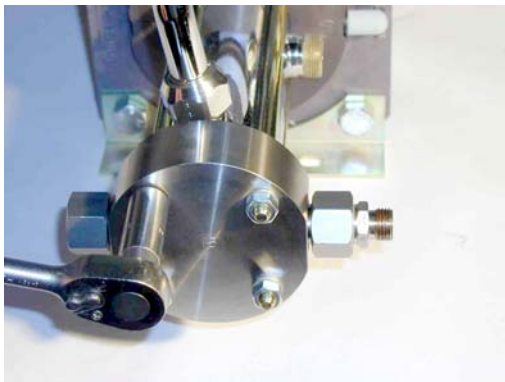


1.1 High-pressure sealing repair

1.1.1 Dismantling 1st stage



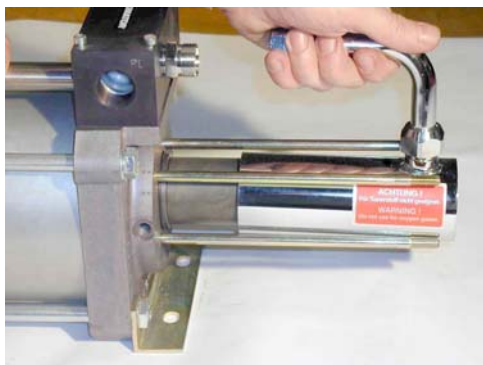
Loosen the cooling pipe union nuts from pilot valve to cooling cylinder.



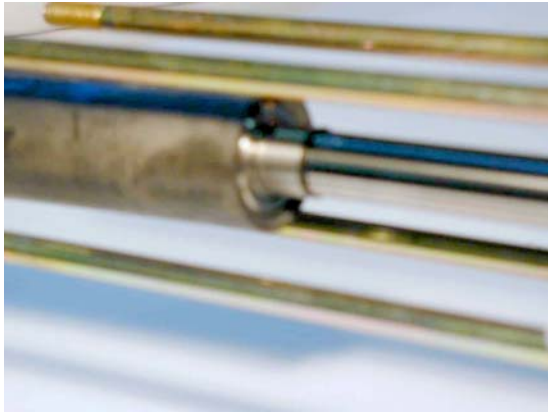
Loosen the four hexagon nuts from the stud bolts.



Carefully separate the compressor head by means of light taps with a plastic hammer from the HP cylinder.



Loosen the HP cylinder by means of light taps with a plastic hammer from the top cover.



Push the HP piston in the direction of the second stage until the stop point. Draw the HP cylinder from the HP piston until it levels with the former.

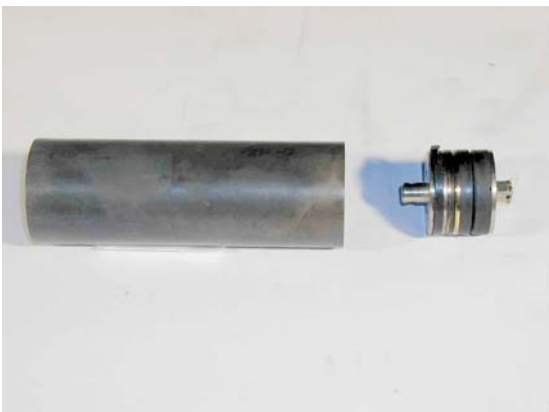


Move the O ring and the securing sleeve along the piston rod until the boring for the dowel pin is free.



Use a suitable mandrel to drive the dowel pin Item 16 out of the boring.

Pull the HP piston out of the HP cylinder.



