



**OPERATIONS & MAINTENANCE**

**MANUAL**

**for the**

**ULTRAFLOW 501 17C HELMET**

**Part No: A10350**



THIS PAGE IS LEFT BLANK INTENTIONALLY



## PREFACE

The following address should be used in all communications with the manufacturer :-

DIVEX Ltd.  
Enterprise Drive, Westhill, Aberdeen, AB32 6TQ  
United Kingdom

Telephone +44 (0)1224 740145  
Facsimile +44 (0)1224 740172  
e-mail [info@divexglobal.com](mailto:info@divexglobal.com)  
[www.divexglobal.com](http://www.divexglobal.com)

### NATIONAL APPROVALS AND MARKINGS:

◆ ULTRAFLOW 501 17C HELMET MARKING : **CE 0088**

DIVEX Limited declares that this Personal Protective Equipment is in conformity with the provisions of Articles 10 and 11 of the EUROPEAN DIRECTIVE 89/686/EEC as a CATEGORY 3 DEVICE, and is manufactured under a Quality System approved by Lloyd's Register Q.A. (Notified Body No. 0088).

EC TYPE APPROVAL CONDUCTED BY:

SGS UNITED KINGDOM Ltd.  
ELLESMERE PORT  
CHESHIRE  
UNITED KINGDOM  
CH65 3EN

NOTIFIED BODY No. 0120

◆ NATIONAL APPROVALS

The DIVEX Limited Quality Management System has been approved by Lloyds Register Quality Assurance Limited to *BS EN ISO 9001* Approval Certificate No. 850495.



THIS PAGE IS LEFT BLANK INTENTIONALLY



<b>DIVEX</b>					
<b>DOCUMENT NUMBER:</b> OM 136					
<b>DOCUMENT TITLE:</b> ULTRAFLOW 501 17C HELMET					
<b>REV</b>	<b>DATE</b>	<b>BY</b>	<b>CHK</b>	<b>APP</b>	<b>COMMENTS</b>
0	16/07/02	PGB	RTW	RTW	Original Document
1	30/07/02	FB	RTW	RTW	ECN 3859
2	15/12/03	LL	RTW	RTW	ECN 4644
3	23/03/10	SMcM	R.WYLIE	R.WYLIE	ECN 13344
4	10/04/09	SMcM	<i>R.Wylie</i>	<i>R.Wylie</i>	ECN 12252
5					
6					
7					
<b>ORIGINAL ISSUE DATE:</b> 16/07/02					
<b>ORIGINAL DOCUMENT BY:</b> P. BUCHAN					
<b>CHECKED BY:</b> R. WYLIE					
<b>APPROVED BY:</b> R. WYLIE					



THIS PAGE IS LEFT BLANK INTENTIONALLY



## CONTENTS

- 1.0 INTRODUCTION**
- 2.0 GENERAL DESCRIPTION AND FUNCTION**
  - 2.1 Helmet Assembly
  - 2.2 Ultraflow 501 Demand Regulator
  - 2.3 Modification From Standard DSI Superflow Regulators
- 3.0 SERVICE & MAINTENANCE OF ULTRAFLOW 501 DEMAND REGULATOR**
  - 3.1 Ultraflow Disassembly
  - 3.2 Ultraflow 501 Assembly
  - 3.3 Adjustment
- 4.0 SERVICE & MAINTENANCE OF SIDE BLOCK**
- 5.0 SERVICE & MAINTENANCE OF ORAL NASAL MASK**
- 6.0 ROUTINE MAINTENANCE**
- 7.0 SUPERLITE 17C EXPLODED PARTS**
- 8.0 RECOMMENDED SUPPLY PRESSURES**
- 9.0 DSI 17C MANUAL**



THIS PAGE IS LEFT BLANK INTENTIONALLY





## 1.0 INTRODUCTION

The **ULTRAFLOW 501** diver's Helmet for open circuit air and Heliox diving operations and consists principally of **ULTRAFLOW 501** demand regulator fitted to a conventional DSI Superlite 17C Helmet. **ULTRAFLOW 501** is suitable for depths down to 50 msw on air and 500 msw on Heliox.



THIS PAGE IS LEFT BLANK INTENTIONALLY

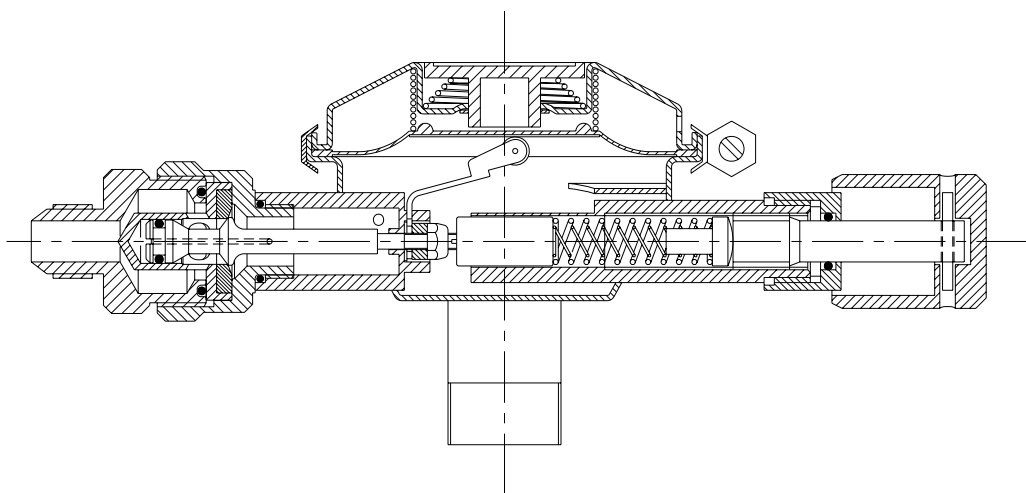
## 2.0 GENERAL DESCRIPTION AND FUNCTION

### 2.1 Helmet Assembly

This manual covers the maintenance of the Ultraflow 501 Demand Valve and the operation of a converted Superlite 17C Helmet with Ultraflow 501

For maintenance of the “Superlite” standard components then refer to the DSI manual.

