

AQUA LUNG G3000SS HELMET

OPERATIONS & MAINTENANCE MANUAL



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AQUA LUNG G3000SS DIVING HELMET OPERATIONS & MAINTENANCE MANUAL, PN 400179

Aqua Lung G3000SS Diving Helmet

PN 400300

PN 400301

PN 400302

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Trademark Notice

Aqua Lung®, is a registered trademark of Aqua Lung America, Inc.

Warnings, Cautions and Notes:

Pay special attention to information provided in warnings, cautions, and notes, that is accompanied by these symbols:



A **WARNING** indicates a procedure or situation that if not avoided, could result in serious injury or death to the user.



A **CAUTION** indicates any situation or technique that could cause damage to the product, and could subsequently result in injury to the user.



A **NOTE** is used to emphasize important points, tips, and reminders.

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I. SAFETY INFORMATION

OPERATOR AND TECHNICIAN TRAINING

The G3000SS Diving Helmet should be used and operated by properly trained and certified divers and tenders only.

The technical procedures in this manual are to be performed only by personnel who have received factory authorized training through an Aqua Lung Service & Repair Seminar.

RECOMMENDED AIR SUPPLY PRESSURE

The recommended air supply pressure is 129 - 326 PSI (8.9 - 22.5 BAR) Over Bottom Pressure as per the *Apeks GX300 Regulated Supply Pressure Table in Checklist 3, In-Water Checklist for Supervisor*.

LONG DURATION & COLD WATER DIVING

Diving for long durations and/or in cold water may subject the diver to severe body and respiratory heat loss. This may lead to a decrease in body core temperature also known as "hypothermia." Hypothermia is extremely dangerous condition and can lead to a loss of reasoning ability, decreased manual dexterity, uncontrollable shivering, unconsciousness, and death.

II. WARRANTY INFORMATION

The manufacturer warrants every new helmet to be free from defects in workmanship for a period of twelve (12) months from date of purchase.

Parts covered under the warranty:

- This warranty covers all metal parts.

Parts not covered under the warranty:

- This warranty does not cover any soft parts (e.g. o-rings, diaphragms), communications components, headliners, or chrome plating. Due to the electrolytic nature of underwater cutting and welding, chrome plating cannot be warranted when the diver engages in these activities.

The warranty becomes null and void if:

- The product has been modified without consent of Aqua Lung America, Inc.
- The product has been misused, damaged, put into a situation or service for which the product is not intended or if the product has not been correctly maintained according to the G3000SS Diving Helmet Operations & Maintenance Manual.

OPERATIONS SECTION

III. HELMET OPERATING INFORMATION

HELMET DESCRIPTION

The G3000SS Diving Helmet is a high performance diving helmet for professional diving applications. The key features of the G3000SS include:

- Balanced design 2nd stage regulator.
- High grade communications system manufactured by OTS.
- Stainless steel (316L) shell, neck retainer and neck ring: no dissimilar metals.
- Breathing loop components protected inside shell.
- Low component count.
- Reduced maintenance load.

The G3000SS has many components in common with the original Gorski G2000SS helmet but with the following important revisions:

- Apeks GX300 2nd stage regulator.
- Double exhaust and double water dump protection.
- Ergonomic free flow knob.
- 4-wire communications (marsh marine or hi-use version).

PERFORMANCE AND CERTIFICATION

The G3000SS Diving Helmet:

- Is suitable for use with standard compressed breathing air ("diving air").
- Meets Work of Breathing (WOB) performance requirements at all required standard and high RMV work rates.
- Meets inspired partial pressure of carbon dioxide performance requirements at all required standard and high RMV work rates.
- Is tested and certified for use in water temperatures down to 4 degrees Celsius (39.2 degrees Fahrenheit).

