



## ***SERVICE MANUAL***



## ***CORE FIRST STAGE***

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## INTRODUCTION

This manual gives the instructions and the recommendations for the disassembly, the cleaning, the checking, the reassembly and the adjustment of an Aqua Lung regulator. This manual is not an instruction manual for unqualified personnel. The procedures described in this manual are intended only for qualified personnel who have been trained in the servicing of Aqua Lung equipment during a specialised course.

If you do not understand certain procedures in this manual you should contact an Aqua Lung service consultant before undertaking any operation.

## WARNINGS, ATTENTION, NOTES

Certain icons have been used to facilitate the reading and understanding of this manual. They have the following meanings:



**WARNING:** Indicates situations that could result in serious or fatal accidents if the advice given is not followed correctly.



**ATTENTION:** Indicates a situation or action that could cause serious damage to the product, making it dangerous if the advice given is not followed correctly.



**NOTE:** Notes are used to emphasize important points as well as information which needs to be remembered.

## MAINTENANCE



**ATTENTION:** According to Aqua Lung specifications, any regulator should undergo servicing at least once every two years and visual inspection at least once per year. These two checks must be performed by an authorized Aqua Lung dealer. Depending on the conditions and the number of dives, the regulator may need to be serviced more often.

In order to conform with the Aqua Lung Regulator Lifetime Guarantee, all servicing (inspection, servicing and repairs) should be recorded in the Service Record incorporated in the regulator User Manual.

## GENERAL INSTRUCTIONS

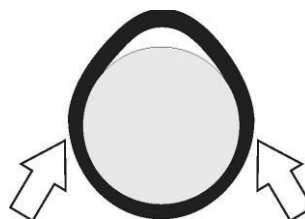
1. In order to carry out the procedures described in this manual correctly, it is important that you follow the steps in the exact order indicated. Read the manual through completely so that you become familiar with all the procedures, the special tools and the replacement parts, before starting to disassemble the product. Keep this manual open near to you so that you can refer to it step by step. Do not rely on your memory.
2. All servicing and repair procedures should be carried out in a workshop that is clean, well lit, easy to access and specially fitted for the purpose.
3. The regulator body should never be directly held in the jaws of a vice. To hold the body, screw the tool (116230) into a HP or MP port and then grip the tool with the vice.
4. Once the regulator has been disassembled, the re-usable components should be separated from the components that need to be replaced. Fragile items with seats or crowns with critical sealing surfaces should be separated and protected during servicing in order to prevent any damage.
5. Use only spare parts from Aqua Lung service kits. Never replace an Aqua Lung part with one from another manufacturer, even if it appears similar.
6. Never re-use regulator parts which should be replaced on the pretext that the regulator has seen little use since its manufacture or since its last service.
7. When reassembling, check that the torque used conforms with that shown in Table 4. Torque values, Torque. Some parts can be irretrievably damaged if the acceptable torque is exceeded.

## GENERAL CONVENTIONS

The conventions described below define the actions to be carried out when an instruction is given.

1. **Unscrew:** to unscrew a threaded part, turn it anti-clockwise.
2. **Screw:** to screw a threaded part, turn it clockwise.
3. **Remove the O-ring:** To remove an O-ring follow the method below, using the special tool (506001) provided for this purpose. Any tool that could damage the O-ring should be avoided. In every case, replace the O-ring removed with a new one.

*Press simultaneously on the two sides of the O-ring in order to form an 'eye'. Insert the special tool (506001) into this eye to remove the O-ring.*



4. The acronyms used:  
**LP:** Low Pressure  
**MP:** Medium Pressure (or IP: Intermediate Pressure)  
**HP:** High Pressure
5. Bracket numbers indicate components references from exploded views.

## DISASSEMBLY PROCEDURE



**NOTE:** Before commencing disassembly, consult the exploded view to check the reference numbers of all parts requiring replacement. These parts should all be replaced by new parts and should not be re-used on the pretext that the regulator has seen little use since its manufacture or since its last service.