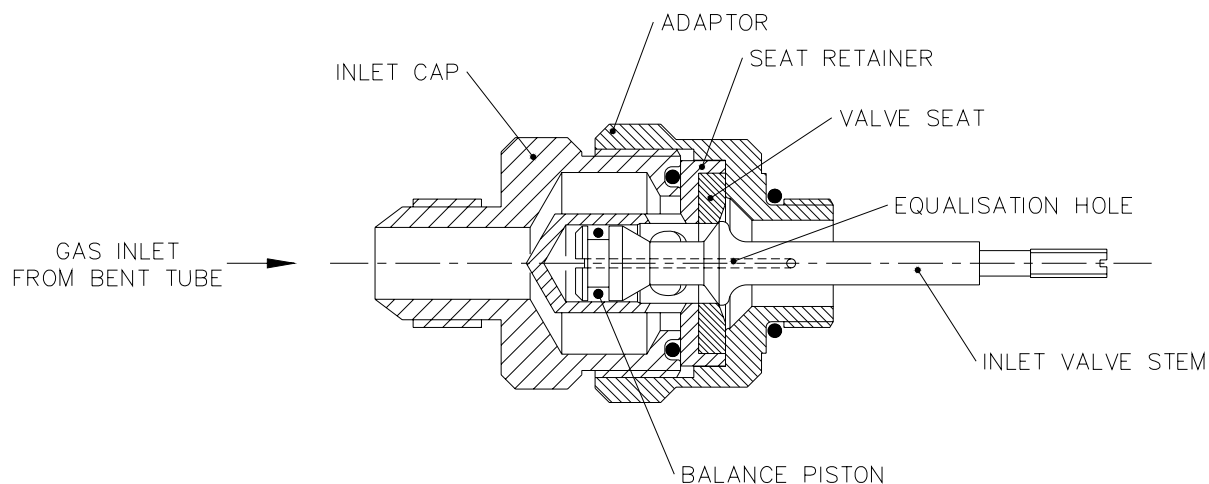
### 2.2 Ultraflow 501 Demand Regulator



The **ULTRAFLOW 501** is a balanced design of demand regulator which gives excellent gas flow over a wide range of supply pressures.

The components of the inlet valve consist of a 316 SS housing, a brass seat retainer with a specially developed valve seat material and the brass inlet valve which connects to the roller lever. In the closed position the supply pressure acts on both the valve and an ‘O’ Ring on the balanced piston part of the stem. The balanced piston is inside the seat retainer and the pressure on the other side of the piston is equalised to the divers side of the inlet valve via a small hole in the stem connected to a point sensing the pressure in the regulator body. The balance piston is slightly smaller in diameter than the inlet valve and this tends to keep firmly closed using the supply pressure itself. As the diver inhales, this reduces the pressure in the regulator body which reduces the closing balance force enabling the diaphragm acting on the roller lever to easily lift the valve off of its seat. At the end of the inhale cycle, the dial-a-breath springs will reseat the valve and restore the rest configuration with supply pressure again holding the valve.

## ULTRAFLOW 501 INLET VALVE ASSEMBLY



**Note:** - That the “dial-a-breath” adjustment is crucial to easy breathing. If it is over-tightened, a large force will be required to lift the inlet valve, requiring a considerable effort on the part of the diver during inhalation. Similarly, if there are large gas supply pressure changes, the pre-load set by the “dial-a-breath” must be altered. Thus, changes in gas supply pressure over bottom, produced by either a change in the actual gas supply pressure or a change in the divers depth, will require “dial-a-breath” adjustment. As the regulator inlet valve assembly is balanced, the “dial-a-breath” movements are minimal for small pressure changes compared to a standard DSI regulator.

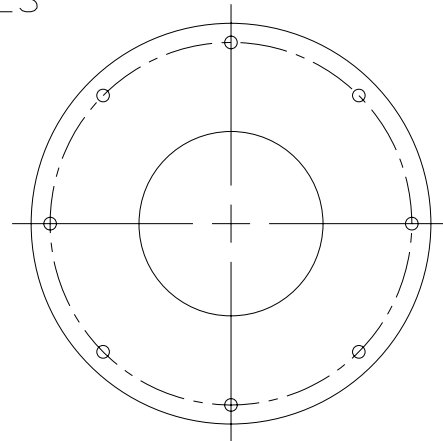
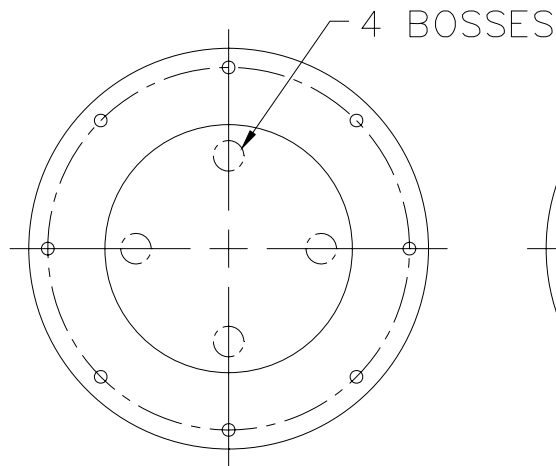
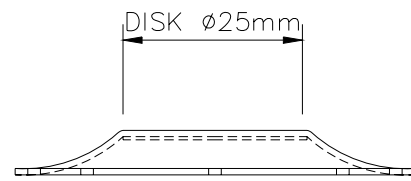
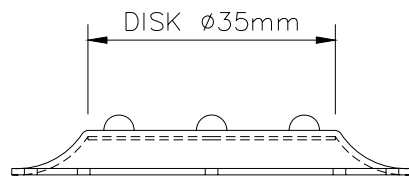
### 2.3 Modifications From The Standard DSI Superflow Regulator

The **inlet tube** which penetrates the helmet body is increased to 22mm ( $\frac{7}{8}$ ”) bore compared to the Superflow’s  $\frac{3}{4}$ ” bore.

The **large swirl** plate in the bottom box is also removed and the “**dial-a-breath**” tube is turned down in the area of the milled flat. Both of these changes allow better gas flow through the regulator.

The **diaphragm** is changed for one which has a larger centre disc and more flexible material. This improves the effective action of the diaphragm.

