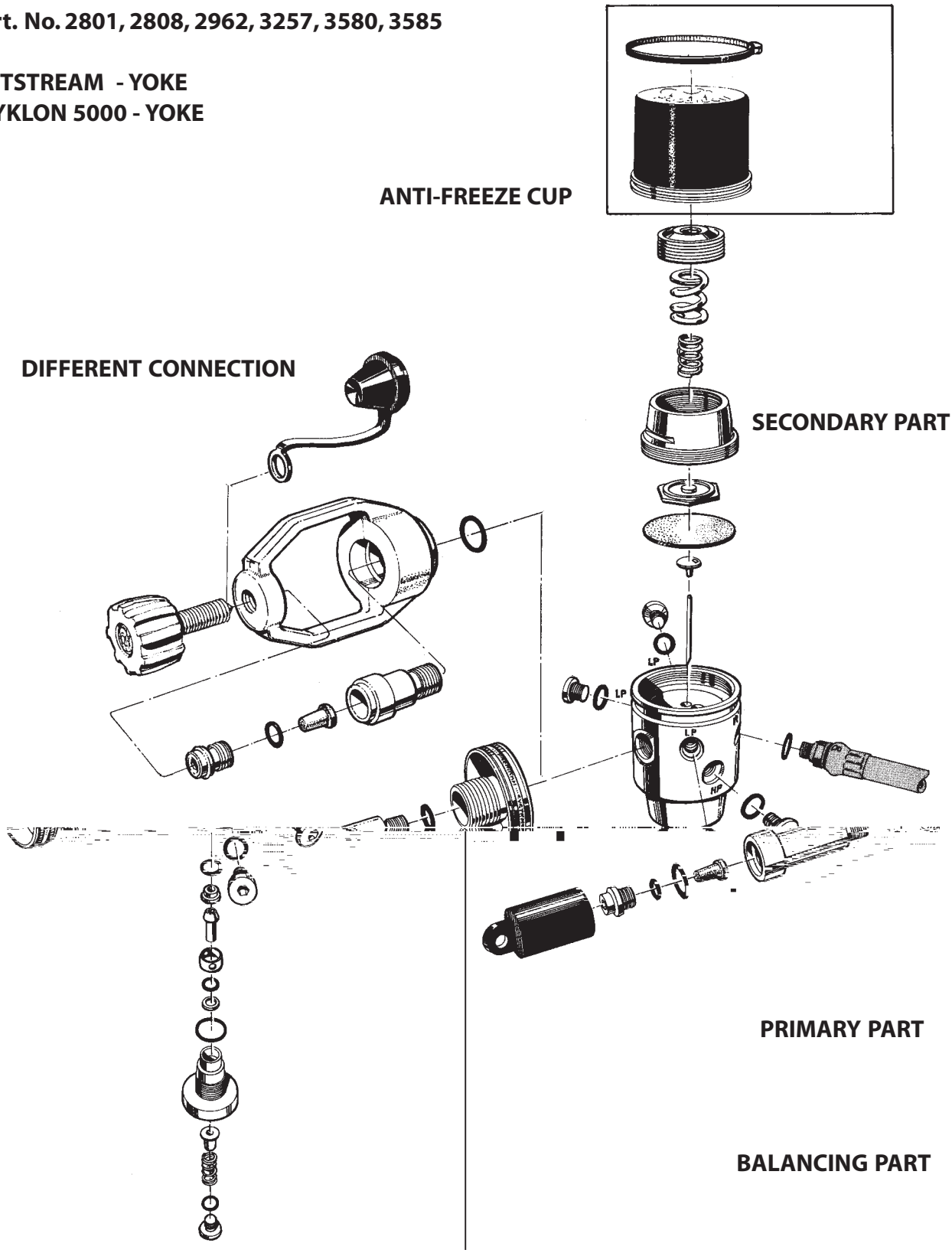
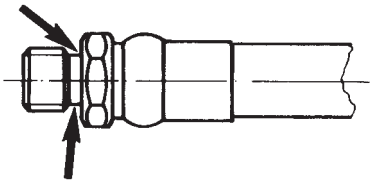
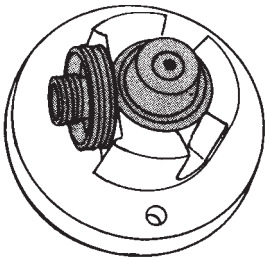
REPAIR INSTRUCTIONS FIRST STAGE REDUCING VALVE

