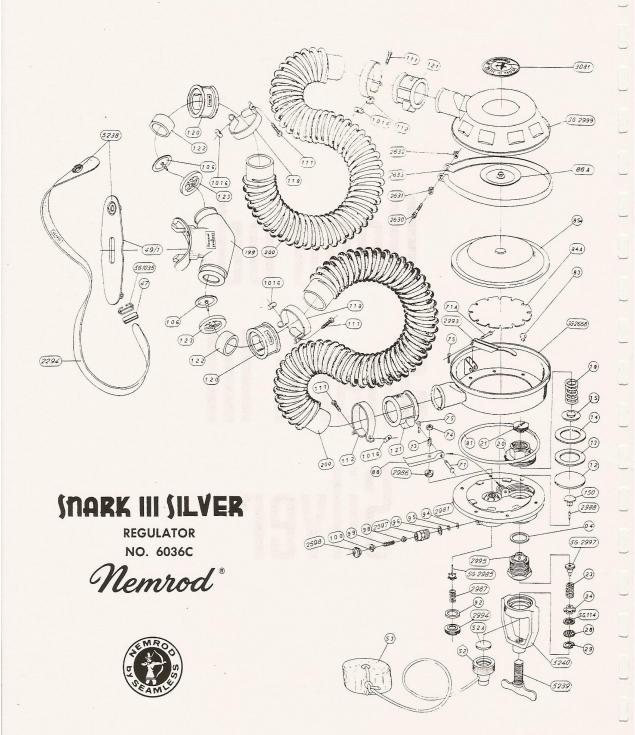
Snark III Silver



SNARK III DELUXE SILVER REGULATOR

The Snark III Silver is a two stage working regulator. The third stage is a safety, or pressure relief valve to relieve inter-stage pressure build-up. The unique position of the hinged levers creates a very low suction effort to activiate the diaphram. Demand breathing is therefore effortless with the Snark III Deluxe Silver Regulator.

Air enters the first stage of the Snark III through a series of filters (SG114 and 28) and enters the intermediate chamber through the open seat (SG2997) compressed against spring (23) by pin (2988) in the high pressure system, establishing inter-stage pressure. As high pressure enters the first stage, the high pressure diaphram (12) is forced outward against the high pressure bonnet spring (18), which is pre-adjusted by adjusting screw (21) to hold seat (SG2997) open until inter-stage pressure reaches about 125 PSI, at which time, pin (2988) withdraws and allows seat (SG2997) to close the stage.

The intermediate chamber consists of the inner surface of the diaphram (12), soft seat of valve (SG2997) and a bore running toward the safety stage, or third stage (2597). Excess pressure in this chamber will force the relief spring (99) to open, venting off pressure in excess of 150 PSI.

Upon demand, the diver causes a partial vacuum inside case assembly (SG2668). The pressure differential between the case pressure and the ambient pressure forces demand diaphram (85A) into the case (SG2668). As the diaphram moves inward, the primary lever (2993) exerts a force on secondary lever (88) through considerable mechanical advantage. Secondary lever (88) in turn, multiplies the force again and forces seat (SG2985) against spring (2987). Air flows to the diver due to diminished interstage pressure.

When demand ceases the demand diaphram (85A) returns to normal position and the demand stage is allowed to close by spring (2987). During exhalation, pressure increases slightly above ambient in the exhaust hose (200) and spent air lifts the exhaust valve (86A) which is attached to cover (SG2999).

Check valves (106) are also in the mouthpiece to minimize water entering the diver's mouth. A neck strap is provided for additional safety. Also, a mouthpiece cover prevents sand or dirt from entering the mouthpiece when the regulator is not in use. A protection cap (52) with a rubber insert will also keep dirt and water from entering the high pressure stage.

