

PROCESS PUMP & SEAL, INC.

PROCESS SOLUTION SPECIALISTS

Cylinder Repair and Upgrade Services

Disassembly Process

- Mark cylinder and all components, identifying port / cap orientations
- Disassemble / clean all cylinder components
- Visually inspect all components for wear, sealing device condition and note probable cause of failure

Record Measurement of All Cylinder Components

- Rod diameter
- Rod straightness
- Piston diameter
- Inside tube diameter
- Inside gland diameter
- Piston groove inside diameter and width
- Gland seal and wiper groove diameters and width
- Tube end seal (and all static seal) groove width & depth
- Check and record rod and piston surface finishes



**All dimensions, clearances and surface finishes must meet or exceed OEM specifications*

Upgrade Materials And Processes For Extended Cylinder Life

- Utilize thermoset polyurethanes offering high abrasion and cut resistance, low compression set, self-lubricating rod/ piston seals, wipers, tube seals
- Install replaceable high compressive strength wear rings on piston and gland wear surfaces where applicable
- Apply aluminum bronze overlay on piston where applicable
- Rods to be chromed plated or HVOF coated and ground back to proper diametrical clearances

Assembly Procedure

- Hone cylinder bore to restore proper surface finish
- Polish piston rod as needed to restore proper surface finish
- Assemble all sealing devices and components using proper lubrication
- Torque all fasteners per OEM specifications using proper lubrication
- Perform cylinder testing using hydraulic oil (or air on pneumatics) checking for proper extension and retraction.
Confirm that internal and external leakage control meets or exceeds OEM specifications
- Surface prep and paint cylinder. Install protective plugs on ports and wrap exposed rod ends