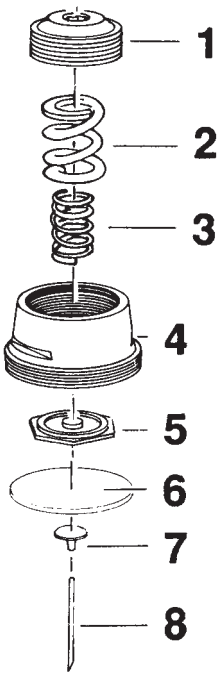
EXPLODED VIEW
Art. No. 2801, 2808, 2962, 3257, 3580, 3585

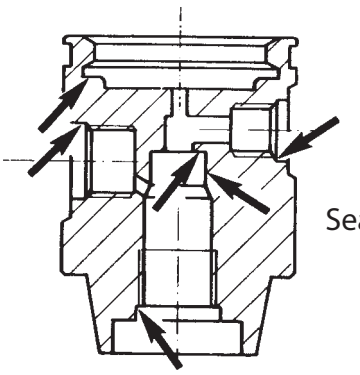
JETSTREAM - YOKE
CYKLON 5000 - YOKE











Sealing surfaces

FIRST STAGE VALVE 2801, 2808, 2962, 3257, 3580, 3585

Secondary side:

1. Disconnect the low pressure hose from the first stage valve using a 13 mm open end wrench.

2. Remove the o-ring from the low pressure hose. Make sure the sealing surfaces are not damaged.

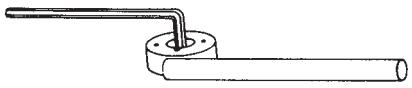
Removal:

Place the first stage valve with the secondary side facing upwards in the fixture.

1. Remove the pressure adjusting screw (1) with a 6 mm Allen wrench and remove the spring (2) and (3).

2. Remove the cover (4) using a 27 mm crowsfoot and the upper diaphragm centre (5).

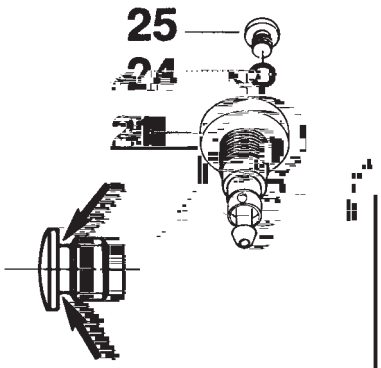
3. Remove the diaphragm. (6). Make sure the sealing surface is not damaged. Remove the lower diaphragm centre (7) and the valve needle (8).



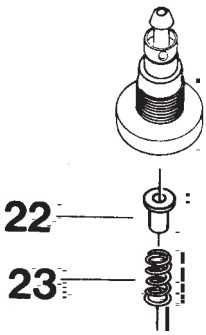
BALANCE HOUSING

Removal:

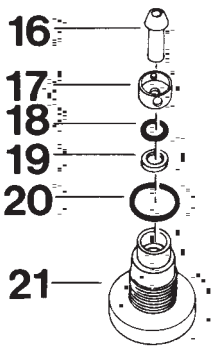
Place the first-stage valve with the balanced housing facing upwards.



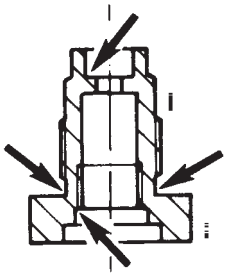
1. Steady the balance housing with a special wrench. Then remove the blind screw (25) with a 5 mm Allen wrench. Remove the o-ring(24) with an o-ring remover. Remove the balance housing (21) with the special wrench.



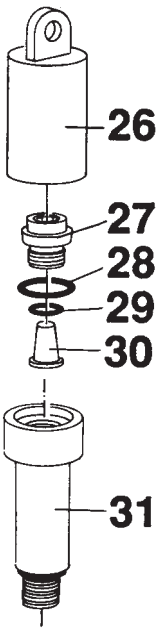
2. Remove the spring (23) and the spring guidance (22).



3. Remove the valve piston (16) and the spacing sleeve (17). Remove the o-ring (18) with an o-ring remover. Remove the washer (19) and the o-ring (20). Use an o-ring remover for this also. Make sure the sealing surfaces are not damaged.



