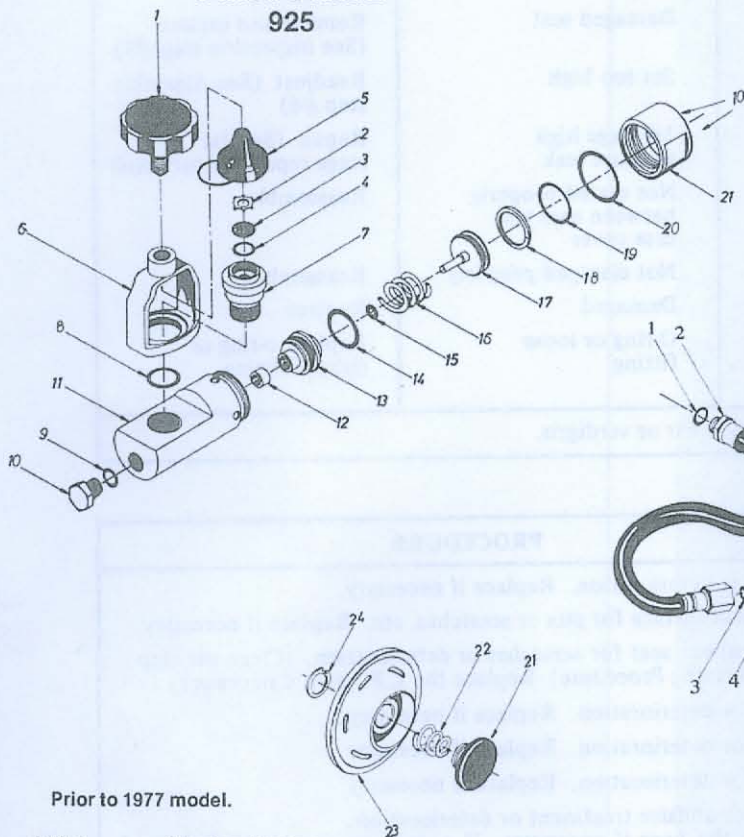


## WATERLUNG 200 REGULATOR REPLACEMENT PARTS

All prices subject to change without notice.

Sportsways reserves the right to accept or reject any order.

### WATERLUNG 200 FIRST STAGE 925



Prior to 1977 model.

1	920-3	Clearing Button
2	920-5	Spring
3	914-2	Case Cover
4	920-4	Retaining Ring

Fig. No.	Part No.	Description
	925	First Stage Complete
1	709	Yoke Screw
2	950-16	Retaining Ring
3	300-9	Filter
4	300-10	"O" Ring
5	300-35	Protection Cap w/Ring
6	300-7	Yoke
7	925-3	Yoke Nut
8	925-5	"O" Ring
9	300-4	"O" Ring
10	300-30	Plug
11	925-1	Body
12	925-4	Valve Seat
13	925-2	Gland
14	950-12	"O" Ring
15	950-11	"O" Ring
16	950-8	Spring
17	950-4	Piston
18	950-14	Back Up Ring
19	950-10	"O" Ring
20	950-9	"O" Ring
21	925-8	End Cap
22	925-6	Adjustment Washer (Not Shown)

