

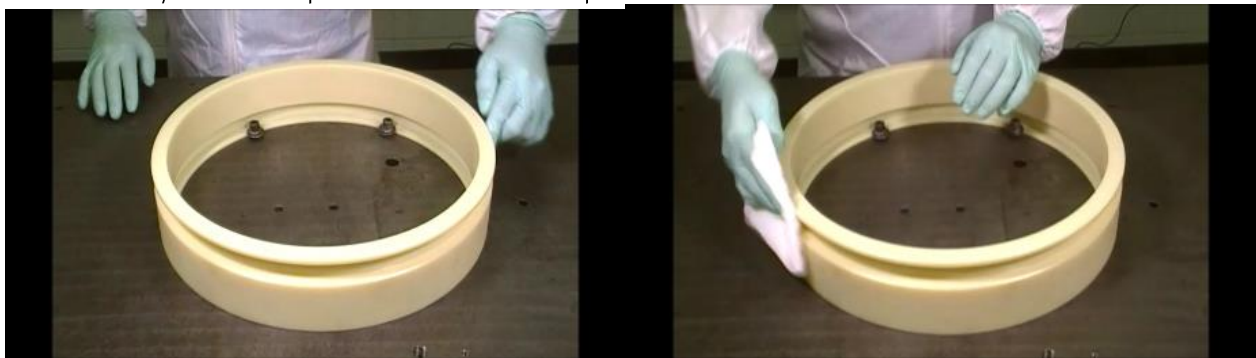


Annular BOP Seal Installation: Guidelines & Instructions

Prior to installation:

Inspection of Cylinder Components:

1. Check all lead-in chamfers and seal groove edges.
 - a. All sharp corners should be rounded & smooth
 - b. All required lead-in chamfers should be rounded and burr free.
2. Ensure that all cylinder components are clean and free of dirt and debris.
 - a. All seal grooves should be cleaned with compressed air.
 - b. All cylinder components should be wiped clean with a lint-free cloth.



Inspection of Seals:

3. Remove any tape from multi-component seals (if applicable)
 - a. Any residue left from the tape should be removed with alcohol or mild solvent.
 - b. Be sure to keep any back-up rings with the associated sealing element if unpacking multiple seals at the same time.
4. Visually check the seals to ensure no damage from shipping.

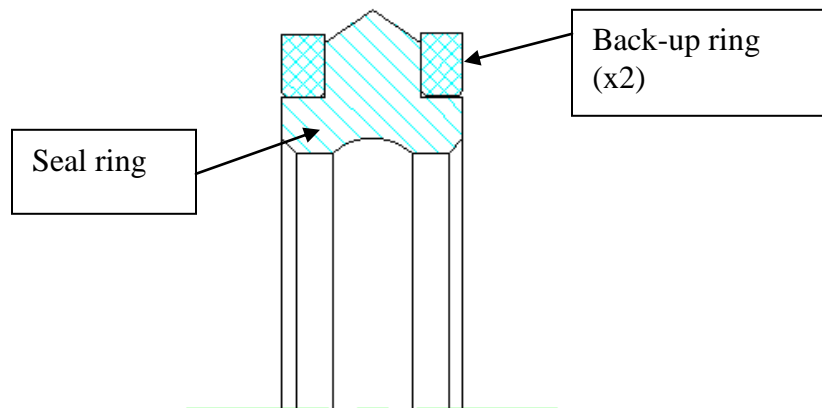


5. Lubricate seal and back-up rings with oil or grease.



Seal Installation:

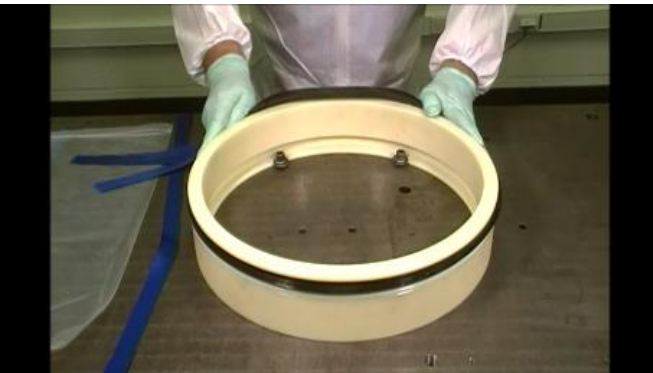
Piston O.D. Seal: Cameron Part: 2826731-01



1. By hand or using installation strap, gently stretch one of the back-up rings over the piston and into the housing groove. Use caution to not over-stretch the back-up ring.



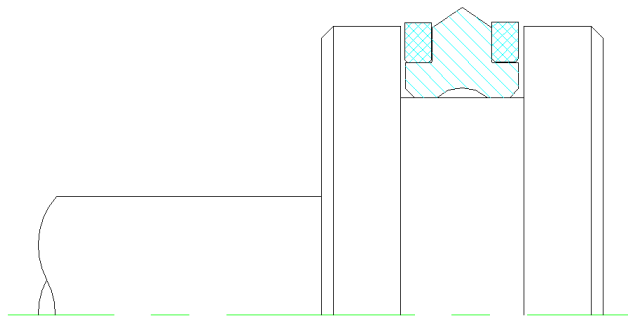
2. Next use the install strap, stretch the rubber piston seal ring over the piston and into the seal groove. Use caution so as not to twist or roll the seal. The install strap helps with untwisting the seal and keep it seated correctly.