The G3000SS Diving Helmet has been CE certified by Germanischer Lloyd SE, Brooktorkai 18, 20457 Hamburg, Germany, Notified Body number 0098 and has been found to be in accordance with the requirements of Council Directive 89/686/EEC. When examined the product satisfied the requirements of the manufacturer's technical specifications (based upon EN 15333-1: 2008, Respiratory Equipment – Open-circuit umbilical supplied compressed gas diving apparatus requirements), which has been previously assessed and deemed to meet the basic health and safety requirements (Annex II) of the directive.

The CE certificated depth of 50 m (165 ft) is a standard maximum certification depth for diving equipment that is used to provide a uniform benchmark for measuring performance.

DIVE SYSTEM REQUIREMENTS

The G3000SS Diving Helmet is used with the following minimum equipment:

- Surface gas control system (panel) providing a regulated surface supply.
- Diver's umbilical, including gas hose and voice communications cable.
- Emergency Gas Supply (EGS) or bailout gas supply (including 1st stage regulator fitted with pressure gauge, and pressure relief valve). All EGS components are to be CE-certified.
- Diving Harness (for attachment of umbilical, bailout gas supply and weights).
- Personal diving equipment (e.g. suit, fins, gloves).

BAILOUT CONFIGURATIONS

There are 2 standard equipment configurations for use with an Emergency Gas System (EGS) or bailout supply: cylinder "Valve Down" and cylinder "Valve Up". Both configurations use a bailout switch block (P/N AP0281/G) mounted on the diver's harness (See Section X for details of the switch block). The switch block provides an easy to operate ON/OFF valve for the bailout supply. The bailout connections on the helmet and the switch block are standard 9/16 inch SCUBA male fittings.

In both configurations the bailout supply is routed from the bailout cylinder/first stage regulator through the switch block then to the helmet manifold. The bailout cylinder is opened during pre-dive checks and remains open throughout the dive. The switch block is also opened during pre-dive checks and then remains closed until required for use. Both hoses remain pressurized to prevent water ingress.

Primary Configuration: This is the cylinder "Valve Down" configuration, fitted with switch block.



Lower hose routed from bailout cylinder, upper hose routed to helmet



Lower hose routed from bailout cylinder, upper hose routed to helmet



CAUTION: Users must be aware of the potential for obstruction of the helmet manifold if the bailout system is rigged in the cylinder "Valve Up" configuration.



NOTE: The cylinder "Valve Down" configuration may be used without a switch block (i.e. bailout supply hose connected directly to the rear manifold on the helmet). During pre-dive checks the bailout first stage regulator and hose are pressurized and the cylinder valve is then closed. The pressurized hose prevents water ingress. Opening the bailout cylinder valve provides bailout gas directly to the helmet. In this case the diver must be able to operate the cylinder valve within 10 seconds. This is known as the Direct Bailout Configuration.

SET-UP PROCEDURES

Testing the Check Valves: The helmet is equipped with two check valves, one for the main gas supply and the other for emergency breathing gas (bailout supply). Each check valve should be checked prior to connecting a gas hose. To check each check valve, the free flow valve must be open and breathing gas must be pulled from the check valve to verify that it is closed. The gas hoses may be attached only after verifying that the check valves are properly functioning.

Testing the Emergency Gas Supply (EGS): After the diver has verified a proper seal of the helmet on his head and the main breathing gas supply is bled from the gas hose, the diver must test his emergency gas supply (bailout). The procedure for testing the bailout supply is detailed in the Pre-Dive Checklist.

USER CHECKLISTS

The following checklists are provided to assist all users:

- Daily Checklist Section IV
- Pre-Dive Checklist Section IV
- In-Water Checklist for Supervisor Section IV
- Post-Dive Checklist..... Section IV

GAS SUPPLY PRESSURES

Regulated surface supply pressures for the G3000SS diving helmet are detailed in the In-Water Checklist.

Gas systems used to supply the G3000SS helmet must be capable of supplying gas to the diver at the required supply pressure and flow rates. The use of unregulated gas sources is extremely dangerous.

The regulated surface supply pressures are intended for use with properly adjusted and maintained G3000SS helmets only. They should not be used with other manufacturers' helmets or masks.

The G3000SS helmet and the umbilical and associated supply system must be properly configured, maintained, and adjusted in order to supply the diver with the correct quantity of breathing gas.

NOISE EXPOSURE

The maximum internal noise levels for the G3000SS diving helmet are as follows:

- Maximum noise level at 40 l/min RMV: 83.4 dB(A) - Limit: 85 dB (A); re 204Pa.
- Maximum noise level at 75 l/min RMV: 98.3 dB(A) - Limit: 135 dB (A); re 204Pa.

Maximum permissible noise exposure times are to be calculated using the above levels, the applicable national occupational health limits, and the expected time that the diver will spend at each RMV.

HEAD PROTECTION

The G3000SS diving helmet provides Class B head protection as detailed in EN 15333-1: 2008.

USE WITH LOW PRESSURE OXYGEN

All breathing loop materials are compatible for use with low pressure pure oxygen (100% O₂) at pressures up to 25 bar (363 psi). See lubrication section for guidance on suitable lubricants.

ENVIRONMENTAL CONDITIONS

The G3000SS is suitable for diving in all common environmental conditions with the following guidance:

Contaminated Water Diving (CWD): Diving in contaminated waters requires special training, equipment, and procedures for all personnel involved. All helmets and suits may leak water under certain conditions. The G3000SS has a double exhaust regulator and double water dump exhaust fitted as standard in order to provide an increased level of protection for the diver.

Decompression diving always involves the risk of decompression illness. Omitted decompression due to a loss of the breathing gas supply or other incident may lead to serious injury or death. Use of a G3000SS helmet mask cannot prevent this type of injury.

G2000SS HELMET CONVERSION

All existing Gorski G2000SS diving helmets may be converted to the G3000SS diving helmet standard. When the GX300 regulator is retrofitted to an existing G2000SS helmet it will then be known as the Gorski G3000SS helmet. A double exhaust kit (water dump), must be fitted to the helmet at the same time. This ensures that the helmet is fitted with, and provides, a dual valve (i.e. double exhaust) level of protection for the diver. See *Appendix A* for details of the double water dump exhaust.

To convert a G2000SS diving helmet to a G3000SS diving helmet, the following items are needed:

- PN AP0300, Apeks GX300 Regulator
- PN AP0270, Handwheel Assembly
- PN 400111, Double Exhaust / Water Dump Kit
- PN 400150 Terminal Block Hi-Use Communications Module Kit or 400151 Terminal Block Marsh Marine Communications Module Kit.

IV. USER CHECKLISTS

Checklist 1	G3000SS Diving Helmet Daily Checklist
Checklist 2	G3000SS Diving Helmet Pre-Dive Checklist
Checklist 3	G3000SS Diving Helmet In-Water Checklist for Supervisor
Checklist 4	G3000SS Diving Helmet Post-Dive Checklist



NOTE: The terms “hook”, “loop” and “hook & loop” are used throughout this manual. Hook & Loop is commonly known as Velcro®, which is a trademarked brand of hook & loop. Some of the helmet components have hook & loop attachments, including the head liner, free flow plug kit and microphone.

CHECKLIST 1
G3000SS DIVING HELMET
DAILY CHECKLIST

BEFORE DIVING THE G3000SS DIVING HELMET, THE PROCEDURES IN THIS CHECKLIST MUST BE COMPLETED, NORMALLY ON A DAILY BASIS (I.E. PRIOR TO THE FIRST DIVE OF THE DAY).



NOTE: The procedures in this checklist are to be performed only by personnel who have received appropriate training in the operation of the G3000SS diving helmet.



WARNING: Aqua Lung strongly recommends completion of this checklist and meeting the minimum requirements provided before using the G3000SS diving 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.**



CAUTION: When using the G3000SS diving helmet, a correctly maintained and serviceable Emergency Gas Supply (EGS) must be used. The EGS must include a 1st stage regulator fitted with submersible pressure gauge and pressure relief valve. The EGS must be confirmed as fully functional prior to diving.



NOTE: When using the EGS, during completion of the daily checklist, the first stage regulator must have an intermediate pressure (IP) output set between 129 and 150 psig (8.9 - 10.3 BAR). In addition, the first stage regulator bleed/pressure relief valve should be set between 180 and 200 psig (12.4 - 13.8 BAR).

COMPLETE THE FOLLOWING BOXES PRIOR TO THE CHECKLIST

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

Helmet Serial No:	Date:
Diver / Tender: (Print Name)	

DAILY CHECKLIST (continued)

ACTION	PROCEDURE	INITIALS
NECK RETAINER AND LOCKING SYSTEM (must be completed by diver/tender)	• Visually inspect the neck retainer assembly for signs of damage, such as bends. Confirm that the retainer fits properly. • Make sure the locking system (both L and R) is properly working and not deformed in any way.	
NECK DAM ASSEMBLY (must be completed by diver/tender)	• Visually inspect the neck dam ring for signs of damage, such as bends, scratches on the o-ring surface area or any other deformities. • Visually inspect the neck seal for signs of damage such as tears, rips or cuts. • If the quad ring is dry, lightly lubricate the quad ring. • Replace the neck dam assembly onto the helmet and ensure a proper fit.	
HELMET INSPECTION (must be completed by diver/tender)	• Visually inspect the helmet (interior and exterior) for damage and/or contamination.  NOTE: <i>If a contaminated area of the shell is cleaned using a wire brush, the brush must be stainless steel or the area will be contaminated.</i> • Inspect the oral-nasal inhalation valve to ensure that it is installed correctly and that the oral-nasal mask is installed on the regulator. • Check that the nose clearing device operates without problems. If necessary lubricate o-rings and stem (<i>Refer nose clearing device section of the Operations and Maintenance Manual for guidance</i>) • Ensure the speakers and microphones are properly installed. <i>Refer to the communications section of the Operations and Maintenance Manual for guidance.</i> • Ensure that the head liner fits properly and is secured to the inside of the helmet shell. Check for worn-off hook and loop, tears and/or rips. (<i>Refer to the head liner section of the Operations and Maintenance Manual for guidance</i>).  NOTE: <i>The Head Liner should be fitted carefully into the helmet shell so that visible parts of the helmet shell (i.e. bare spots) are minimized.</i>	

DAILY CHECKLIST (continued)

ACTION	PROCEDURE	INITIALS
EGS INSPECTION (must be completed by diver/tender)  NOTE: <i>Ensure that the EGS is maintained properly.</i>	• Visually inspect all EGS hoses for any signs of damage or defect. • Ensure that the bailout cylinder is within the VIP and the hydrostatic date. • Check the first stage regulator intermediate pressure (IP) setting before each dive. • Make sure there is no damage to the diver harness and cylinder retention straps. Repair or replace if damaged. • Visually inspect the bailout switch block (if fitted) for any signs of damage or defect, and confirm that it is attached securely to the diver harness.	
CONNECT THE EGS TO THE HELMET (must be completed by diver/tender)	• Confirm the check valve is properly functioning by orally checking it (suck on valve to confirm seal). • Connect the first stage regulator, fitted with submersible pressure gauge, to the EGS cylinder then proceed as follows: DIRECT BAILOUT CONFIGURATION: Connect the regulator hose directly to the helmet check valve. BAILOUT SWITCH BLOCK CONFIGURATION: Connect the regulator hose to the bailout inlet connection on the switch block. Connect the second hose from the switch block outlet to the helmet check valve. • With the cylinder supply turned off, open and close the free flow / water dump valve to verify efficient operation of the valve. • Open the EGS supply valve on the cylinder and log the pressure. EGS CYLINDER PRESSURE _____ psig. • Immediately after logging the EGS cylinder pressure, proceed as follows: DIRECT BAILOUT CONFIGURATION: Open the helmet free flow / water dump valve $\frac{3}{4}$ to 1 full turn and confirm a powerful flow of gas coming out of the defogger train. BAILOUT SWITCH BLOCK CONFIGURATION: Open the switch block valve prior to opening the helmet free flow / water dump valve and confirming the gas flow. • After confirmation, close the free flow / water dump valve (and switch block valve if fitted).	