Sealing surfaces

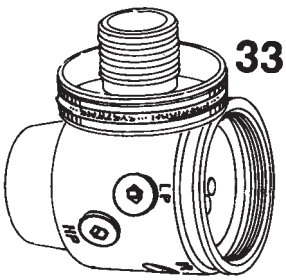


FIRST STAGE
2962, 3257, 3580, 3585

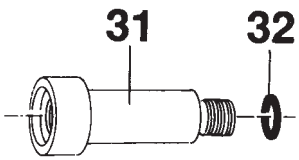
Removal:

1. Remove the protective cap (26).

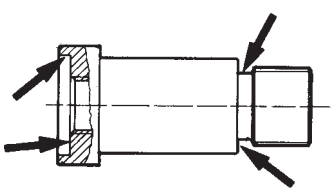
2. Remove the locking screw (27) with a 6 mm Allen wrench. Remove the o-ring (28) and the cupfilter (30).

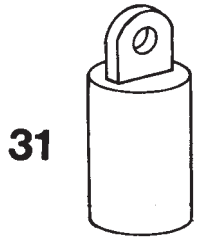


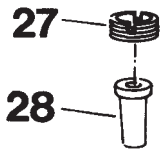
3. Place the first stage in the fixture. Remove the connecting (3 1) with a 6 mm Allen wrench.

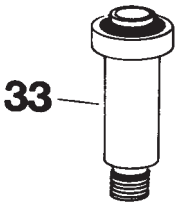


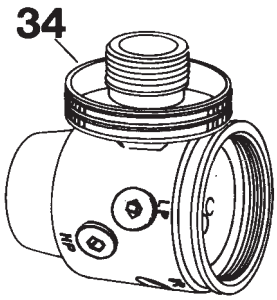
4. Remove the wheel (33) and the oring (32) with an o-ring remover. Make sure the sealing surfaces are not damaged.

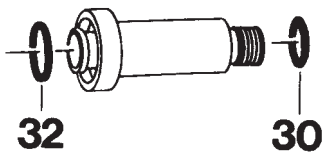


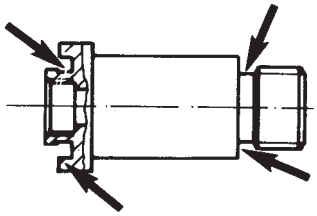












Sealing surfaces

FIRST STAGE
2801

Removal:

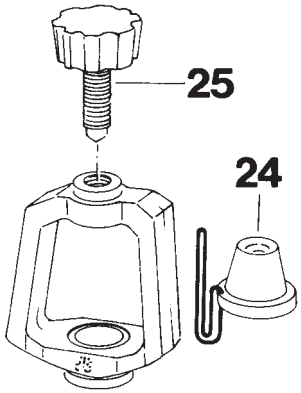
1. Remove the protective cap (3 1).

2. Remove the locking screw (27) with an 8.5 mm screwdriver. Remove the cup filter (28).

3. Place the first stage in the fixture. Remove the high pressure valve housing (33) with a 6 mm Allen wrench.

4. Remove the wheel (34).

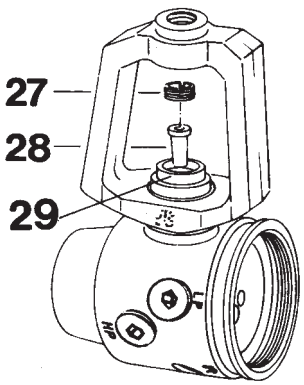
5. Remove the o-rings (30,32) with an o-ring remover. Make sure the sealing surfaces are not damaged.



FIRST STAGE
2801, 3257 10, 3585 10

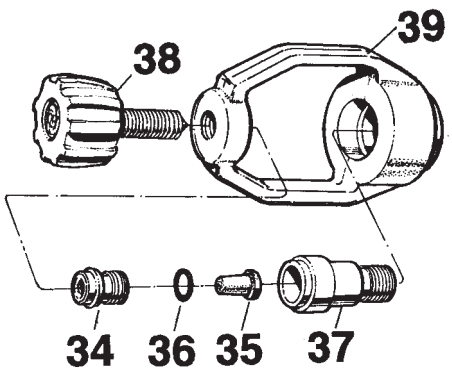
Removal:

1. Remove the protective cap (24). Unscrew the knob (25).

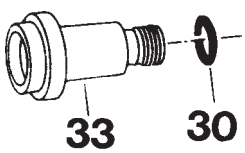


2. Remove the locking screw (27) with an 8.5 mm screwdriver. Remove the cup filter (28).

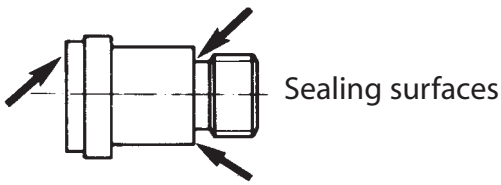
3. Remove the connection (29) with a 6 mm Allen wrench.

