

## CHECKLIST 6

### G2000SS DIVING HELMET

## ANNUAL INSPECTION AND MAINTENANCE CHECKLIST

Inspection and maintenance procedures in accordance with this checklist are to be conducted annually (i.e. Annual Overhaul) unless daily or monthly inspections reveal the need for this to be conducted more frequently.

This checklist is to be used in conjunction with the helmet Technical Manual for guidance in conducting each step in the inspection and maintenance of the G2000SS.



#### **NOTE:**

- *The procedures in this checklist are to be performed only by personnel who have received factory authorized training through an Aqua Lung Service and Repair Seminar.*
- *If you do not completely understand all of the procedures outlined in this checklist, contact Aqua Lung to speak with a technical advisor before proceeding any further.*
- *If the helmet is used in contaminated water, monthly inspection and maintenance is required.*
- *After completing this checklist, it should be kept in the helmet maintenance log/file.*



**WARNING:** Aqua Lung America strongly recommends completion of this checklist and meeting the minimum requirements provided before using the G2000SS helmet. However, these requirements are not conclusive, as further steps may be required depending on the type of activity performed. **FAILURE TO COMPLY WITH THIS CHECKLIST MAY RESULT IN SERIOUS INJURY OR EVEN DEATH.**

### GENERAL INSTRUCTIONS

1. All parts replaced annually are contained in the annual service kit P/N 400108.
2. Any damage or defective parts must be replaced.
3. All parts should be cleaned using the standard procedures detailed in the Technical Manual.




### TOOLS REQUIRED FOR ANNUAL MAINTENANCE

|  |   |
|--|---|
| 3/8" Nut Driver                          | 5/16" Flat Blade Screwdriver (Regulator Adjust) |
| 7/16" Nut Driver                         | Phillips #3 Screwdriver                         |
| 3/16" Allen/Hex Key                      | 15/16" Deep Socket and Driver                   |
| 1/4" Allen/Hex Key                       | 11/16" Socket and Driver                        |
| 5/8" Flat OE Low Profile / Slim Wrench   | 7/8" Deep Socket and Driver                     |
| 11/16" Flat OE Low Profile / Slim Wrench | Torque Screwdriver (20 - 140 inch pounds)       |
| O-Ring Tool (Brass or plastic)           | Torque Wrench (10 - 40 foot pounds)             |
| 3/8" Flat Blade Screwdriver              |   |

## ANNUAL INSPECTION AND MAINTENANCE CHECKLIST (continued)

### DISASSEMBLY - SEQUENCE OF EVENTS

This sequence is for guidance. Maintenance instructions are in the subsequent checklist.

| Step | Activity  | Tools Required  |
|------|---|---|
| 1    | Remove neck dam assembly.   |   |
| 2    | Remove neck retainer (5).   | 7/16" Nut Driver or Wrench<br>3/16" Allen/Hex Key               |
| 3    | If required, remove both (L and R) locking system catches (8A & 8B).<br> <b>Note:</b> No requirement to remove catches unless defective. | 1/4" Allen/Hex Key<br>3/16" Allen/Hex Key                       |
| 4    | Remove headliner.   | No Tools Required   |
| 5    | Remove NCD (73).  | No Tools Required   |
| 6    | Remove oral nasal mask (32) (remove microphone first)   | No Tools Required   |
| 7    | Remove comms assembly components.   | 3/8" Nut Driver on Terminals                                    |
| 8    | Remove the comms bulkhead assembly (23).  | 15/16" Deep Socket  |
| 9    | Release tension from the swagelock connector nut and fitting on airway tube (24).   | 5/8" Flat OE Wrench for back up<br>11/16" Flat OE Wrench on nut |
| 10   | Remove free flow knob (14) from the valve.  | 3/8" Flat Screwdriver   |
| 11   | Release tension from the valve bonnet (62).   | 11/16" Socket   |
| 12   | Unscrew (2) long (11) and (2) short (43) manifold hex screws.   | 3/16" Allen/Hex Key   |
| 13   | Remove the manifold body (37) from the helmet shell (1).  | No Tools Required   |
| 14   | Remove the manifold Insert (41).  | No Tools Required   |
| 15   | Using screwdriver, slightly bend the airway assembly (24) and pull the manifold body end out of the helmet  | 3/8" Flat Screwdriver   |
| 16   | Unscrew swagelock connector (26) and remove the airway assembly (24) from the helmet.   | 11/16" Flat OE Low Profile Wrench                               |
| 17   | Unscrew swagelock connector (26) from the free flow exhaust valve body (52).  | 5/8" Flat OE Low Profile Wrench                                 |
| 18   | Unscrew regulator cover (17).   | Phillips #3 Screwdriver   |
| 19   | Remove the second stage regulator from the helmet.  | No Tools Required   |
| 20   | Remove defogger train (28) from the free flow barrel (29).<br> <b>Note:</b> Do not use force, it should slide out easily.              | No Tools Required   |
| 21   | Remove the free flow valve from the free flow barrel (29).<br> <b>Note:</b> Do not use force, it should slide out easily.              | No Tools Required   |
| 22   | Unscrew the exhaust valve cover (16).   | Phillips #3 Screwdriver   |
| 23   | Remove the free flow valve from the helmet.   | No Tools Required   |
| 24   | Unscrew the port retainer (20).   | Phillips #3 Screwdriver   |
| 25   | Remove the face port (19) and o-ring (18).  | No Tools Required   |

