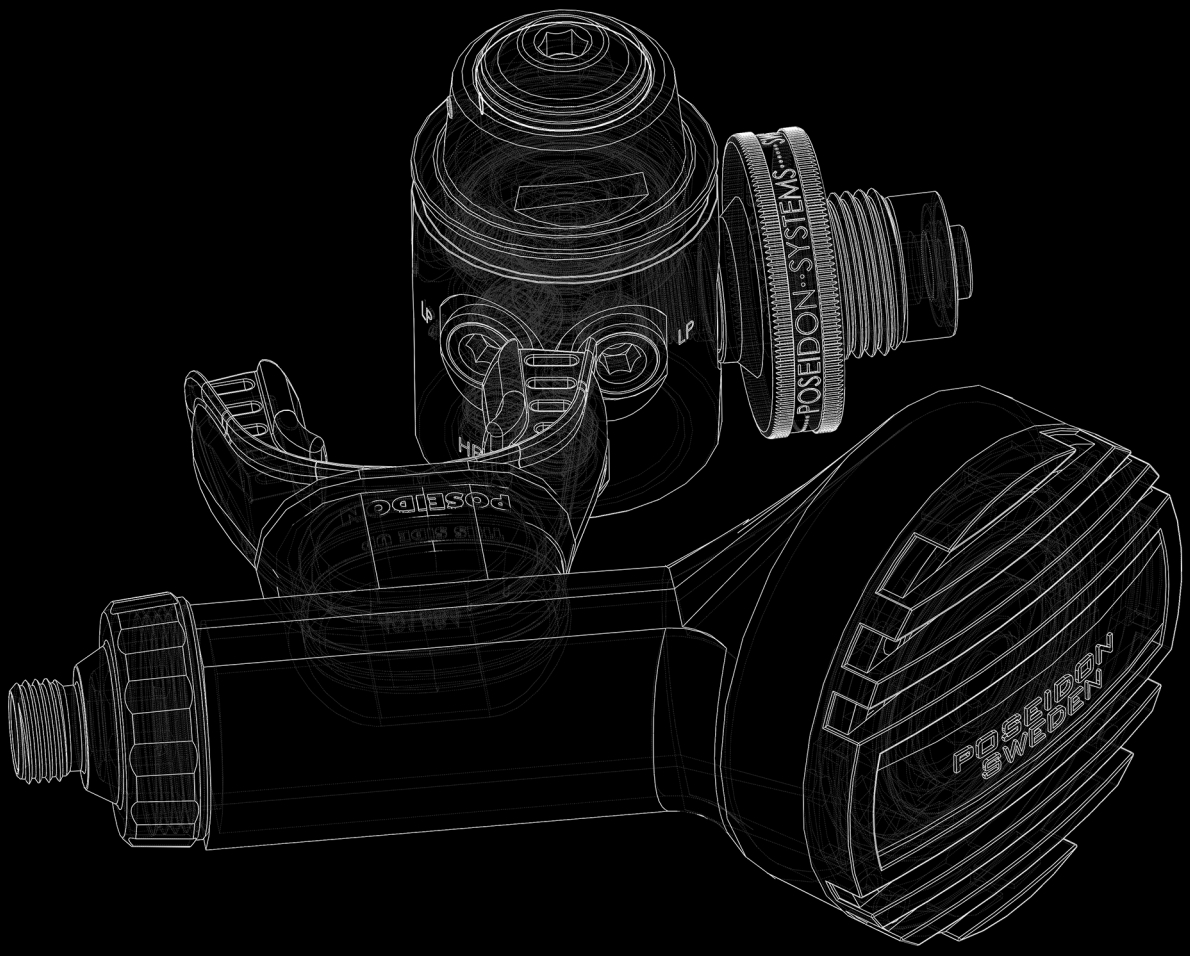
JETSTREAM Art. Nmbr 3960

SERVICE MANUAL V2.0



GÖTEBORG SWEDEN
POSEIDON

JETSTREAM - Article number 3960 / 3960 10

TABLE OF CONTENT

Chapter	Page
Important information	3
Function	4
Tools	5
Jetstream (art. nmbr 3960 / 3960 10) specifications	7
Second stage exploded view	8
Second stage parts list	9
First stage 3790 exploded view and parts list	10
First stage 3790 10 exploded view and parts list	11
Second stage disassembly instructions	12
Second stage assembly instructions	15
Second stage adjustments	18
First stage disassembly	19
First stage assembly with cleaning instructions	24
First stage settings and adjustment	29

IMPORTANT

This manual contains preliminary servicing instructions for the Poseidon breathing regulators. It is intended to serve as a guide for repairs and servicing carried out by service technicians certified by Poseidon Diving Systems. The instructions given in this manual are based on the assumption that special tools are used and are based on our experience.The work should be done in the same order as shown in these instructions.

TYPE DESIGNATIONS

In all correspondence concerning breathing regulators, indicate the type designation and serial number. All products in this servicemanual that requires a CE-approval are of course CE-approved. CE approval represents only a minimum level of product quality and manufacturing standards. At Poseidon we put each new addition through rigorious testing procedures our selves. This is the only proper method to ensure that your equipment will live up to our claims.

CLEANING

If corrosion or salt deposits occurs, place all metal parts in concentrated Hempocid* or 15% Hydrochloric acid for about 10 minutes. If available, all metal parts can be placed in an ultrasonic washer and cleaned in accordance with the instructions of the cleaning solution used.

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.*

LUBRICANTS USED

The following lubricant/oil are used:

Regulator Lubricant: Art no 8516

Oil: Silicon oil Art no 3139

SERVICE KITS

The following service kits should be used:

Second stage No. 2961, 3546, 0120-005 : Service kit no. 3549

First stage No. 3790, 3790 10: Service kit no. 3769

FUNCTION

POSEIDON breathing regulator is a two-stage regulator where the first stage is a diaphragm-actuated reducing valve, whith reduces the primary pressure (Cylinder pressure) to approx. 123 PSI/8,5 BAR. The reduced pressure (the secondar'y pressure) then goes via the regulator hose to the second stage where the air supply is automatically regulated to the convenience of the diver.

The first-stage always holds the adjusted pressure above the ambient pressure which is necessary to the function of the breathing regulator. This is brought about, the outer springloaded diaphragm being in contact with the ambient pressure. It automatically responds to this pressure acting it and thereby regulates all changes in pressure.

During diving in cold water, i.e, temperatures lower than +10°C (+50°Farenheit), the outer spring housing of the first stage may be provided with an anti-freeze cap in order to prevent direct contact with the water.This is necessary as the considerable cooling that takes place when the primary air expands in the secondary chamber can otherwise cause ice to form and thereby prevent the springs and diaphragm from functioning.

The second-stage functions in such a way that the underpressure created in the regulator housing during each inhalation influences a diaphragm actuated valve system, which will supply the necessary air as long as the inhalation phase lasts. The automatic pressure compensation takes place in the same way as in the first stage, the outer diaphragm surface being in direct contact with ambient pressure, and the pressure on the inside of the diaphragm must correspond to ambient pressure before the diaphragm can return to its position. The diaphragm retums to its rest position and shuts off the air flowing in as soon as the inhalation phase has been broken off and the air pressure in the regulator housing has become equal to ambient pressure.

The second stage fias been provided with an ejector system for the purpose of keeping inhalation effort to a minimum.

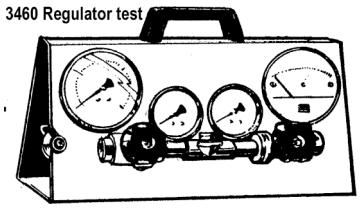
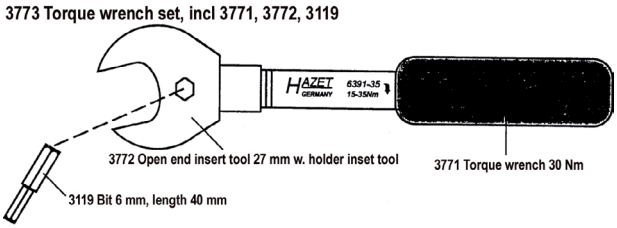
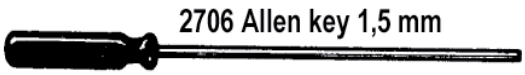
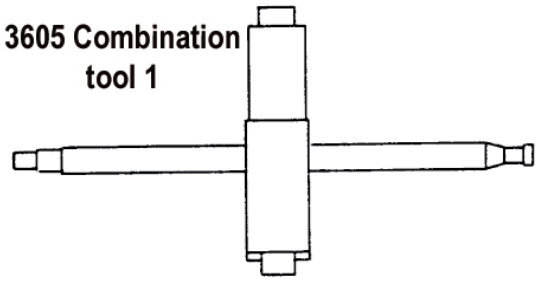
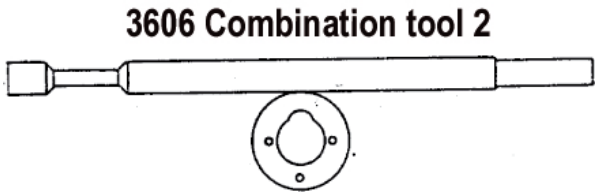
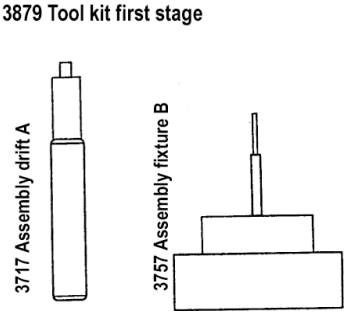
During the exhalation phase, the exhaled air goes out through the exhalation diaphragm on the opposite side of the inhalation diaphragm into the ambient medium. The exhalation diaphragm closes automatically when exhalation stops. Also, the exhalation diaphragm regulates the necessary pressure compensation by closing when the ambient pressure is equal.The special construction of the exhalation section of the regulator has been designed to obtain high capacity with low exhalation effort.

The second stage bas a built in purge button, for manual purging.