DAILY CHECKLIST (continued)

ACTION	PROCEDURE	INITIALS
ATTACH THE UMBILICAL (to be completed by tender)	- Confirm the check valve is properly functioning by orally checking it (suck on valve to confirm seal). - Blow air through the umbilical to remove any debris, and attach the umbilical into the umbilical adapter located on the check valve.	
CHECK THE SECOND STAGE REGULATOR (must be completed by diver/tender)	Slowly depress the purge button to full extent and confirm a sufficient audible flow of gas.  NOTE: If the regulator free flows, or if after fully depressing the purge button there is a weak flow of gas, the regulator needs to be adjusted or the low pressure valve should be replaced or serviced by a trained technician.	
CONFIRM FUNCTION OF COMMUNICATIONS (to be completed by diver)	Check all communications to confirm correct functioning.	
CHECK DRY-SUIT INFLATION HOSE (must be completed by tender).	If fitted, confirm the dry suit inflation valve and exhaust valve are functioning properly.	
CHECK HELMET FOR LEAKS	Apply soap and water to ALL gas fittings and connections (including the EGS) to check for leaks on the helmet.	
FINAL CHECK (to be completed by tender)	- Check to ensure the neck retainer is in the correct position and properly locked. - Ensure the diver's safety harness is in good condition. - Ensure the umbilical strain is released. - Ensure the EGS hose quick disconnect is in good condition and is functioning properly. - Ensure diver has boots, gloves, knife and other accessories.	

Signature: _____

Date: _____

To Diver / Tender: Note comment on the space provided below. Be sure to log maintenance in the applicable maintenance log.

Comments: _____

CHECKLIST 2
G3000SS DIVING HELMET
PRE-DIVE CHECKLIST

BEFORE COMPLETING THIS CHECKLIST, THE DAILY CHECKLIST MUST BE COMPLETED.
BEFORE DIVING THE G3000SS DIVING HELMET, THE PROCEDURES IN THIS CHECKLIST MUST BE COMPLETED.



NOTE: The procedures in this checklist are to be performed only by personnel who have received appropriate training in the operation of the G3000SS diving helmet.



NOTE: Aqua Lung strongly recommends that the diver be assisted by the tender or supervisor when preparing for diving and conducting the procedures in this checklist.



WARNING: Aqua Lung strongly recommends completion of this checklist and meeting the minimum requirements provided before using the G3000SS diving 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.**



CAUTION: When using the G3000SS diving helmet, a correctly maintained and serviceable Emergency Gas Supply (EGS) must be used. The EGS must include a 1st stage regulator fitted with submersible pressure gauge and pressure relief valve. The EGS must be confirmed as fully functional prior to diving.

COMPLETE THE FOLLOWING BOXES PRIOR TO THE CHECKLIST

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

Helmet Serial No:	Date:
Diver/Tender: (Print Name)	

PRE-DIVE CHECKLIST (continued)