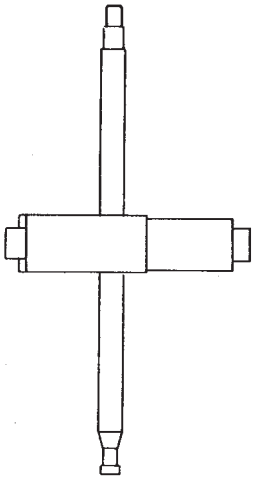


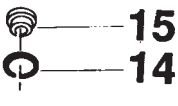
4. New model, remove the locking screw (34) with an 6 mm Allen wrench. Remove the cup filter (35) and the o-ring (36). Remove the connection (37) with an 6 mm Allen wrench.

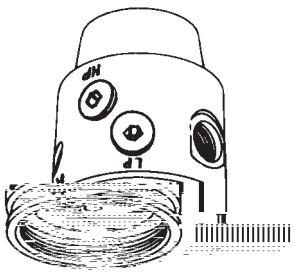


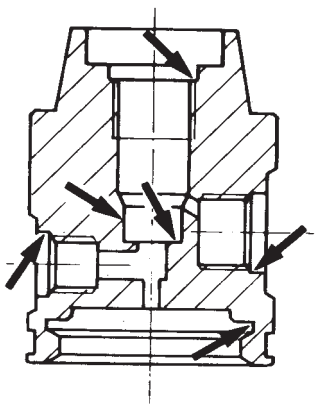
5. Remove the o-ring (30) with an o-ring remover. Make sure the sealing surface is not damaged.

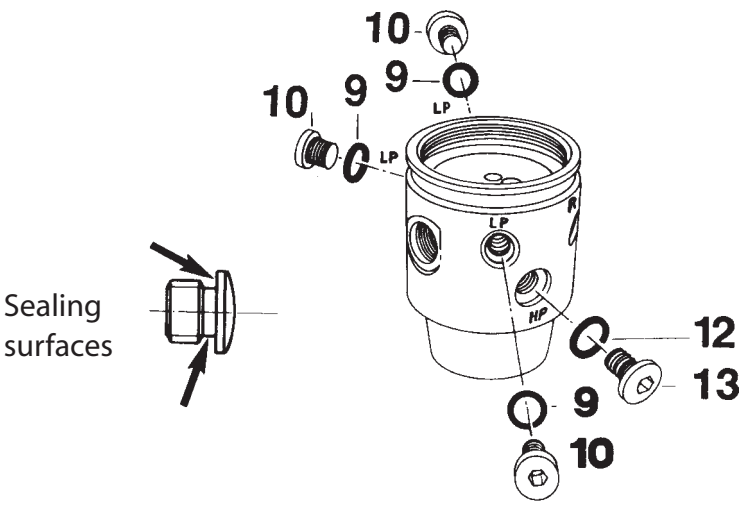


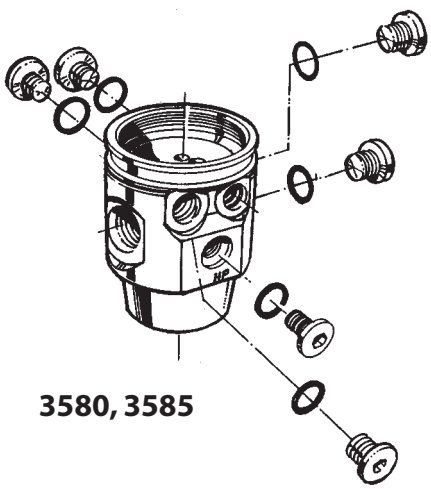












FIRST STAGE
2801, 2808, 2962, 3257, 3580, 3585

6. Remove the valve seat (15) with a valve seat remover.

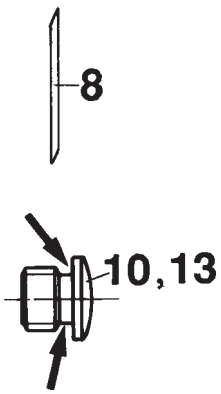
7. Remove the o-ring (14) with an oring remover. Make sure the sealing surface is not damaged.