**ANNUAL INSPECTION AND MAINTENANCE CHECKLIST (continued)**





**COMPLETE THE FOLLOWING BOXES PRIOR TO THE CHECKLIST**

**COMPLETE THE SIGNATURE, DATE AND COMMENTS AT THE END OF THE CHECKLIST**





|                                    |              |
|------------------------------------|--------------|
| <b>Helmet Serial No:</b>           | <b>Date:</b> |
| <b>Technician:</b><br>(Print Name) |              |

| <b>STEPS</b>  | <b>PROCEDURE</b>  | <b>INITIALS</b> |
|---|---|-----------------|
| <b>NECK DAM ASSEMBLY</b><br><b>NOTE:</b> Refer to the technical manual, neck dam assembly section for guidance. |   |                 |
| <b>CHIN STRAP</b>   | <ul style="list-style-type: none"> <li>Visually inspect for tears and cuts.</li> <li>Replace if damaged or defective.</li> <li>Check that all screws are present and secure.</li> </ul>   |                 |
| <b>QUAD RING</b>  | <ul style="list-style-type: none"> <li>Remove and inspect for cuts and/or deterioration.</li> <li>If necessary, replace the Quad Ring.</li> </ul> <b>NOTE:</b> The quad ring has a long service life and is not normally replaced annually. |                 |
| <b>NECK SEAL</b>  | <ul style="list-style-type: none"> <li>Visually inspect for cuts and/or deterioration.</li> <li>If necessary, replace the neck seal.</li> </ul>   |                 |
| <b>UPPER NECK RING</b>  | <ul style="list-style-type: none"> <li>Visually inspect the o-ring groove for damage.</li> </ul>  |                 |
| <b>BOTTOM NECK RING</b>   | <ul style="list-style-type: none"> <li>Visually inspect for damage. Check that all screws are present and secure.</li> </ul>  |                 |


## ANNUAL INSPECTION AND MAINTENANCE CHECKLIST (continued)

| STEPS   | PROCEDURE  | INITIALS |
|---|--|----------|
| <b>NECK RETAINER AND LOCKING SYSTEM</b><br> <b>NOTE:</b> Refer to the technical manual, neck retainer section for guidance.    |  |          |
| <b>PULL PINS</b><br>(pre-2011 helmets)  | <ul style="list-style-type: none"> <li>• Ensure the ease of movement and spring tension of both pull pins. Check for debris inside springs and for any mechanical damage.</li> </ul>   |          |
| <b>LATCH CATCHES</b><br>(2011 onwards)  | <ul style="list-style-type: none"> <li>• If required, disassemble both (L and R) latch catch assemblies.</li> <li>• Inspect all components for damage.</li> <li>• Clean, reassemble and check correct function.</li> </ul>   |          |
| <b>NECK RETAINER</b>  | <ul style="list-style-type: none"> <li>• Visually inspect for damage.</li> <li>• Remove neck retainer bolt and replace neck retainer nut (annually).</li> </ul>  |          |
| <b>HEAD LINER</b><br> <b>NOTE:</b> Refer to the technical manual, head liner section for guidance.                           |  |          |
| <b>HEAD LINER</b>   | <ul style="list-style-type: none"> <li>• Remove head liner from helmet.</li> <li>• Visually inspect for deterioration and/or damage.</li> <li>• If necessary, replace with a new liner.</li> </ul>  <b>NOTE:</b> The liner may be washed as required. |          |
| <b>NOSE CLEARING DEVICE (NCD)</b><br> <b>NOTE:</b> Refer to the technical manual, nose clearing device section for guidance. |  |          |
| <b>O-RINGS (2)</b>  | <ul style="list-style-type: none"> <li>• Remove NCD from helmet.</li> <li>• Visually inspect for damage and/or deterioration.</li> <li>• Replace o-rings annually.</li> </ul>  |          |
| <b>NEOPRENE PAD</b>   | <ul style="list-style-type: none"> <li>• Visually inspect for damage and/or deterioration.</li> <li>• If necessary, replace neoprene pad.</li> </ul>   |          |
| <b>NCD BODY</b>   | <ul style="list-style-type: none"> <li>• Visually inspect for damage to NCD stem.</li> <li>• Confirm ease of movement.</li> </ul>  |          |