TOOLS

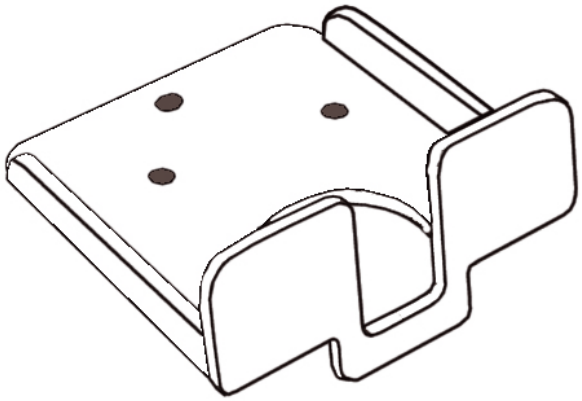
To service Poseidon Jetstream regulators, a mix of standard tools and specific Poseidon special tools are needed. The list below shows what specific Poseidon tools and what standard tools are needed.

Poseidon specific tools

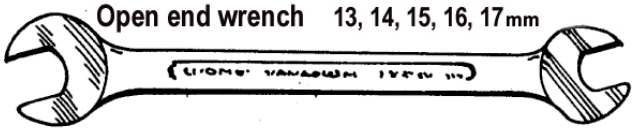
Article nmbr.	Description	Picture
2297	O-ring remover	
3460	Regulator test	
3773	Torque wrench set	
2706	Allen key 1,5 mm	
3605	Combination tool 1	
3606	Combination tool 2	
3879	Tool kit	

TOOLS

Poseidon specific tools continues.

Article nmbr.	Description	Picture
8516	Regulator lubricant	
3397 10	Fixture for first stages	

Standard tools

Article nmbr.	Description	Picture
	Open end wrenches	
	Screwdriver, philips head	
	Allen keys, 4, 5, 6 mm	

JETSTREAM **Art No 3960**

BREATHING REGULATOR

Primary pressure.....Max 4351 PSI / 300 BAR
Secondary pressure.....Max 145 PSI/ 10 BAR
Airflow.....Approxemately 1600l/min
Inhalation resistance at 115 l/min.....Max. 40 mm of water
Exhalation recistance.....Max. 20 mm of water
The above data apply when measuring at atmospheric pressure

FIRST STAGE VALVE **Art No 3790, 3790 10**

Description.....Diaphgram-actuated balanced with shear venturi boost. Release pressure approx. 217-247 PSI / 1,5-1,7 MPa / 15-17 bar

Connection threads for primary pressure.....G 5/8'' -max 4350 PSI /30 MPa /300 bar accord. SS 2600/K and DIN 477/5 or yoke connection accord. SS 2603 and ANSI/CGA V1: 1987

Outlet connections:
One outlet marked R for second stage
(max. airflow).....UNF 3/8'' - secondary pressure
Three outlets marked LP for Jetstream octopus,
drysuits, stadjacket.....UNF 3/8'' -secondary pressure
Two outlets marked HP for pressure gauge.....UNF 7/16'' -primary pressure

SECOND STAGE VALVE **Art No 2961, 3546, 0120-005, 0120-006**

Description.....Upstream diaphragm actuated, servo assisted with safety relief, fixed ejector system. Purge button for clearing. Sensivity switch for added control.

REGULATOR HOSE WITH INTEGRAL SAFETY VALVE **Art No 2946, 4680-70**

Length.....28 inch / 70 cm
Release pressure .....Approx. 247 PSI / 17 bar

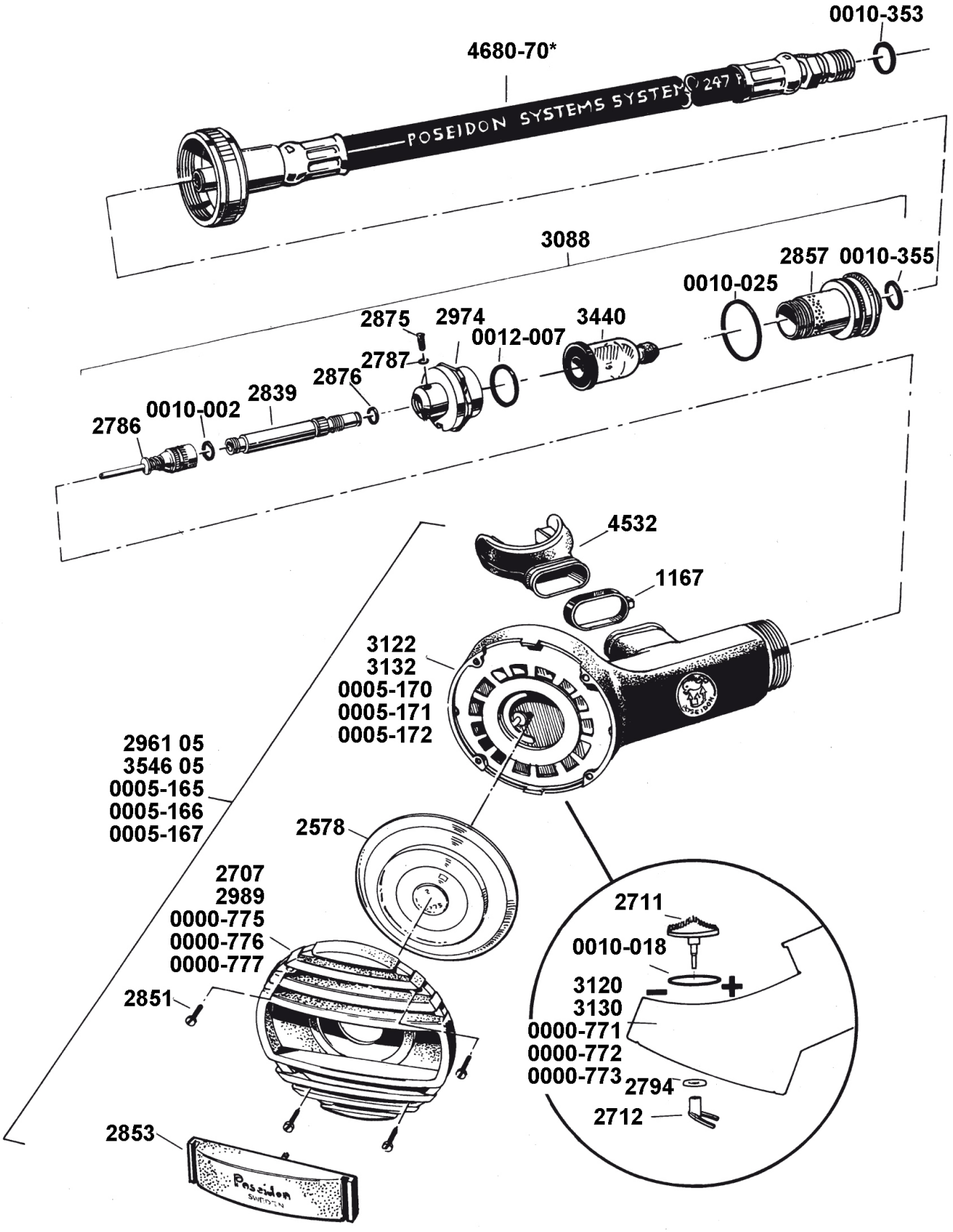
TIGHTENING TORQUE

Primary connection .....20 - 22 lbf.ft / 28 - 30 Nm
Valve cover .....20 - 22 lbf.ft / 28 - 30 Nm
Connections marked R-LP-HP.....6 lbf.ft / 8 Nm
Balanced housing .....7 lbf.ft / 10 Nm

ANTI-FREEZE PROTECTION **Art No 1286**

Type .....Rubber cap

Exploaded view: 2nd stage 2961, 3546, 0120-005, 0120-006, 0120-020, 0120-030, 0120-080



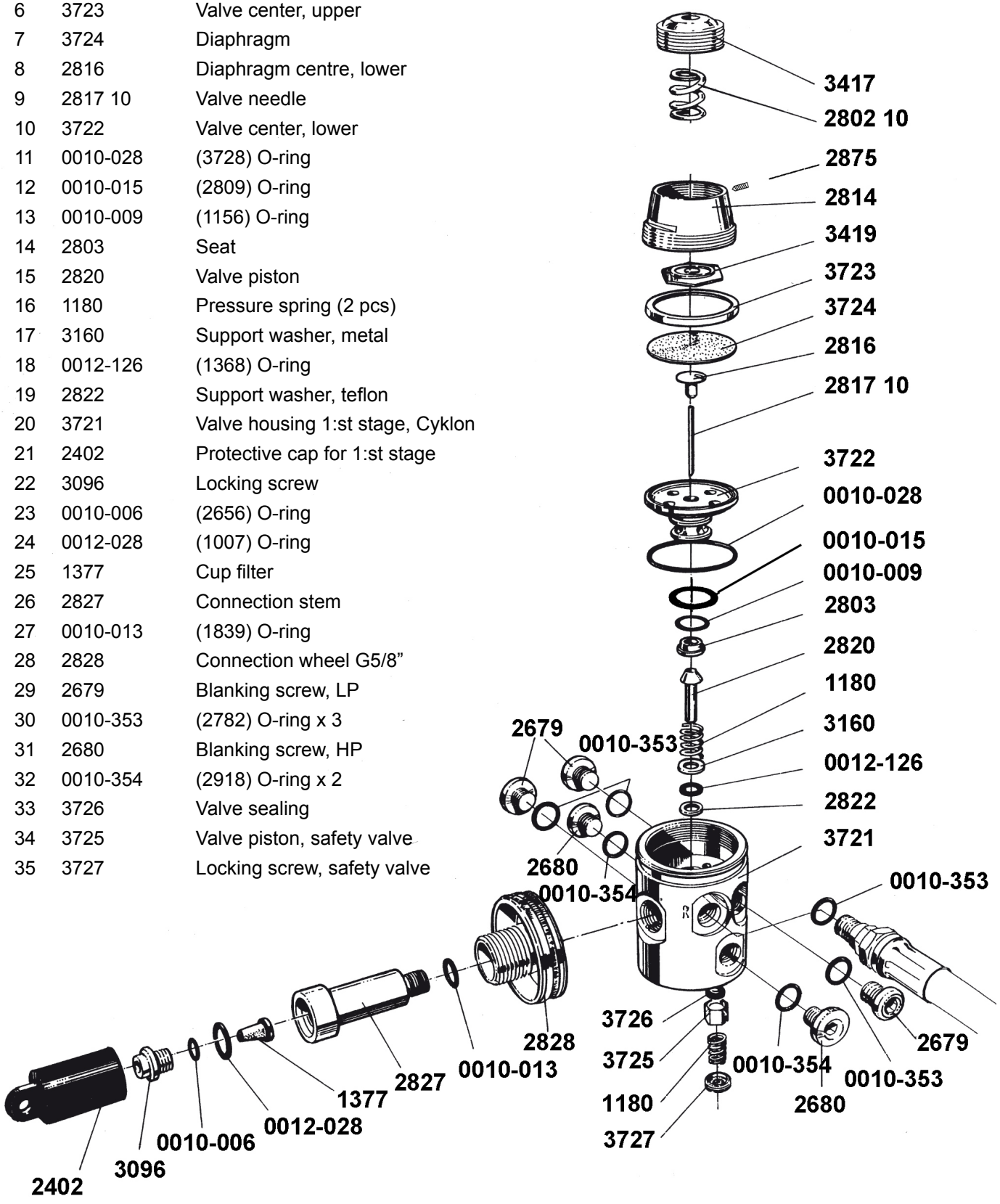
Parts list: 2nd stage 2961, 3546, 0120-005, 0120-006, 0120-020, 0120-030, 0120-080

