

# INSTALLATION GUIDE for BLACKMER MECHANICAL SEALS w/ JACKETS

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A seal 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  
Replaces

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**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.

**NOTICE:**

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.

Blackmer pump manuals and parts lists may be obtained from Blackmer's website ([www.blackmer.com](http://www.blackmer.com)) or by contacting Blackmer Customer Service.

**WARNING**



Hazardous pressure can cause personal injury or property damage

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

**WARNING**



Hazardous voltage. Can shock, burn or cause death.

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

**WARNING**



Hazardous machinery can cause serious personal injury.

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

**WARNING**



Hazardous pressure can cause serious personal injury or property damage

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

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

**WARNING**



Hazardous machinery can cause severe personal injury or property damage

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

**WARNING**



Hazardous or toxic fluids can cause serious injury.

**If pumping hazardous or toxic fluids, system must be flushed and decontaminated, inside and out, prior to performing service or maintenance**

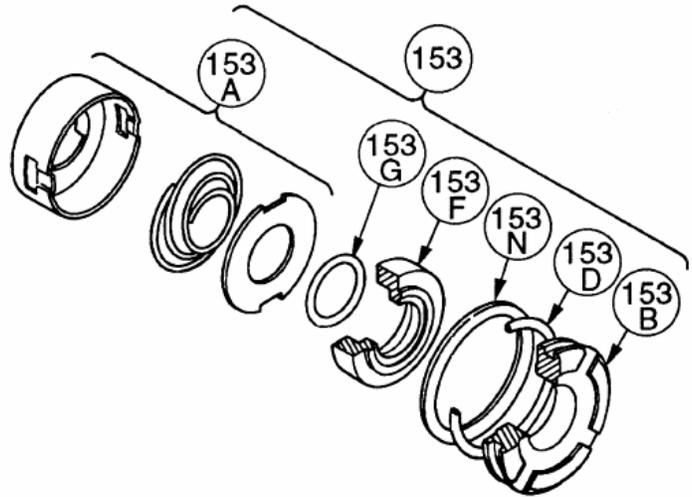
## SEAL REPLACEMENT GUIDE

1. Always refer to the proper pump's Parts List and Installation, Operation and Maintenance Instructions **BEFORE** attempting any maintenance.
2. In general, replace the entire seal assembly including O-rings.
3. A mechanical seal is a precision device. Use care when handling to protect the seal faces.
4. Keep all oil, grease and dirt off the seal faces.
5. If necessary, use a clean tissue (not a shop cloth) and alcohol to clean the seal faces.

6. Before installing a new seal, clean the seal recess area and remove any burrs or nicks from the shaft. After cleaning, lightly oil the seal recess area and shaft.
7. Use care when sliding the seal face or seat over the shaft to avoid damage.
8. The drive tangs of the seal jacket, the notches in the rotating seal face and the pin on the stationary seat **MUST** all be properly engaged.
9. Replace the seal as shown in the appropriate pump Installation, Operation and Maintenance Manual.

### Variant 1 (1" pumps) Mechanical Seal Components

Ref. No.	Part Name	Parts Per Seal
153	Mechanical Seal Assembly	1
153A	Seal Jacket Assembly	1
153B	Stationary Seat	1
153D	O-Ring – Stationary	1
153E	O-Ring – Rotating Face	1
153F	Seal Face	
153G	Seal Ring – Rotating	1
153N	Seal Backup Ring (not used in all seals)	1



### Variant 2 (1.25" – 4" pumps) Mechanical Seal Components

Ref. No.	Part Name	Parts Per Seal
153	Mechanical Seal Assembly	1
153A	Stationary Seat	1
153B	Seal Face	1
153C	Seal Jacket Assembly	1
153D	O-Ring – Stationary Seat	1
153E	O-Ring – Rotating Face	1