**ATTENTION:** Use only the special tool (506001) when removing O-rings in order to avoid damaging the seal recess. The slightest scratch on a sealing surface could cause a leak. If a surface should be damaged then this part should be replaced with a new one. Do not use any pointed instrument or metal tool to remove O-rings.

1. Unscrew the hose from the first stage using a 9/16" spanner. Unscrew MP plugs (122233) and HP plugs (122237) with a 4mm Allen key. Remove the O-rings (124701 and 124703) with the tool (506001).



Screw the holding tool (116320) into a free MP port.

## YOKE CONNECTION

Start after point 1

2. Remove the yoke screw (128631) and the dust cap (124555). Securely clamp holding tool (116230) into vice with yoke connection facing up. Place the socket (A11001) on the yoke retainer (129242) and unscrew it. Remove the yoke retainer and the yoke (124611) from the body. Remove the regulator from the vice.



3. Remove the filter (129209) and the O-ring (124703) from the body (129254).



4. Take the assembly yoke retainer (129242) & yoke (124611). Put back in place the dust cap (124555) and the yoke screw (128631) into the yoke. Screw the yoke screw and compress the dust cap between the yoke retainer and the yoke screw, to open the ACD connection (see pictures below).



Yoke screw not screwed enough



Yoke screw enough screwed

Securely clamp the assembly into vice by gripping the yoke retainer hexagon part with yoke connection facing down. With a 3mm Allen key, turn **clockwise** to unscrew the yoke shutter valve (129207). Remove the assembly from the vice.



5. Remove the yoke screw (128631) and the dust cap (124555) to disassemble the system.

Using the tool (506001), remove the O-ring (473056) of the yoke shutter valve (129207).



Separate the yoke shutter valve from the yoke shutter crown (129205).

Extract the O-ring (124703) from the inside groove of the yoke shutter crown with the tool (506001).



## DIN CONNECTION

Start after point 1

6. Take a DIN/Yoke adapter (125237) and thread it onto the DIN hand wheel (129929) in order to compress the spring. Securely clamp holding tool (116230) into vice with DIN connection facing up.



7. Using a 4mm Allen key, unscrew the DIN shutter valve (129202). Remove it from the connection.



8. Unscrew the adapter DIN/Yoke (125237), then remove the DIN shutter crown (129243) and the spring (129204).



9. Using the tool (506001), remove the O-rings (124709) and (473057) from the DIN shutter crown (129243).



10. Using a 7/16 socket, remove the DIN screw (129213).



11. Using the tool (506001), remove the O-ring (444243) from the DIN screw.



12. Remove the DIN hand wheel (129929), then unscrew the DIN union (129241) with a key of 17.

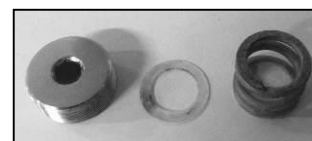


13. Remove the regulator from the vice. Extract the filter (129209) and the O-ring (124703) from the body (129254).

## WET CHAMBER

Start after points 5 (if yoke) or 13 (if DIN)

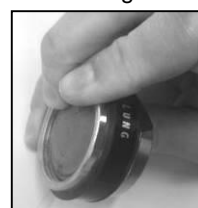
14. Securely clamp holding tool (116230) into vice with wet chamber facing up. With an 8mm Allen key, unscrew the MP adjusting screw (128117). Remove the washer (127568) and the MP spring (127567).



15. Using the socket (122152), unscrew the wet chamber body (129904).



16. Remove by hand the diaphragm (119159) and the spring pad (127565) from the wet chamber body (129904). Remove the pin support (127563) and the pin (127564) from the body (129254). Remove the regulator from the vice.





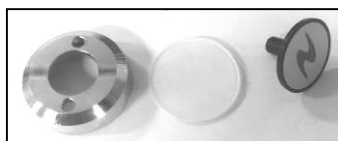
17. Place the wet chamber body (129904) on a table, plastic washer (129958) down. Push the washer down.  
Entirely remove the washer from the wet chamber body.