8. Remove the valve housing from the fixture.

9. Remove the blind screw (10 and 13) with a 5 mm and 3 mm Allen wrench. Remove the o-rings (9 and 12) with an o-ring remover. Make sure the sealing surfaces are not damaged.

When servicing the regulator the following parts should be replaced:
See chapter Service-kit.

1. All o-rings
2. Diaphragm
3. Cup filter
4. Valve seat
5. Washer



CLEANING:
If corrosion or salt deposits occurs, place all metal parts – concentrated Hempocid* or 15% Hydrochloric acid for about 10 minutes. Then, rince the parts thoroughly and blow dry with air. The synthetic parts in the second stage must not be treated with solvent. They shall be cleaned in freshwater only.

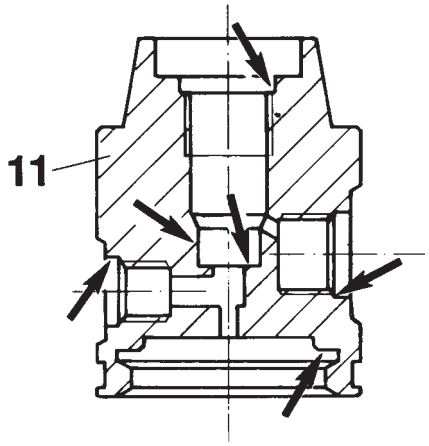
**Hempocid = Acid Liquid Detergent Containing phosphoric acid (5 - 10%) and bactericid for desinfectant cleaning.*

Checking:

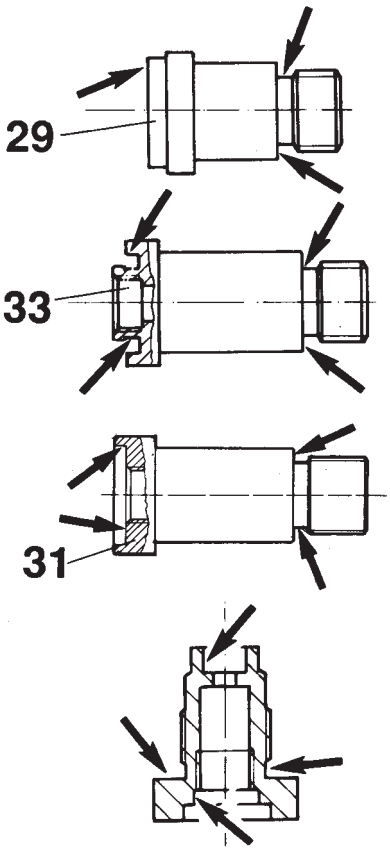
Check the following parts very carefully. Replace even if only slightly damaged.

1. Valve needle (8). Check to make sure that the needle is straight.

2. The blind screws (10 and 13). Check to make sure the sealing surfaces are undamaged. Also check that the threads are not damaged.

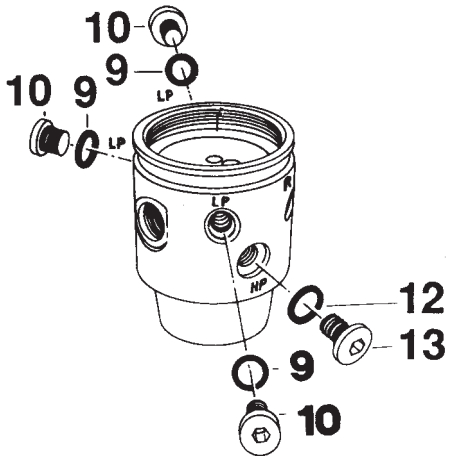


3. The valve housing (11).
   Check to make sure the threads and also the sealing surfaces for the o-rings are undamaged.