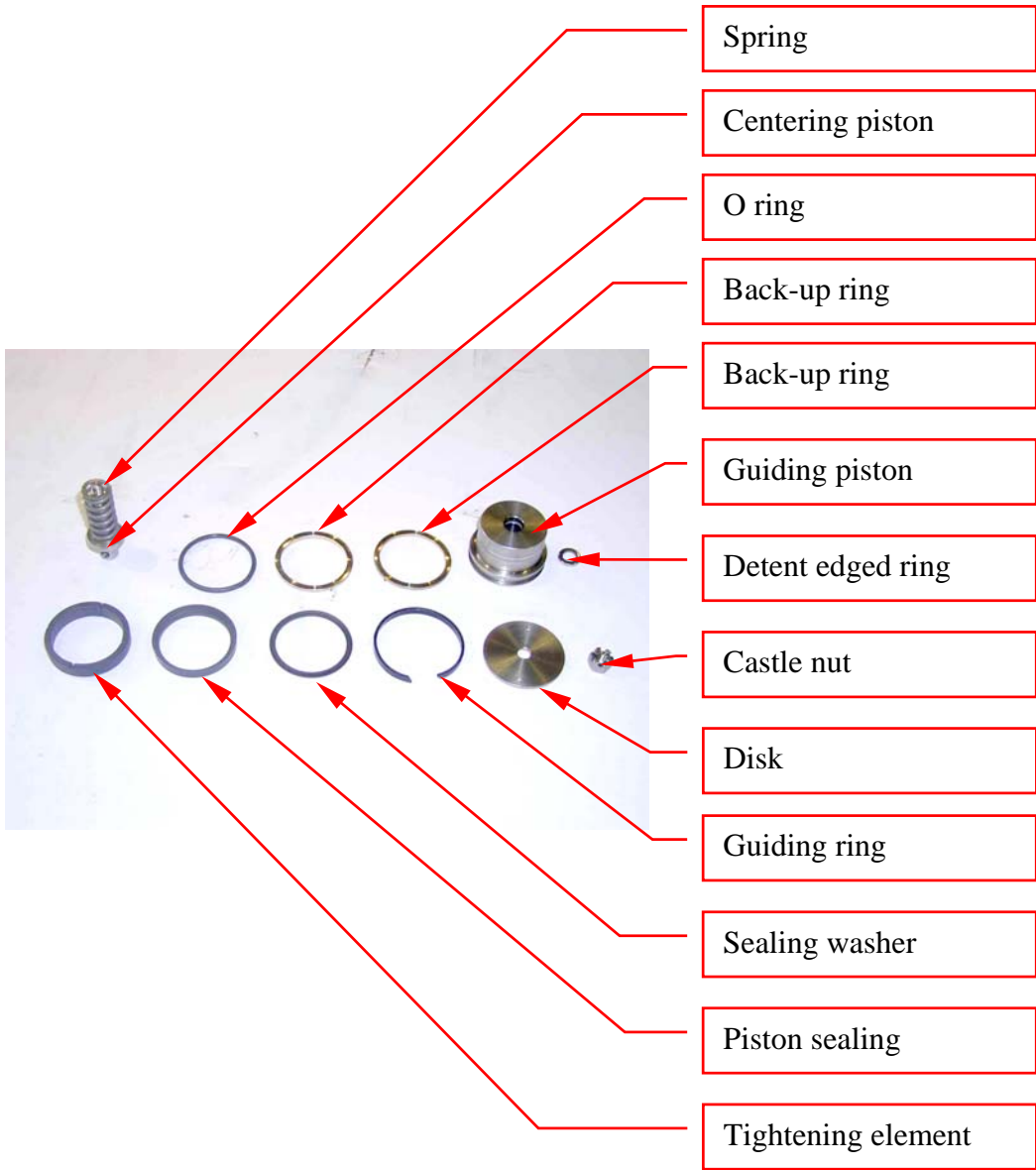


Remove the retaining pin.

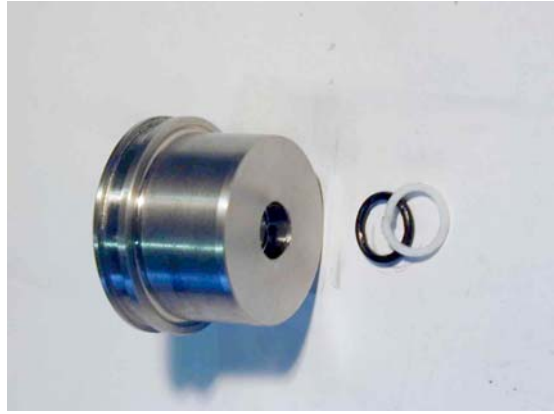
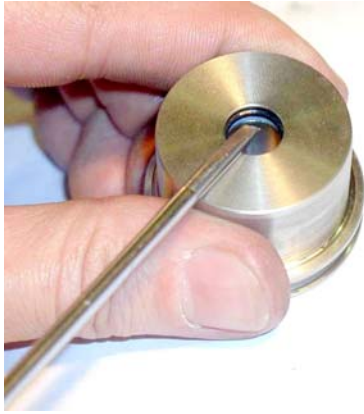


Carefully loosen the castle nut. Caution:
Tightened package expands due to spring pre-
tensions.