DESCRIPTION
and
NUMBERS
PART

	.38	.38	.42	.42	.38	.38	.38	1.92	3.19	.38	09.	09.	•38	. 38	.38	.38	1.02	3.88	.42	.38	1.27	.45	.52	1.26	1.00	.38	06.	1.17	.38	.38	4.80	.82	1.42	
Bands screw	Narrow hose band	Large hose band	Large hose sleeve	Narrow hose sleeve	Valve support	Diaphram plate supporter	Pin disc	Mouthpiece	Ringed hose	Nut	Fixation strap	Escape valve body	Escape valve plug	Bands screw	Screw retainer	Nut	Yoke	Body case plate	Low pressure valve guide	Low pressure valve spring	Pin	Primary lever	Low pressure chamber plug	High pressure case	Label	Button	Screw	Yoke	Filter	Buckle 14 mm.	Case assembly	Low pressure valve	High pressure valve	Case
111	112	118	120	121	122	123	150	199	200	1016	2294	2597	2598	2630	2631	2632	2633	2981	2986	2987	2988	2993	2994	2995	3081	5238	5239	5240	SG 114	SG1035	SG2668	SG2985	SG2997	SG2999
	.38	.38	.42	.38	1.92	.52	.38	.57	.38	.38	.38	.75	.38	.38	.38	.38	.38	.38	.38	.38	.45	.38	.57	1.42	.38	.45	.38	.38	.38	.38	.38	.38	.38	
High pressure d	Rubber gasket		Seat disc adjus	Adjusting spring					8 Perfortaed silter disc			9/1 Protector	2 Protection cap	2A Rubber insert	3 Cork floater	1 Secondary lever pin	1A Lever pin	3 Set screw	4 Locknut	5 Pin			4A Diaphram fibre plate				Low pressure	4 Brass washer escape valve	Rubber					
	High pressure diaphram .38 111 Bands screw	High pressure diaphram .38 111 Bands screw Rubber gasket .38 112 Narrow hose band	High processor diaphram .38 111 Bands some processor Rubber gasket .38 112 Bards band Fibre gasket .38 118 Large hose band	High pressure diaphram .38 111 Bards pressure Maphram .38 112 Bards band Fibre gasket .38 118 Large hose band Seat disc adjusting spring .42 120 Large hose sleeve	High pressure diaphram .38 111 Bands are processored diaphram .38 112 Narrow hose band Fibre gasket .38 118 Large hose band .42 120 Large hose sleeve Adjusting spring .42 121 Narrow hose sleeve	High pressure diaphram .38 111 Bands band Rubber gasket .38 112 Narrow hose band Seat disc adjusting spring .42 120 Large hose sleeve Adjusting spring .38 121 Narrow hose sleeve Spring container 1.92 Valve support	High pressure diaphram .38 111 Bands screw Rubber gasket .38 112 Narrow hose band .38 112 Large hose band .42 120 Large hose sleeve Adjusting spring .38 121 Narrow hose sleeve .38 122 Valve support Adjusting screw .52 123 Diaphram plate supporter	High pressure diaphram .38 112 Bands screw Rubber gasket .38 112 Narrow hose band .38 112 Large hose band .38 120 Large hose sleeve .38 120 Large hose sleeve .38 121 Narrow hose sleeve .38 122 Valve support .38 122 Valve support .38 123 Diaphram plate supporter .38 150 Pin disc	High pressure diaphram .38 111 Bands screw Rubber gasket .38 112 Narrow hose band Seat disc adjusting spring .42 120 Large hose sleeve Adjusting spring .38 121 Narrow hose sleeve Spring container .52 122 Valve support High pressure spring .38 150 Pin disc Spring support .57 199 Mouthpiece	High pressure diaphram .38 11 Bards screw Rubber gasket .38 112 Barge hose band Seat disc adjusting spring .42 120 Large hose sleeve Adjusting spring .38 121 Narrow hose sleeve Spring container .52 122 Valve support High pressure spring .38 150 Pin disc Spring support .57 199 Mouthpiece Perfortaed silter disc .38 200 Ringed hose	High pressure diaphram .38 112 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A thorough inspection is always a good policy after several years of use. Return your regulator to your local dealer or directly to Seamless Rubber Company for proper inspection and repair.

Analysis and Correction of Complaints

- 1. Mouthpiece or hoses leak water
 - A. Check #200 hoses for cuts or holes.
 - B. Check #118 and #112 clamps for tightness.
 - C. Check valves #106 and #86A for correct closure.
 - D. Loose grip on mouthpiece tighten your bite.
 - E. Loose or damaged diaphram remove cover SG2999, check #85A diaphram.
 - F. Loose case cover #2981, check tightness of screws #83.
- 2. Mouthpiece leaks air
 - A. Check diaphram #85A for stiffness or loss of suppleness.
 - B. Check lever #2993 and #88 could be reset too high, use calibrating tool #7001 to correct lever position.
 - C. Check inter-stage pressure with manometer gauge \$7010 at rotary venture nozzle #2994 at 125PSI.
 - D. Check face on seat #SG2997.
- 3. Air leaks from regulator case plate #2981
 - A. Loose high pressure nozzle case #2995 tighten case. If leak persists, replace gasket #04
 - B. Before assembly, set pressure with gauge #7010 at 125 PSI, using adjusting screw #21 as needed.
 - C. Plug #2994 may be loose, so tighten. If leak continues, replace gasket #92.

- D. First stage leak causes pressure relief valve #100 to blow off. Check SG2997 for damage. Place gauge #7010 at nozzle #2994. Adjust inter-stage pressure to 150 PSI with screw #21, then adjust screw #100 to blow off at 150 PSI. When relief pressure is set, reduce inter-stage pressure to normal 125 PSI with #21.
- 4. Regulator breathes hard
 - A. Cylinder pressure may be too low
 - B. High pressure end of regulator may be clogged by rust or salt crystals plugging filters.
 - C. Check holes in nozzle #2995. Remove circlip #29, replace screen #28 and filter #SGl14 and replace new circlip.
 - D. Diaphram #85A may be too stiff, loss of suppleness, replace diaphram.
 - E. Levers #2993 and #88 are set too low. Normal calibration is when top curled end of #2993 is flush with the groove of tool #7001 whose outer edges are resting on the case assembly wall.
 - F. Check seat #SG2985 for proper lift off or wear.
 - G. Check intermediate stage pressure at 125 PSI.
- 5. Regulator does not breathe.
 - A. Check air in tank
 - B. Check exhalation
 - C. Non-return valves #106 in mouthpiece #199 may be reversed.
 - D. Remove regulator cover #SG2999 and check diaphram #85A and depress lever #2993. Remove #2994, #2987 #2985, #2986, #73 and #74. If no air flows past these points, which regulator is attached to a cylinder with 500 PSI check high pressure body #2995. The seat may be frozen due to water in the air cylinder or regulator submerged in water without the protection cap #52.

Summary

The #7010 gauge is used on plate (2081) and is set at 125 PSI by adjusting screw (21). Air inside the gauge must be released each time adjusting screw (21) is moved. If required, set the safety stage adjusting screw (100) to 150 PSI before adjusting the inter-stage pressure at 125 PSI.

Try not to be penny-wise and pound-foolish in the repair of regulators. Soak and buff all metal parts with 20% nitric acid solution. Brush all rubber parts with a solution of silicone. Carry a good supply of parts and replace them freely. Your customers will be happy to pay a few extra dollars if you are extremely careful and accurate in your repair work.