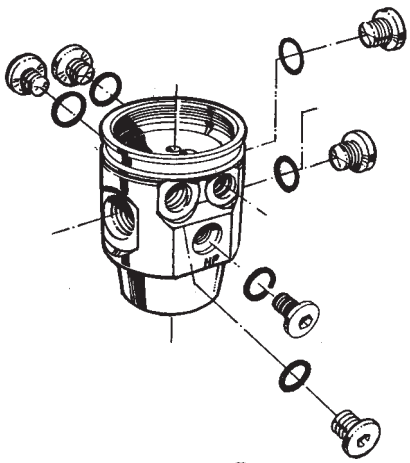
4. The connections (29,31 or 33).
   Check to make sure the sealing surfaces for the o-rings are undamaged.

5. Balanced housing (21).
   Check to make sure the threads and also the sealing surfaces for the o-rings are undamaged.

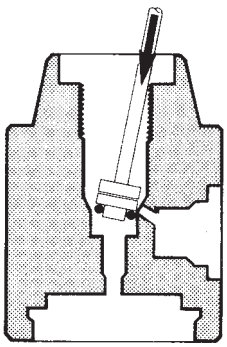


Assembly

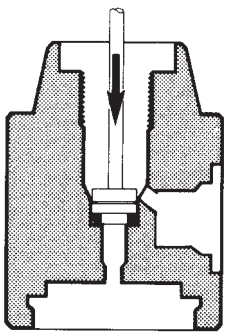
1. Install the o-rings (9) and (12) on the blind screws (10) and (13). Lubricate through the outlets.

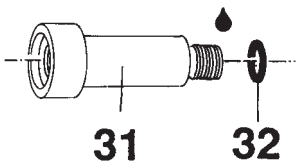


2. Screw in the blind screws in the LP- HP outlets. Use a 5 mm Allen wrench and tighten up by hand.



3. Install the o-ring (14) on the valve seat (15) and the install the valve seat with a seat drift. Press the drift diagonally as shown in the diagram and the "rock" it to the vertical while pressing down. The seat and o-ring should pop into place. This procedure avoids damage to the oring from the high pressure supply outlet.

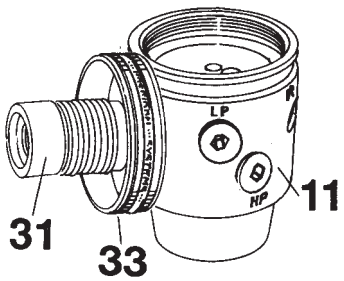




FIRST STAGE
2962, 3257, 3580, 3585

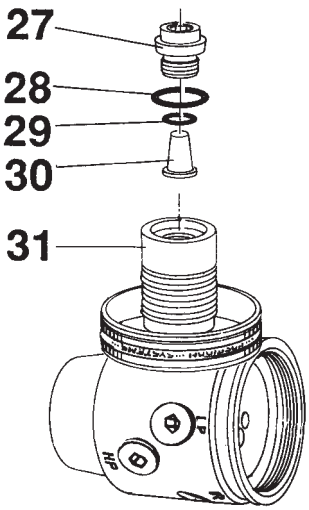
Assembly:

1. Install the o-ring (3 1) on the connection (30). Lubricate the o-ring and the thread.



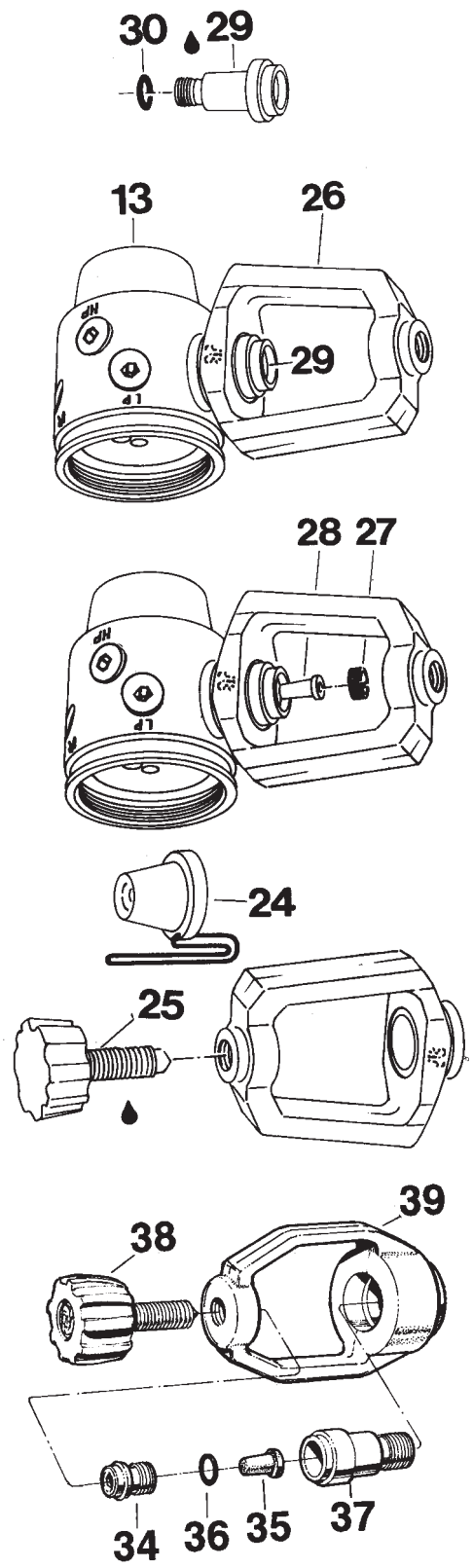
2. Install the wheel (33) on the connection.