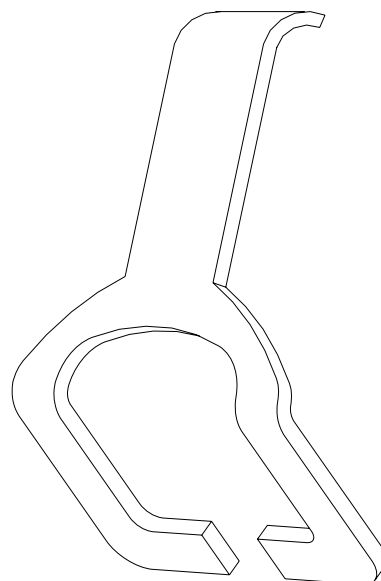
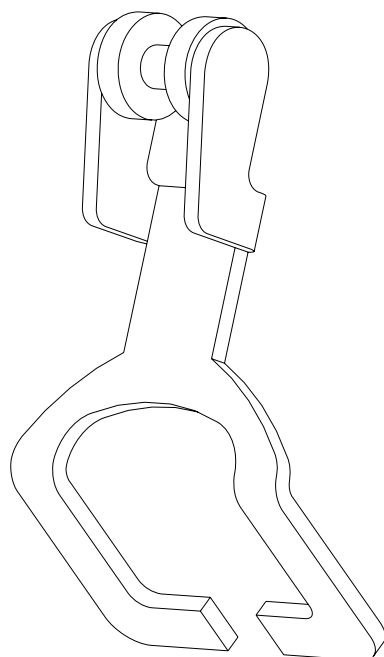
**Diaphragm** DE024 (510-552) is replaced with a diaphragm with a larger backing Plate 35mm DE057. This provides a diaphragm having 1.9 times greater effective area.



**ULTRAFLOW 501**

**NOT RECOMMENDED**

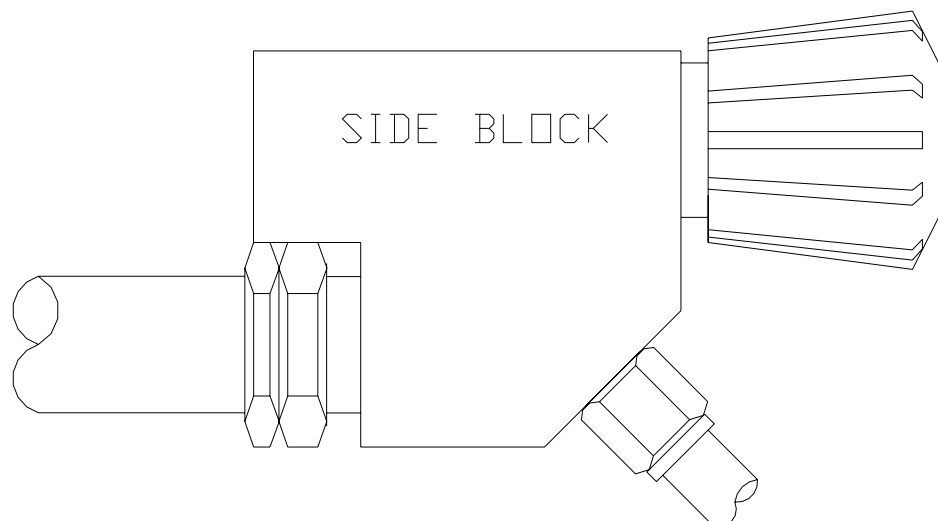
The **lever** on which the diaphragm acts is of the roller end type and none of the other types should be used. The roller type provides least resistance to movement. The roller type is DE058 (545-038).



**ULTRAFLOW 501**

**NOT RECOMMENDED**

The **side block/bent tube** assembly as supplied by **DIVEX** is modified by the replacement of the Standard DSI Teflon Washer with an 'O' Ring. **DIVEX** Part No. RT011, which improves gas flow at this point, together with the special bent tube assembly, **DIVEX** Part No. DM 2009, to interface with the **ULTRAFLOW 501** Inlet Valve.



**NOTE:** - (A) From 1991 onward, the Check Valve and fitting DE121 (555-118) are manufactured as one. Current Check Valve is Part No. DE189.



### 3.0 SERVICE & MAINTENANCE OF ULTRAFLOW 501 DEMAND REGULATOR

#### 3.1 Ultraflow Disassembly

##### To be read in conjunction with Drawing on Page 3.7

1. Remove the cover Clamp Screw (Item 29) and Cover Clamp (Item 15) lift the Cover (Item 13) off with Spring (Item 14) and pull out the Diaphragm (Item 11).
2. The “dial-a-breath” control is removed by backing the knob (Item 27) out until the Nut (Item 25) is exposed enough to use a wrench. The knob (Item 27) Nut (Item 25), ‘O’ Ring (Item 28), Washer (Item 24) and Shaft (Item 23) all come out as one. The Knob (Item 27) may be removed from the shaft (Item 23) by punching out the Lock Pin (Item 26). A  $\frac{3}{32}$ ” diameter punch should be used. The ‘O’ Ring (Item 28) and Washer (Item 24) remain on the shaft (Item 23) and may now be removed. Tilt the helmet so that the Spacer (Item 22), Spring Set (Item 21) and Piston (Item 20) fall out of the adjustment Shaft Tube of the Regulator Body (Item 8).
3. Remove the Bent Tube Assembly from the Inlet Valve Assembly.
4. Remove the complete Inlet Valve Assembly from the Demand Regulator Body (Item 8), using a wrench on the **ULTRAFLOW** Adapter Flats (Item 3).
5. The Inlet Valve Assembly can now be carefully pulled away from the Demand Regulator Body leaving the Valve Stem (Item 1) in place in the Regulator.
6. The Valve Stem can be removed from the Regulator by removing the Nut (Item 19). Use a straight slot screwdriver to rotate the Valve Stem (Item 1) while Retaining Nut (Item 19) is held with the correct spanner from the DSI Service Tool Kit.
7. Undo the Nut (Item 9) which secures the inlet tube to the helmet. Remove the Regulator Body (Item 8). Nut (Item 9) and ‘O’ Ring (Item 10). All parts should be thoroughly cleaned and parts replaced as indicated with ‘O’ rings being lubricated only with Christo-Lube fluorinated grease before installation.



## 3.2 Ultraflow 501 Assembly

### **To be read in conjunction with the drawing on page 3.7**

During re-assembly of the Demand Regulator, replace all questionable and damaged parts with new. Lubricate all 'O' rings and threaded metal parts lightly only with Christo-Lube fluorinated grease.

1. Install the Inlet Valve Stem (Item 1) in the regulator Body. Fit the Washer (Item 16), Lever (Item 17) and Spacer (Item 18) on to the Shaft of the Inlet Valve Stem. Screw the nut on to the threaded end of the Inlet Valve Stem until the Inlet Valve threads protrude slightly (about 2 threads past the Nut). Use a straight slot screwdriver and special DSI spanner for this operation.

**CAUTION:** The Lock Nut (Item 19) is a Nyloc Nut and should always be replaced with new if removed from the Inlet Valve.