ACTION	PROCEDURE	INITIALS
SUPPLY GAS (must be completed by supervisor)	Supervisor must ensure the diver has sufficient breathing gas pressure supplied to the helmet for depth.	
BREATHING SYSTEM FUNCTION CHECK (must be completed by diver)	- Ensure proper functioning of free flow valve by opening and closing the valve. - Check that breathing resistance is comfortable. - Ensure gas purge function by pressing in the purge button. - Ensure the bail out cylinder valve is closed.	
COMMUNICATION CHECK (must be completed by diver and communications operator)	Ensure the speakers and microphone are functioning correctly.	
CHECK DRY SUIT INFLATION HOSE (must be completed by tender)	Ensure dry suit inflation valve and exhaust valve are functioning correctly.	
FULL HELMET CHECK (must be checked by supervisor)	- Check all helmet gas fittings and connections for leaks. Check EGS for leaks. - Check adjustment or fit of entire helmet, including the divers safety harness, umbilical strain release, EGS hose quick disconnect, boots, gloves, knife and accessories.	
EGS FUNCTIONAL CHECK (must be completed by diver and witnessed by tender)	- Turn off the main breathing gas supply and breathe down the umbilical (free flow / exhaust valve may be used to assist). - Open EGS (bailout) supply (i.e. cylinder valve, or cylinder valve and switch block valve, depending on bailout configuration) and take two breaths from the EGS supply. - Close the EGS supply valve(s) as follows: DIRECT BAILOUT CONFIGURATION: Close the cylinder valve (the hose remains pressurized). BAILOUT SWITCH BLOCK CONFIGURATION: Close the switch block valve. The cylinder valve is to remain open. Both hoses remain pressurized. - Open main breathing gas supply. Diver reports: Breathing OK.  NOTE: This check is mandatory and must be completed for all EGS (bailout) configurations. After checking, the EGS supply must be shut leaving the supply hose(s) pressurized.	

PRE-DIVE CHECKLIST (continued)

ACTION	PROCEDURE	INITIALS
CHECK DIVER'S ENTIRE RIG (must be completed by supervisor)  WARNING: Both latch catches must fit into place correctly or the helmet may flood.	• Check adjustment and fit of the entire rig, specific points: • Head liner secured inside the helmet shell. • Neck dam is installed. • Neck retainer secured with both locking catches (L and R) engaged on neck retainer. • Chin strap properly fastened. • Check adjustment and fit of the diver's safety harness. Umbilical strain release, EGS hose quick disconnect, boots, gloves, etc. • Ensure helmet supply pressure is at minimum 129 psig (8.9 bar) as per the regulated supply pressure table in <i>Checklist 3, In-Water Checklist for Supervisor</i>.	
FINAL BREATHING CHECK (must be completed by diver)	• Check to ensure the helmet is breathing correctly with no complications.  NOTE: <i>Ensure all equipment is properly adjusted and is properly functioning.</i>	

Signature: _____

Date: _____

Comments: _____

CHECKLIST 3

G3000SS DIVING HELMET

IN-WATER CHECKLIST FOR SUPERVISOR

WHEN DIVING THE G3000SS DIVING HELMET, THE PROCEDURES IN THIS CHECKLIST MUST BE COMPLETED.



WARNING: Aqua Lung strongly recommends completion of this checklist and meeting the minimum requirements provided before using the G3000SS diving 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.**



CAUTION: When using the G3000SS diving helmet, a correctly maintained and serviceable Emergency Gas Supply (EGS) must be used. The EGS must include a 1st stage regulator fitted with submersible pressure gauge and pressure relief valve. The EGS must be confirmed as fully functional prior to diving.



WARNING: When diver uses less than the minimum recommended supply pressure, the work must be adapted to prevent over-breathing the system, which will result in exhaustion.

COMPLETE THE FOLLOWING BOXES PRIOR TO THE CHECKLIST

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

Helmet Serial No:	Date:
Diver/Tender: (Print Name)	

PROCEDURE	INITIALS
1. The diver must ensure the helmet is breathing and must report that breathing is satisfactory.	
2. The diver must ensure the helmet is watertight and if wearing a dry-suit, the diver must ensure no leakage occurs. Diver must report that a proper seal has been made.	