3. Screw the wheel connection assembly into, the valve housing assembly with a 6 mm Allen wrench.



Place the valve housing (11) in a fixture. Tighten with a torque wrench to 28 - 30 Nm (20-22 lbf. ft.).

IMPORTANT! Use bits No 3119 (L = 40 mm). Put o-ring (29) on the cup type filter (30). Install these and o-ring (28) and the locking screw (27) in connection (31). Tighten with a Allen wrench 6 mm.



FIRST STAGE
2801, 3257 10, 3585 10

Assembly:

1. Install the o-ring (30) on the connection (29). Lubricate the thread and the o-ring.

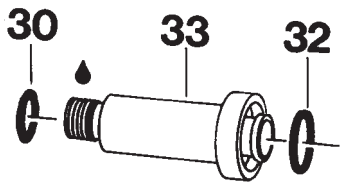
2. Place the connection (29) in the Yoke (26) and screw the connection into the valve housing (13) using a 6 mm Allen wrench. Place the valve housing in a fixture. Tighten with a torque wrench to 28 - 30 Nm.(20-22 lbf.ft). Use bits nr 2883 (length 30 mm)

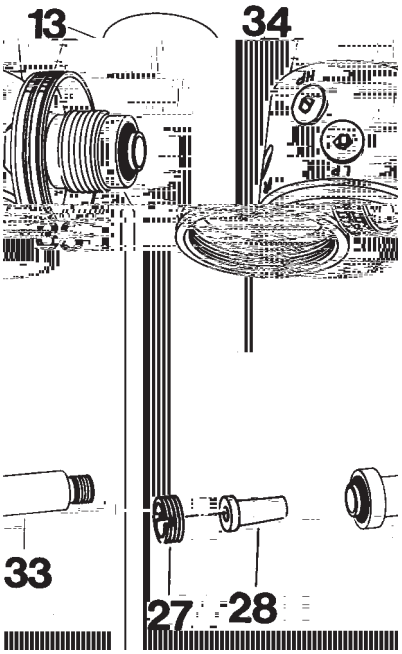
3. Install the cup filter (28). Screw in the locking screw (27) with a 8.5 mm screw driver. Install the protective cap (24).Grease the thread and screw in the knob.

4. New model. Place the connection (37) in the Yoke (39) and screw the connection into the valve housing, using a 6 mm Allen wrench. Place the valve housing in a fixture. Tighten with a torque wrench to 28 - 30 Nm (20 - 22 lbf.ft). Use bits nr 3119 (length 40 mm)