	Art. Nmbr.	Description
1	0010-353	(2782) O-ring
2	4680-70	LP hose with built in OPV*, 70 cm / 27,5 inch
	4680-90	LP hose with built in OPV*, 90 cm / 35,4 inch
3	3088	Low pressure valve, complete
4	0010-355	(2856) O-ring
5	2857	LP valve house
6	0010-028	(1145) O-ring
7	3440	Valve insert
8	0012-007	(1233) O-ring
9	2947	Valve house nut
10	2875	Stop screw M3x4
11	2787	Rubber plate
12	0015-019	(2876) O-ring
13	2839	Valve tube, Jetstream
14	0010-002	(1896) O-ring
15	2786	Servo valve Jetstream, complete
16	4532	Mouthpiece
17	1167	Locking strap
18	3122	Housing with switch, Black
	3132	Housing with switch, Yellow
	0005-170	Housing with switch, Blue
	0005-171	Housing with switch, Red
	0005-172	Housing with switch, Grey
19	2578	Membrane with washer
20	2707	Cover 2nd stage Jetstream, Black
	2989	Cover 2nd stage Jetstream, Yellow
	0000-775	Cover 2nd stage Jetstream, Blue
	0000-776	Cover 2nd stage Jetstream, Red
	0000-777	Cover 2nd stage Jetstream, Grey
21	2851	Screw M2x8
22	2853	Purge button
23	2961 05	LP Valve Jetstream, Black
	3546 05	LP Valve Jetstream, Yellow
	0005-165	LP Valve Jetstream, Blue
	0005-166	LP Valve Jetstream, Red
	0005-167	LP Valve Jetstream, Grey
24	2711	Switch
25	0010-018	(1851) O-ring
26	3120	Demand valve housing, Black
	3130	Demand valve housing, Yellow
	0000-771	Demand valve housing, Blue
	0000-772	Demand valve housing, Red
	0000-773	Demand valve housing, Grey
27	2794	Lock washer
28	2712	Diaphragm cam

*Only hose with built in OPV can be used.

Exploaded view: 1st stage 3790

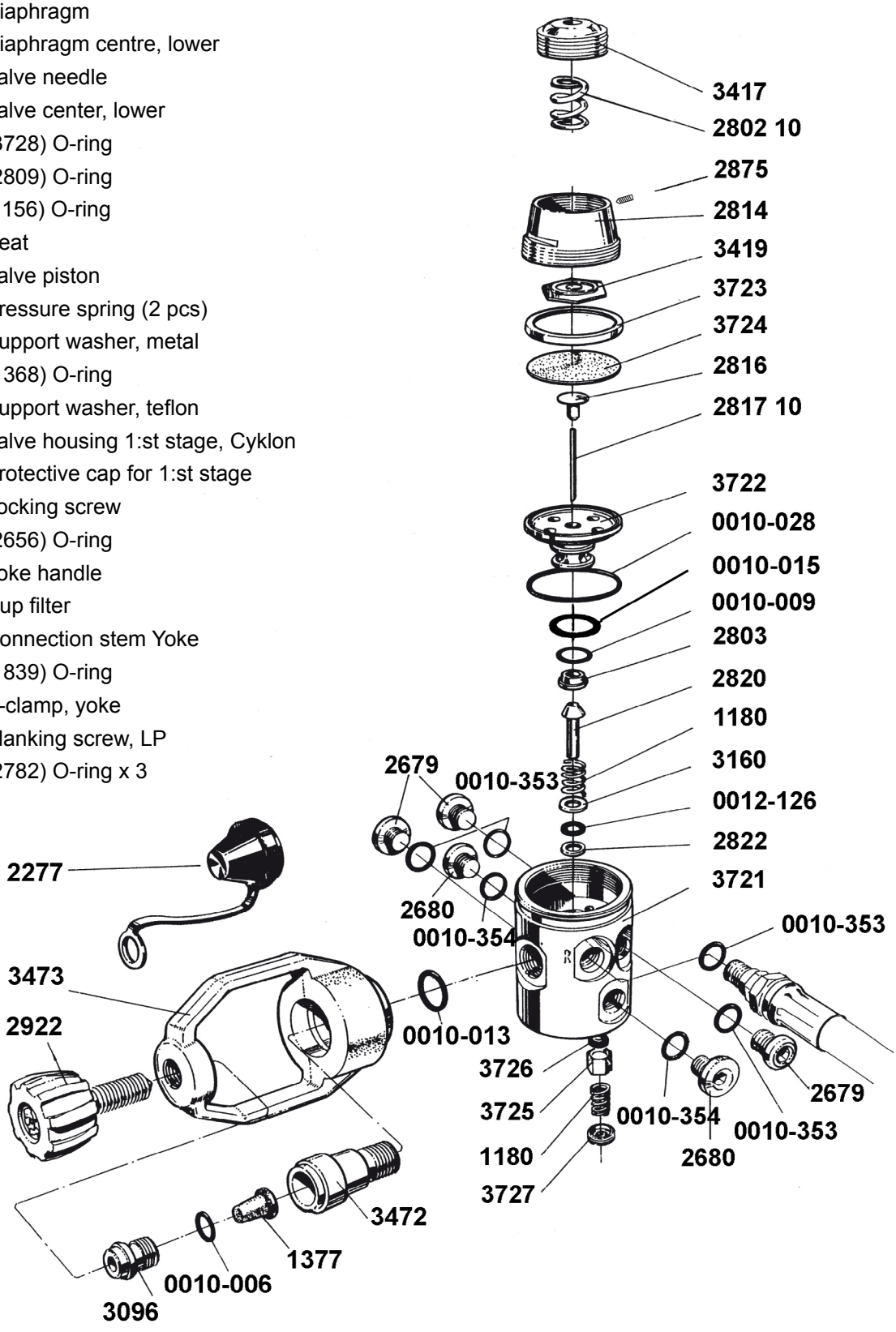
	Art. Nmbr.	Description
1	3417	Adjustmen screw
2	2802 10	Adjustment spring
3	2875	Locking screw
4	2814	Cover for valve housing
5	3419	Upper diaphragm center
6	3723	Valve center, upper
7	3724	Diaphragm
8	2816	Diaphragm centre, lower
9	2817 10	Valve needle
10	3722	Valve center, lower
11	0010-028	(3728) O-ring
12	0010-015	(2809) O-ring
13	0010-009	(1156) O-ring
14	2803	Seat
15	2820	Valve piston
16	1180	Pressure spring (2 pcs)
17	3160	Support washer, metal
18	0012-126	(1368) O-ring
19	2822	Support washer, teflon
20	3721	Valve housing 1:st stage, Cyklon
21	2402	Protective cap for 1:st stage
22	3096	Locking screw
23	0010-006	(2656) O-ring
24	0012-028	(1007) O-ring
25	1377	Cup filter
26	2827	Connection stem
27	0010-013	(1839) O-ring
28	2828	Connection wheel G5/8”
29	2679	Blanking screw, LP
30	0010-353	(2782) O-ring x 3
31	2680	Blanking screw, HP
32	0010-354	(2918) O-ring x 2
33	3726	Valve sealing
34	3725	Valve piston, safety valve
35	3727	Locking screw, safety valve



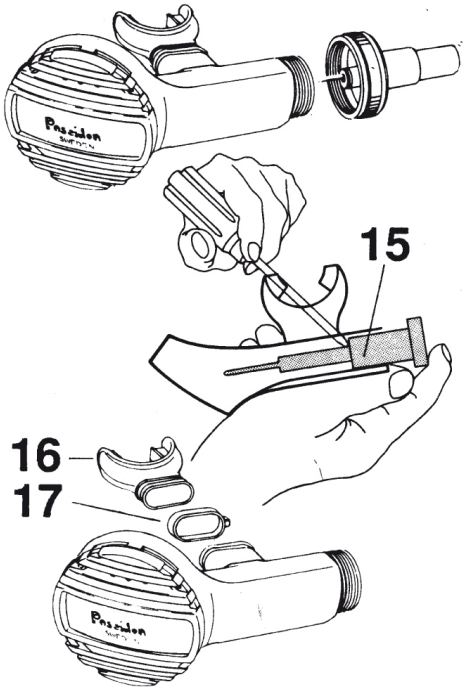
Exploaded view: 1st stage 3790 10

	Art. Nmbr.	Description
1	3417	Adjustmen screw
2	2802 10	Adjustment spring
3	2875	Locking screw
4	2814	Cover for valve housing
5	3419	Upper diaphragm center
6	3723	Valve center, upper
7	3724	Diaphragm
8	2816	Diaphragm centre, lower
9	2817 10	Valve needle
10	3722	Valve center, lower
11	0010-028	(3728) O-ring
12	0010-015	(2809) O-ring
13	0010-009	(1156) O-ring
14	2803	Seat
15	2820	Valve piston
16	1180	Pressure spring (2 pcs)
17	3160	Support washer, metal
18	0012-126	(1368) O-ring
19	2822	Support washer, teflon
20	3721	Valve housing 1:st stage, Cyklon
21	2402	Protective cap for 1:st stage
22	3096	Locking screw
23	0010-006	(2656) O-ring
24	2922	Yoke handle
25	1377	Cup filter
26	3472	Connection stem Yoke
27	0010-013	(1839) O-ring
28	3473	A-clamp, yoke
29	2679	Blanking screw, LP
30	0010-353	(2782) O-ring x 3