3. Next, stretch by hand or using installation strap, gently stretch one of the back-up rings over the piston and into the closest open pocket of the seal. Use caution to not over-stretch the back-up ring.



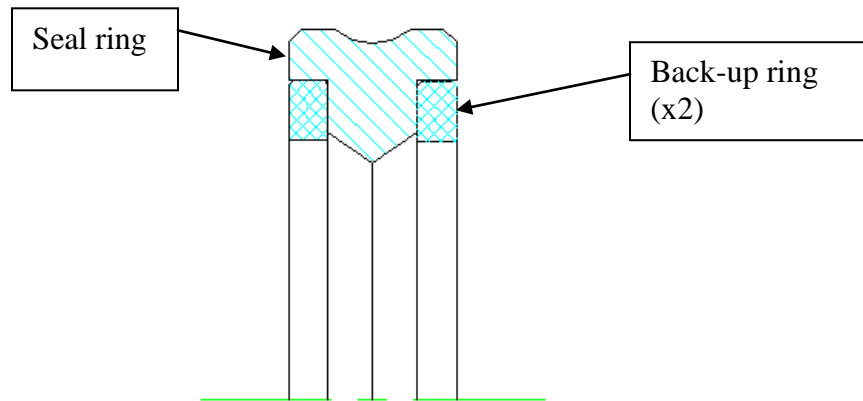
4. Final piston seal installation should look like this:



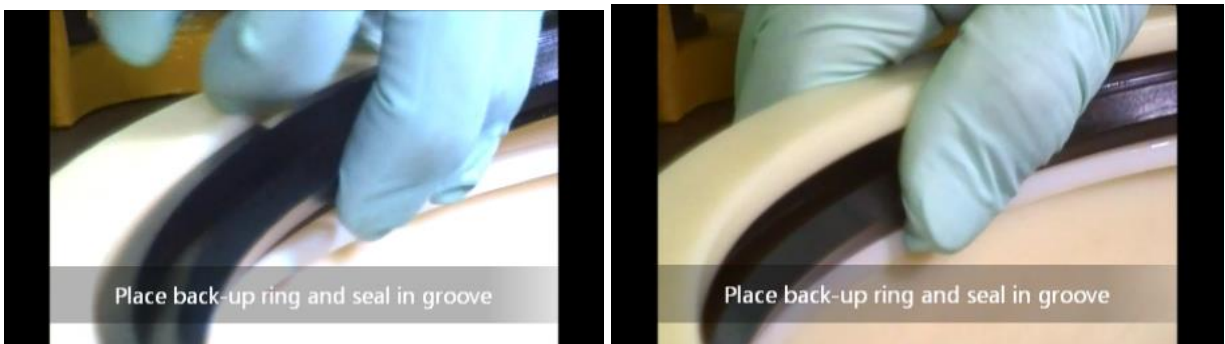


Piston I.D. Seal: Cameron Part: 2826732-01

Please review PRIOR TO INSTALLATION steps at the beginning of these instructions and repeat for the rod seal and back up rings.



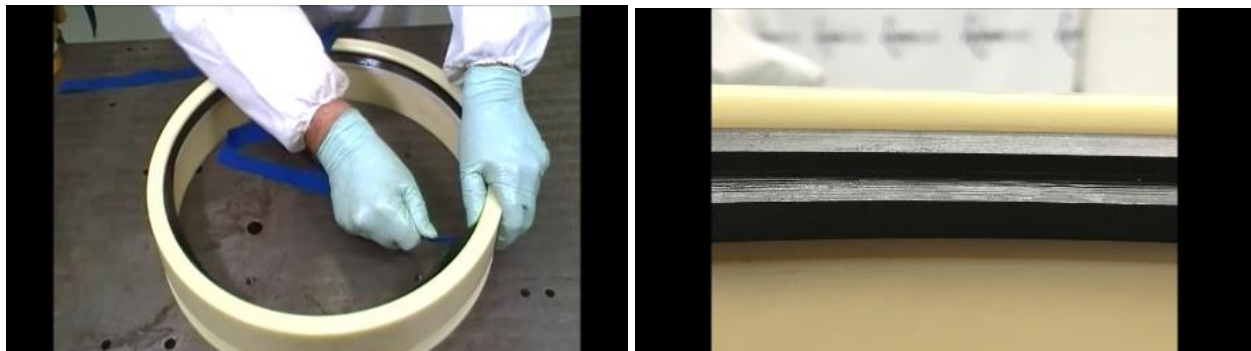
1. Install the backup ring first, by placing it into the seal groove. Leave your install strap on the backup ring. This will help you seat the rod seal later. Then with a second install strap around the rod seal, insert the rod seal into the groove.



2. You will have to kidney shape the seal to fit it into the housing groove. Use the install strap on the backup ring to help seat the seal correctly. (See video for example).



- a. Use install strap on rod seal and move swiftly around the housing to make sure there is no twisting.





3. Next, install the remaining back-up ring by gently bending or kidney shaping the back-up ring into the open pocket of the seal.
 - a. Make sure not to over bend or kink the back-up ring when installing. You will hear a snap in place. (see video for example).



- b. Final rod seal assembly should look like this:

