

1.1 Repair of suction and delivery valves

1.1.1 Dismantling 1st stage

1.1.1.1 Suction valve 1st stage

Loosen the inlet sockets. Pull out the entire valve unit by means of the inlet socket.



Use a mandrel to force the valve unit out of the inlet socket.



Remove the O ring from the valve seat.



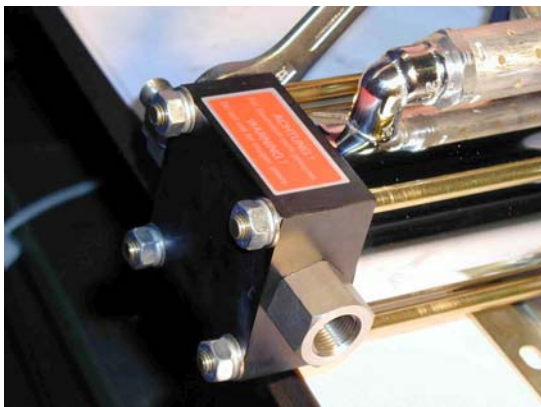
Remove the O ring from the inlet socket.

The main parts of the suction valve are: Inlet socket, valve ball, spring, ball holder, valve seat and two O rings.

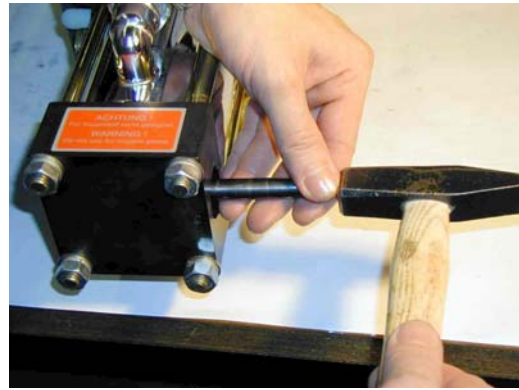
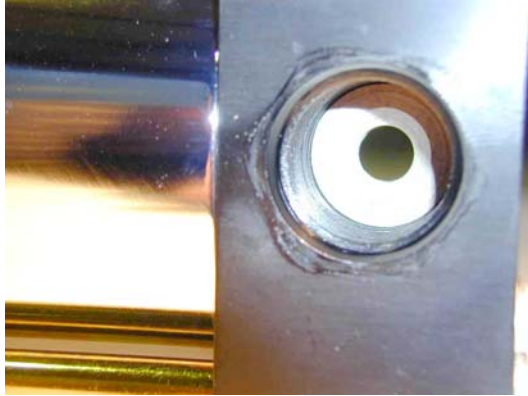


1.1.1.2 Delivery valve 1st stage

Loosen the outlet sockets. The ball and spring fall out and the valve seat stays in the HP head.



Use a mandrel to force out the valve seat, that is still in the HP head.



Remove the O ring that seals the valve seat.



Force the ball holder out of the outlet socket.



Remove the O ring from the outlet socket.

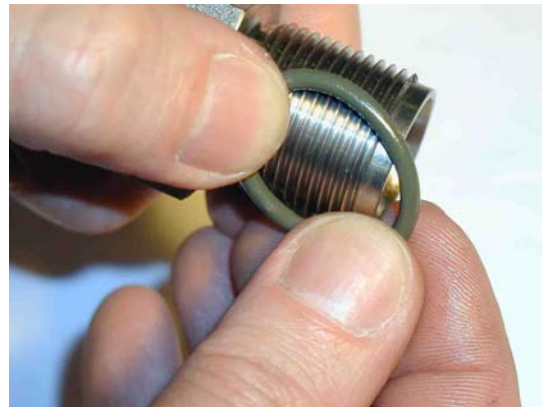
The main parts of the delivery valve are: Inlet socket, valve ball, spring, ball holder, valve seat and two O rings.