2. Assemble the **ULTRAFLOW** Adapter (Item 3), Seat Retainer (Item 4) and Inlet Cap (Item 2).
3. Install the Piston (Item 20), Spring Set (Item 21) and Spacer (Item 22) into the Adjustment Tube of the Regulator Body. Generously apply Christo-Lube Fluorinated Grease to this assembly.
4. Thread the main adjustment Shaft (Item 23) into the tube. Slide the washer (Item 24) and 'O' Ring (Item 28) onto the adjustment shaft (Item 23). Slide the packing Nut (Item 25) onto the shaft and tighten in onto threaded tube of the Regulator (Item 8).
5. Fit the knob (item 27) onto the adjustment Shaft (Item 23) and align the holes for the Retaining Pin (Item 26).

**CAUTION:** Support the adjustment knob (item 27) while tapping Retaining Pin (Item 26) to prevent damage to the Shaft (Item 23) and Body (Item 8).

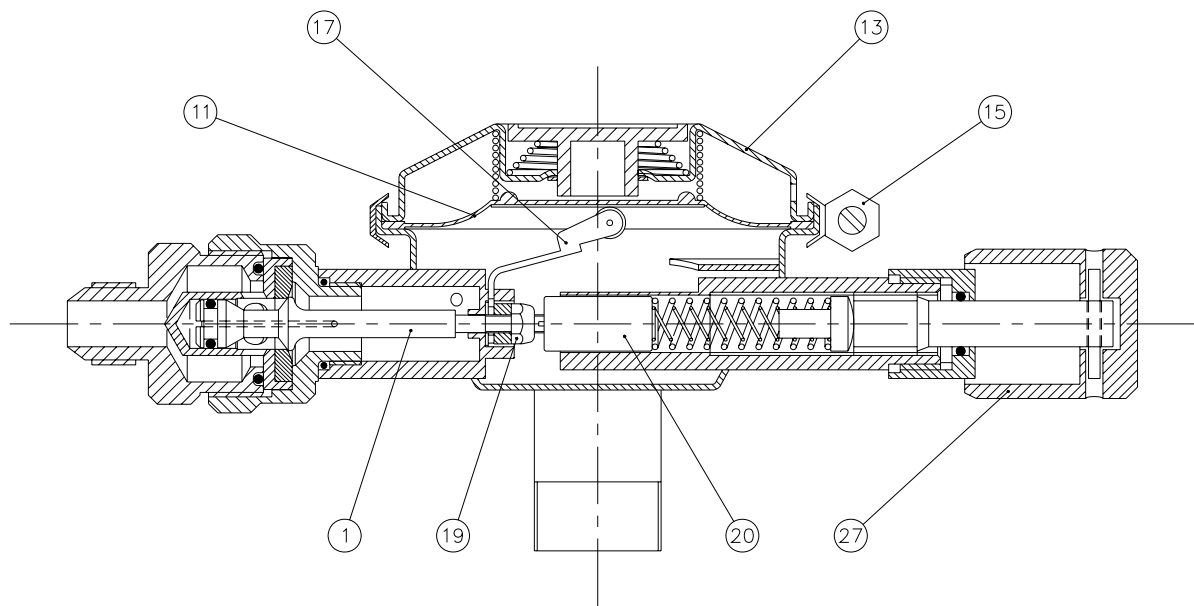
6. Assemble the Bent Tube Assembly to the Inlet Valve Assembly.

**NOTE:** The sealing washer should be DIVEX Part No. RT011 which improves flow characteristics.

Adjust the Regulator as described in Section 3.3.



### 3.3 Adjustment



1. Remove the Clamp (Item 15), Cover (Item 13), Spring (Item 32) and Diaphragm (Item 11).
2. Fully loosen the “dial-a-breath” (Item 27) by turning counter-clockwise to the stop.
3. Insert the DSI service tool between the Inlet Valve Stem (Item 1) and the Piston (Item 20) as shown in the diagram above. The blade of this tool should be aligned with the small slot in the end of the Stem. This prevents rotation of the Stem.
4. Connect to a gas supply and set pressure between 10-15 BAR.

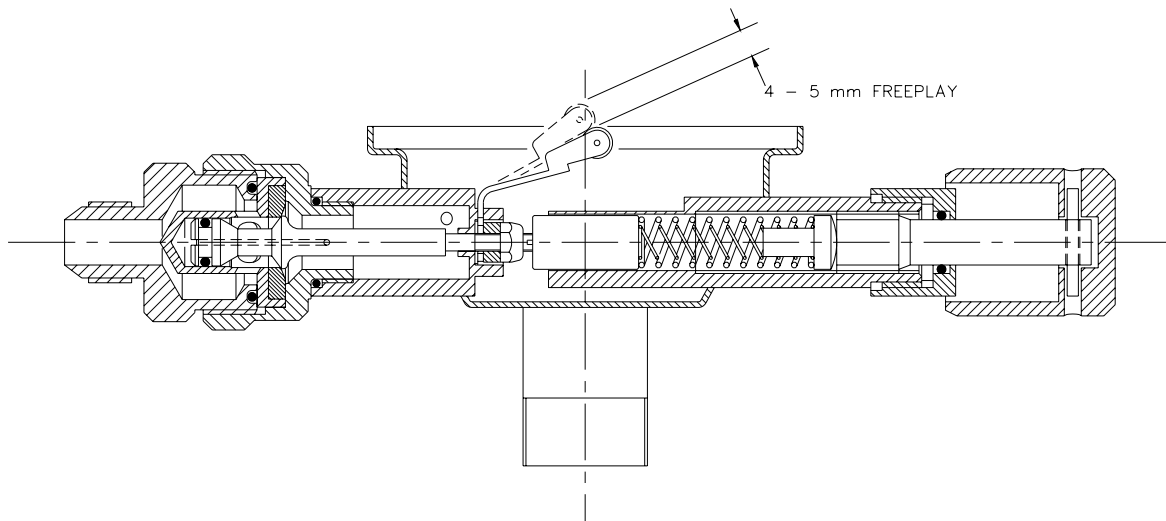
**NOTE:** - For operational gas supply pressures, refer to Regulator Setting Guidelines in Section 8 of this manual.

5. Tighten the “dial-a-breath” (Item 27) until free flow has just stopped. Depress the roller fork (Item 17) a few times to allow the valve stem to centralise.
6. Adjust the Nut (Item 1) until there is 4-5 mm of freeplay at the end of the Lever (item 17).
7. Remove the DSI service tool from the Inlet Valve Stem.

**NOTE:** - The regulator will require the “dial-a-breath” turned in 1 to 2 turns to compensate for the thickness of the DSI tool.