**ANNUAL INSPECTION AND MAINTENANCE CHECKLIST (continued)**

| STEPS  | PROCEDURE  | INITIALS |
|--|--|----------|
| <p><b>ORAL-NASAL MASK</b></p> <p> <b>NOTE:</b> Refer to the technical manual, oral-nasal mask section for guidance.</p> |  |          |
| <p><b>ORAL-NASAL</b></p>   | <ul style="list-style-type: none"> <li>• Remove oral-nasal mask (microphone must be removed prior to oral-nasal mask) and check for damage and/or deterioration.</li> <li>• The oral-nasal mask may be washed as required.</li> <li>• If necessary, replace the oral-nasal mask.</li> </ul> <p> <b>NOTE:</b> The oral-nasal mask has a long service life and is not normally replaced annually.</p> |          |
| <p><b>INHALATION VALVE HOUSING</b></p>   | <ul style="list-style-type: none"> <li>• Remove and visually inspect for damage. All spokes of the "wagon wheel" must be present.</li> <li>• If necessary, replace the inhalation valve housing.</li> </ul>  |          |
| <p><b>INHALATION VALVE</b><br/>(one way valve)</p>   | <ul style="list-style-type: none"> <li>• Remove and visually inspect for damage and deterioration.</li> <li>• Replace the inhalation valve annually.</li> </ul>  |          |
| <p><b>COMMUNICATIONS</b></p> <p> <b>NOTE:</b> Refer to the technical manual, communications section for guidance.</p> |  |          |
| <p><b>SPEAKER AND MICROPHONE</b></p>   | <ul style="list-style-type: none"> <li>• Remove and visually inspect the speakers, microphone, cables and connections. Ensure that contact surfaces are cleaned thoroughly.</li> <li>• During reassembly check the comms system. If sound quality is poor, replace speakers and/or microphone.</li> </ul>  |          |
| <p><b>COMMUNICATIONS POSTS</b></p>   | <ul style="list-style-type: none"> <li>• Visually inspect for insulation cracks or damage and re-tighten each nut from inside. Replace posts as required.</li> </ul> <p> <b>NOTE:</b> There is no requirement to remove the posts unless damaged.</p>   |          |
| <p><b>COMMUNICATIONS TERMINAL BLOCK</b><br/>(2012 Forward)</p>   | <ul style="list-style-type: none"> <li>• Visually inspect the internal 4-wire comms terminal block (if fitted) for damage.</li> <li>• Replace as required.</li> </ul>  |          |




## ANNUAL INSPECTION AND MAINTENANCE CHECKLIST (continued)

|                                |   |  |
|--------------------------------|---|--|
| <b>COMMUNICATIONS BULKHEAD</b> | <ul style="list-style-type: none"> <li>Remove and visually inspect the 4-wire comms bulkhead connector and cable (if fitted) for damage.</li> <li>Replace the o-ring annually.</li> </ul> <p> <b>NOTE:</b> The ferrules are normally reused.</p> |  |
|--------------------------------|---|--|



