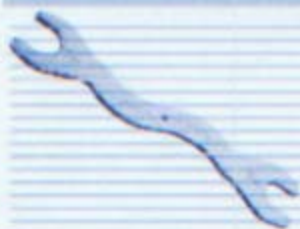




OT-8000 SERVICE MANUAL

ScubaMax

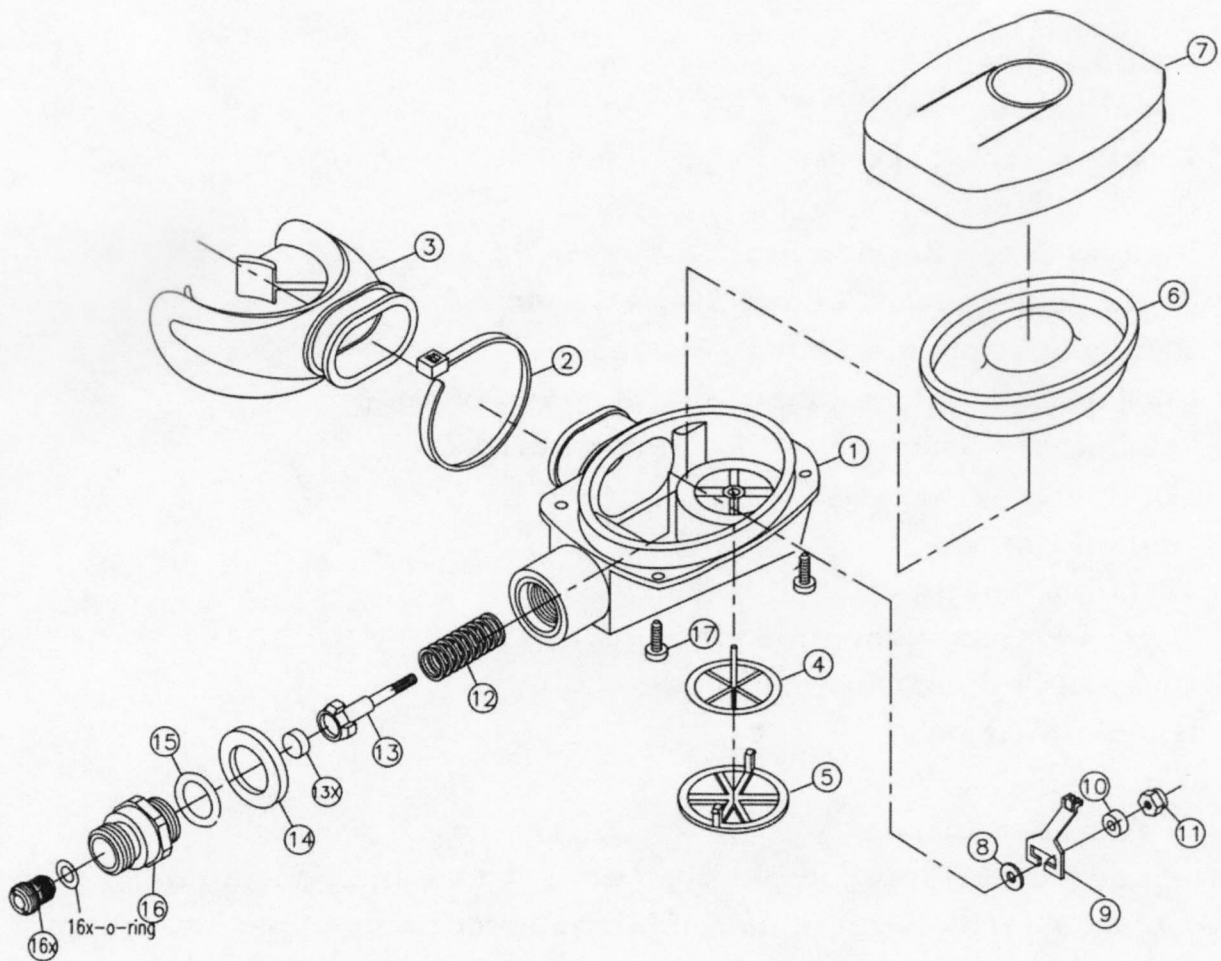
→ Regulator Service Manual →



Professional SCUBA Diving Equipment

SCUBA MAX

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ITEM	PART NO	DESCRIPTON	ITEM	PART NO	DESCRIPTON
1	9501	MAIN HOUSING	11	9511	STAINLESS NYLON NUT
2	9502	NYLON TIE	12	9512	MAIN SPRING
3	9503	SILICONE MOUTHPIECE	13	9513	POPPET
4	9504	SILICONE VALVE	13X	9513-X	LP SEAT
5	9505	EXHAUSE COVER	14	9514	BRASS RING
6	9506	DIAPHRAGM	15	9515	O-RING
7	9507	FRONT COVER	16	9516	INLET NIPPLE
8	9508	SPACER	16X	9516X	ORIFICE
9	9509	LEVER ARM	16X-O	9516X-O	ORIFICE-O-RING
10	9510	SPACER	17	9517	SCREW

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Before You Begin

Read these instructions completely before you begin servicing the regulator or filling whip. These instructions are intended for people who have been **AUTHORIZED** by **SCUBAMAX** to repair **SCUBAMAX** Scuba equipment. If you are not so authorized - **STOP**.

1.0 INTRODUCTION

- 1.0.1 The procedures in this manual apply to the **SCUBAMAX** the **OT-8000** type 2ND stage. Refer to the exploded views as you read the service section of the manual. The Item Numbers referred to in the service section are those seen in the corresponding exploded view



! WARNING !

NEVER tighten the hose fitting to the first stage with more than 40 in. lbs. (4.5 Nm) of torque. The inlet hose fitting will be weakened by over tightening. Failure to heed this warning may result in serious injury or death.

NOTE:

All **SCUBAMAX** Scuba Regulators have service kits available which contain the parts which must be changed at every annual service no matter what their condition. The standard annual service kit part numbers are shown in the parts list. All other parts not contained in these kits must be inspected by the technician and changed if necessary. Parts will be handled under warranty, only if they have failed due to problems with material or workmanship.

**! WARNING !**

SCUBAMAX Scuba Regulators are manufactured using materials suitable for use with oxygen enriched gases (i.e. Nitrox, etc.) providing the oxygen content does not exceed 40%. Equipment intended for enriched air (Nitrox) use, must not be used with regular compressed breathing air or other gases. Regulators intended for enriched air use, can be serviced only by technicians trained by one of the major oxygen enriched air training agencies. Failure to heed this warning may result in serious injury or death.

- 1.0.2** This manual gives breakdowns of regulator parts, equipment specifications, servicing instructions, troubleshooting recommendations, and guidelines for proper care of **SCUBAMAX** regulators. This manual is intended for use only by persons specially trained and authorized to service **SCUBAMAX** Scuba equipment.
- 1.0.3** Anyone attempting to service or repair **SCUBAMAX** Scuba regulators must have a thorough understanding of the principles of operation of scuba regulators and valves, as well as the appropriate mechanical ability. The technician must be properly trained in the safe use of compressed air and the various tools and cleaning solutions involved in the procedures outlined in this manual.
- 1.0.4** The best source for current part numbers for any of the parts listed in this manual is your current parts and price list from **SCUBAMAX**.
- 1.0.5** If you have any questions, or need more information, contact your

SCUBAMAX Scuba Sales Representative or **SCUBAMAX** Customer Service. You can e-mail you technical questions to **SCUBAMAX'S** mail box.

2.0 SPECIFICATIONS

PROBLUE **OT-8000** SECOND STAGE REGULATOR

AIR FLOW 33 cu. ft. (935 liters/min). @ 1 atmosphere
INHALATION RESISTANCE .. 0.9" -2.0" (2.3 - 5.08 cm) w.c. @ 1 atmosphere
EXHALATION RESISTANCE .. 0.6" (1.52 cm) w.c. max. @ 1 atm.

RECOMMENDED LUBRICANT LTI Christo-Lube 111[®]




A. **OT-8000** SECOND STAGE REGULATOR

TYPEPOPPET VALVE , BALANCE DIAPHRAGM
WEIGHT.....5 lb. (w/o hose)
MATERIALSCOVER ----- ABS
HOUSING ----- ABS HI-IMPACT
LP SEAT ---- SILICONE
O-RING ----- Buna-N
DIAPHRAGM ----- SILICONE
EXHAUST VALVE---- SILICONE
MOUTHPIECE ---- SILICONE

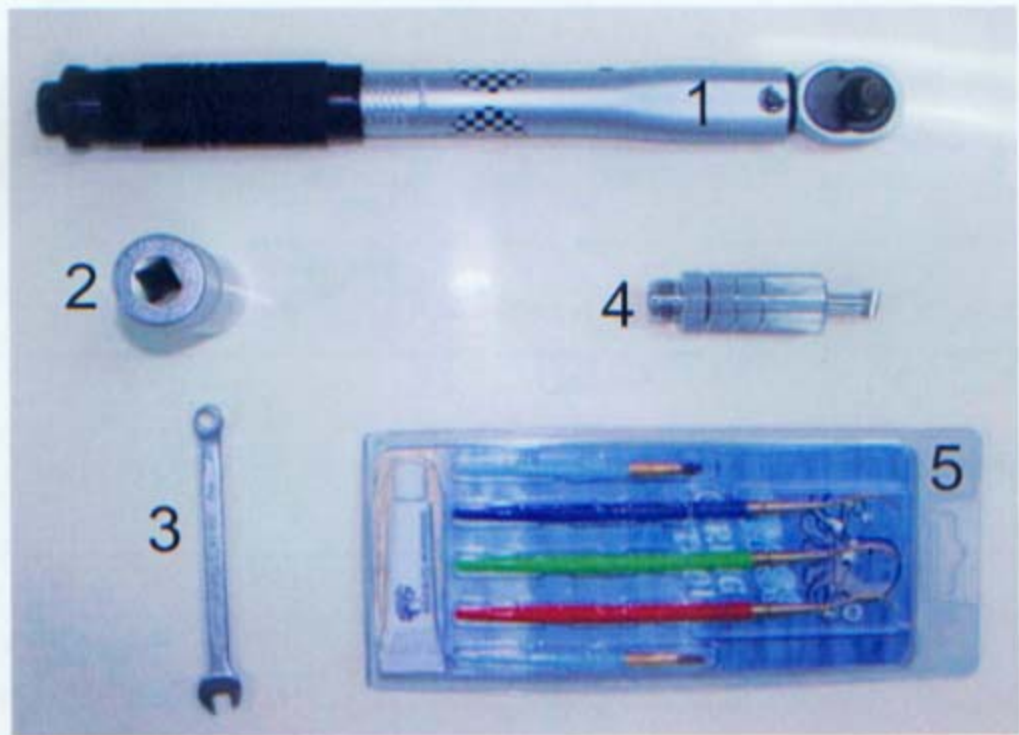
2.1 Torque Specifications:

Description	Item #	Torque
INLET NIPPLE	16	85-95 in/lbs (9.6-10.7 Nm)
SCREW	17	1-2 ft/lb (2-3 Nm)
Hose inlet end		2-3 ft/lb (3-4 Nm)
Hose outlet end		2-3 ft/lb (3-4 Nm)

3.0 SERVICE KIT LIST

DRAWING	NO	PART NO	DESCRIPTION	Q'TY
	13X	9513X	LP SEAT	1
	15	9515	O-RING	1
	16X-0	9516X-0	O-RING	1

3.1 SERVICE TOOL LIST



1	TORQUE WRENCH 5-25 N.M	2	19MM HEX SOCKET
3	6MM COMBINATION WRENCH	4	ADJUST TOOL
5	O-RING TOOL SET	6	4H POPPET TOOL
7	" + " SCREWDRIVER		