1.1.2 Assembly 1st stage

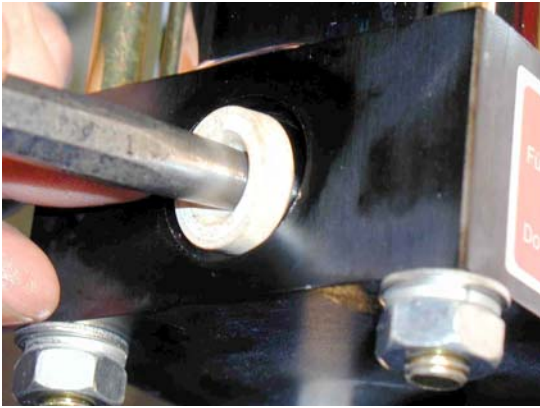
1.1.2.1 Outlet valve 1st stage

Grease the O ring and slip it onto the outlet socket.



Grease the O ring that seals the valve seat and insert the ring in to the HP head.





Use a cone-shaped mandrel to force the valve seat into the HP head.



Insert the ball into the valve seat.



Attach the spring on to the ball.



Push the ball holder over the spring.

Screw the outlet socket into the HP head. Make sure to check before the correct seat of the ball and the spring. Tighten the outlet socket with 120 Nm.

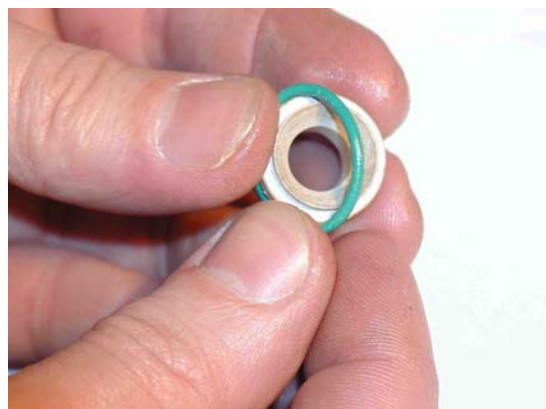
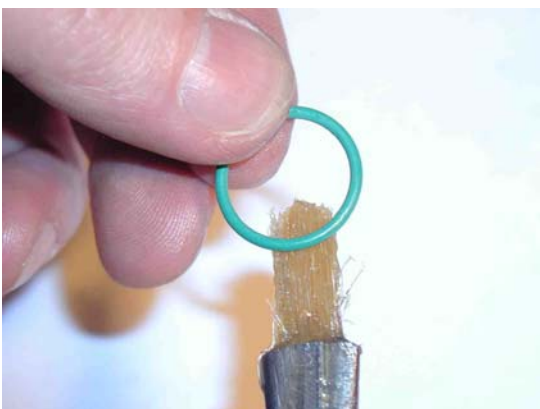


1.1.2.2 Inlet valve 1st stage

Grease the O ring and slip it onto the inlet socket.



Grease the O ring that seals the valve seat and slip it onto the valve seat.



Place the valve seat and the ball onto the inlet socket and carefully press them into the socket.

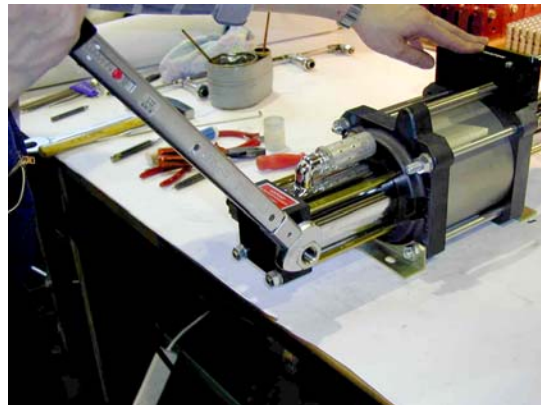


Place the spring on top of the ball.