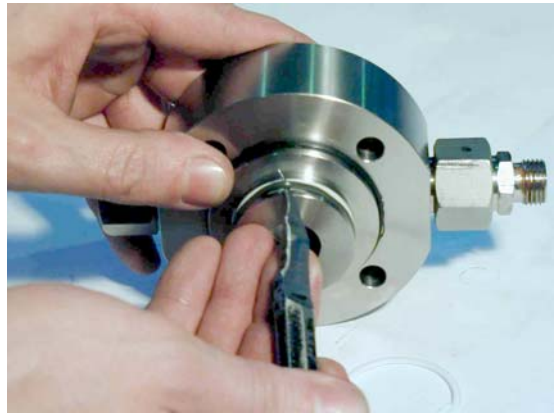
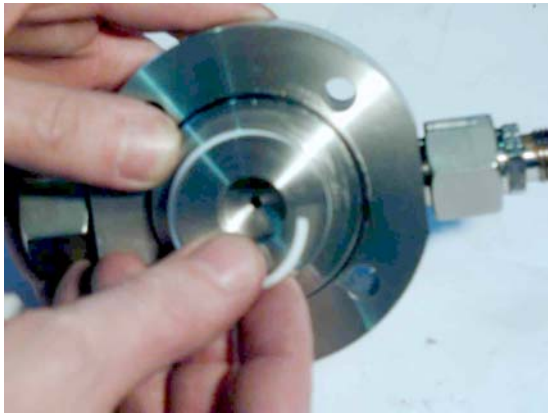
Now the HP sealing unit can be easily removed from the HP piston.



Remove the O ring and the back-up ring with a screwdriver from the guiding piston.



Dismantle the two back-up rings and the O ring from the HP head.



Remove the O ring that seals the cooling cylinder.



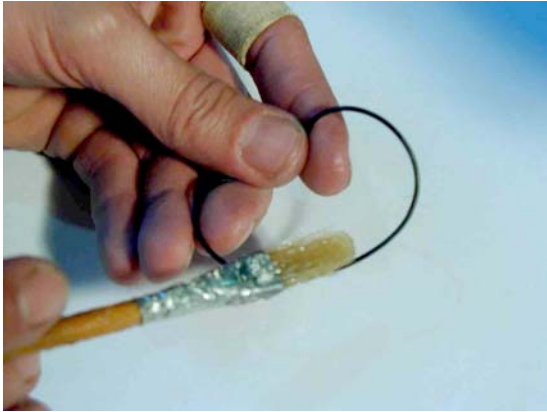
Dismantle the O rings that seal the cooling cylinder and the HP cylinder.

1.1.2 HP piston assembly 1st stage

Clean all re-used components and inspect them for any damage.

Slightly grease all sealing and guide elements.
Use preferably MAXIMATOR grease Works No. 3610.1456.

Grease the O rings that seal the top and bottom covers of the HP and cooling cylinders.

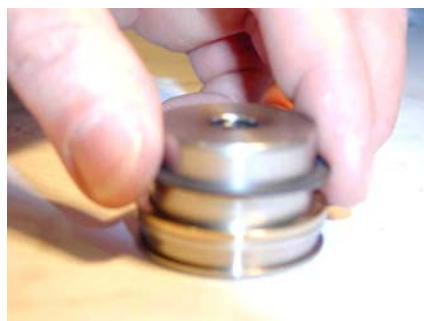


1.1.3 Assembly 1st stage

Grease the back-up and O ring and insert them into the guiding piston boring.



