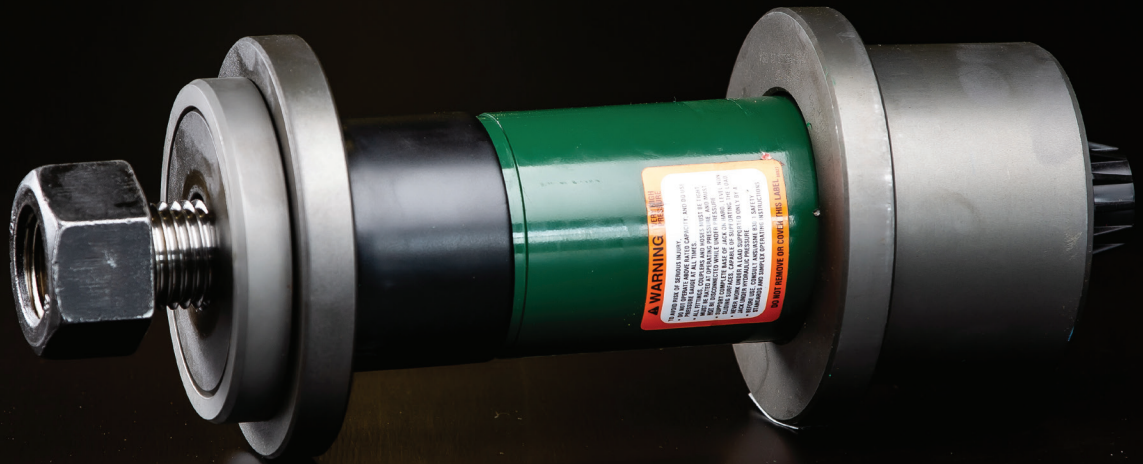


MISSION Bushing X-tractor

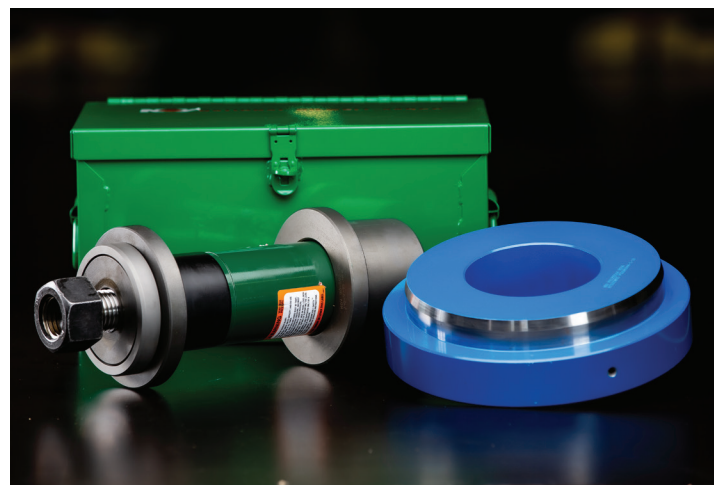


Time saved in the pump room equates to less downtime.

Inspecting or replacing a mud pump's wear plate first requires removing the liner bushing or liner flange. The conventional method of removal requires clamping the crosshead extension rod to the bushing and rotating the pump manually until the bushing comes out. This arduous and time-consuming task can require two or more men working in often dangerous situations. The job can become even more laborious if the bushing has been in the pump for a long period of time or if it gets cocked or misaligned in the power bore frame as it is being removed.

MISSION™ has designed the Bushing X-tractor™ to provide superior cost-to-benefit value to the contractor. By creating a straight and consistent pull of the liner bushing out of the frame bore, it greatly reduces the chance of cocking and improves the fluid end maintenance procedures. This conceptual breakthrough is achieved with the help of a hydraulically-actuated cylinder contained in the assembly that pushes against the back of the fluid end module until the bushing is clear of the power frame. With the bushing removed, the wear plate and wear plate seal can be inspected and replaced, if necessary. This dreaded task, which used to take hours, can now be accomplished in minutes.

The only tool needed to operate the Bushing X-tractor is a hydraulic hand pump. All of the other functional components are included with assembly. The tool works with the OEM-style bushing and clamp, the Mission L bushing and liner nut, and the Blak-Jak™ bushing and Lok-CEL™. The Bushing X-tractor is now available for NOV 9P through 14P mud pumps.

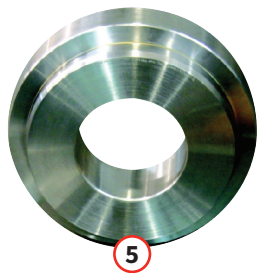


MISSION Bushing X-tractor

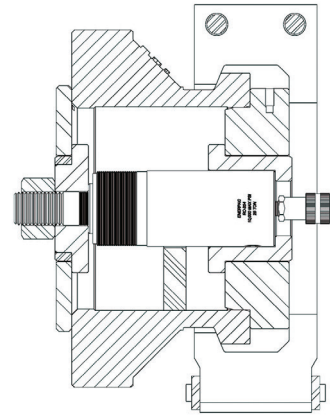
Liner bushing X-tractor puller assemblies

Part number	Description
80502120	Assembly, bushing X-tractor 9P100 10P130
80502121	Assembly, bushing X-tractor 12P160
80502122	Assembly, bushing X-tractor 14P220

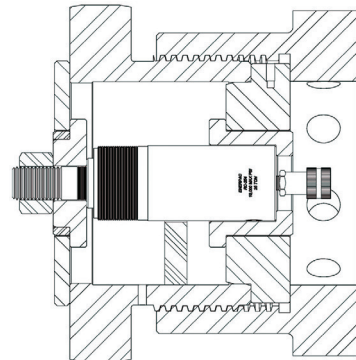
1. X-tractor body with integral hydraulic cylinder
2. Bushing adapter
3. Wear plate adapter
4. X-tractor spacer
5. Puller plate
6. Storage box



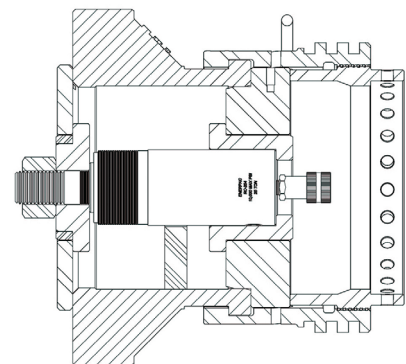
The bushing X-tractor is compatible with these three configurations.



OEM style



MISSION 'L' style



Blak-JAK style

Note: Liner bushing puller will work for the three types of bushing shown

For more information on this tool that will pay for itself time and time again, please contact your local NOV representative.