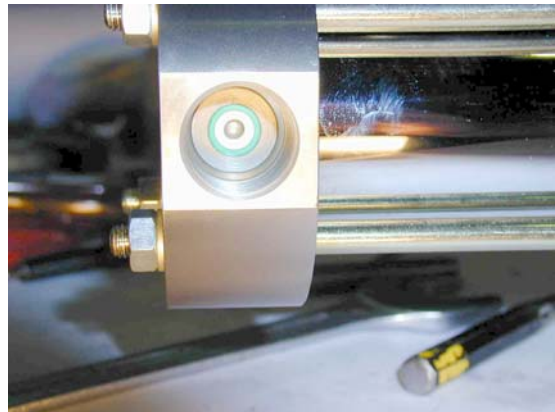
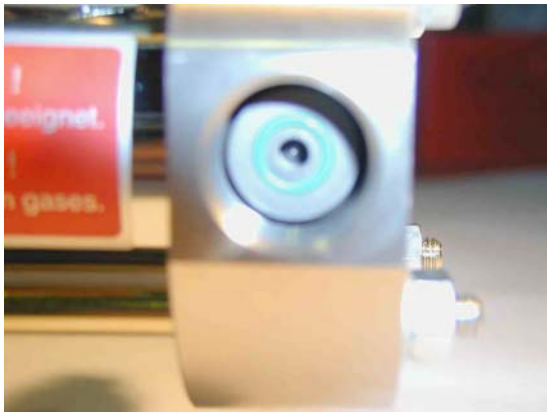
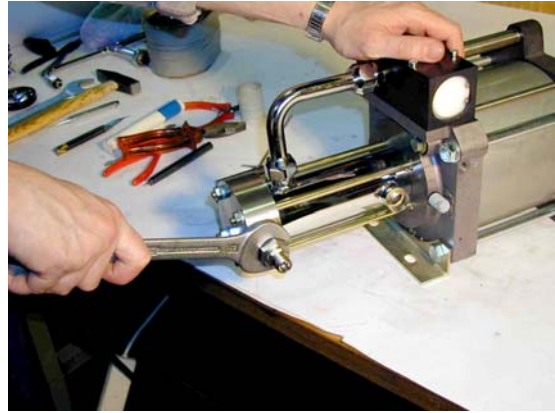
Slip the ball holder over the spring.

Screw the inlet socket into the HP head. Tighten the inlet socket with 120 Nm.

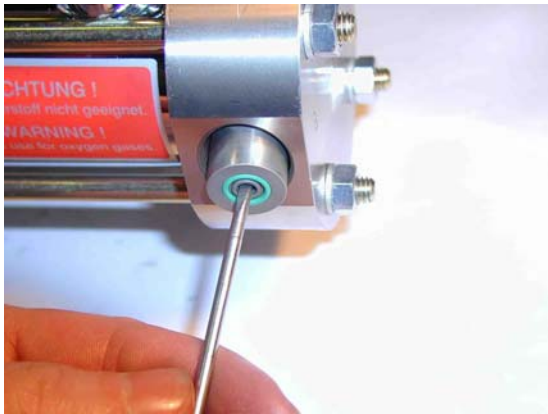


1.1.3 Dismantling 2nd stage

Unscrew the inlet and outlet sockets from the HP head, leave the valves in the HP head.

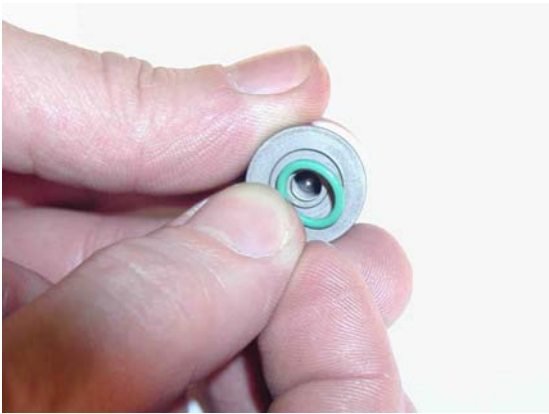
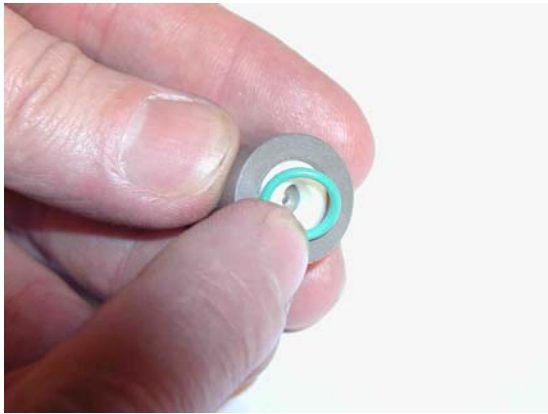


The inlet and outlet valves are of an identical design.

