

BLACKMER PUMP MAINTENANCE AND REBUILD KITS

960471
Page 1 of 2

FORM 555

A kit may be used in multiple pump models. Always refer to the proper pump's Parts List and Installation, Operation and Maintenance Instructions **BEFORE** attempting any maintenance.

Effective June 2008
Replaces Sept 2003



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



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



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



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

NOTICE:

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

MAINTENANCE

Maintenance and troubleshooting must be done by an individual experienced with pump maintenance and the type of system involved.

Visit our website www.blackmer.com or contact the factory for a current Parts List and Installation, Operation and Maintenance Instructions

WARNING



If pumping hazardous or toxic fluids, system must be flushed prior to performing service

Hazardous or toxic fluids can cause serious injury.

WARNING



Failure to disconnect and lockout electrical power or engine drive before attempting maintenance can cause serious personal injury, death or major property damage

Hazardous machinery can cause serious personal injury

WARNING



Do not attempt to open the pump until you have bled off the pressure. On systems with meters, the differential valve will keep liquid under pressure in the pump, meter and piping even when the hose is emptied

Hazardous pressure can cause personal injury or property damage

CAUTION



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

Hazardous pressure can cause personal injury or property damage

SUGGESTIONS FOR REPAIR OF YOUR BLACKMER PUMP

Maintenance Kits include all the parts normally needed to repair your Blackmer pump.

Rebuild Kits include all Maintenance Kit items plus major components such as a rotor & shaft and a liner.

Parts Lists and Installation Operation & Maintenance Instructions are available at www.blackmer.com. The pump Parts List page will identify the parts included in each kit.

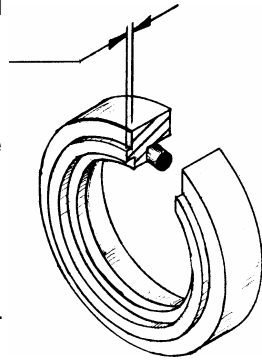
It is suggested that you replace all the parts in the kit. If you choose to selectively replace parts, carefully review the back side of this form.

If in doubt, replace the part.

Always refer to the proper pump's Parts List and Installation, Operation and Maintenance Instructions **BEFORE** attempting any maintenance.

MECHANICAL SEALS (if equipped)

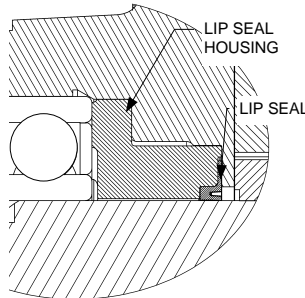
If a seal has been leaking, the entire seal should be replaced. Should a seal that has not been leaking be replaced? It depends on the condition of the parts. The seal may have been damaged during pump disassembly, or it may have been in service long enough to have used up most of its wear life. If the lip of the rotating seal face is worn within .010" (.25 mm) of the shoulder, it should be replaced. If either seal face is grooved, scratched, or marred, replace both faces. Examine the O-rings and replace any that are cut, swollen, hardened or flattened



If in doubt, replace the entire seal.

LIP SEALS (if equipped)

If a seal has been leaking, the entire seal should be replaced. Should a seal that has not been leaking be replaced? It depends on the condition of the parts. The seal may have been damaged during pump disassembly, or it may have been in service long enough to have used up most of its wear life.



If in doubt, replace the entire seal.

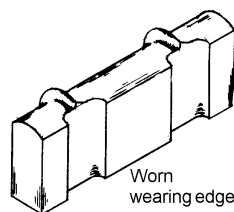
Also inspect the shaft in the seal area for excessive wear or "grooving".

PACKING (if equipped)

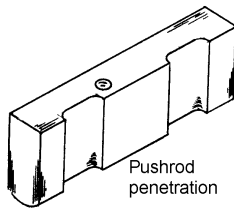
When replacing the packing, always use a full set of packing rings. Never add new rings to an old set of packing.

VANES

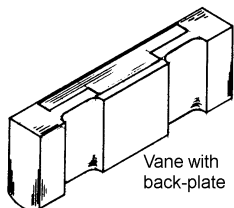
After a period of time, the vanes will wear. Change the vanes if they are worn unevenly or have raised projections on the wearing edge. Push rod penetration of the vanes is usually an indication of excessive speeds, or excessive re-circulation of liquid through the built-in internal relief valve. Check the separate bypass valve set-pressure to make sure that when the discharge line is closed, the liquid bypasses back to the tank and does not re-circulate in the pump. See the "Operation" section in the pump Instruction sheet. Grooved Vanes should always be installed with the groove in the direction of rotation. (Fig. C)



Worn wearing edge

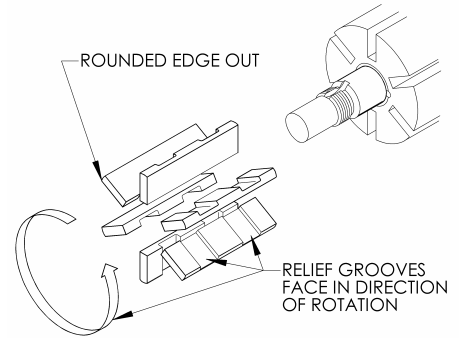


Pushrod penetration



Vane with back-plate

Figure C



DISCS (or HEADS) and ROTOR

Examine the discs (or heads) and rotor for wear. A few scratches or a lightly abraded area should not affect pump performance. Remove any burrs from the edges of the vane slots in the rotor, which could cause the vanes to hang up. If the rotor has worn into the disc (or head) .006" (.15mm) or more, the discs (heads) should be replaced. If the rotor is narrower than the liner by .015" (.38 mm) or more, replace it.

Excessive wear on the rotor ends, discs (or heads) after a short period of service is usually caused by end thrust on the shaft from the driver, or improper locknut adjustment. Refer to the individual pump instruction sheets for proper assembly and adjustment of the locknuts.

BALL BEARINGS (if equipped)

Ordinarily, there will be very little wear or deterioration of the ball bearings unless a seal has been leaking extensively. Leakage from the seal will wash the lubricant out of the bearings and cause rapid wear. Thoroughly clean the bearings in solvent and examine them for extra play or clearance, which indicates wear. Spin the outer race and check for roughness of turning. Replace bearings if wear is evident.

SLEEVE BEARINGS (if equipped)

Inspect for cracks, chips, or out of round appearance. Replace the Sleeve Bearings if any wear or damage is evident.

LINER (if equipped)

Small scratches in the liner seldom affect pump efficiency. If the liner is worn in a "washboard" manner, the vanes will bounce; the liner should be replaced. Liners are only included in the rebuild kits.

MISCELLANEOUS PARTS

Gaskets, O-rings and bearing lockwashers are inexpensive and it is usually a good idea to replace them.

Take care in rebuilding your pump. When assembled, make sure you can rotate the shaft by hand. Grease the bearings immediately. Do not over-grease.

Refer to the pump IOM for the proper grease.

CHECK THE SYSTEM

After repair, the entire system (pump, piping, valves, meter, etc.) must be checked for leaks. **DO NOT** operate system if leaks are present.