**CONTINUE WITH HELMET DISASSEMBLY AS PER THE SEQUENCE OF EVENTS OUTLINED ABOVE. WHEN DISASSEMBLY IS COMPLETE, PROCEED WITH THE MAINTENANCE CHECKLIST FOR EACH ASSEMBLY.**

| STEPS  | PROCEDURE  | INITIALS |
|--|--|----------|
| <p style="text-align: center;"><b>SECOND STAGE REGULATOR</b></p> <p> <b>NOTE:</b> Refer to the technical manual, second stage regulator section for guidance.</p> |  |          |
| <b>REGULATOR BODY</b>  | <ul style="list-style-type: none"> <li>Remove second stage regulator from the helmet shell.</li> <li>Unscrew the connecting ring and remove the inner components (LP valve assembly).</li> <li>Visually inspect the condition of the main body.</li> <li>Clean as required.</li> </ul>   |          |
| <b>DIAPHRAGM</b>   | <ul style="list-style-type: none"> <li>Unscrew the diaphragm housing.</li> <li>Visually inspect the diaphragm for cuts and damage.</li> <li>If required, wash with soap and water, rinse with fresh water and allow to dry. If necessary, replace diaphragm.</li> </ul> <p> <b>NOTE:</b> The diaphragm has a long service life and is not normally replaced annually.</p> |          |
| <b>O-RINGS (3)</b>   | <ul style="list-style-type: none"> <li>Replace the large (1) and medium (2) o-rings on the main body, diaphragm housing and LP valve. These are replaced annually.</li> </ul>  |          |
| <b>LOW PRESSURE (LP) VALVE</b>   | <ul style="list-style-type: none"> <li>Disassemble and rebuild the LP valve assembly as per <i>Excerpt from Poseidon Cyclone 5000 Regulator Manual</i>. Replace the small o-ring and red disk/seat inside the LP valve.</li> </ul>   |          |

**ANNUAL INSPECTION AND MAINTENANCE CHECKLIST (continued)**



|   |   |                        |
|---|---|------------------------|
| <p><b>EXHAUST FLAPPER VALVE</b></p>   | <ul style="list-style-type: none"> <li>• Visually inspect for cuts and damage. Wash with soap and water, rinse with fresh water and allow to dry. If necessary, replace exhaust flapper valve.</li> </ul> <p> <b>NOTE:</b> <i>The exhaust flapper valve has a long service life and is not normally replaced annually.</i></p>   |                        |
| <p><b>REGULATOR METAL PARTS</b></p>   | <ul style="list-style-type: none"> <li>• Visually inspect for damage. Clean as required. If necessary, replace damaged parts.</li> </ul>  |                        |
| <p><b>STEPS</b></p>   | <p><b>PROCEDURE</b></p>   | <p><b>INITIALS</b></p> |
| <p><b>FREE FLOW / EXHAUST VALVE AND DEFOGGER</b></p> <p> <b>NOTE:</b> <i>Refer to the technical manual, free flow / exhaust valve and defogger section for guidance.</i></p> |   |                        |
| <p><b>FREE FLOW / EXHAUST VALVE BODY</b></p>  | <ul style="list-style-type: none"> <li>• Remove the free flow/exhaust valve from the helmet shell. Disassemble fully and visually inspect all parts for damage. Clean as required.</li> </ul>   |                        |
| <p><b>EXHAUST FLAPPER VALVE</b></p>   | <ul style="list-style-type: none"> <li>• Visually inspect for cuts and damage. Wash with soap and water, rinse with fresh water and allow to dry. If necessary, replace exhaust flapper valve.</li> </ul> <p> <b>NOTE:</b> <i>The exhaust flapper valve has a long service life and is not normally replaced annually.</i></p> |                        |
| <p><b>O-RINGS (3)</b></p>   | <ul style="list-style-type: none"> <li>• Replace all o-rings (3) annually.</li> </ul>   |                        |
| <p><b>COPPER WASHERS (2)</b></p>  | <ul style="list-style-type: none"> <li>• Replace both copper washers annually.</li> </ul>   |                        |
| <p><b>SEAT- FREE FLOW VALVE</b></p>   | <ul style="list-style-type: none"> <li>• Visually inspect and check nylon seat condition.</li> <li>• If necessary, replace entire seat-free flow valve.</li> </ul>  |                        |
| <p><b>VALVE STEM</b></p>  | <ul style="list-style-type: none"> <li>• Visually inspect for damage, bends and thread condition.</li> <li>• If necessary, replace with new valve stem.</li> </ul>  |                        |