	Art. Nmbr.	Description
31	2680	Blanking screw, HP
32	0010-354	(2918) O-ring x 2
33	3726	Valve sealing
34	3725	Valve piston, safety valve
35	3727	Locking screw, safety valve
36	2277	Protective cap, yoke



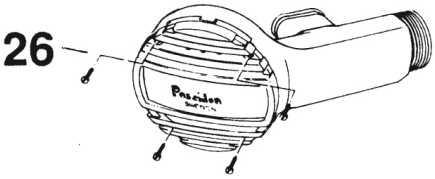
DISASSEMBLY - 2nd STAGE 2961, 3546, 0120-005, 0120-006, 0120-020, 0120-030, 0120-080



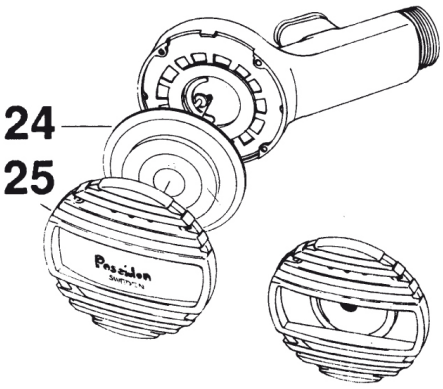
Disconnect the low pressure hose from the second stage.

Remove the low pressure valve from the housing (15) with a screwdriver.Make sure the servo valve needle is not bent. Be sure to hold the low pressure valve carefully, to avoid dropping it (see figure).

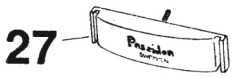
Cut off the locking strap (17) with cutting pliers. Remove the mouth piece (16).



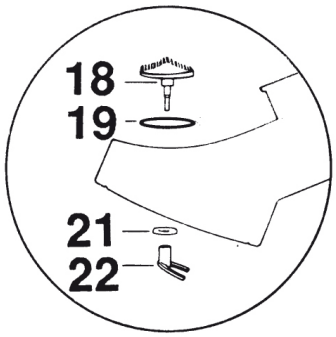
Unscrew the 4 screws (26) with a 3.5 mm screwdriver.



Remove the cover (25) and the diaphragm (24).



Remove the purge button (27).

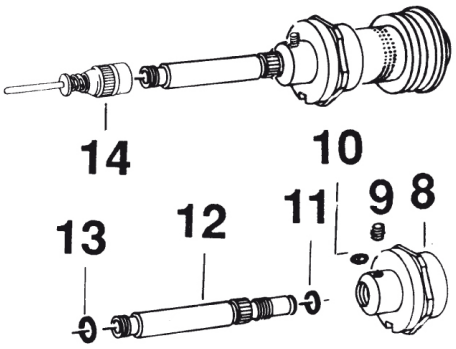


IMPORTANT
The switch should not be removed if it is undamged.

Removal:

- Pull out the diaphram cam (22).
- Cut off the switch (18) with a pair of cutting pliers close to the locking washer (21). Remove the switch.
- Remove the o-ring (19).

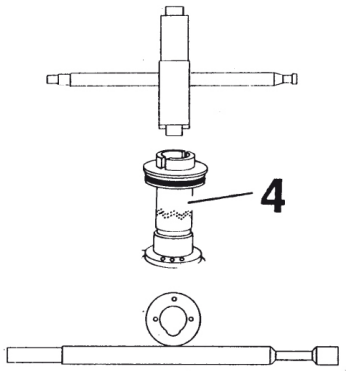
DISASSEMBLY - 2nd STAGE 2961, 3546, 0120-005, 0120-006, 0120-020, 0120-030, 0120-080



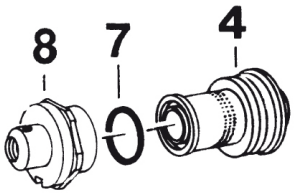
Remove the servo valve (14).

Unscrew the stop screw (9) and remove the valve tube (12). Remove the o-rings (11) (13) with an o-ring remover. Make sure the sealing surfaces are not damaged.

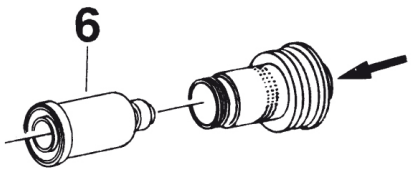
Remove the rubber plate (10).



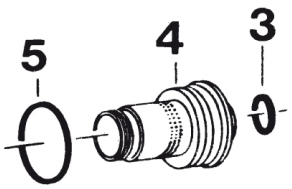
Place the valve housing in the tool. Unscrew the valve housing (4) with a special spanner.



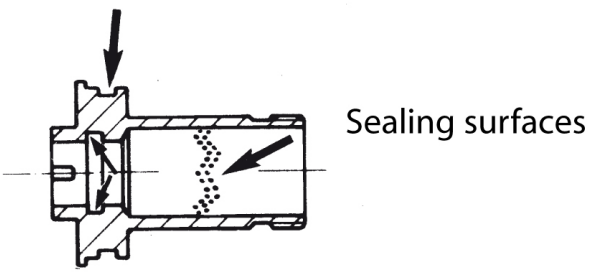
Remove the o-ring (7) with an oring remover.Make sure the sealing surfaces are not damaged.



Remove the valve insert.



Remove the o-rings (5) (3) with an o-ring remover. Make sure the sealing surfaces are not damaged.

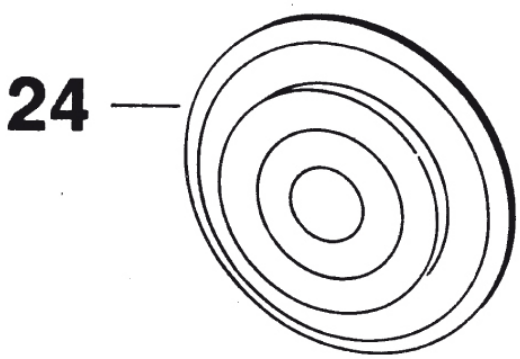


DISASSEMBLY - 2nd STAGE 2961, 3546, 0120-005, 0120-006, 0120-020, 0120-030, 0120-080

When servicing the 2nd stage all o-rings, including the one in the low pressure hose, shoudl be replaced.

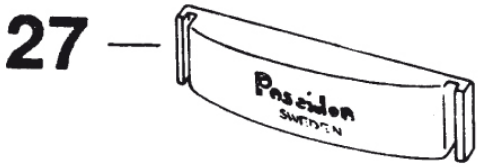
CLEANING:
If corrosion or salt deposits occurs, place all metal parts in an ultrasonic washer or in a 15% Hydrochloric acid solution for about 10 minutes.Then, rince the parts thoroughly and blow dry with air. The synthetic parts in the second stage must not be treated with solvent.They shall be cleaned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

BEFORE ASSEMBLY CHECK THE FOLLOWING:



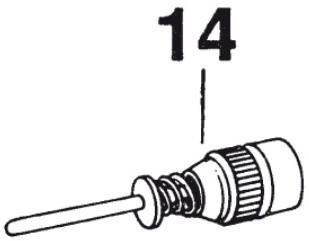
Diaphragm (24). Check that the sealing surface of the diaphragm is even. Also check that there are no holes in the diaphragm and that the diaphragm washer is properly fixed in position.

The mouth-piece (16).Make sure there are no cracks.



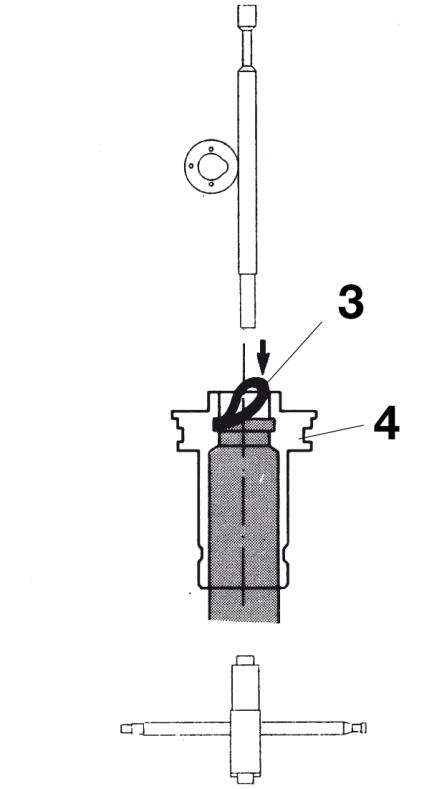
The purge button (27).Make sure there are no cracks. Check to make sure the spring is undamaged.

Servo valve (14). Check to make sure that the valve bar is not bent.



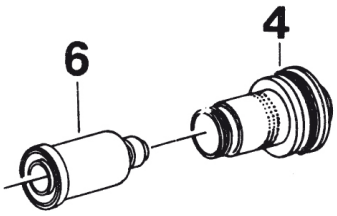
The switch: Put the switch into - and +position. It should be moved rather slowly, control the position of the diaphragm and that it is properly tighten.