4.0 SERVICE PROCEDURES FOR THE SCUBAMAX OT-8000

- 4.0.1 Before you begin disassembly of the regulator, test the first and second stages for output pressures and leakage. Pre-testing in this way will help the technician to pinpoint any specific problems requiring repair.**
- 4.0.2 The work area must be clean and well lighted, with clean compressed air available to blow sand and dirt from parts.**
- 4.0.3 The procedures covered in this manual section apply to the OT-8000 second stage. To access the exploded view of this model open the front cover of this manual.**

4.1 TOOLS REQUIRED (or suggested) FOR SECOND STAGE SERVICING

- **19MM HEX DEEP SOCKET**
- **4H POPPET TOOL**
- **6MM COMBINATION WRENCH**
- **Adjust tool for second stage**
- **SPIDER SCREWDRIVER**
- **OT-8000 2nd Stage Annual Service Kit**
- **Clean Shop Rags**
- **Dow-Corning Compound 111**

Silicone Grease or LTI Christo-Lube 111[®] (p/n 347-0111)

4.2 DISASSEMBLY OF THE SECOND STAGE



! WARNING !

NEVER tighten the hose fitting to the first stage with more than 40 in. lbs. (4.5 Nm) of torque. The inlet hose fitting can be weakened by over tightening. To view the complete parts list of the second stage, open the front cover of this manual.

4.2.1

Use the 6" and 8" adjustable wrenches to loosen the hose nut from the INLET NIPPLE (16). Remove the hose assembly from the second stage. Inspect the hose assembly for any cuts or cracks, especially on the hose at the metal ferrules. Blow the interior bores of the hoses.

Replace the hose assembly if any cuts or cracks are found. Remove and discard the O-rings from each end of the hose. Clean, rinse, and blow-dry the interior bores of the hoses. Replace the hoses if necessary.

4.2.2

If the mouthpiece is in good condition, you can don't remove and be reused. If not good to remove the mouthpiece (3) by cutting the mouthpiece tie(2) with side cutting pliers. Discard the old mouthpiece tie. Examine the condition of the mouthpiece.

4.2.3

Remove the exhaust cover (5) from the case by pulling it back.

4.2.4

Before removing the exhaust valve (4) from the housing (1), bend the valve over as far as it will go from the top, bottom, left, and right sides. If it fails to snap back quickly, and does not lie perfectly flat against the housing exhaust grid, the valve should be replaced. If it does snap back satisfactorily, remove it by pulling it out with your fingers. Inspect the sealing edges. If they appear smooth, and the locking tab on the nipple

is good, the valve can be reused.

4.2.5

Unscrew the screw (17) from the housing (1) with **SPIDER SCREWDRIVER**.

4.2.6

Remove the front cover (7) from the housing (1).

4.2.7

Remove the diaphragm (6) from the housing (1).

4.2.8

Loosen and remove the inlet nipple (16) with **19MM HEX SOCKET** from housing(1). Use a **ADJUST TOOL** to turn left the orifice (16x) until remove it. Remove and discard all o-ring (15,16X-O) from inlet nipple and orifice.

4.2.9

Before remove the poppet (13) must be check and record the poppet thread length that over the nut screw(11). Use the **6MM COMBINATION WRENCH** hold the nut screw (11) and use the **4H POPPET TOOL** to turn left the poppet (13) until remove it. The spring (12), lever arm (9), thick washer spacer (10), thin washer spacer (8) and nut screw will fall when the poppet(13) removed. Remove the lp seat (13X) from the poppet (13).

4.3 CLEANING AND INSPECTION OF THE 2nd STAGE

4.3.1

Rinse all plastic and silicone parts in fresh warm soapy water solution. Rinse with clean warm water and then blow the parts dry with compressed air to remove any sand and dust particles.



! WARNING !

DO NOT use vinegar or other acid solutions on the plastic parts since this will cause the plastic to become brittle!

4.3.2