8. Check that there is still 4-5mm of freeplay at the end of the Lever (Item 17).

9. Shut the gas supply to the regulator and vent the remaining gas in the side block by pushing the Lever (Item 17).
10. Turn the Nut (Item 19) 90° in a clockwise direction using the DSI spanner.
11. Repeat steps 4, 8, 9 and 10 until the valve stem has rotated through 360°.



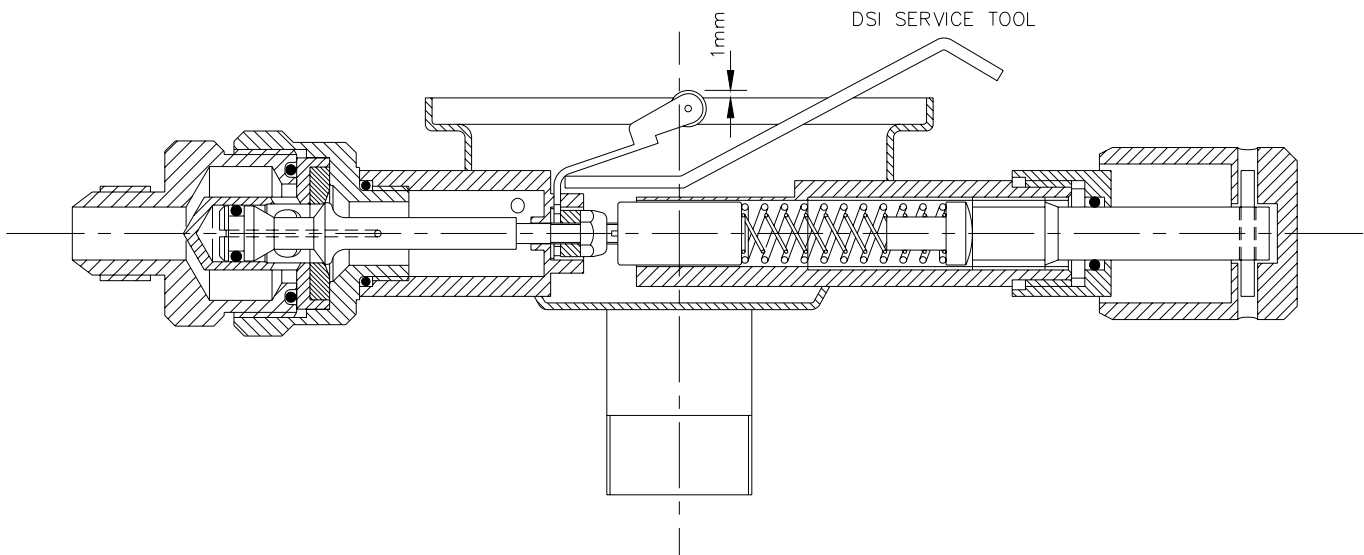
12. If there is less than 4-5mm freeplay at the end of the Lever (Item 17) or the regulator freeflows, repeat steps 3 to 11 until there is a minimum 4-5mm of freeplay at the end of the Lever (Item 17) in all 90° increments of the valve stem movement.
13. Refit the diaphragm (Item 11) and Cover (Item 13), holding cover firmly in place by hand.
14. Depress the Purge Button in the centre of the cover (Item 13) ensuring that there is clearance between the Button and the Diaphragm. If the Lever height requires adjustment, it must be bent, as described in paragraphs 15 and 16 below.
15. To decrease the Purge Button clearance, grip the lever with the first finger of the right hand under the lever and with the thumb on top, push down to bend the roller end of the lever upwards.

**NOTE:** - It is essential that undue stress is not placed on the lower arms of the Lever, as this will distort the blades resulting in spongy operation.

16. To increase the clearance, place the “disc end” of the DSI service tool inside the Regulator, under the Lever as shown below.

The lever may then be bent down to the desired height by hand (i.e. roller projects approximately 1mm above the top edge of the demand regulator body and this should be checked using a straight edge).

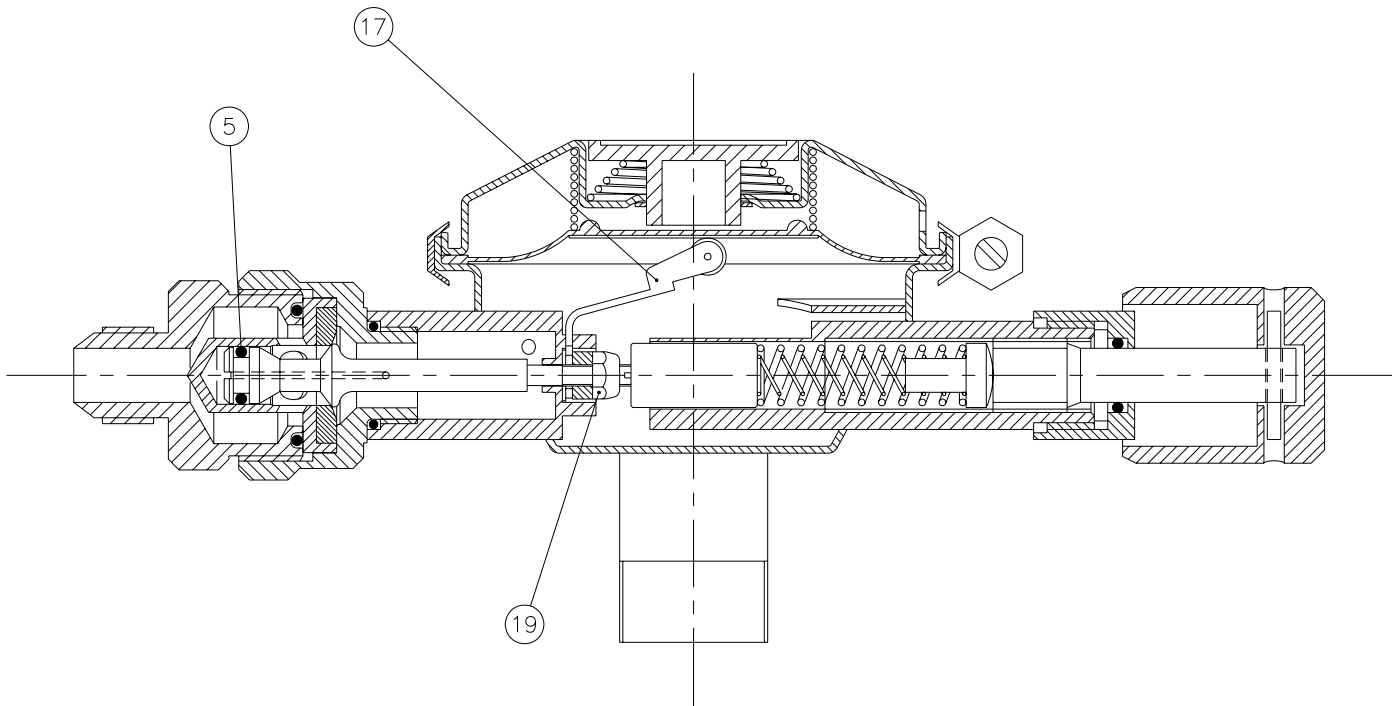
**CAUTION:-** Do not bend the Lever too far.