ASSEMBLY - 2nd STAGE 2961, 3546, 0120-005, 0120-006, 0120-020, 0120-030, 0120-080

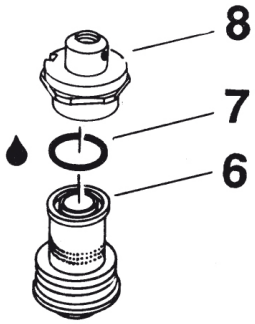


Assembly:

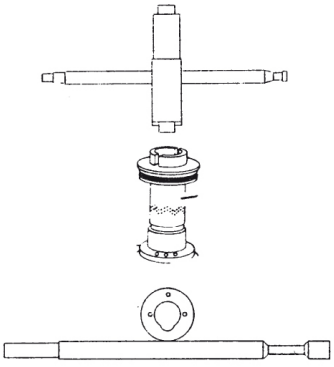
Mount the o-rings (5,3) on the valve housing (4).Use the tools. (See diagram.)



Install the valve insert (6) in the valve housing (4).

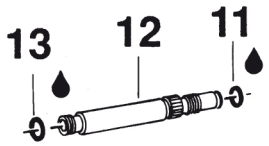


Place the o-ring (7) in the groove of the valve insert (6). Lubricate the thread. Install the valve housing nut (8).

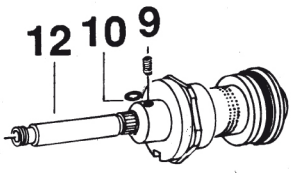


Place the valve housing in the handle. Tighten with a tool.(See diagram.)

ASSEMBLY - 2nd STAGE 2961, 3546, 0120-005, 0120-006, 0120-020, 0120-030, 0120-080



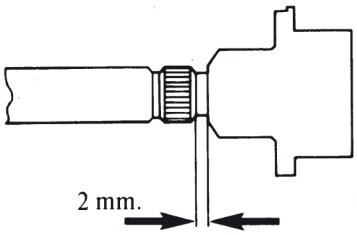
Install the o-rings (11,13) on the valve tube (12).Grease the threads and the o-rings.



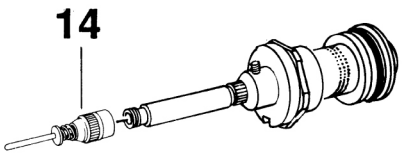
Screw in the valve tube (12) until about 2 mm space remains as illustrated.

Install the rubber plate (10). Screw in the set screw (9). Do not tighten up.

Screw the servo valve (14) on to valve tube (12). Tighten up. Be careful not to bend the valve needle.

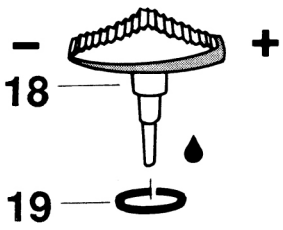


Test the low pressure valve for leakage.
See chapter: Final adjustment.



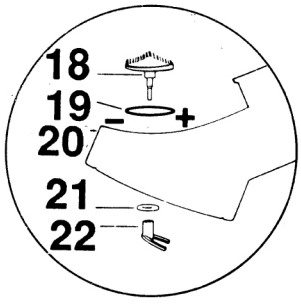
SWITCH

Fit in o-ring (19) and lubricate it.



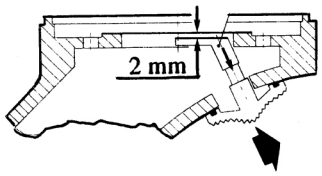
Fit in the switch with the narrow part against the - minus sign on the second stage valve. See diagram.

Install the locking washer (21) on the switch (18). Press it on a drift. Tighten the locking washer so that there is sufficient resistance when setting the switch.



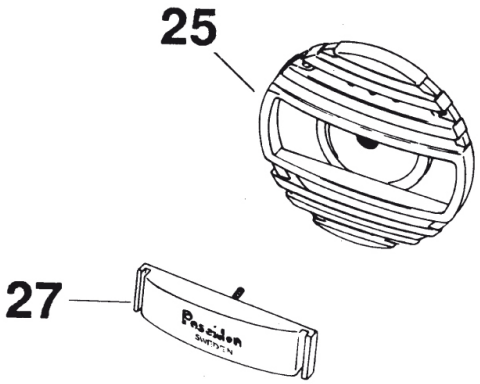
Fix the diaphragm cam (22) upon the switch (18). Set switch at - (minus), press the diaphragm cam into correct position per the diagram.

The distance from the top of the diaphragm cam to the housing should be 2 mm, concerns diaphragm of silicone rubber, see diagram.

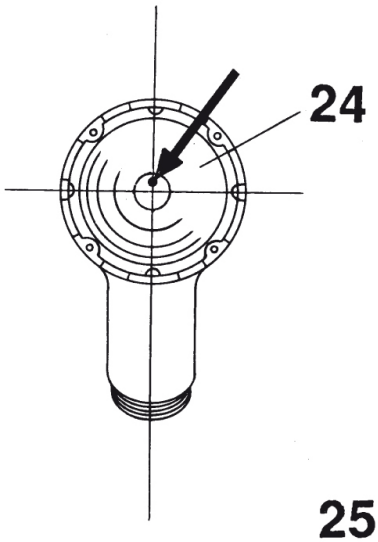


Carefully push diaphragm cam into the right position. Note the cam should be pushed slowly on to the switch so that the switch is not moved.

ASSEMBLY - 2nd STAGE 2961, 3546, 0120-005, 0120-006, 0120-020, 0120-030, 0120-080



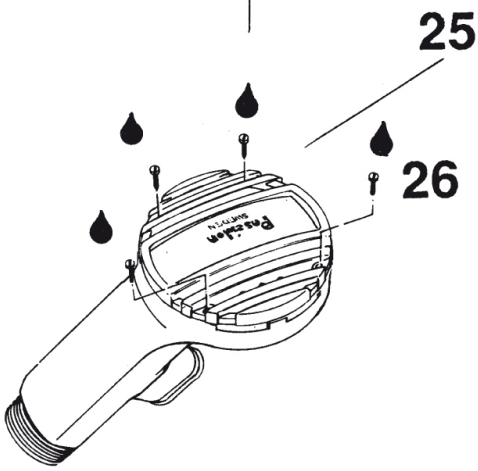
Fit the purge button in the cover (25) for the second stage.Make sure that the spring is undamaged.



Position the diaphragm (24) with the diaphragm washer facing down wards and the hole positioned as illustrated.

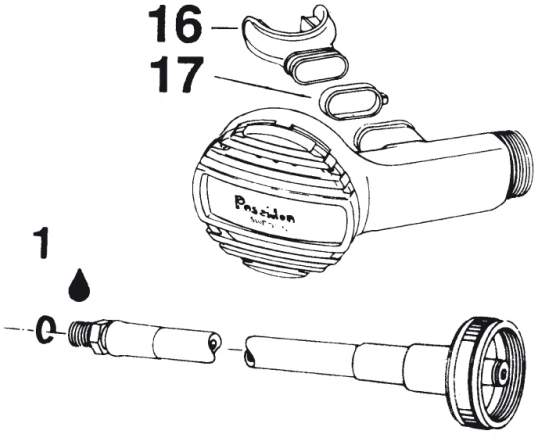
Position the cover (25) for the second stage according to the adjacent illustration. Lubricate the screw and tighten (27) with a screwdriver.

Install the mouth piece (16) and the locking strap (17). Tighten up and cut off with plastic band pliers.



Checking the second stage for leaks: Place the mouth piece against your lips and cover the low pressure hose connection with your thumb and inhale lightly.This will create a partial vacuum inside the second stage. If the pressure does not equalize in 5 second stage leaks. See chapter fault detecting.

LOW PRESSURE HOSE WITH SAFETY VALVE



Check the hose for cracks or other defects. Check the sealing surfaces and threads. Install the o-ring (1) and lubricate it.

Install the hose in the outlet of the first stage valve marked R (important for the regulators performance). Tighten with 13 mm open- end wrench.

ADJUSTMENT - 2nd STAGE 2961, 3546, 0120-005, 0120-006, 0120-020, 0120-030, 0120-080

Second stage valve: Tightness testing of the low pressure valve withservo valve.

Close the HP valve and purge fully by means of the purge button.

Remove the low pressure valve from the second stage housing.

Place the low pressure valve in the test fixture and screw on the hose.

Open the LP valve, push the servo valve's needle carefully, and purge a few times. Immerse the valve below the surface of the water in a special water tank and check to make sure that the valve is absolutely tight.

Move the low pressure valve to the second stage valve and fit the low pressure valve's outlet to the guide fitting in the second stage housing.Make sure that the valve is inserted straight to prevent the servo valve from becoming damaged.

Lubricate the external thread on the second stage housing and the end of the hose nipple. Screw on the low pressure hose.

Adjustment of the inhalation resistance:

Open the HP valve.

Connect the oval connecting pipe on the inhalation resistance gauge to the mouth-piece on the regulator.

Test-breathe very carefully. Check the reading of the gauge needle, which should rise to 35-40 mm/vp and then move back.The turning point reading equals the inhalation resistance. If the reading is too low, screw the valve tube away from the diaphragm as shown in the illustration. If the reading is too high, screw the valve tube towards the diaphragm.

Tighten up the stop screw.