5. Install the o-ring(36) on the cup type filter(35). Place the filter in the connection(37).

6. Install the protective cap, grease the thread and screw in the knob.





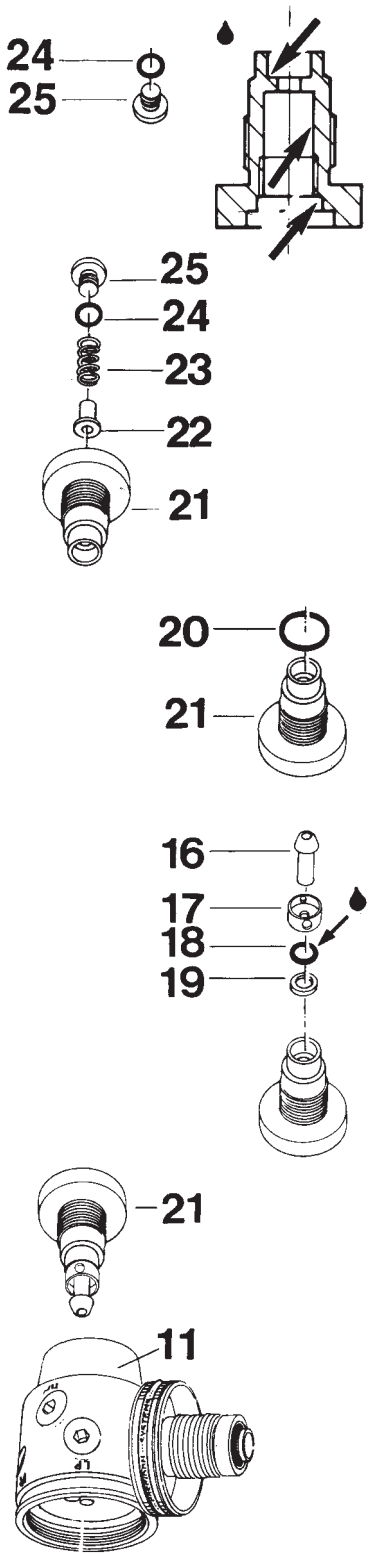
FIRST STAGE
2808

Assembly:

1. Install the o-rings (30,32) on the connection (33). Grease the o-ring (30) and thread.

2. Fit the connection (33) to the wheel (34) and screw it into the valve housing (13) with a 6 mm Allen wrench. Place the valve housing in torque wrench to 28 - 30 Nm.(20-22 lbf.ft).

3. Install the cup filter (28) screw in the locking screw (27) with an 8.5 mm screwdriver.



FIRST STAGE

BALANCED HOUSING

1. Install the o-ring (24) on the blind screw G 1/8" (25).

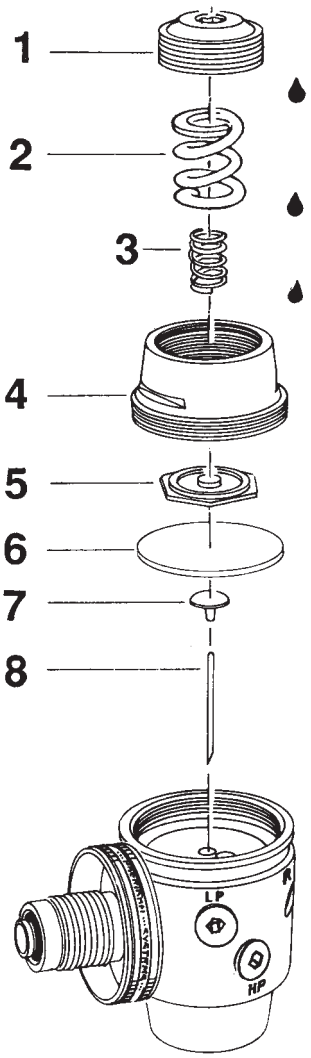
2. Grease the inside of balanced housing (21).

3. Install the spring guide (22) and the spring (23). Serew in the blind screw (11) with a 5 mm Allen wrench. The blind screw should be tightened while the balanced housing is held in the valve housing.

4. Install the o-ring (20) at the balanced housing .

5. Install the washer (19)and the oring (18). Grease the inside of oring and the washer. Install the spacing sleeve (17) and the valve piston (16).

6. Install the balanced housing (21) in the valve housing (11) and tighten the blind screw with a Allen wrench to 10Nm/7 lbf.ft.



7. Turn the valve housing with the secondary side upwards.

8. Install the valve needle (10). At previous models the needle was beveled in one edge. The bevel should in these cases be pointed downwards.

9. Install the lower diaphragm centre (7) and the diaphragm (6), which must be pushed into the groove in the valve housing. Check to make sure that this is correctly installed by pressing it downwards.
It should move approximately 2 mm (1/16").

10. Install the upper diaphragm centre (5).

11. Install the cover (4) and tighten with a torque wrench to 28 - 30 Nm. (20-22 lbf.ft).

12. Install the spring (2) and (3), lubricate both ends of the spring and the thread on pressure adjusting screw, and tighten 5 turns with a 6 mm Allen wrench.