Put the following on the guiding piston in the indicated sequence: Sealing washer, back-up ring, piston packing, O ring (well greased) and tightening element.





Grease the centring piston and attach its pertaining spring.



Place the disk on the tightening element and insert the centring piston into the guiding piston.



Compress the complete sealing package in anti-spring force direction. For the time being, tighten the castle nut only slightly (2-3 thread turns).



Place the guiding ring onto the guiding piston.

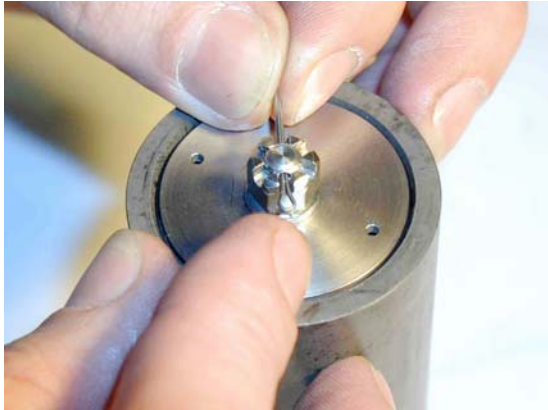


Insert the complete sub-assembly into the pressure cylinder. Check the correct seat of the guiding ring in the groove.
Caution: For this operation, place the pressure cylinder on a workbench with the large 45° chamfer facing downwards. Insert the sub-assembly HP piston with the castle nut facing upwards (visible) into the cylinder until the O-ring is barely visible. Check the correct seat of the O ring and, if need be, bed the ring carefully between tightening element and piston sealing ring. Only then push the HP piston into the pressure cylinder until it is flush.
Caution: Make sure not to damage the O ring in the process.



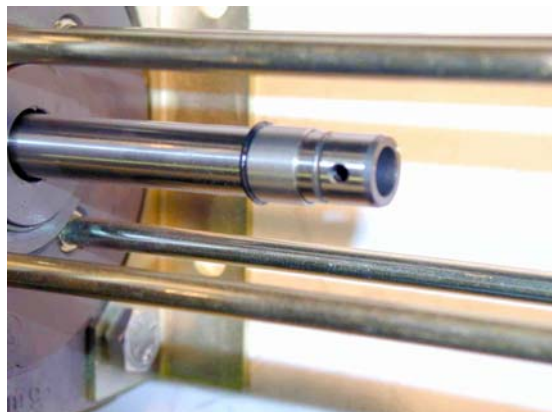
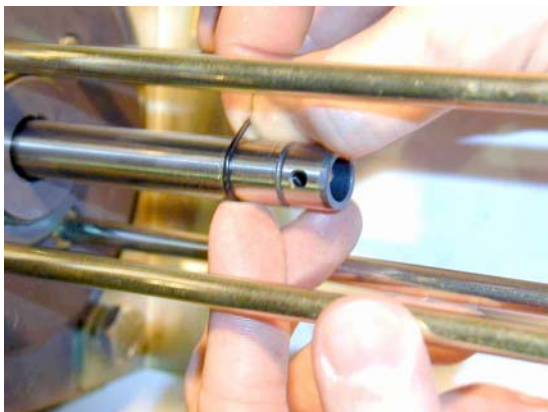
Tighten the castle groove with the specified torque of 20 Nm.

Use the retaining pin to secure the bolted union.

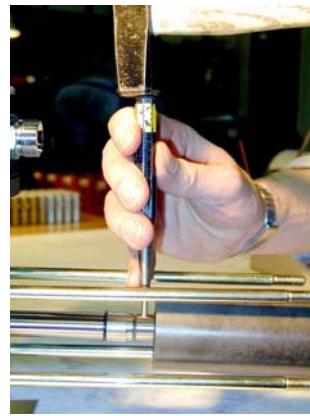
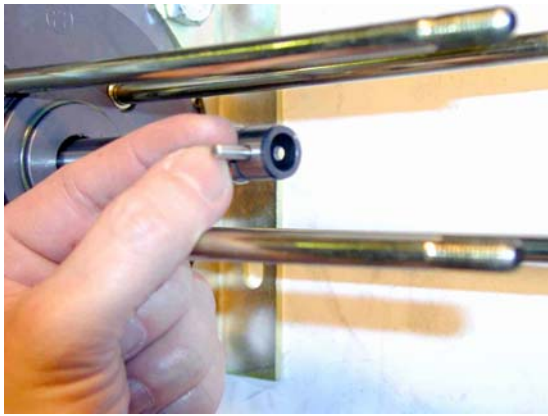


Move the pressure piston to the other side of the pressure cylinder so that the through boring of the centring piston is fully visible.