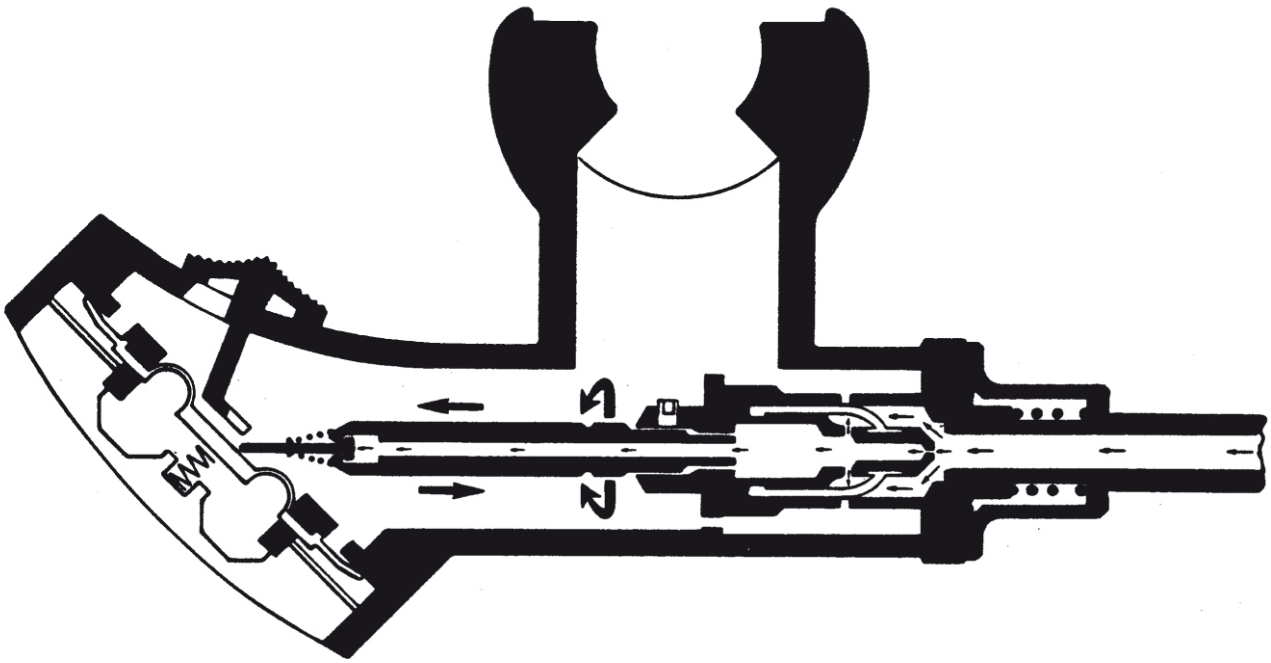
Checking the purge button:

Press the purge button.The second stage valve should now provide a generous supply of air.

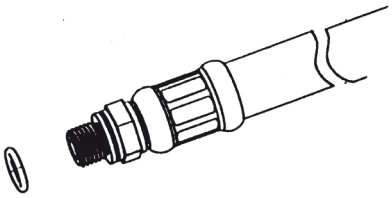
Cover the mouth-piece and press the purge button.The second stage valve should then supply a reduced flow air.

Depressurize the regulator.

Close the HP valve.



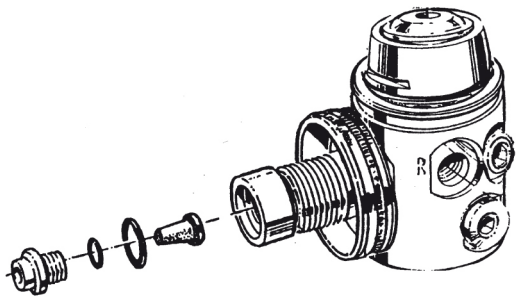
DISASSEMBLY - 1st STAGE 3790 / 3790 10



Secondary side:

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

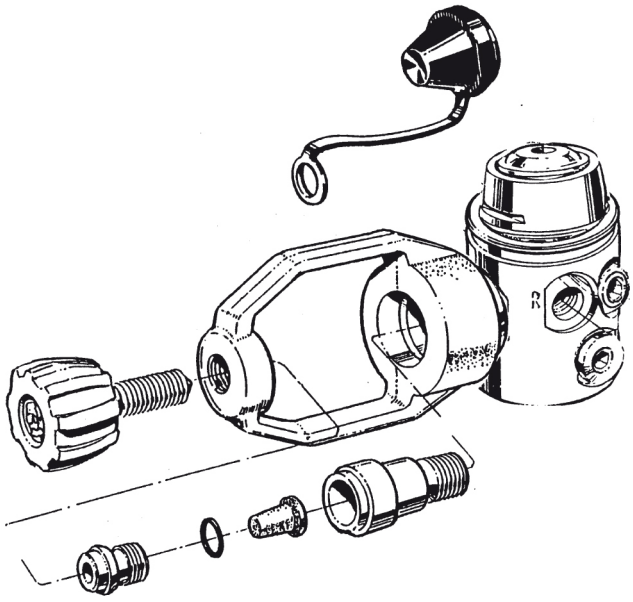
Remove the o-ring from the low pressure hose with the o-ring remover.



First stage valve with G 5/8" (3790):

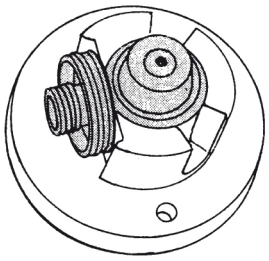
Remove the locking screw with a 6 mm Allen wrench.

Remove the o-ring and the cup-filter with o-ring.



First stage valve with Yoke (3790 10):

Remove the knob and the protective cap. Remove the locking screw with a 6 mm Allen wrench. Remove the cup filter and the o-ring.



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

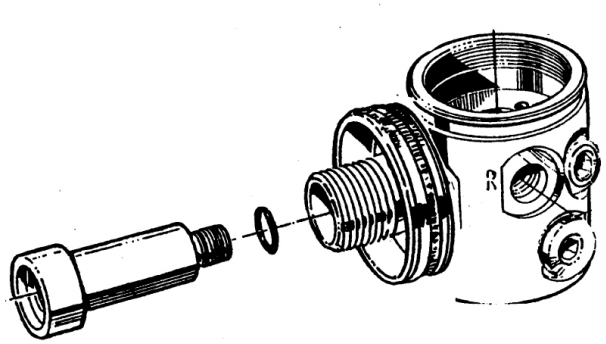
DISASSEMBLY - 1st STAGE 3790 / 3790 10

Removal:

Remove the stop screw with a 1,5 mm Allen wrench.

Remove the pressure adjusting screw with a 6 mm Allen wrench and remove the spring. In older model - two springs.

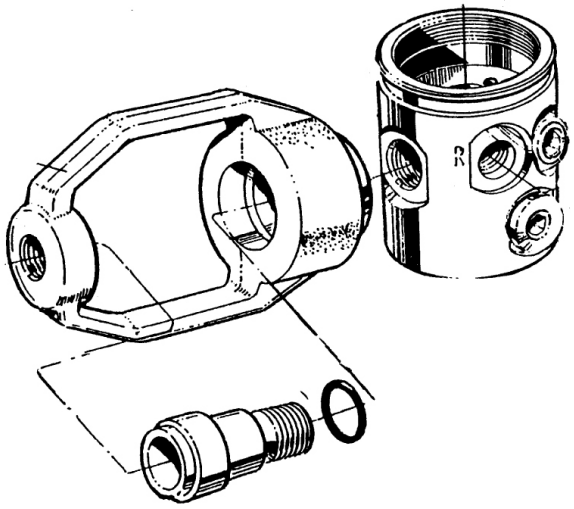
Remove the cover using a 27 mm crowsfoot and the upper diaphragm center.



First stage valve with G 5/8" (3790):

Remove the connection and the wheel with a 6 mm Allen wrench.

Remove the o-ring with an o-ring remover.Make sure the sealing surfaces are not damaged.

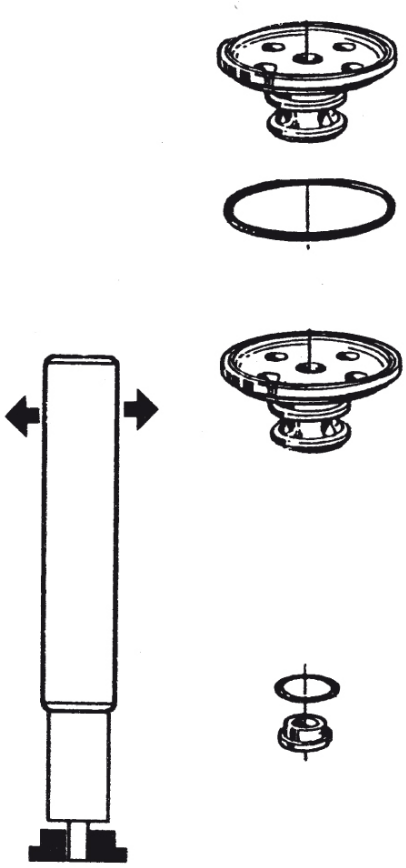


First stage valve with Yoke (3790 10):

Remove the connection and the yoke with a 6 mm Allen wrench.

Remove the o-ring with an o-ring remover.Make sure the sealing surfaces are not damaged.

DISASSEMBLY - 1st STAGE 3790 / 3790 10



Removal:
Remove the valve centre, upper and the daphragm.

Remove the diaphragm centre, lower and the valve needle.

Remove the valve centre, lower and the o-ring with an o-ring remover.Make sure the sealing surfaces are not damaged.

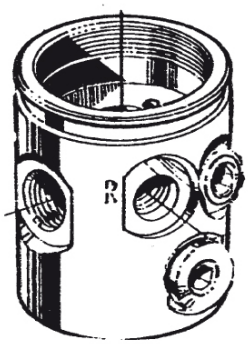
Remove the o-ring, from the valve centre, lower with an o-rings remover.Make sure the surfaces are not damaged.

Remove the valve seat and the o-ring with the assembly drift.

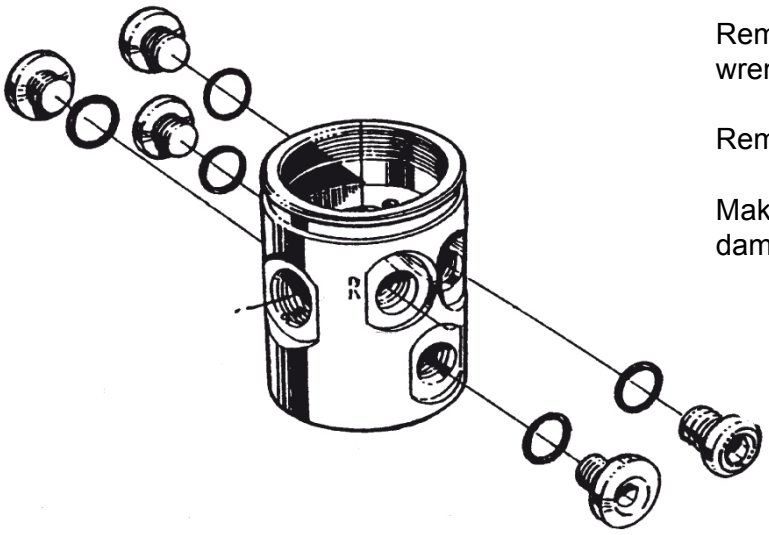
Remove the valve piston and the pressure spring.

