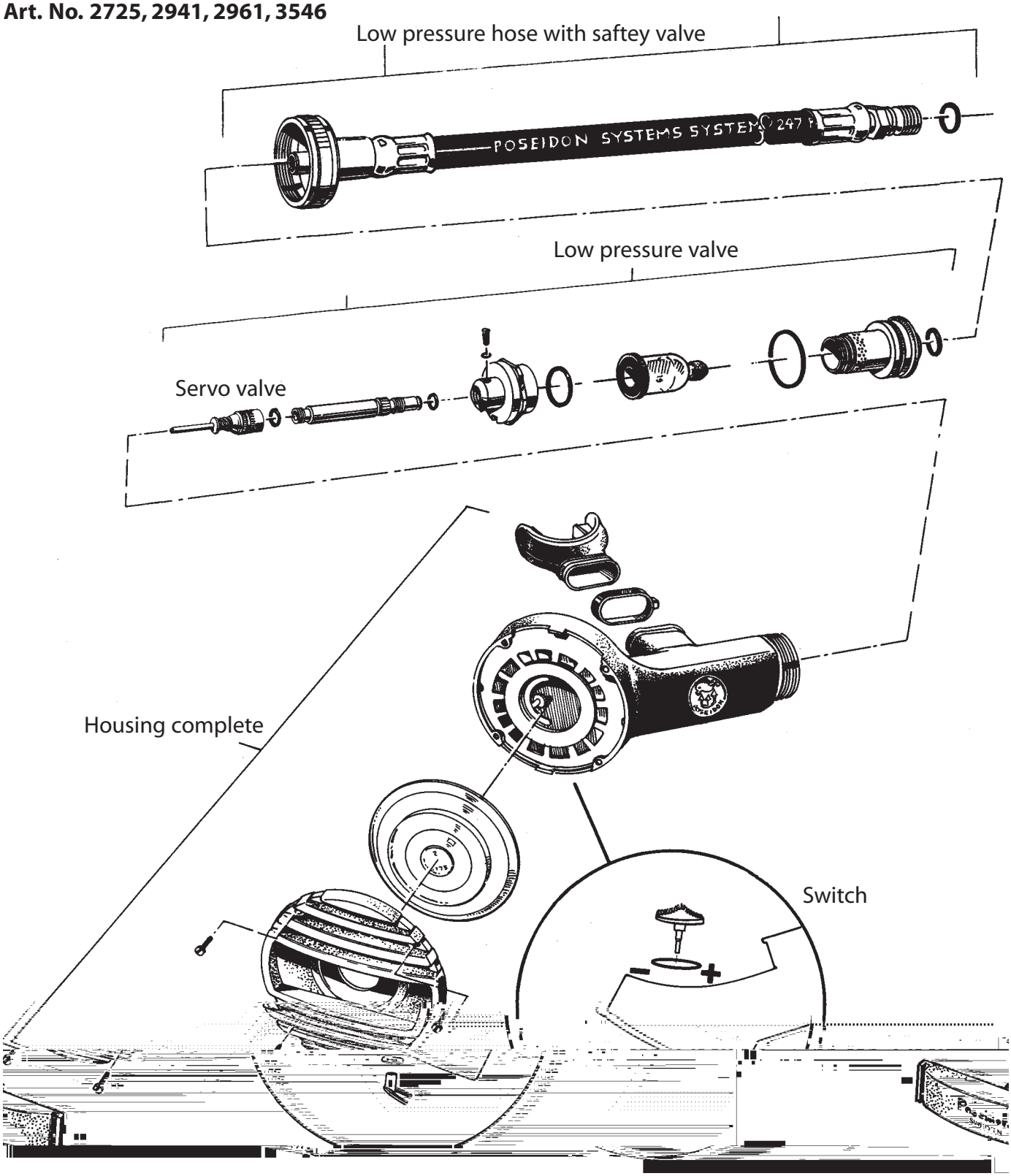
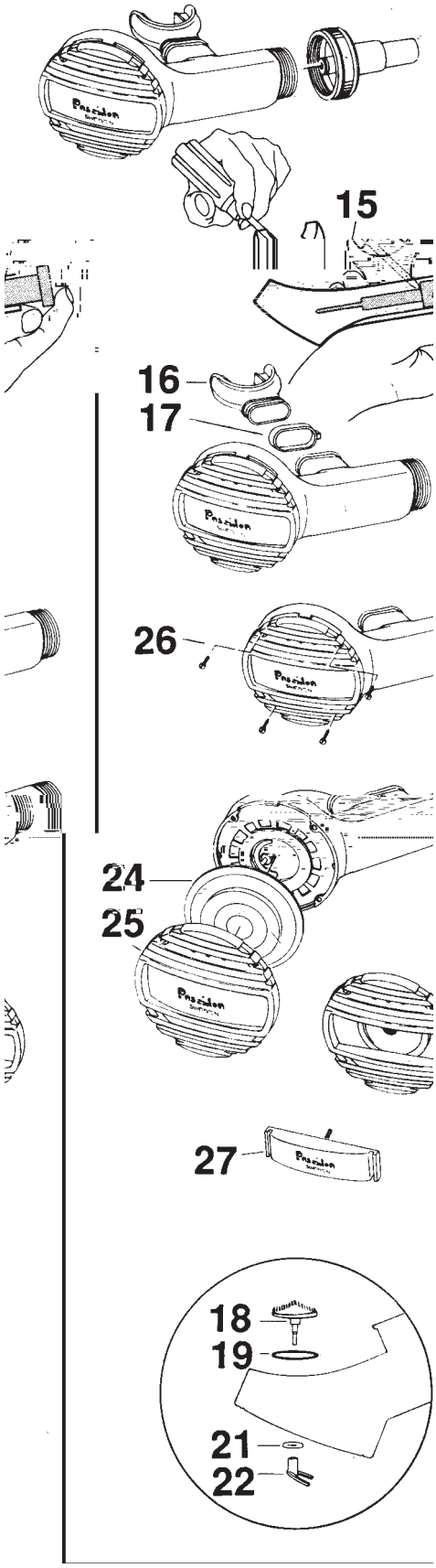
REPAIR INSTRUCTIONS SECOND STAGE DEMAND VALVE