## DRY CHAMBER

Start after points 5 (if yoke) or 13 (if DIN)

18. Securely clamp holding tool (116230) into vice with dry chamber facing up.  
Using a lug spanner (129198) unscrew the dry chamber plug (129902). Remove the diaphragm (127579) and the piston (127581).



19. Using an 8mm Allen key, unscrew the MP adjusting screw (127566).  
Remove the washer (127568) and the MP spring (127567).



20. Using the socket (122152), unscrew the dry chamber body (129903).



21. Remove by hand the diaphragm (119159) and the spring pad (127565) from the dry chamber body (129903). Remove the pin support (127563) and the pin (127564) from the body (129254).  
Remove the regulator from the vice.



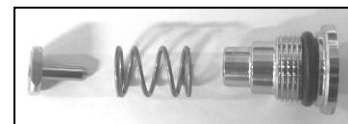
22. Place the dry chamber body (129903) on a table, plastic washer (129959) down. Push the washer down.  
Entirely remove the washer from the dry chamber body.



## COMMON TO ALL MODELS

Start after points 17 (if wet chamber) or 22 (if dry chamber)

23. Using an 8mm Allen key, unscrew the plug (129120).  
Turn over the body in order to recover the spring (122244) and the HP seat (124624). Separate the spring from the HP seat.



24. Using the tool (506001), remove the exterior O-ring (213714) from the plug (129120), then the O-ring (124612) and the anti-extrusion washer (119129) inside the plug.







**ATTENTION:** Before continuing, make sure that you are working on a soft surface in order to avoid damaging the crown (127585) during disassembly.

25. Insert the plastic side of the extraction tool (116236) into the body's central hole, wet / dry chamber side. Make sure that the tool is in contact with the crown (127585). Press down to remove the seat.



Remove the O-ring (124704) from the seat, using the tool (506001).

26. While holding the holding tool (116230), remove the body protector (128124) at the opposite side of the tool. Then, unscrew the holding tool.



## DISASSEMBLY END

**Before starting to re-assemble the regulator, make sure that all replacement parts have been cleaned and lubricated in accordance with Procedure A – Cleaning and Lubricating, page 21.**

## REASSEMBLY PROCEDURE

### COMMON TO ALL MODELS

1. Screw the wet chamber body (129904) or the dry chamber body (129903) onto the body (129254) WITHOUT ITS DIAPHRAGM, then place it standing on a table, the chamber down.



2. Place the body protector (128124) on the body (129254) and then engage the polyurethane collar over the two HP ports.



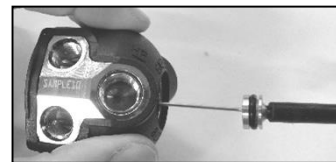
3. Completely engage the body protector by pressing the top of it.



4. Unscrew the wet chamber body (129904) or the dry chamber body (129903). Finish positioning the body protector collar.



5. Fit a new lubricated O-ring (124704) on the crown (127585). Slide the seat onto the tool (116236), positioning the seat lip against the tool plastic part. Move the system into the body (129254), plug side, and position the seat by pushing with the tool.



6. Screw the holding tool (116320) into a free MP port. Securely clamp holding tool into vice with plug facing up.

Lubricate the new HP seat tail (124624). Insert it in the body (129254), blue face facing the body interior. Check that the seat stay upright inside the body. Place the spring (122244) around the seat.



**NOTE:** Before continuing, closely examine the anti-extrusion washer (119129). You will note that it has a flat side and a concave side. For correct assembly the concave side should be against the O-ring, as shown in the picture below.



— O-ring

— Anti extrusion washer

7. Fit a new anti-extrusion washer (119129) then a new lubricated O-ring (124612) in the plug (129120). Using a 4mm Allen key, press the anti-extrusion washer and the O-ring against the plug bottom.



8. Fit a new lubricated O-ring (213714) onto the plug (129120).



9. With the thumb, engage the plug (129120) into the body (129254). Push on the plug to compress the spring, at the same time screwing the plug into the body until it blocks.



Using a torque wrench (122154), tighten the plug to **0.5 m.kg (3.62 ft.lb)**.

Remove the regulator from the vice.



## YOKE CONNECTION

*Start after point 9*

10. Fit a new lubricated O-ring (124703) into the yoke shutter crown groove (129205), using the tool (506001).



11. Install the yoke shutter valve (129207) inside the yoke shutter crown (129205), and then fit in a new lubricated O-ring (473056) in the shutter valve groove.



12. Install the spring (129204) into the yoke retainer (129212).



13. Place the yoke shutter crown (129205) onto the spring (129204), put the sub-assembly into the yoke (124611).



14. Install the dust cap (124555) between the yoke (124611) and the yoke shutter crown (129205). Tighten the yoke screw (128631) so that the spring (129204) is compressed.



15. Stop tightening when the yoke shutter crown (129205) is set in this position, the yoke screw (128631) becomes hard to turn.



16. Position the yoke retainer with threads facing upward, using a 3mm Allen key, turn counter-clockwise 3 full turns.



17. Tighten the yoke screw (128631) again, so that dust cap (124555) is snug against the yoke retainer (129242).



Securely clamp the assembly into vice by gripping the yoke retainer (129212) hexagon part with yoke connection facing down.

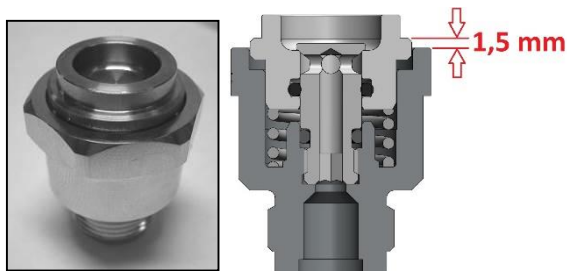


18. Using a torque screwdriver (122152) and a 3mm Allen key adapter, turn counter-clockwise and torque the yoke shutter valve (129207) to **0.3 m.kg (2.17 ft.lb)**.



19. Remove the assembly from the vice, entirely unscrew the yoke screw (128631). Remove the dust cap (124555) and the sub-assembly shutter/retainer from the yoke (124611).

20. Check that the yoke shutter crown (129205) shoulder is about 1.5mm (0.4 inches) above the yoke retainer (129242). Push down with your finger against the crown shutter to confirm the ACD system works.



21. Using a 1/4" socket wrench (116239), fit a new O-ring not lubricated (124703) in the body counterbore (129254) DIN connection side.



22. Insert a new filter (129209) in the socket wrench (116239) and then turn over the body (129254) and put the filter inside the O-ring (124703) thanks to the socket wrench.



23. Place the sub-assembly shutter/retainer in the yoke (124611). Screw it manually into the body (129254) until it blocks.

Securely clamp holding tool (116230) into vice with yoke connection facing up.

Using a torque wrench (122154) with the socket (A11001), tighten the yoke retainer to **2.5 m.kg (18.08 ft.lb)**. Remove the regulator from the vice.



24. Thread the dust cap (124555) into the yoke screw (128631), with the Aqua Lung logo outside. Screw the yoke screw into the yoke (124611).



## DIN CONNECTION

Start after point 9

25. Using a 1/4" socket wrench (116239), fit a new O-ring not lubricated (124703) in the body counterbore (129254) DIN connection side.



26. Insert a new filter (129209) in the socket wrench (116239) and then turn over the body (129254) and put the filter inside the O-ring (124703) thanks to the socket wrench.



27. Fit in a new and lubricated O-ring (444243) on the DIN screw (129213).



28. Take the DIN union (129241), install the DIN hand wheel (129929) on it, and place on top the DIN screw (129213). Screw by hand the DIN screw into the DIN union.



29. Using a 7/16" socket, screw the sub-assembly into the body (129254).

Securely clamp holding tool (116230) into vice with DIN connection facing up.

Using a socket and a torque wrench (122154), tighten the DIN screw to **2.5 m.kg (18.08 ft.lb)**.





30. Fit a new lubricated O-ring (473057) into the DIN shutter crown interior groove (129243), using the tool (506001).  
Fit a new lubricated O-ring (124709) into the shutter crown exterior groove.



31. Place the spring (129204) into the DIN screw (129213). Set the DIN shutter crown (129243) with its associated O-ring onto the spring.



32. Thread a DIN/Yoke adapter (125237) onto the DIN screw (129213) so that the spring gets compressed.



33. Install the DIN shutter valve (129202). Using a torque screwdriver (122152), tighten it to **0.3 m.kg (2.17 ft.lb)**. Remove the regulator from the vice. Unscrew the DIN/Yoke adapter (125237).



## WET CHAMBER

Start after points 24 (if yoke) or 33 (if DIN)

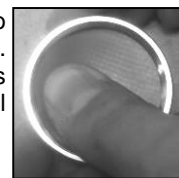
34. Insert the pin (127564) into the central hole, wet chamber side. Place the pin support (127563) over the pin.



**NOTE:** Press several times on the pin support. It should feel like a push-button.



35. Fit a new diaphragm (119159) into the wet chamber body (129904). Make sure that the diaphragm is correctly positioned by pressing all around its edge with your finger.



36. Insert the plastic washer (129958) onto the wet chamber body (129904). Watch out of the text orientation, the biggest ring should be at the exterior side of the wet chamber body.



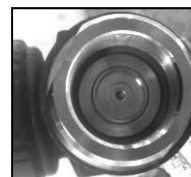
Press the plastic washer up against the wet chamber body shoulder.

37. Securely clamp holding tool (116230) into vice with wet chamber facing up.  
Screw by hand the wet chamber body (129904) onto the body (129254).  
Using a socket (122152) and a torque wrench (122154), tighten the wet chamber body to **2.5 m.kg (18.08 ft.lb)**.



**NOTE:** the tightening of the wet chamber on the body **SHOULD NOT** be done with the MP spring assembled in the wet chamber. The previous steps must be respected.

38. Fit the spring pad (127565), the MP spring (127567) and the washer (127568) on the diaphragm.



39. Grease the thread of the MP adjusting screw (128117) with a brush. Using an 8mm Allen key, screw the MP adjusting screw until coming to the same level than the wet chamber body (129904).



## DRY CHAMBER

Start after points 24 (if yoke) or 33 (if DIN)

40. Insert the pin (127564) into the central hole, wet chamber side. Place the pin support (127563) over the pin.



**NOTE:** Press several times on the pin support. It should feel like a push-button.



41. Fit a new diaphragm (119159) into the dry chamber body (129903). Make sure that the diaphragm is correctly positioned by pressing all around its edge with your finger.



42. Insert the plastic washer (129959) onto the dry chamber body (129903). Watch out of the text orientation, the biggest ring should be at the exterior side of the wet chamber body.



Press the plastic washer up against the dry chamber body shoulder.

43. Securely clamp holding tool (116230) into vice with dry chamber facing up. Screw by hand the dry chamber body (129903) onto the body (129254). Using a socket (122152) and a torque wrench (122154), tighten the wet chamber body to **2.5 m.kg (18.08 ft.lb)**.



**NOTE:** the tightening of the wet chamber on the body **SHOULD NOT** be done with the MP spring assembled in the wet chamber. The previous steps must be respected.

44. Fit the spring pad (127565), the MP spring (127567) and the washer (127568) on the diaphragm.



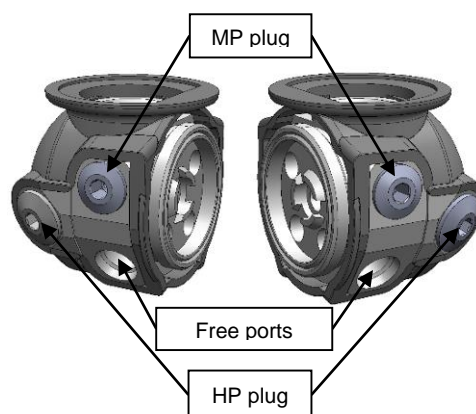
45. Grease the thread of the MP adjusting screw (127566) with a brush. Using an 8mm Allen key, screw the MP adjusting screw until coming to the same level than the first thread of the dry chamber body (129904).



## COMMON TO ALL MODELS

Start after points 39 (if wet chamber) or 45 (if dry chamber)

46. Remove the regulator from the vice and unscrew the holding tool (116230).
47. Fit new lubricated O-rings (124701) on both HP plugs (122237).  
Fit new lubricated O-rings (124703) on the three MP plugs (122233).  
Using a 4 mm Allen key, screw two HP plugs and two MP plugs on the outlets indicated herein below.



**REASSEMBLY END**



## FIRST STAGE ADJUSTING

1. Connect the first stage to a MP gauge 0-16 bar. If the gauge is not fitted with an over-pressure valve, then it is vital that the second stage is fitted so that it can act as an over-pressure valve in the event of an HP leak.
2. Connect the first stage to a cylinder charged to 200 bars. Slowly open the cylinder valve to put the regulator under pressure.
3. Check that there is no leak.



**ATTENTION:** if the MP indicated by the gauge rapidly exceeds 9.5 bar for standard version and 8.5 bar for supreme version, then this indicates a HP leak. Close the cylinder valve immediately and purge the regulator. Refer to Table 1. Troubleshooting Guide.

4. Using an 8mm Allen key, turn the MP adjusting screw (128117 or 127566) by increments of 1/8 of a turn and purge the regulator several times, using the second stage, after each increment. Screwing the MP adjusting screw, increase the MP value, unscrewing it, decrease the MP value. To know which MP value is required, refer to Table 5. Checking specifications.
5. Leave the regulator under pressure for several minutes and check that the MP remains stable. If the MP rises more than 0.3 bar this indicates that there is a leak. Refer to Table 1. Troubleshooting Guide.
6. Close the cylinder valve and completely purge the regulator. Put the regulator under pressure once more and check that the MP is stable. If the MP is different, repeat steps 4 and 5 until a stable pressure is obtained.
7. For wet chamber version, disconnect the regulator from the pressure gauge and screw the MP plug (122233) equipped with its O-ring (124703).

## FINAL REASSEMBLY FOR SUPREME VERSION



**NOTE:** The following step should be carried out with the regulator under pressure.

1. With the regulator under pressure, insert the piston (127581) into the dry chamber. Place the diaphragm (127579) right to the bottom of the dry chamber plug (129902). Screw it fully home on the body using a lug spanner (129198).



2. Check that the MP is still stable (see Table 5. Checking specifications).
3. Close the cylinder valve and purge the regulator. Disconnect the regulator from the pressure gauge and screw the MP plug (122233) equipped with its O-ring (124703).

## FINAL REASSEMBLY END

## TEST IN WATER

1. Check that all the MP and HP plugs are in place and that a correctly adjusted second stage is connected to the first stage. Slowly open the cylinder valve to put the regulator under pressure.
2. Immerse the first stage completely in water to check that there is no leak.



**NOTE:** Do not mistake any bubbles that are trapped in the regulator with a leak. If there is a leak there will be a constant stream of bubbles.

3. When you are sure that there is no leak, close the cylinder valve and purge the regulator. Remove the first stage from the cylinder and refit the dust cap.
4. If a leak has been detected then note its source and refer to Table 1. Troubleshooting Guide.