17. Replace the Diaphragm with Bias Spring and Cover and re-test the regulator as follows:

Tighten the “dial-a-breath” fully and connect to a gas supply of recommended pressure. Depress the Purge Button gently. If there is no gas flow, dismantle the Regulator and re-check adjustment as described in Paragraph 1 to 10 above.

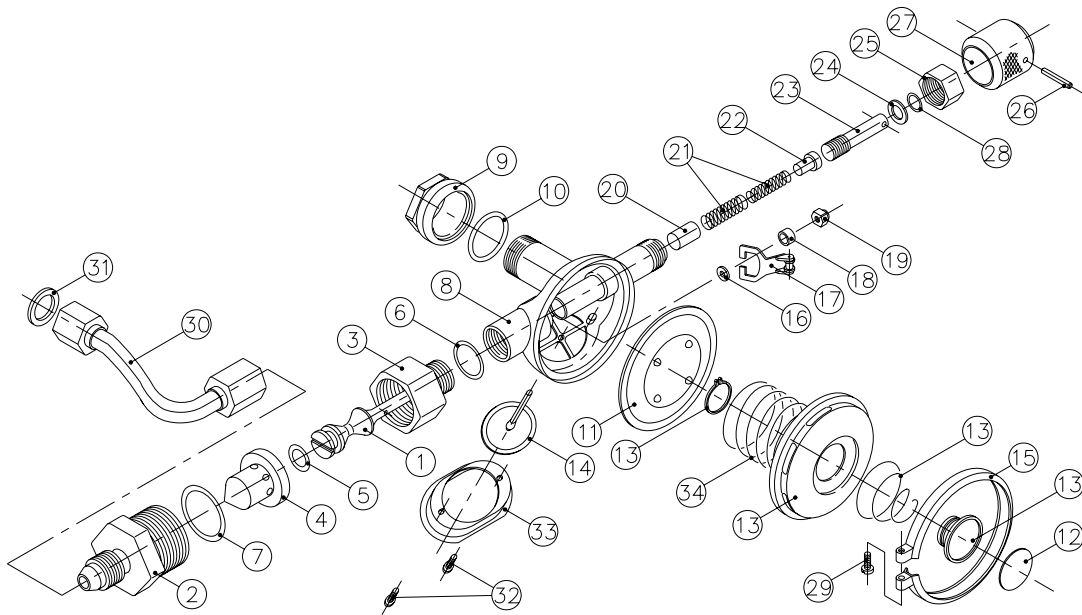
18. Re-set the “dial-a-breath” by unscrewing the “dial-a-breath” knob till the Regulator freeflows then tighten one (1) full turn.



**NOTES: -**

- (a) It is not permissible to loosen the Nut (Item 19) more than one eighth of a turn to adjust the Lever height. If the nut is loosened beyond this amount, the regulator will not flow to its maximum rate.
- (b) It is essential that all Regulator parts should be free from dirt and rubber components should be inspected for any sign of deterioration.
- (c) All internal parts should be lightly lubricated with Christo-Lube Fluorinated Grease; especially 'O' Ring
- (d) The two opposing blades on the bottom of the Lever (Item 17) must be accurately aligned with each other and be free from tool marks or burrs.

## ULTRAFLOW 501 REGULATOR



ITEM NO	DESCRIPTION	QTY.	PART No	TORQUE SETTINGS	
				Inch Pounds	Nm
1	VALVE STEM	1	D1995	-	-
2	INLET CAP	1	D1996	100	11.3
3	ADAPTER	1	D1997	40	4.5
4	VALVE SEAT RETAINER	1	D1998	-	-
5	O-RING	1	E13991	-	-
6	O-RING	1	RN014-7	-	-
7	O-RING	1	RN017-7	-	-
8	ULTRAFLOW BODY	1	D1434A	-	-
9	NUT	1	D1433	100	11.3
10	O-RING	1	RN214-7	-	-
11	DIAPHRAGM	1	DE057	-	-
12	DECAL (ULTRAFLOW 501)	1	T14753	-	-
13	COVER ASSEMBLY (BLACK)	1	D1149	-	-
14	MUSHROOM VALVE	1	DE028	-	-
15	CLAMP	1	DE069	-	-
16	WASHER	1	DE067	-	-
17	ROLLER LEVER	1	DE058	-	-
18	SPACER	1	DE068	-	-
19	NUT	1	DE025	-	-
20	PISTON	1	DE062	-	-
21	SPRING SET	1	D13800	-	-
22	SPACER	1	DE063	-	-
23	SHAFT	1	DE064	-	-



24	WASHER	1	DE019	-	-
25	PACKING NUT	1	DE065	40	4.5
26	RETAINING PIN	1	DE021	-	-
27	ADJUSTMENT KNOB	1	DE066	-	-
28	O-RING	1	DE020	-	-
29	SCREW	1	DE022	8	1.0
30	BENT TUBE ASSEMBLY	1	DM2009	100/100	11.3/11.3
31	O-RING	1	RT011	-	-
32	RETAINING SCREW	1	DE076	-	-
33	WHISKER ADAPTER	1	DE096	-	-
34	BIASING SPRING (LIGHT YELLOW)	1	D1158	-	-



#### **4.0 SERVICE AND MAINTENANCE OF SIDE BLOCK**

Maintenance of the Side Block with regard to DIVEX equipment consists of checking the condition of the 'O' Ring at the top of the bent tube assembly. If there is any doubt about the condition, replace. For maintenance on the remainder of the side block refer to the DSI Manual.



THIS PAGE IS LEFT BLANK INTENTIONALLY





## **5.0 SERVICE AND MAINTENANCE OF ORAL NASAL MASK**

Remove the Oral Nasal Mask first removing the nose block device by unscrewing the knob and removing the packing nut and 'O' rings. Pull the nose block device out of the oral nasal. Unscrew the outer nuts on the communications posts and remove the microphone wire lugs.

Grasp the oral nasal and slowly pull of the regulator mount nut and the connector. The oral nasal is now out of the headgear and can be inspected. Replace if necessary noting that a light coat of silicone lubricant will preserve the rubber.

Re-assembly is the reverse of the above sequence.



THIS PAGE IS LEFT BLANK INTENTIONALLY



## 6.0 ROUTINE MAINTENANCE

### Maintenance Schedule

#### 24 Hours

Clean and inspect mask or helmet inside and out.

Check operation of all moving parts

Check neck dam for tears or deterioration which could lead to damage (helmets only)

Refer to DSI Manual for detailed procedures.

#### Monthly

Inspect oral nasal for signs of deterioration.

Inspect and adjust demand regulator.

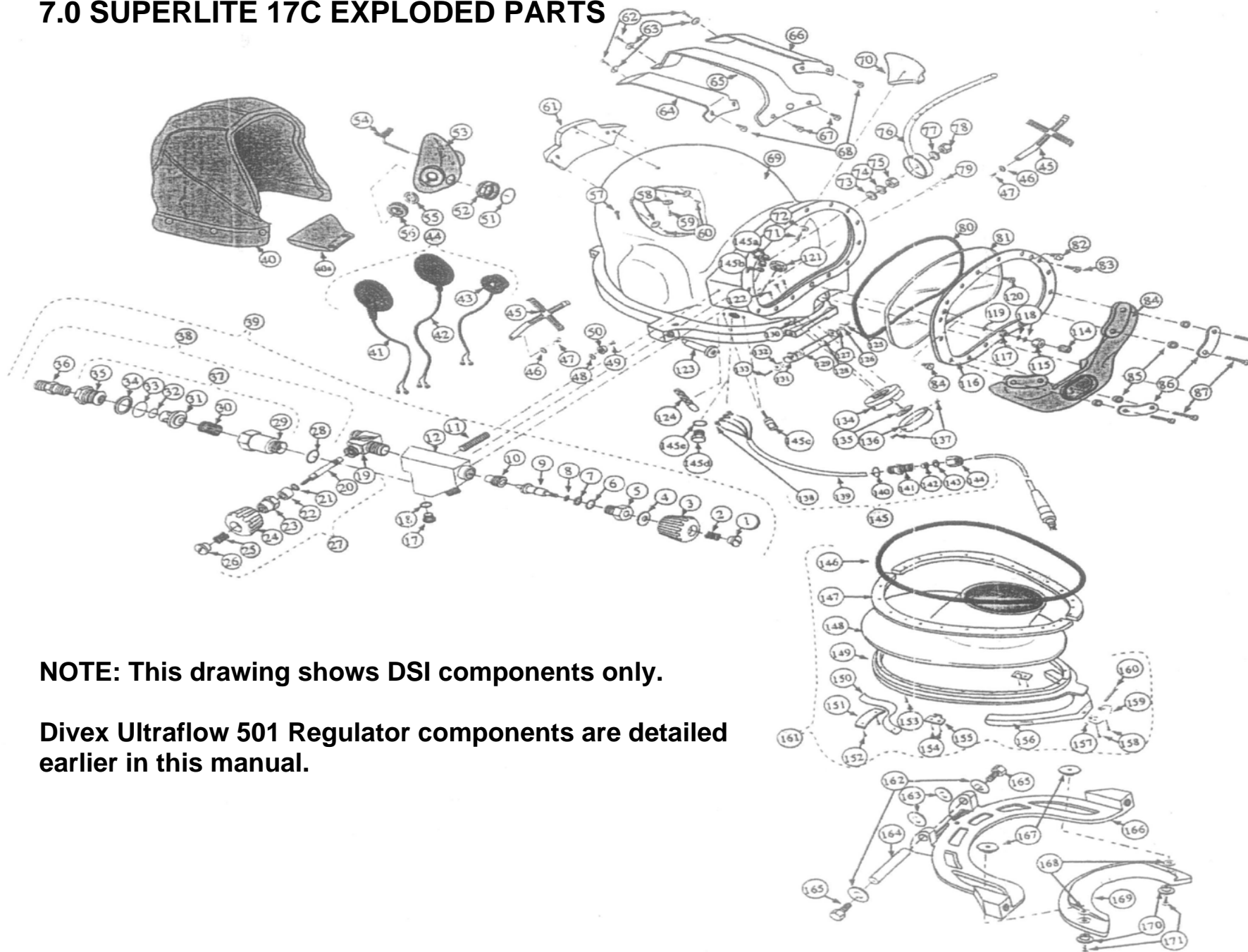
Lubricate packing on nose clearing devise as described in DSI Manual.

Test Check Valve on main supply connection as described in DSI Manual.



THIS PAGE IS LEFT BLANK INTENTIONALL

## 7.0 SUPERLITE 17C EXPLODED PARTS



**NOTE:** This drawing shows DSI components only.

Divex Ultraflow 501 Regulator components are detailed earlier in this manual.



THIS PAGE IS LEFT BLANK INTENTIONALLY

## SUPERLITE 17C

Location No	Part Number	Divex Number	Description
1	550-019	DE093	Locknut
2	535-802	DE177	Spring
3	520-016	DE035	Knob, Control
4	520-030	DE036	Washer
5	550-020	DE181	Bonnet
6	510-015	DE037	O-Ring
7	520-031	DE038	Washer
8	510-010	DE016	O-Ring
9	550-022	DE156	Valve Stem
10	550-023	DE040	Seat Assem.
11	550-024	DE182	Stud
12	550-029	DE125	Side Block
17	550-095	DE005	L.P Plug, w/O-Ring
18	310-003	DE2702	O-Ring
19	550-140	DE1851	Emerg.Valve Body
20	550-138	DE1581	Stem
21	540-095	DE1571	Washer
22	520-024	DE0411	Packing
23	550-091	DE1841	Packing Nut
24	520-025	DE0351	Knob, Control
25	535-802	DE177	Spring
26	550-019	DE093	Locknut
27	505-070	DE0781	Emerg. Valve Assem.
28	510-483	DE043	O-Ring
29			Body
30			Spring
31			Poppet
32			O-Ring
33			O-Ring
34			Wiper
35			Seat
36	555-117	DE079	Adapter, Brass, 1/4" NPT/O <sub>2</sub>
37	555-195	DE189	One-Way Valve
38	505-060	DE1321	One-Way Valve Stem
39	505-024	DE1341	Side Block Assem. (B)
40	510-682	DE1732	Head Cushion
	510-654	~	Head Cushion Valve
40a	510-683	DE1751	Chin Cushion
	510-639	~	Chin Cushion Bag
	510-671	DE1759	Replacement Foam Kit
41	515-005	DE077	Earphone Right