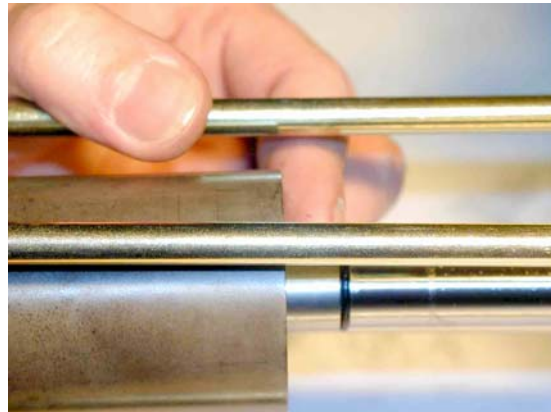
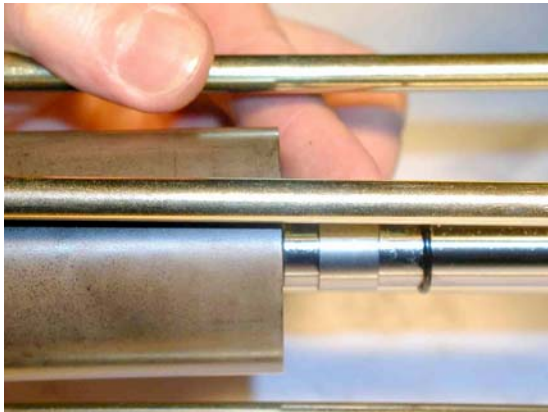
Mount the O ring and securing sleeve to the piston rod.



Attach the dowel pin and insert the centring piston into the boring at the piston rod, then beat in the dowel pin.



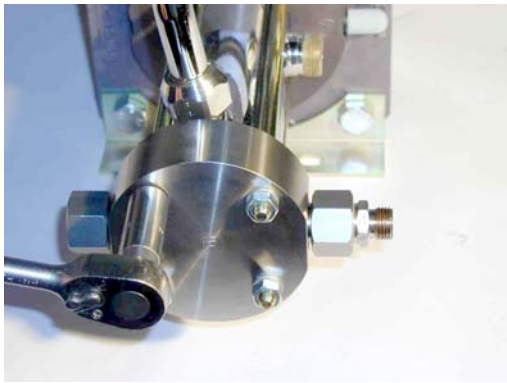
Push the securing sleeve over the securing pin and safeguard it with the O ring.



1.1.4 Dismantling 2nd stage



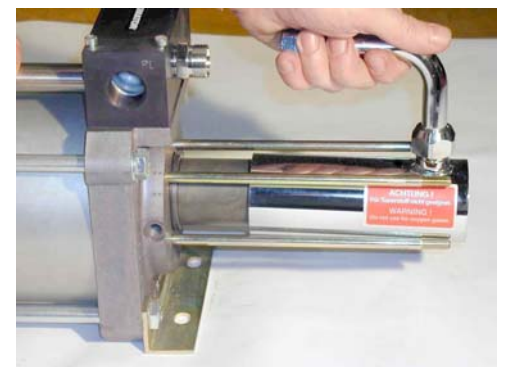
Loosen the cooling pipe union nuts from pilot valve to cooling cylinder.