Remove the washer, steel, the o-ring and the washer, teflon with an o-ring remover.

Make sure the surfaces, are not damaged.



DISASSEMBLY - 1st STAGE 3790 / 3790 10



Removal:

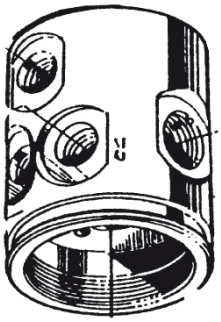
Remove the blind screws with a 5 mm Allen wrench.

Remove the o-rings with an o-ring remover.

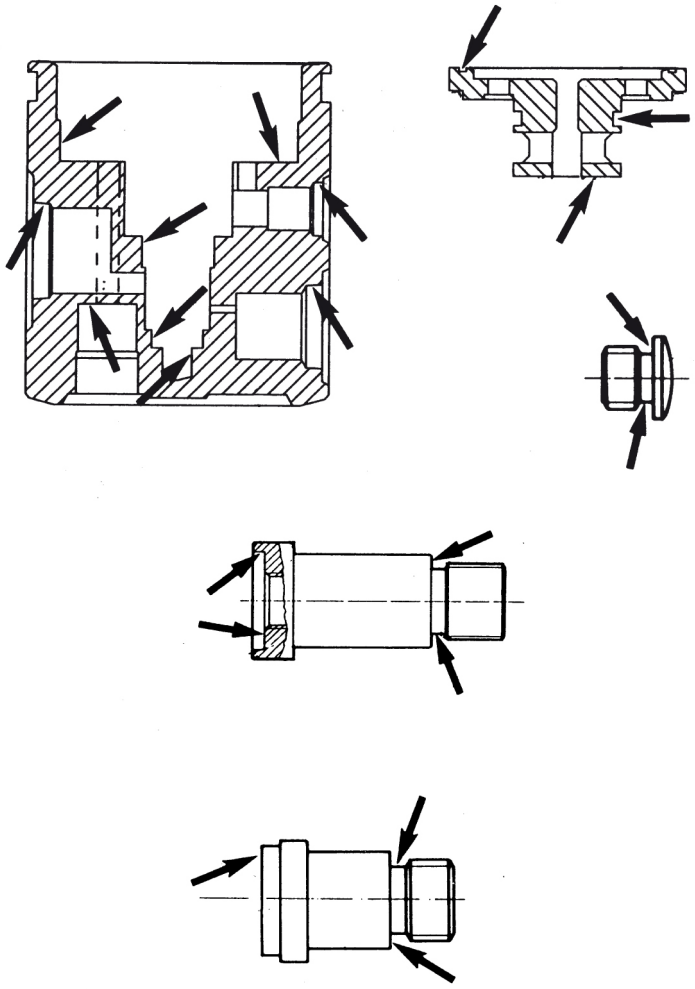
Make sure the sealing surfaces are not damaged.

Remove the locking screw with a 4mm Allen wrench.

Remove the pressure spring and the valve piston.



DISASSEMBLY - 1st STAGE 3790 / 3790 10



CLEANING

If corrosion or salt deposits occurs, place all metal parts in an ultra-sonic washer or in a 15% Hydrochloric acid solution 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.

CHECKING

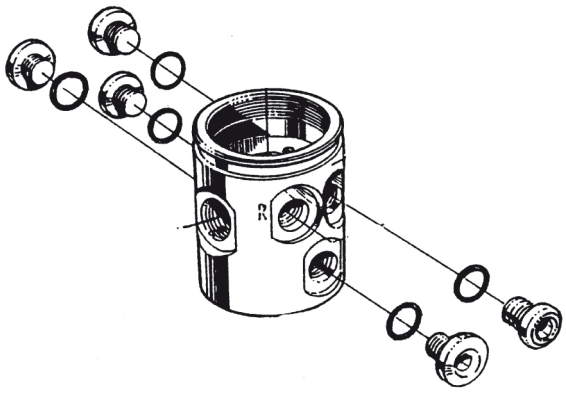
Check the following parts to make sure the sealing surfaces are undamaged. Also check that the threads are not damaged.

1.The blind screws
2.The valve housing
3.Valve centre
4.The connections

When servicing the regulator the following parts should be replaced:

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

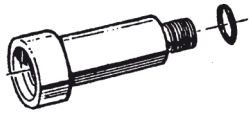
ASSEMBLY - 1st STAGE 3790 / 3790 10



Install the o-rings on the blind screws.
Lubricate the outlets.

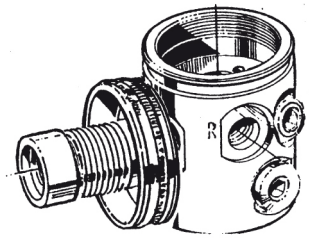
Screw the blind screws in the LP-HP outlets.

Use a 5 mm hexagon spanner and tighten up by hand.



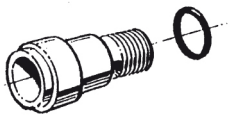
First stage valve with G 5/8" (3790):

Install the o-ring on the connection.
Lubricate the o-ring and the thread.



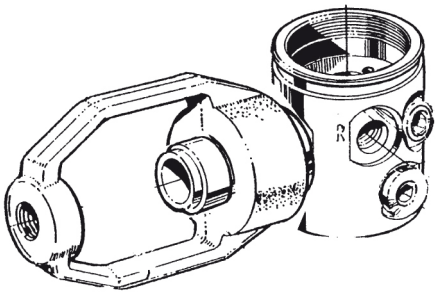
Install the wheel on the connection.

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



First stage valve with Yoke (3790 10):

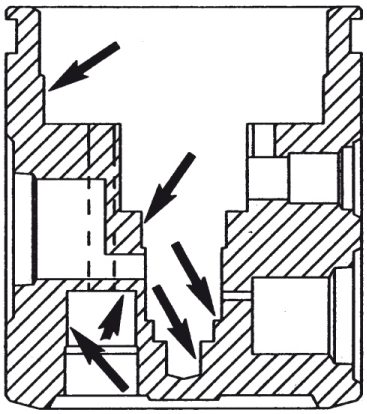
Install the o-ring on the connection.
Lubricate the o-ring and the thread.



Install the yoke on the connection.

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

ASSEMBLY - 1st STAGE 3790 / 3790 10

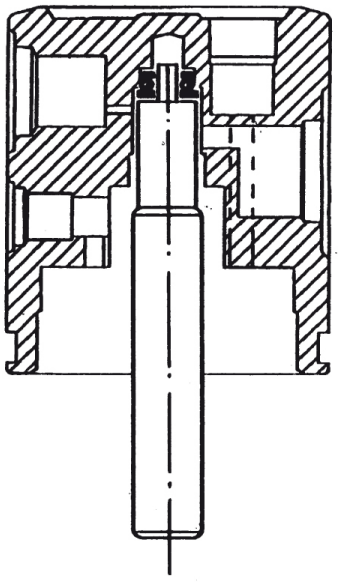


Lubricate the valve housing.

Lubricate the washers and the o-ring and Place on the assembly drift A in the following order:

- Washer, steel
- O-ring
- Washer, teflon

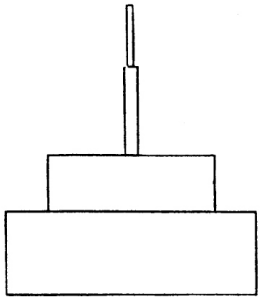
Install in the valve housing.



Install the o-ring on the valve seat.

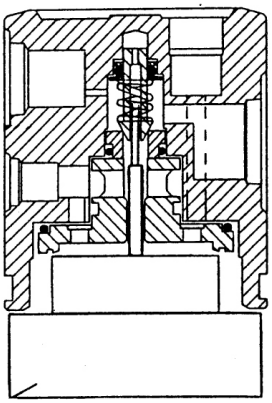
Install the o-ring, on the valve centre, lower.

ASSEMBLY - 1st STAGE 3790 / 3790 10



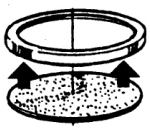
Place on the assembly fixture B:

- valve centre, lowér
- o-ring, lubricated
- valve seat with o-ring downwards
- valve piston, lubricated,
- pressure spring on valve piston.



Install in the valve housing.

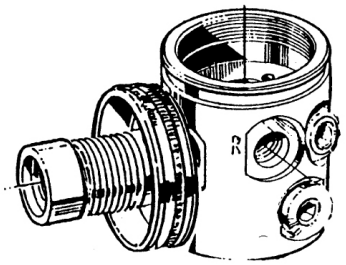
Turn the valve housing with the secondary side upwards.



Install the diaphragm in the valve centre, upper, convex part up

Install in the valve housing.

Install the valve needle.

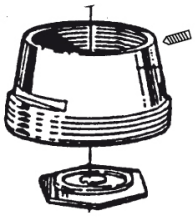


Install the lower diaphragm centre.

ASSEMBLY - 1st STAGE 3790 / 3790 10

Install the diaphragm centre, upper in the valve housing.

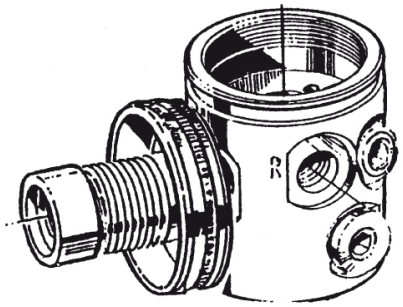
Grease the thread on the cover and tighten up by hand.



Check to make sure that the parts are correctly installed by pressing at the valve centre. It should move approximately 2 mm (1/16”).

Lubricate both ends of the spring and install.