### WATERLUNG 200 SECOND STAGE 931

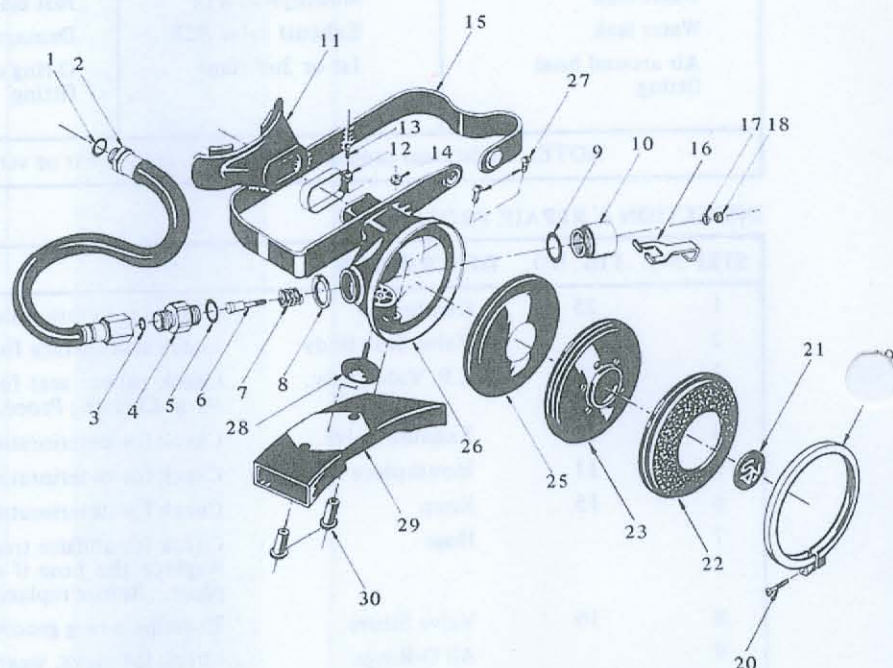


Fig. No.	Part No.	Description
	931	Second Stage Complete
1	300-4	"O" Ring
2	411-25	Hose-Low Pressure
3	411-26	"O" Ring
4	411-6	Valve Seat Body
5	400-5	"O" Ring
6	910-9	L.P. Valve Ass'y
7	910-8	Spring
8	911-7	Retaining Ring
9	911-6	"O" Ring
10	911-12	Valve Sleeve
11	400-19S	Mouthpiece
12	400-26D	Mouthpiece Clamp
13	400-27	Screw
14	400-14	Nut
15	450-4	Mouthpiece Strap Ass'y
16	910-7	Valve Lever
17	411-14	Washer
18	411-13	Locknut
19	911-3	Clamp Ring
20	1325-33	Screw
21	930-4	Name Plate
22	930-3	Case Cover
23	930-2	Diaphragm Purge Cover
25	930-5	Diaphragm Ass'y
26	911-1	Case
27	803Q	Sealing Screw
28	910-6	Exhaust Valve
29	910-4	Exhaust Tee
30	910-12	Exhaust Tee Fastener



### DISASSEMBLY PROCEDURE

STEP NO.	FIG. NO.	PART NO.	DESCRIPTION	PROCEDURE
1			Hose	Unscrew from end of cap #21 with 9/16" wrench.
2	21	950-2	End Cap	Unscrew with 1" wrench and remove o-ring #20 from body #11.
3	17	950-4	Piston	Carefully pull back. Remove spring #16. Remove o-ring #19 and back up ring #18 from piston. Handle piston carefully, especially small end
4	13	925-2	Gland	Unscrew from body with screwdriver. Remove o-ring #14, o-ring #15 and valve seat #12.
5	1	709	Yoke Screw	Unscrew by hand.
6	7	925-3	Yoke Nut	Unscrew from body with 1" wrench and detach from yoke #6. Remove o-ring #8 from yoke nut.
7	2	950-16	Retaining Ring	Pry out of yoke nut bore and remove filter #3 and o-ring #4.
8	10	300-30	Plug	Unscrew with 9/16" wrench and remove o-ring #9.

### ASSEMBLY PROCEDURE

STEP NO.	FIG. NO.	PART NO.	DESCRIPTION	PROCEDURE
1	4	300-10	O-Ring	Place inside yoke nut, install filter and secure with retaining ring.
2	8	925-5	O-Ring	Assemble on yoke nut.
3	7	925-3	Yoke Nut	Assemble to yoke and fasten to body.
4	1	709	Yoke Screw	Install into yoke.
5	13	925-2	Gland	Screw into body after installing o-ring #15, o-ring #14 and seat #12.
6	17	950-4	Piston	Assemble back up ring #18 toward stem end of piston and install o-ring #19.
7	16	950-8	Spring	Place into body #11 and carefully manipulate piston into gland #13 and into the body.
8	20	950-9	O-Ring	Assemble on body and install end cap #21.
9	9	300-4	O-Ring	Install on plug #10 and screw plug into body.

### NOTES:



## TROUBLE SHOOTING

NOTE: Trouble shooting should be done as a complete unit, (1st and 2nd stages together).

PROBLEM	ORIGIN	CAUSE	REMEDY
Air leakage from 4 drain holes in body	O-rings #14,15,19 or gland #13	Gland not tight or o-rings damaged	Tighten or replace o-rings as necessary
Air leak from end cap #21	O-ring #20	End cap not tight or o-ring damaged	Tighten or replace o-ring as necessary
H.P. airleak to 2nd stage	Piston #17	Piston seat or valve seat damage	Replace parts as necessary (See step #2 and #4 of Inspection Procedure)
Air leakage at yoke	O-ring #8	Yoke nut not tight or o-ring damaged	Tighten or replace o-ring as necessary

NOTE: Additional causes could be dirt, sand, wear or verdigris.