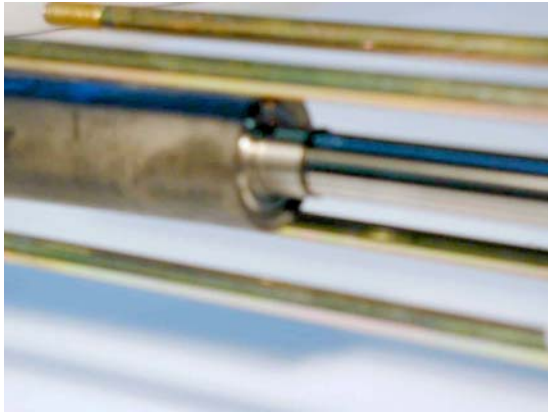
Loosen the four hexagon nuts from the stud bolts.



Carefully separate the compressor head by means of light taps with a plastic hammer from the HP cylinder.



Loosen the HP cylinder by means of light taps with a plastic hammer from the top cover.



Push the HP piston in the direction of the second stage until the stop point. Draw the HP cylinder from the HP piston until it levels with the former.



Move the O ring and the securing sleeve along the piston rod until the boring for the dowel pin is free.



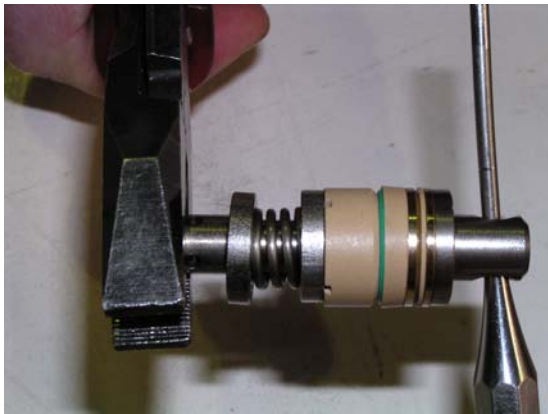
Use a suitable mandrel to drive the dowel pin Item 16 out of the boring.

Pull the HP piston out of the HP cylinder.



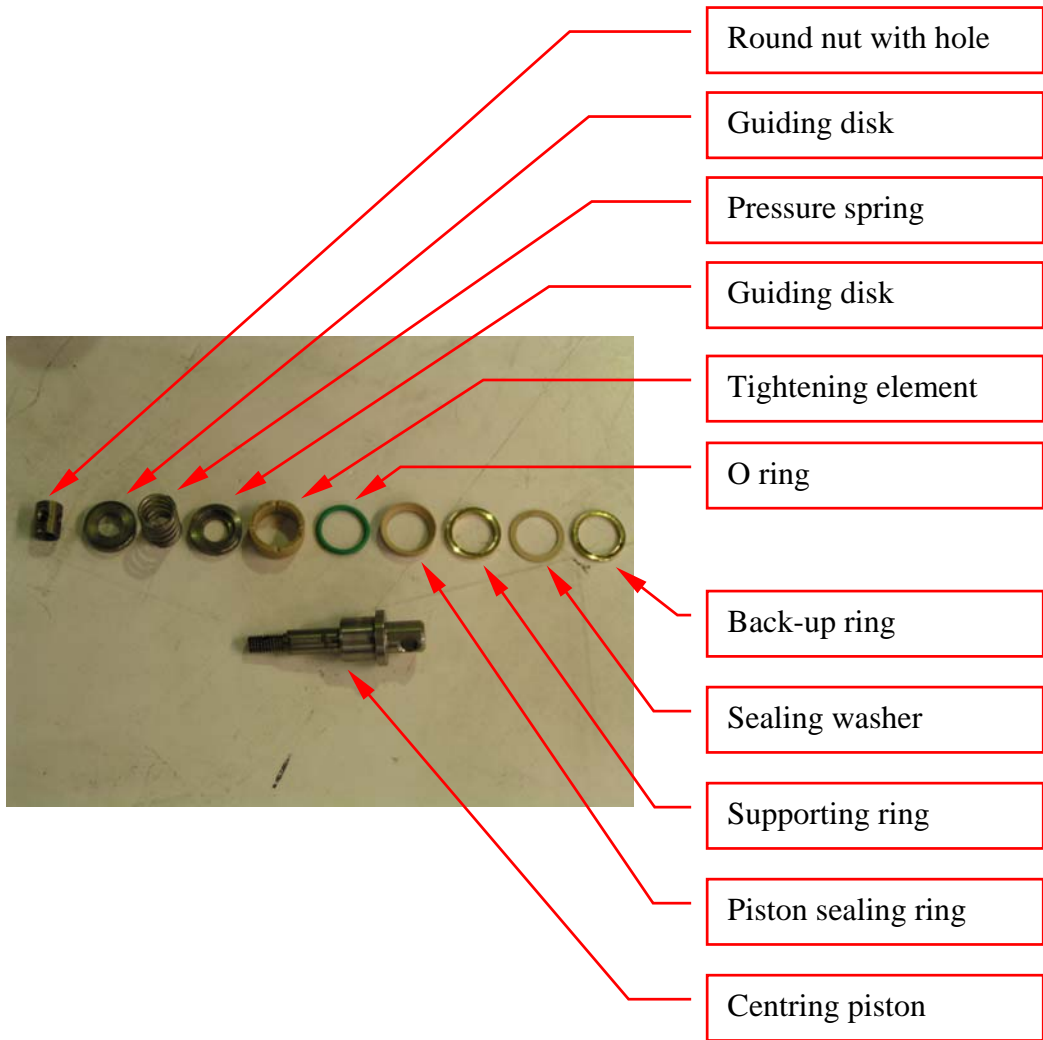


Remove the retaining pin.

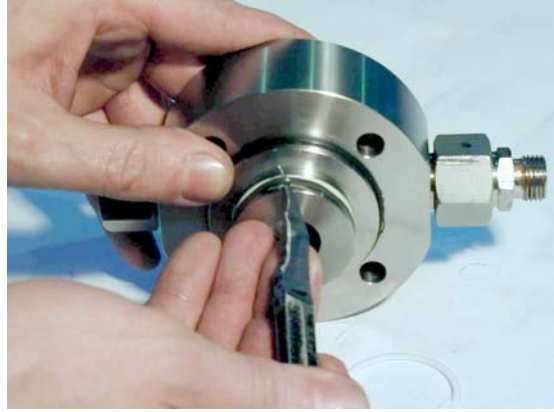
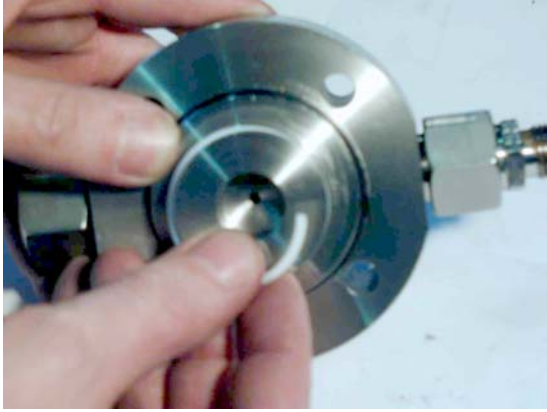


Carefully loosen the castle nut. Caution:
Tightened package expands due to spring pre-
tensions.

Now the HP sealing unit can be easily removed from the HP piston.



Dismantle the two back-up rings and the O ring from the HP head.



Remove the O ring that seals the cooling cylinder.



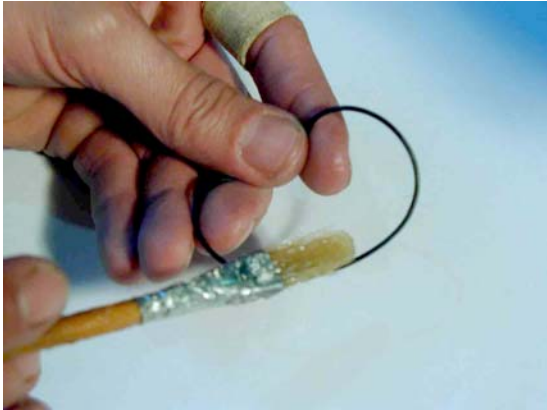
Dismantle the O rings that seal the cooling cylinder and the HP cylinder.

1.1.5 HP piston assembly 2nd stage

Clean all re-used components and inspect them for any damage.

Slightly grease all sealing and guide elements.
Use preferably MAXIMATOR grease Works No. 3610.1456.

Grease the O rings that seal the top and bottom covers of the HP and cooling cylinders.