## APPENDIX

### Table 1. Troubleshooting Guide

SYMPTOM	POSSIBLE CAUSE	TREATMENT
Increase in MP (likely to cause a second stage leak)	1. The HP seat (124624) is worn or damaged	1. Replace the HP seat
	2. The crown (127585) is damaged	2. Replace the crown
	3. The O-ring (124704) is worn or damaged	3. Replace the O-ring
	4. Groove on the plug (129120) damaged	4. Replace the plug
	5. O-ring (124612) is worn or damaged	5. Replace the O-ring
	6. O-ring crown groove on the body (129254) is damaged	6. Replace the body
External leak	1. O-rings on the MP and HP plugs are worn, extruded or damaged	1. Replace the O-rings
	2. The diaphragm (119159) is worn or damaged	2. Replace the diaphragm
	3. The diaphragm (127579) is worn or damaged	3. Replace the diaphragm
	4. The diaphragm (127579) sealing face on the body (129254) is damaged	4. Replace the body
	5. Wet or dry chamber screw (128113 or 128115) loose	5. Tighten the chamber
	6. Din shutter crown O-ring (124709) damaged	6. Replace the O-ring
	7. Filter O-ring (124703) damaged	7. Replace the O-ring
	8. Plug O-ring (213714) damaged	8. Replace the O-ring
	9. Yoke shutter valve O-Ring (473056) damaged	9. Replace the O-ring
	10. Yoke shutter crown O-ring (124703) damaged	10. Replace the O-ring
	11. DIN shutter crown O-ring (473057) damaged	11. Replace the O-ring
Reduced airflow or significant breathing resistance on complete regulator	1. Cylinder valve not completely open	1. Open the valve, check the cylinder pressure
	2. Cylinder valve requires servicing	2. Try another cylinder
	3. Filter (129209) blocked	3. Replace the filter
	4. The cylinder is empty	4. Charge the cylinder
	5. The hose is closed	5. Change the hose

Table 2. Tools and service kits list


REF	DESCRIPTION	PICTURES	APPLICATION	US PART NO.
506001	O-ring tool		Fitting and removing O-rings	944022
116236	Disassemble tool HP club		Seat assembly / disassembly	109437
129198	Hook wrench		Dry chamber plug screwing / unscrewing	129198
116230	HP disassembly tool		1 <sup>st</sup> stage holding in vice	100395
116239	1/4" box wrench		Filter and O-ring installation	n/a
122154	Torque wrench SAM		Yoke retainer, wet and dry chamber body, DIN screw, plug screwing / unscrewing	n/a
122155	Facom screw driver A404 2-10 NM		Yoke and DIN shutter valve screwing / unscrewing	n/a
125237	DIN/yoke adaptor 300B		DIN shutter valve assembly / disassembly	n/a
122152	Socket dry ch Legend/Mistral		Wet and dry chamber body screwing / unscrewing	122152
A11001	Socket inlet fitting 26mm		Yoke retainer screwing / unscrewing	111001
n/a	7/16 " socket		DIN screw screwing / unscrewing	n/a
n/a	17mm key		ACD DIN union screwing / unscrewing	n/a
n/a	9/16" key		Hose HP side screwing / unscrewing	n/a
n/a	3mm Allen key		Yoke shutter valve screwing / unscrewing	n/a
n/a	4mm Allen key		HP and MP plugs, Din shutter valve screwing / unscrewing Pressing of anti-extrusion washer and O-ring against plug bottom	n/a
n/a	8mm Allen key		MP adjusting screw, plug, yoke retainer screwing / unscrewing	n/a
128016	Service kit first stage balanced diaphragm	HP Core yoke, HP Core DIN, HP Core supreme yoke, HP Core supreme DIN		n/a

Table 3. Recommended cleaners and lubricants



LUBRICIANT / CLEANER	APPLICATION	SOURCE
Christo-Lube MCG 111	All O-rings	Aqua Lung, ref. 480025
 <b>ATTENTION:</b> <i>Silicone parts do not require lubrication. Do not grease them. Greasing silicone parts can change their molecular construction and cause premature degradation of the material.</i>		
Oakite #31	Acid bath for cleaning brass and stainless steel parts	Oakite Products, Inc.
NETALU	Acid bath for cleaning brass and stainless steel parts	Aqua Lung, ref. 455001
Diluted white vinegar	Acid bath for cleaning brass and stainless steel parts	Household stores
 <b>ATTENTION:</b> <i>Do not use hydrochloric acid for cleaning parts. Hydrochloric acid, even when well diluted, attacks the coating of metal parts and leaves a corrosive deposit that damages plastic parts and O-rings.</i>		
Washing-up liquid (diluted with hot water)	Degreases brass and stainless steel parts; general cleaning of plastic and rubber parts	Household stores
Disinfectant STERANIOS 2%	Disinfectant for all plastic and metal parts	Aqua Lung, ref : 382062