## INSPECTION & REPAIR PROCEDURE

STEP NO.	FIG.NO.	DESCRIPTION	PROCEDURE
1		All o-rings and back up rings	Check for nicks, wear, deterioration, etc. Replace if necessary.
2	17	Piston	Check for nicks, wear, etc. on seat face, stem surface and o-ring groove. Replace if necessary.
3	13	Gland	Check for nicks, wear, etc. on inside diameter and replace if necessary.
4	12	Valve Seat	Examine seat - checking for deep embedding, nicks, etc. If one end is satisfactory it should be assembled toward the valve stem. Replace the valve seat, if necessary.
5	3	Filter	Always replace with a new filter element.

## CLEANING PROCEDURE

1	All plastic and rubber parts:	Clean in warm, soapy water. Rinse thoroughly and dry with air hose or cloth. Apply a thin coat of silicone grease to all surfaces. Wipe with clean cloth to remove excess silicone.
2	All metal parts only:	Clean in mixture of 50/50 water and white vinegar solution and rinse thoroughly with fast running water. Dry with air hose or cloth.

NOTE: Additional cleaning of external parts only may be necessary due to accumulation of foreign matter. Use extra fine wire brush or equivalent.

## ADJUSTMENT PROCEDURE

This regulator has been adjusted at the factory for a breathing resistance which is agreeable to the majority of users. You may, however, wish to increase the intermediate pressure for easier breathing. To do this, add washer #925-6 to the 1st stage housing, between the gland #13 and the spring #16.

Standard intermediate pressure is 110 to 120 PSI at 2250 PSI supply. This pressure is checked by screwing the low pressure hose to the test gauge, tool #T1404, instead of the second stage. Note: before supply pressure is turned on, open bleed screw on gauge. After flow begins, close bleed off slowly. Gauge needle should stop within specified range. If, however, it continues to climb, close supply; 1st stage might have a high pressure leak.

## NOTES:



# **DISASSEMBLY PROCEDURE**

STEP NO. FIG. NO. PART NO.

STEP NO.	FIG. NO.	PART NO.	DESCRIPTION
1			Hose
2	20	1325-33	Screw
3	19	911-3	Clamp Ring
4	21	910-10	Clearing Button
5	4	411-6	Valve Seat Body
6	6	910-9	L.P. Valve Assembly
7	29	910-4	Exhaust Tee
8	28	910-6	Exhaust Valve
9	11	400-19	Mouthpiece
10	10	911-12	Valve Sleeve

# **PROCEDURE**

Unscrew with 11/16" wrench.  
Unscrew from clamp ring #19.  
Spread and remove. Lift case cover #23 from case #26. Lift diaphragm #25 from case.  
Remove retaining ring #24 from button using pliers, tool #T761-3. Lift button from case cover and remove spring #22.  
Unscrew from valve sleeve in case with 13/16" wrench. Remove o-ring #5.  
Unscrew lock nut #18, using 1/4" hex socket screwdriver, tool #T761-5. Remove washer #17 and valve lever #16. Hand should be placed at opening of L.P. valve sleeve to intercept valve #6 and spring #7 when released by unscrewing locknut.  
Unscrew fastener #30 to remove.  
Bend valve's diameter in half with first finger and thumb and pull slightly to eject from case.  
Remove screw #13. Spread clamp and remove prior to pulling mouthpiece and strap off case.  
Remove retaining ring #8 using external pliers, tool #T761-3. Oscillate the valve sleeve to loosen and withdraw it from the inside of the case.

# **ASSEMBLY PROCEDURE**

STEP NO. FIG. NO. PART NO.

STEP NO.	FIG. NO.	PART NO.	DESCRIPTION
1	10	911-12	Valve Sleeve
2	7	910-8	Spring
3	16	910-7	Valve Lever
4	4	411-6	Valve Seat Body
5			Hose & 1st Stage
6	16	910-7	Lever
7	28	910-6	Exhaust Valve
8	29	910-4	Exhaust Tee
9	11	400-19	Mouthpiece
10	25	910-3	Diaphragm
11	23	910-2	Case Cover
12	19	911-3	Clamp Ring