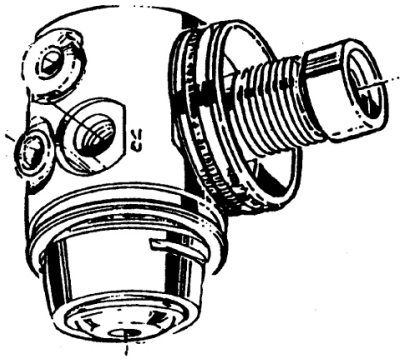
Lubricate the thread on pressure adjusting screw, and tighten 7 turns with a 6 mm Allen wrench.



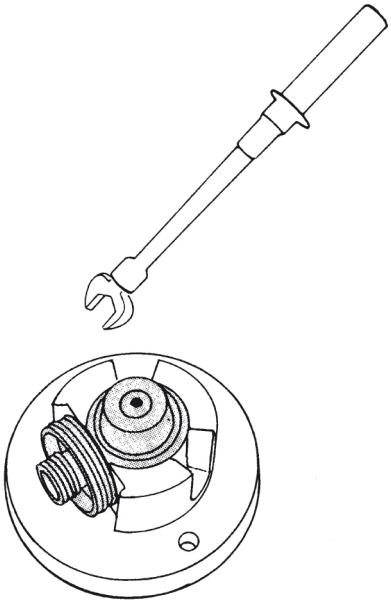
Install the stopscrew.

Install the valve sealing on the valve piston.

Install the valve piston (34) and the pressure spring. Install the locking screw with a 4 mm Allen wrench. Tighten up by hand.



ASSEMBLY - 1st STAGE 3790 / 3790 10

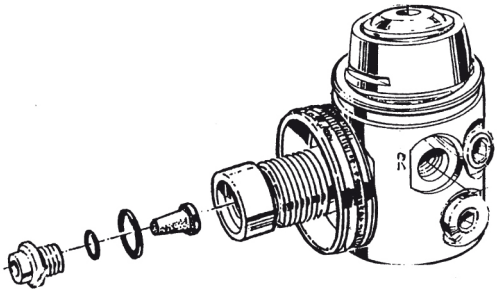


Place the valve housing in a fixture.

Tighten the cover for valve housing with a torque wrench (30 Nm) and an open ended insert tool 27 mm.

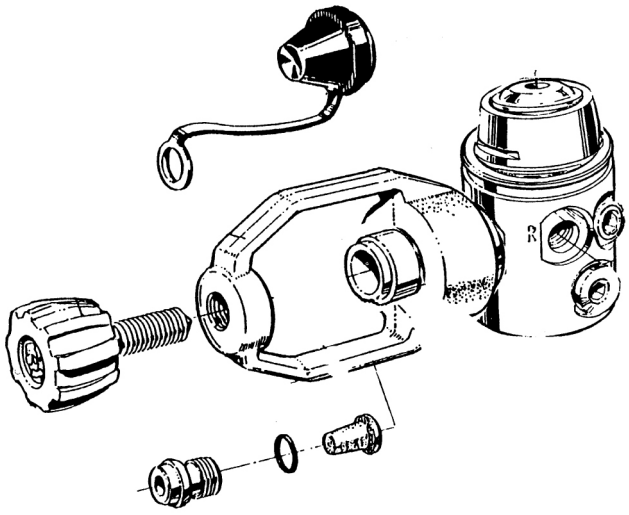
Tighten the connection with a torque wrench (30 Nm) and holder insert tool/ bits.

IMPORTANT! Use bits nr 3119 (L = 40 mm).



First stage valve with G5/8" (3790):

Put o-ring on the cup type filter. Install them and the o-ring and the locking screw in the connection. Tighten with a Allen wrench 6 mm.



First stage valve with Yoke (3790 10):

Put o-ring on the cup type filter (26). Install them and the locking screw in the connection. Tighten with a Allen Wrench 6 mm. Put the protective cap on the knob.

Lubricate and screw in the knob.

Install o-ring on the low pressure hose. Lubricate the o-ring and the thread.Tighten the hose with a 13 mm open wrench.

ADJUSTMENTS AND SETTINGS - 1st STAGE 3790 / 3790 10

Preparing the first stage for adjustment
Before starting the process of setting the intermediate pressure of the first stage, it's recommended that you do the following steps.

- Un-screw the adjustment screw to the point where there is no tension on the adjustment spring.
- Connect the first stage to a regulator test box.
- Open the left hand side valve (Low Pressure) on the regulator test box and check for leaks. The intermediate pressure gauge should show 0 bar/psi intermediate pressure.
- If no leaks are found, open the right hand side vale (high pressure) and check the intermediate pressure gauge. It should still show 0 bar/psi intermediate pressure.
- Allow the first stage to sit, under high pressure, for one minute.
- Then start turning the adjustment screw, so that there is an intermediate pressure shown on the intermediate pressure gauge.
- Turn off both valves on the regulator test box.
- Depressurize the regulator.

You are now ready for the next step: Setting the intermediate pressure.

Setting the intermediate pressure
Connect the regulator to the test equipment.

Connect the regulator test low pressure gauge hose to one of the low pressure outlets.

Open the LP valve (=20 bar/290 psi).

Set the secondary pressure at 10 bar, and intermittently purge the second stage by means of the purge button.NOTE that the second stage valve must be fully tight during this test.When the pressure gauge needle stops at the preset pressure, a maximum rise in pressure of 1 bar is allowed before the needle finally stops. If the needle continues to move to a higher pressure reading there is a fault in the seal between the valve seat and piston or the O-ring.

Close the LP valve, and open the HP valve (=200/300 bar). Purge intermittently with the purge button and adjust the pressure to 8.5 bar/ 123 psi. Tighten up the stop screw on the cover.

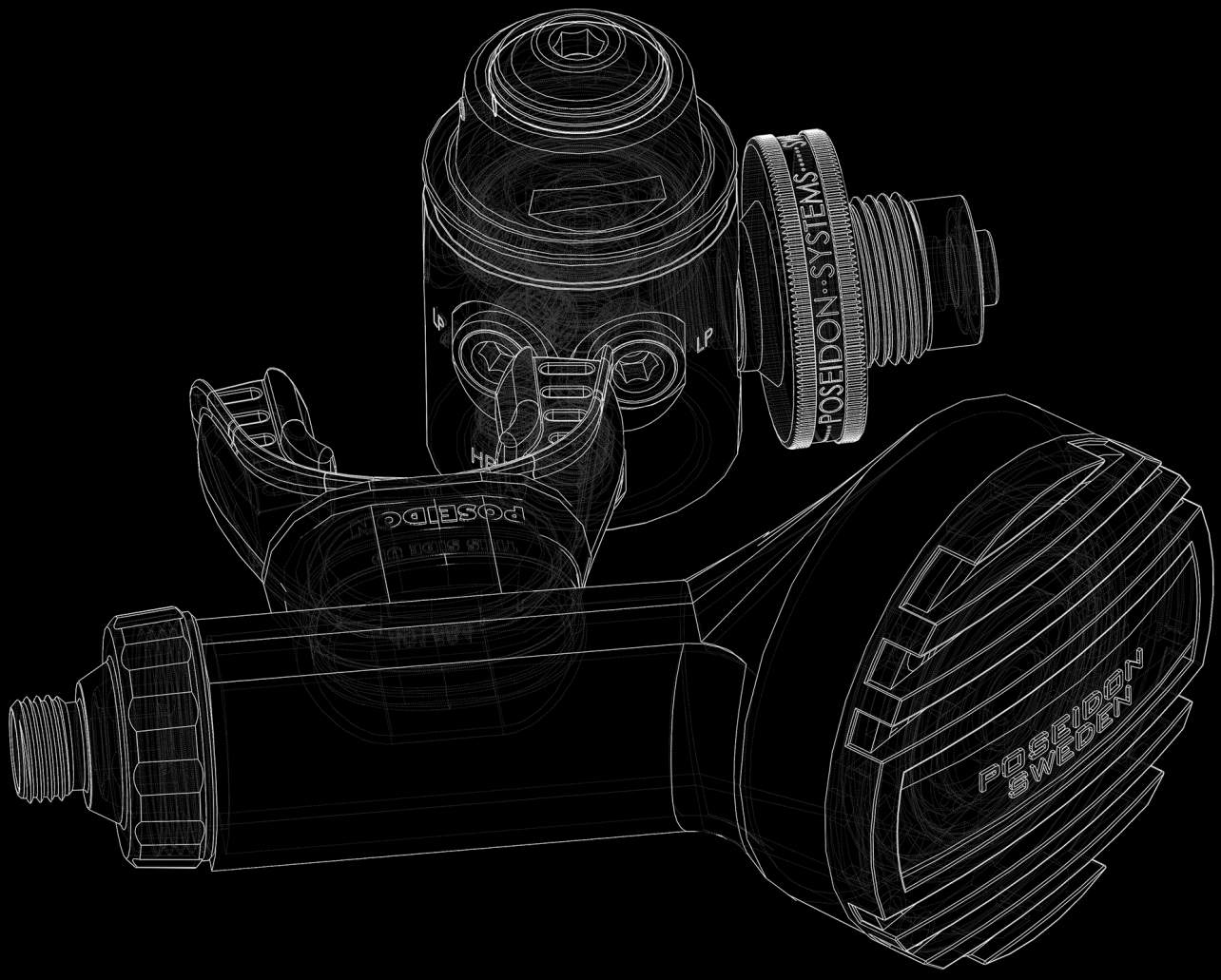
Close the HP valve and purge it fully.

The first stage intermediate pressure has now been set.

Intermediate pressure quick reference table.

	TANK PRESSURE		
1st stage model	**20 bar**	**M.T.P***	**Notes**
3790	+1,5 bar (22 psi) / -1,0 bar/ (14,5 psi)	8,5 bar / 123 psi	Balanced 1st stage
3790 10	+1,5 bar (22 psi) / -1,0 bar/ (14,5 psi)	8,5 bar / 123 psi	Balanced 1st stage

* Max Tank Pressure = Full tank



Issue 2.0

Service manual Jetstream Art. Nmbr. 3960.