Table 4. Torque values

N° REFERENCE	DESCRIPTION	COUPLE
129904	Wet chamber body	2.5 m.kg (18.08 ft.lb)
129903	Dry chamber body	2.5 m.kg (18.08 ft.lb)
129242	Yoke retainer	2.5 m.kg (18.08 ft.lb)
129207	Yoke shutter valve	0.3 m.kg (2.17 ft.lb)
129213	DIN screw	2.5 m.kg (18.08 ft.lb)
129202	DIN shutter valve	0.3 m.kg (2.17 ft.lb)
129120	Plug	0.5 m.kg (3.62 ft.lb)
129241	DIN union	2.5 m.kg (18.08 ft.lb)

Table 5. Checking specifications

TEST	INSTRUCTIONS	SPECIFICATIONS
Leak Test	160 bar < Working pressure < 200 bar	No leak
Medium Pressure	160 bar < Working pressure < 200 bar	<b>MP at 9.5 bar <math>\pm</math> 0.5 bar</b> : Core <b>MP at 8.5 bar <math>\pm</math> 0.5 bar</b> : Core supreme
MP Variation	160 bar < Working pressure < 200 bar	After purging the regulator several times, the MP should not increase by more than 0.3 bar in 5-15 seconds



## Procedure A – Cleaning and Lubricating (All Aqua Lung regulators)

### Cleaning brass and stainless steel parts.

1. Pre-clean by soaking in NETALU diluted to 25%.
2. Cleaning in an ultra-sonic bath filled with a mixture of washing-up liquid + hot water. If some resistant deposits remain then fill the ultrasonic bath with diluted white vinegar and repeat. DO NOT put plastic, rubber, silicone or anodised aluminium parts in contact with vinegar.
3. Rinse in demineralised or fresh water to avoid calcium deposits. Soak for 10 minutes. Dry with filtered low pressure air and then check that their condition is now suitable for re-use.

### Cleaning plastic, rubber and anodised aluminium parts.

For anodised aluminium parts: soak in a « NETALU diluted to 25% ». Rinse in fresh water and dry with low-pressure filtered air.

For plastic parts. (casings, plugs...): clean in an ultrasonic bath containing a mixture of washing-up liquid and hot water. Use only a toothbrush with nylon bristles to remove any deposits. Rinse in fresh water and dry with low-pressure filtered air.



**ATTENTION:** Do not place plastic and rubber parts in contact with acid solutions. This could alter their physical properties and cause degradation and premature breakdown.

### Cleaning parts for Nitrox/O2 use.

1. Metal parts: Pre-clean by soaking in NETALU diluted to 25%.
2. Ultrasonic cleaning in Promoclean TP108 diluted at 5%.
3. Rinse in demineralised water. Soak for 10 min.
4. Dry in the open air in a clean and dust-free atmosphere. Place the parts on a white cloth, allow to dry and check after drying that the cloth shows no grease deposits and that the condition of the parts is appropriate for re-use with Nitrox/O2.

### Cleaning hoses.

Refer to technical support “Hose inspection and cleaning procedure”.

### Wiping.

To wipe parts, use a white filter paper, a pure cotton cloth or any other material that **does not produce fluff**.

### Inspection.

Visually check under a white light (day light or artificial light).

The parts are completely free of any traces of:

1. organic materials (oil, grease, paint, rust...)
2. cleaning agents
3. dust
4. humidity

### Lubrication.

When handling O-rings wear unpowdered latex gloves. It is important not to allow contact between the internal components and the skin or any other source of contamination when the regulator is being prepared for Nitrox use. All seals should be lubricated with Christolube MCG111. Cover the seals with a light film of grease and remove any excess by rolling the seal between finger and thumb. Do not use an excess of grease; this can have the effect of accumulating particles that could damage the O-rings.

## Maintenance Notes

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