# **PROCEDURE**

Install o-ring #9 on sleeve and assemble sleeve from inside of case checking orientation of air passage in relation to venturi. Secure with retaining ring #8.  
Place in valve sleeve. Insert the L.P. valve through valve sleeve and hold in place with thumb.  
Place in slot over thread end of valve together with washer. Prethread nut by hand in place. Additional tightening must be done with 1/4" hex socket screwdriver until valve is extended approximately 1/32" from end of case inlet.  
Place o-ring #5 on body. Thread body into valve sleeve in case with 13/16" wrench.  
Screw hose into valve seat body with 11/16" wrench.  
With case assembly held so that lever faces up, place a straight edge tool over lever and case's outer diameter. Make final adjustment with 1/4" hex socket screwdriver on nut. Adjust so that top of lever touches straight edge when air supply of 2250 PSI is applied to first stage.  
Pull stem through case so that stem's barb lies on inside.  
Secure in place with sealing screw #27 and fastener #30.  
Slip strap assembly #15 over tube and push mouthpiece over case tube. Secure with #12 clamp and hardware.  
Place inside case assembly.  
Assemble button and spring into case cover. Secure button in place with retaining ring. Place cover over diaphragm in case assembly so that one of the slots is in uppermost position.  
Spread clamp ring and wrap around case cover and case so that screw boss is in down position. Tighten with screw so that it will not rotate.

NOTES:



## TROUBLE SHOOTING

NOTE: Trouble shooting should be done as a complete unit, (1st and 2nd stages together).

PROBLEM	ORIGIN	CAUSE	REMEDY
Hard to breathe	Lever #16	Set too low	Readjust (See assembly step #6)
Hard to breathe	1st stage	Intermediate pressure set too low	Increase PSI where applicable
Hissing sound after inhaling	Valve assy. #6	Damaged seat	Remove and replace (See inspection step #3)
Hissing sound after inhaling	Lever #16	Set too high	Readjust (See assembly step #6)
Hissing sound after inhaling	1st stage	1st stage high pressure leak	Repair (See 1st stage repair instructions)
Water leak	Diaphragm #25	Not seated properly between case & case cover	Reassemble
Water leak	Mouthpiece #11	Not clamped properly	Reassemble
Water leak	Exhaust Valve #28	Damaged	Replace
Air around hose fitting	1st or 2nd stage	O-ring or loose fitting	Replace o-ring or tighten fitting

NOTE: Additional causes could be dirt, sand, wear or verdigris.

## INSPECTION & REPAIR PROCEDURE

STEP NO.	FIG. NO.	DESCRIPTION	PROCEDURE
1	25	Diaphragm	Check for deterioration. Replace if necessary.
2	4	Valve Seat Body	Check seat surface for pits or scratches, etc. Replace the valve seat body if necessary.
3	6	L.P. Valve Assy.	Check rubber seat for scratches or deterioration, (clean per step #1 in the cleaning procedure). Replace the L.P. valve assembly if necessary.
4	28	Exhaust Valve	Check for deterioration. Replace if necessary.
5	11	Mouthpiece	Check for deterioration. Replace if necessary.
6	15	Strap	Check for deterioration. Replace if necessary.
7		Hose	Check for abusive treatment or deterioration. Replace the hose if necessary. If o-rings are cut or cracked, replace. Before replacing, wipe o-rings with silicone grease.
8	10	Valve Sleeve	Check o-ring groove for irregularities.
9		All O-Rings	Check for nicks, wear, deterioration, etc. Replace as required.

## CLEANING PROCEDURE

1	All plastic and rubber parts, including the L.P. valve #6. (NOTE: Do not try to remove the valve seat)	Clean in warm, soapy water. Rinse thoroughly and dry with air hose or cloth. Apply a thin coat of silicone grease to all surfaces (except inside hose, mouthpiece, exhaust tee and sealing edges of diaphragm.) Wipe with clean cloth to remove excess silicone.
2	All metal parts only, except the L.P. valve #6.	Clean in mixture of 50/50 water and white vinegar solution and rinse thoroughly with fast running water. Dry with air hose or cloth.

NOTE: Additional cleaning of external parts only may be necessary due to accumulation of foreign matter. Use extra fine wire brush or equivalent.

**IMPORTANT:** When the Waterlung regulator mouthpiece is turned upward in the water, you may get a flow of air. This is due to the sensitivity of the demand valve, which creates effortless breathing of the Waterlung. This is positively not a malfunction or a defect.

To stop the air flow, simply turn or shake the mouthpiece downward or hold underwater, filling it with water. This automatically will stop the bubbling or flow of air.

## NOTES: