

BLACKMER MECHANICAL SEAL INSTALLATION

CARTRIDGE MECHANICAL SEAL INSTRUCTIONS

MODELS: GX, X, TX, TXV, TX200, TX400, ATX, STX3

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Effective MAR 2003
Replaces SEP 2002



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.

These instructions are intended to assist in the installation of Blackmer cartridge mechanical seals, and **MUST** be kept with the pump.

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

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

Maintain **ALL** system and Blackmer pump operation and hazard warning decals.

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 OR MAINTENANCE CAN CAUSE SERIOUS PERSONAL INJURY OR PROPERTY DAMAGE.

WARNING



Hazardous pressure can cause 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, PRIOR TO PERFORMING SERVICE OR MAINTENANCE

NOTICE:
THE APPROPRIATE BLACKMER PUMP MANUAL AND PARTS LIST MAY BE OBTAINED FROM THE BLACKMER WEBSITE (WWW.BLACKMER.COM) OR BY CONTACTING BLACKMER CUSTOMER SERVICE.

PUMP INSTRUCTION SHEETS AND PARTS LISTS

Pump Model	Pump Instruction Sheet	Pump Parts Lists				
		1.5"	2"	2.5"	3"	4"
GX	101-B00	—	101-B01	101-B02	101-B03	101-B04
X		—	101-B05	101-B06	101-B07	101-B08
TX	201-A00	201-A01	201-A02	201-A03	201-A04	201-A05
TXV		—	202-A01 *	202-A02	202-A03	—
STX3	285/H	203-A01				
TX200	285/K	285/K5 *				
TX400		205-A02				
ATX		201A-A01				
ATX-HYD	201A-A00	201A-A02				

* Discontinued models

NOTICE:
MAINTENANCE AND TROUBLE SHOOTING MUST BE DONE BY AN INDIVIDUAL EXPERIENCED WITH PUMP MAINTENANCE AND THE TYPE OF SYSTEM INVOLVED.

NOTICE:
THE FOLLOWING INSTRUCTIONS INCLUDE ONLY THE STEPS NECESSARY TO REMOVE AND REPLACE THE BLACKMER CARTRIDGE MECHANICAL SEAL. BEFORE PROCEEDING, READ AND FOLLOW ALL MECHANICAL SEAL RELATED INSTRUCTIONS AND HAZARD WARNINGS PROVIDED IN THE APPROPRIATE PUMP "INSTALLATION, OPERATION AND MAINTENANCE" MANUAL.

CARTRIDGE MECHANICAL SEAL REMOVAL

- Before removing the head assembly, clean the pump shaft thoroughly, making sure the shaft is free of nicks and burrs.
- Models without discs:
 - With the head assembly removed, use two large screwdrivers to carefully push the backside of the seal jacket to remove the mechanical seal cartridge from the head. DO NOT damage the head. See Figure 1.

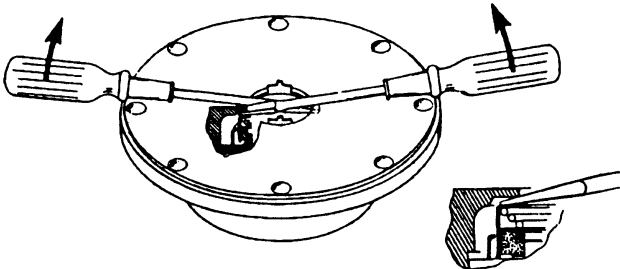
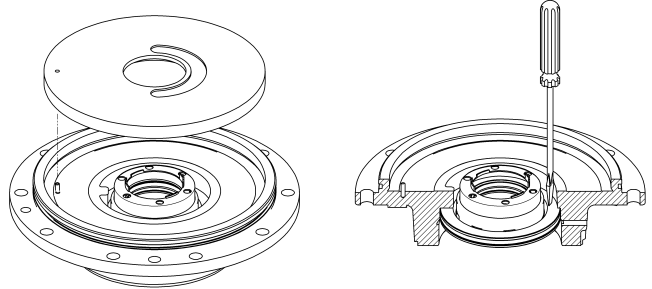


Figure 1 – Mechanical Seal Removal

- Models with discs
 - With the head assembly removed, remove the disc (71) from the head.
 - To remove the mechanical seal (153), use the flat end of a screwdriver to gently push the backside of the stationary seat of the cartridge mechanical seal from the head. DO NOT damage the head. See Figure 2.



Disc Removal

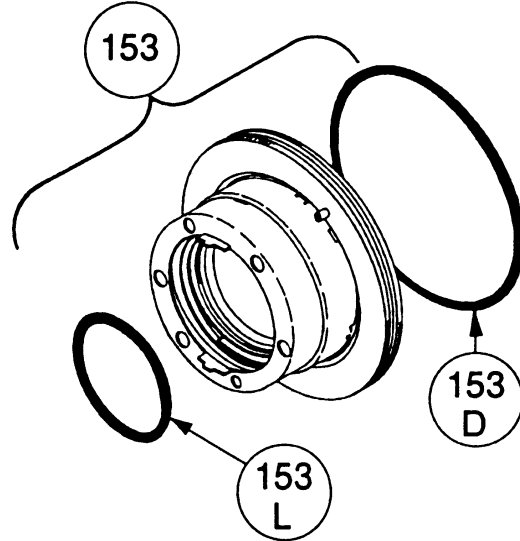
Seal Removal

Figure 2

- Discard the mechanical seal cartridge.
- Inspect the shaft at the mechanical seal area for grooving or pitting. Replace rotor and shaft as necessary.

CARTRIDGE MECHANICAL SEAL INSTALLATION

- Clean the head seal recess, removing any debris, nicks or burrs. On models with discs install the disc (71) in the head recess before installing the mechanical seal.
- With a small amount of quality O-ring lubricant, lubricate the mechanical seal O-rings (Ref. Nos. 153D and 153L).
- Position the mechanical seal jacket with the drive tangs INWARD, and push the seal assembly into the head seal recess. The stationary seat pin MUST be positioned between the lugs in the back of the head recess.



REF. NO.	CARTRIDGE MECHANICAL SEAL PARTS
153	Cartridge Mechanical Seal with O-Rings
153D	O-Ring - Stationary
153L	O-Ring - Rotating