## **ANNUAL INSPECTION AND MAINTENANCE CHECKLIST (continued)**

| STEPS  | PROCEDURE   | INITIALS |
|--|---|----------|
| <b>FREE FLOW VALVE KNOB</b>  | <ul style="list-style-type: none"> <li>Check condition of the guide hole in the knob. It should be square and firm. If any deterioration or excess play is present, replace knob.</li> </ul> <p> <b>WARNING: Knob slippage on the stem may cause hazardous conditions for the diver.</b></p> |          |
| <b>DEFOGGER</b>  | <ul style="list-style-type: none"> <li>Visually inspect the free flow barrel and defogger train for damage. Replace the o-ring (1) on the Swagelock connector.</li> </ul>   |          |
| <b>AIRWAY ASSEMBLY</b>   | <ul style="list-style-type: none"> <li>Visually inspect the airway assembly.</li> <li>Clean as required. Blow any moisture out of airway assembly using compressed air.</li> </ul>  |          |
| <p><b>MANIFOLD</b></p> <p> <b>NOTE:</b> Refer to the technical manual, manifold section for guidance.</p> |   |          |
| <b>MANIFOLD BODY</b>   | <ul style="list-style-type: none"> <li>Remove the manifold body, complete, from the helmet.</li> </ul>  |          |
| <b>CHECK VALVES (2)</b>  | <ul style="list-style-type: none"> <li>Remove check valves and adapters.</li> <li>Confirm correct operation of both check valves by conducting a "suck-and-blow" check on each. Air should only flow in one direction. If this does not happen, replace check valve.</li> </ul>   |          |
| <b>O-RINGS (2)</b>   | <ul style="list-style-type: none"> <li>Replace o-rings on the manifold and port plugs annually.</li> </ul>  |          |
| <b>SCREEN</b>  | <ul style="list-style-type: none"> <li>Visually inspect the screen for damage. Wash with soap and water, rinse with fresh water and allow to dry.</li> </ul>  |          |
| <b>MANIFOLD HOUSING</b>  | <ul style="list-style-type: none"> <li>Visually inspect for damage. Wash with soap and water, rinse with fresh water and dry by blowing through with compressed air.</li> </ul>   |          |
| <b>MANIFOLD GASKET</b>   | <ul style="list-style-type: none"> <li>Replace the manifold gasket annually.</li> </ul>   |          |
| <b>O-RINGS (2)</b>   | <ul style="list-style-type: none"> <li>Replace o-rings on the manifold connecting insert annually.</li> </ul>   |          |
| <b>TEFLON TAPE</b>   | <ul style="list-style-type: none"> <li>Clean <u>all</u> Teflon tape residue from check valves and hose fittings. Apply new Teflon tape prior to reassembly.</li> </ul>  |          |



**ANNUAL INSPECTION AND MAINTENANCE CHECKLIST (continued)**

| STEPS   | PROCEDURE   | INITIALS |
|---|---|----------|
| <p><b>FACE PORT ASSEMBLY</b></p> <p> <b>NOTE:</b> Refer to the technical manual, face port assembly section for guidance.</p>  |   |          |
| <p><b>PORT RETAINER</b></p>   | <ul style="list-style-type: none"> <li>• Visually inspect the port retainer and screws for damage.</li> <li>• Clean as required.</li> </ul>   |          |
| <p><b>O-RING (1)</b></p>  | <ul style="list-style-type: none"> <li>• Visually inspect the groove for damage and clean as required.</li> <li>• Replace the o-ring annually.</li> </ul>   |          |
| <p><b>FACE PORT</b></p>   | <ul style="list-style-type: none"> <li>• Check condition of the face port.</li> <li>• If necessary, wash with soap and water, rinse with fresh water and allow to dry.</li> <li>• Replace the face port if damaged.</li> </ul> <p> <b>NOTE:</b> DO NOT scrub, use aerosol or chemicals on the face port, it will weaken it.</p> |          |
| <p><b>HELMET SHELL</b></p> <ul style="list-style-type: none"> <li>• Verify condition and inspect for damage to the helmet shell.</li> <li>• Clean as required with soap and water, rinse with fresh water, and dry.</li> <li>• Blow any moisture out of airway assembly using compressed air.</li> </ul>  |   |          |
| <p><b>HELMET REASSEMBLY</b></p> <ul style="list-style-type: none"> <li>• The reassembly sequence of events is the reverse of disassembly.</li> <li>• Follow the Technical Manual to reassemble the helmet to original condition.</li> <li>• All components must be clean and fully serviceable prior to assembly.</li> <li>• All o-rings must be lubricated prior to assembly.</li> </ul> |   |          |
| <p><b>HELMET FINAL TEST</b></p> <p><b>Test the helmet after completion of assembly to confirm that it performs correctly and that there are no leaks.</b></p>   |   |          |

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**Technician Comments (e.g. Specific items noted during maintenance):**

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_