EXPLODED VIEW
Art. No. 2725, 2941, 2961, 3546





SECOND STAGE
2710, 2941, 2961, 3546

Removal:

1. Disconnect the low pressure hose from the second stage.

2. 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).

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

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

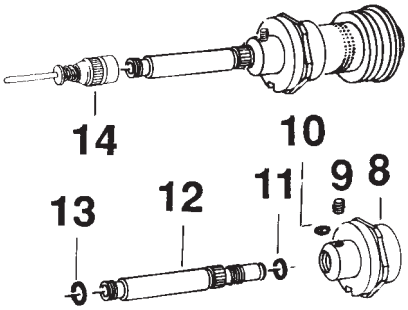
5. Remove the cover (25) and the diaphragm (24).

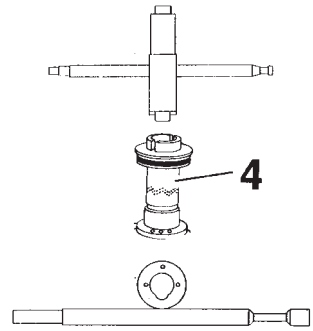
6. Remove the purge button (27).

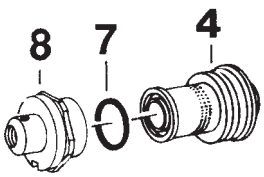
IMPORTANT
The switch should not be removed if it is undamaged.

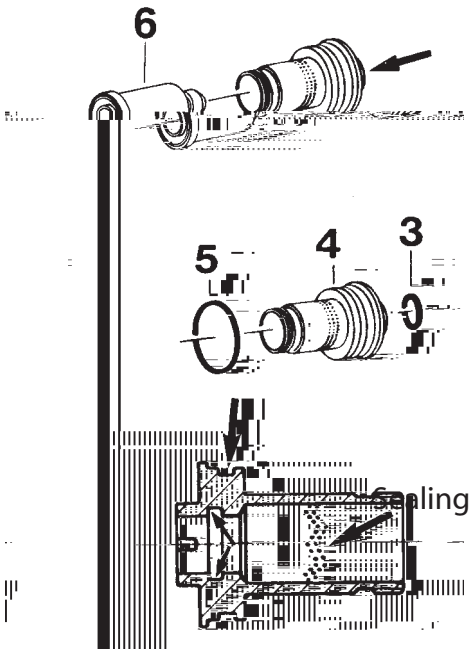
Removal:

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









Removal:

1. Remove the servo valve (14).

2. 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.

3. Remove the rubber plate (10).

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

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

6. Remove the valve insert.

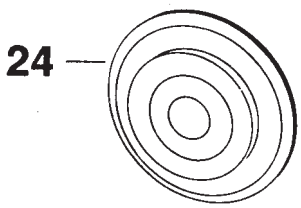
7. Remove the o-rings (5) (3) with an o-ring remover. Make sure the sealing surfaces are not damaged.

When servicing the regulator the following parts should be replaced: See chapter Servicekit.

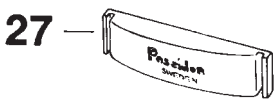
1. All o-rings. Also the ones in the low pressure hose.

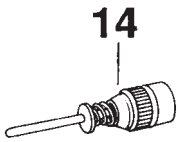
CLEANING:
If corrosion or salt deposits occurs, place all metal parts – concentrated Hempocid* or 15% Hydrochloric acid for about 10 minutes. Then, rince the parts thoroughly and blow dry with air. The synthetic parts in the second stage must not be treated with solvent. They shall be cleaned in freshwater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

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









BEFORE INSTALLING CHECK THE FOLLOWING:

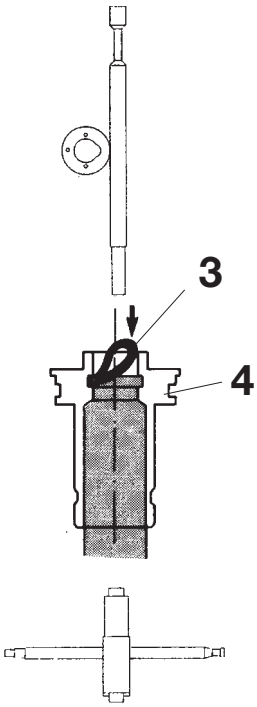
1. Diaphragm (24). Check that the sealing surface of the diaphragm is even. Also check that there are no holes in the diaphragm and that the diaphragm washer is properly fixed in position.

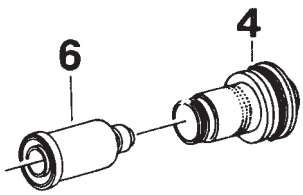
2. The mouth-piece (16). Make sure there are no cracks.

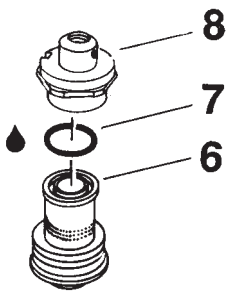
3. The purge button (27). Make sure there are no cracks. Check to make sure the spring is undamaged.

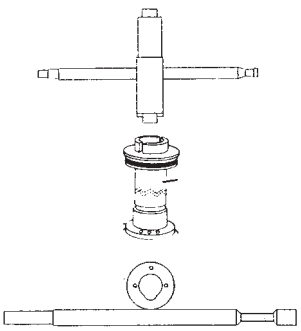
4. Servo valve (14). Check to make sure that the valve bar is not bent.

5. 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.









SECOND STAGE

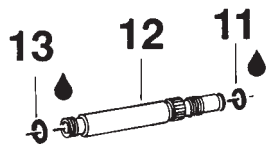
Assembly:

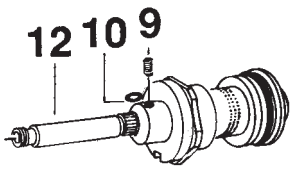
1. Mount the o-rings (5,3) on the valve housing (4). Use the tools. See diagram.

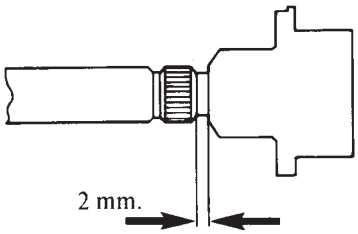
2. Install the valve insert (6) in the valve housing (4).