One-Way DE 162  
Valve Kit 525 - 330

Location No	Part Number	Divex Number	Description
42	515-006	DE042	Earphone Left
	510-542	~	Earphone Cover Set
	515-008	~	Speaker
	520-015	~	Speaker Protector
43	515-009	DE097	Microphone
44	515-030	DE086	Communications Set
45	540-054	DE054	Earphone Retainer
46	530-527	DE089	Washer
47	530-018	DE2710	Screw
48	530-519	DE1740	Washer
49	530-018	DE2710	Screw
50	530-702	DE1741	Snap
51	510-211	DE120	O-Ring
52	550-038	DE122	Nut, Regulator Mount
53	510-690	DE2717	Oral Nasal Mask
54	545-015	DE003	Nose Block Device
	510-575	DX2374	Nose Block Pad
55	510-550	DE004	Valve, Oral Nasal
56	520-020	DE150	Valve Body
57	530-015	DE2713	Screw
58	530-540	DE094	Washer
59	530-078	DE1710	Screw
60	530-070	DE159	Screw
61	560-125	DE1748	Weight, Top Rear
62	530-062	DE1761	Screw
63	530-406	DE047	Washer
64	540-130	DE1764	Mount Bracket – Starboard Side
65	540-133	DE1713	Handle
66	540-132	DE1762	Mount Bracket – Port Side
67	530-045	DE017	Screw
68	530-040	DE052	Screw
69	505-106	DE1769	Helmet, Fiberglass w/Ring
70	560-086	DE1765	Weight, Port Side
71	560-078	DE1710	Screw
72	530-540	DE094	Washer
73	530-535	DE175	Washer
74	530-415	DE173	Washer, Lock
75	530-317	DE171	Nut
76	545-016	DE080	Air Train
77	530-535	DE175	Washer
78	530-317	DE171	Nut
79	530-050	DE010	Screw
80	510-260	DE011	O-Ring
81	520-004	DE012	Face Port/Lens (Lexan)
82	530-052	DE014	Screw
83	530-035	DE013	Screw



Location No	Part Number	Divex Number	Description
84	510-554	DE107	Whisker
85	550-061	DE108	Spacer
86	540-015	DE106	Plate
87	530-045	DE017	Screw
88-113			Not Used
114	550-062	DE161	Knob, Nose Block
115	555-180	DE190	Packing Nut
116	560-070	DE193	Port Retaining
117	550-116	DE1716	Nose Block Guide
118	510-008	DE015	O-Ring
119	510-010	DE016	O-Ring
120	535-035	DE013	Screw
121	550-040	DE087	Nut
122	530-035	DE013	Screw
123	505-110	DE1727	Sealed Pull Pin
124	515-061	DE680	Terminal Block
125	530-035	DE013	Screw
126	530-546	DE2792	Washer
127	550-061	DE108	Spacer
128	540-086	DE2785	Swing Tongue Catch
129	520-167	DE2786	Washer
130	530-032	DE2726	Screw
131	535-825	DE2787	Spring
132	550-122	DE2788	Spring Spacer
133	530-045	DE017	Screw
134	550-063	DE095	Exhaust Body
135	510-561	DE081	Exhaust Valve/Water Dump
136	545-024	DE082	Exhaust Cover
137	530-021	DE076	Screw
138	515-049	DE2794	Terminal
139	515-045	CO074	Waterproof Conn, Male
140	510-481	DE032	O-Ring
141	555-175	DE084	Packing Gland
142	520-035	DE033	Ferrule, Front
143	520-036	DE034	Ferrule, Back
144	555-178	DE085	Packing Nut
145	505-047	DE1767	W.P. Connector Assem
145a	530-308	DE090	Nut
145b	530-525	DE089	Washer
145c	515-035	DE031	Communications Post
145d	510-481	DE032	O-Ring
145e	550-043	DE088	Plug
146	510-450	DE2745	O-Ring
147	540-105	DE2748	Split Nut, (2 Required)

Location No	Part Number	Divex Number	Description
148	510-631	DE1731	Neck Dam, Latex (med)
	510-628	DE1728	Neck Dam, Neoprene (med)
149	560-078	DE2749	Stepped Ring
150	530-808	DE2751	Pull Strap
151	540-115	DE2752	Strap Plate
152	530-220	DE2753	Screw
153	530-024	DE2750	Screw
154	530-022	DE2757	Screw
155	540-056	DE1721	Catch, Front Yoke
156	520-012	DE1734	Front Yoke
157	530-312	DE2791	C Clip
158	530-022	DE2757	Screw
159	550-216	DE1771	Front Yoke Hinge Block
160	530-312	DE2790	Pin
161	505-101	DE2759	Neck Ring Assem. (latex)
162	530-545	DE2761	Washer
163	520-165	DE2762	Washer
164	550-275	DE2763	Hinge Pin
165	530-200	DE2760	Bolt
166	560-111	DE2768	Locking Collar
167	550-113	DE1745	Adjustment Nut
168	530-547	DE2782	Washer
169	520-098	DE2781	Neck Pad w/# 168 (2)
170	550-045	DE2770	T-Washer
171	530-064	DE2771	Screw

## 8.0 RECOMMENDED SUPPLY PRESSURES

The operation of the ULTRAFLOW 501 Helmet is no different from that of a standard DSI Superlite 17B Helmet and optimum diver breathing resistance can be achieved by rotation of the Demand Regulator adjustment knob.

### Recommended Supply Pressure for Air Diving Applications

To assist users of the ULTRAFLOW 501 Helmet to gain maximum diver comfort and safety, it is recommended that the following minimum overbottom supply pressure settings are provided at the supervisors panel. The maximum overbottom settings should not exceed 20 barg.

Diving Depth MSW	Surface Supply Pressure (Barg)	
	300' Umbilical	600' Umbilical
10	10	10
20	10	10
30	10	10
40	11	12
50	13	14

### Recommended Supply Pressure for Mixed Gas Diving Applications

To assist users of the ULTRAFLOW 501 Helmet to gain maximum comfort and safety, it is recommended that the following minimum supply pressure settings are provided in the Diving Bell. This pressure setting should no exceed 20 bar g.

BELL DEPTH	DIVER SUPPLY (BELL)
MSW	BAR
30-150	10
151-180	11
181-215	12
216-250	13
251-280	14
281-315	15
316-350	16
351-400	17
401-430	18
431-460	19
461-480	20
481-500	20