1.1.6 Assembly 2nd stage

Put the following on the guiding piston in the indicated sequence: Supporting ring, sealing washer, supporting disk, piston packing, O ring (well greased), tightening element, guiding disk, pressure spring and guiding ring.





Now screw the round nut with hole onto the centring piston. Compress the complete sealing package in anti-spring force direction until the two borings (round nut with hole and centring piston) are aligned.

Secure the bolted union with a retaining pin. Afterwards, adjust the retaining pin in such manner that it does not project beyond the diameter of the centring piston (see Fig. below).





Insert the complete sub-assembly into the pressure cylinder.

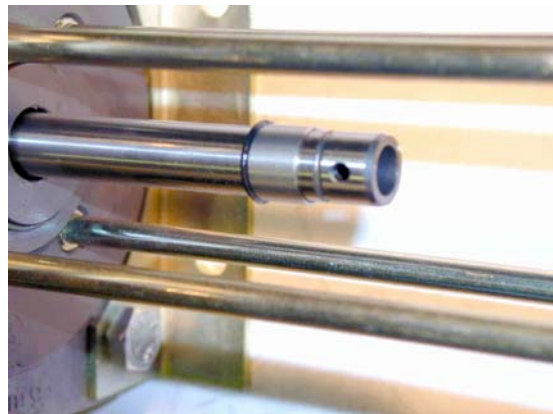
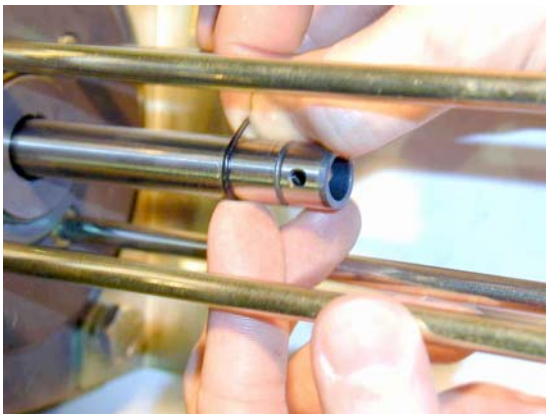
Caution: For this operation, place the pressure cylinder on a workbench with the large 45° chamfer facing downwards. Insert the sub-assembly HP piston with the castle nut facing upwards (visible) into the cylinder until the O-ring is barely visible. Check the correct seat of the O ring and, if need be, bed the ring carefully between tightening element and piston sealing ring. Only then push the HP piston into the pressure cylinder until it is flush.

Caution: Make sure not to damage the O ring in the process.

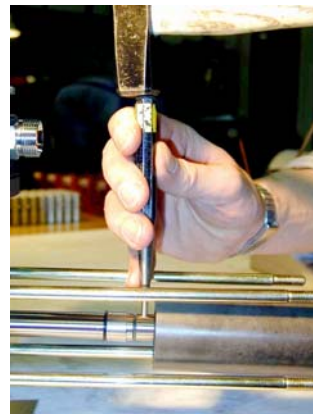
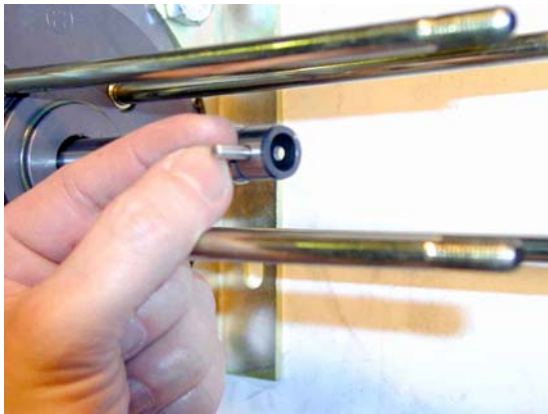


Move the pressure piston to the other side of the pressure cylinder so that the through boring of the centring piston is fully visible.

Mount the O ring and securing sleeve to the piston rod.



Attach the dowel pin and insert the centring piston into the boring at the piston rod, then beat in the dowel pin.



Push the securing sleeve over the securing pin and safeguard it with the O ring.