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

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







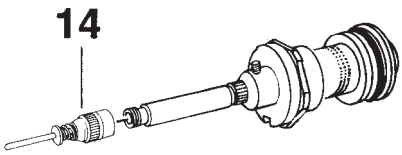
5. Install the o-rings (11,13) on the valve tube (12). Grease the threads and the o-rings.

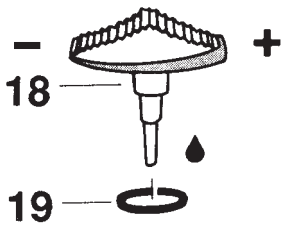
6. Screw in the valve tube (12) until about 2 mm space remains as illustrated.

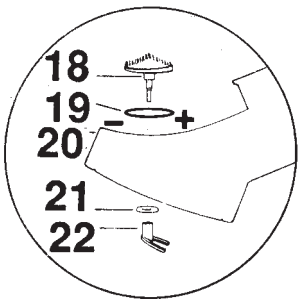
7. Install the rubber plate (10). Screw in the set screw (9). Do not tighten up.

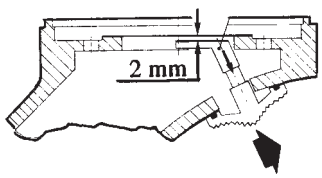
8. Screw the servo valve (14) on to valve tube (12). Tighten up. Be careful not to bend the valve needle.

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





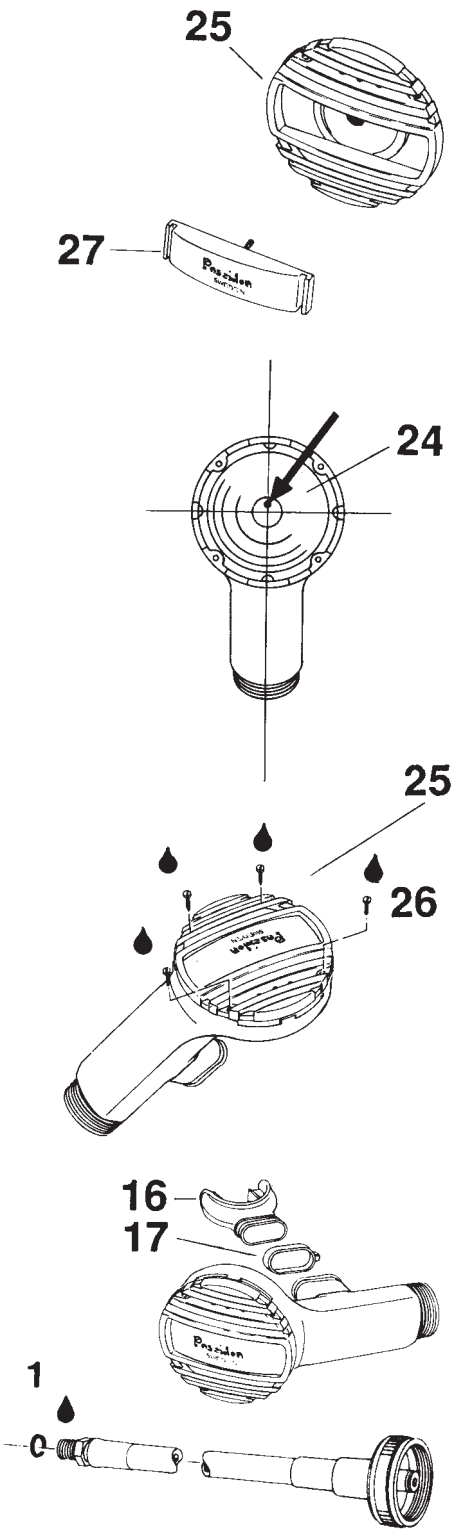




SWITCH

1. Fit in o-ring (19) and lubricate it.
2. Fit in the switch with the narrow part against the - minus sign on the second stage valve. See diagram.
3. 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.
4. 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:

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

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

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

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

5. 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. Oceanair in an optional outlet marked LP.