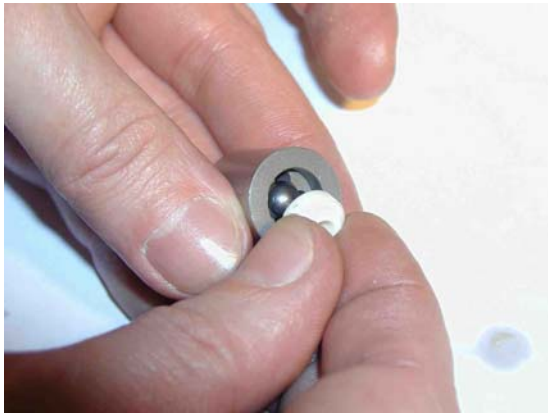


“Hook” the valves from the HP head with a screwdriver.

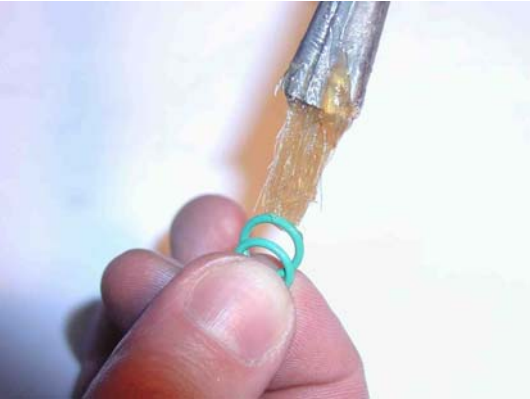



Remove the two O rings from the valve body.



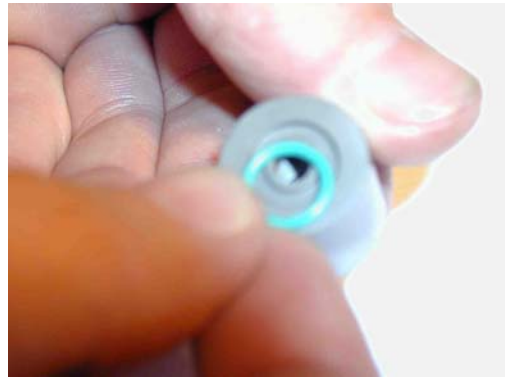
Remove the valve seat, spring and ball from the valve body.



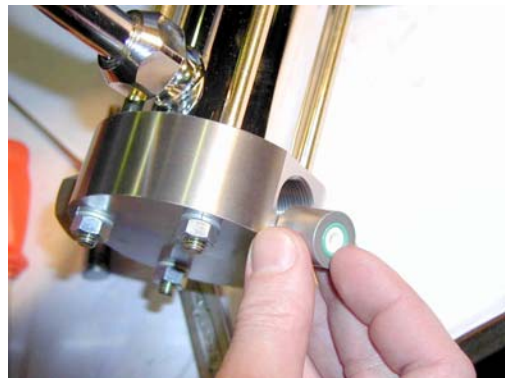
1.1.4 Assembly 2nd stage

Check the valves for damage and spring ruptures. Replace defective components.	
	Grease the O rings.
	Insert the spring into the valve body.
	Place the ball onto the spring.
	Place the valve seat onto the ball.

Mount the O rings on either side of the valves.



Insert the valves into the HP head. Make sure that the white valve seat points in the following directions: Inlet valve – outwards, Outlet valve - inwards.



Screw the inlet and outlet sockets into the HP head and tighten the sockets with 120 Nm.