IN-WATER CHECKLIST (continued)**APEKS GX300 REGULATED SUPPLY PRESSURE TABLE**

NOTE: The main objective of the regulated supply pressures listed in the table below is to ensure that a pressure between 8.9 and 10.3 bar above ambient pressure is maintained at the diver as tested and CE certified.



NOTE: The supply pressures listed in the table below were derived by breathing simulator trials for optimum performance at each depth using a breathing rate which simulates hard work (an RMV of 62.5 lpm). They were obtained using a 100 meter [328 ft] umbilical with a minimum I.D. of 9.5mm [0.375"] with not more than two sections. Use of different size umbilicals will affect performance.

Depth		Recommended Supply Pressure Range			
(MSW)	(FSW)	(BAR)		(PSIG)	
		MINIMUM	MAXIMUM	MINIMUM	MAXIMUM
00-20	00-66	8.9	10.9	129.0	158.0
21-30	69-98	11.0	12.4	160.0	180.0
31-40	102-131	13.3	15.4	193.0	223.0
41-50	135-164	17.5	20.5	254.0	297.0
51-60 (not recommended when using normal air)	167-197 (not recommended when using normal air)	21.5	22.5	312.0	326.0

HP Gas Supply Systems: The GX300 Regulated Supply Pressure Table applies to conventional surface supply systems providing a regulated gas supply to the diver through an MP umbilical. If a high pressure (HP) gas supply system is used, the information in the regulated supply pressure table does not apply. The HP gas supply system will automatically adjust the diver's gas supply pressure with changes in depth. Always refer to the manufacturer's instructions for the system being used.

Signature: _____

Date: _____

Comments: _____

CHECKLIST 4

G3000SS DIVING HELMET

POST-DIVE CHECKLIST

THE POST-DIVE CHECKLIST MUST BE COMPLETED AT LEAST ONCE A DAY WHEN DIVING USING THE G3000SS DIVING HELMET.



NOTE: *The procedures in this checklist are to be performed only by personnel who have received appropriate training in the operation of the G3000SS diving helmet.*



WARNING: Aqua Lung strongly recommends completion of this checklist and meeting the minimum requirements provided before using the G3000SS diving 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.**

COMPLETE THE FOLLOWING BOXES PRIOR TO THE CHECKLIST

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

Helmet Serial No:	Date:
Diver/Tender: (Print Name)	

POST-DIVE CHECKLIST (continued)

PROCEDURE	INITIALS
1. Secure and bleed down the breathing gas supply and the EGS hose.	
2. Disconnect all helmet gas connections and disconnect the communication wires / cable. Replace hose caps onto hose adapters after removing all water from the hose adapter.	
3. Wash the outside of the helmet and all external fittings completely with fresh water. This removes dirt and prevents surface corrosion. If required, wash with soap and water, rinse with fresh water and allow to dry.	
4. Visually inspect the helmet fully for damage.	
5. Remove the head liner. Visually inspect for damage and/or deterioration. If the head liner is wet, air dry it.  NOTE: The head liner may be washed as required.	
6. If required, and particularly if the inside of the regulator was exposed to salt or contaminated water, remove the regulator and the oral-nasal mask from the helmet. Wash with soap and water, rinse with fresh water and allow to dry. DO NOT allow water to enter the regulator body. Re-install into helmet upon completion.  NOTE: Refer to the separate Apeks Technical Manual: GX300 REGULATOR FOR THE AQUA LUNG G3000SS DIVING HELMET - MAINTENANCE MANUAL for guidance on installation and removal of the regulator.  NOTE: The GX300 regulator valve cover and exhaust valve assembly should be removed and rinsed carefully with fresh water after diving in extreme conditions (e.g. sand, sediment, or debris in water).	
7. Remove the speakers.	

POST-DIVE CHECKLIST (continued)

PROCEDURE	INITIALS
8. Remove the microphone from the oral-nasal mask. Wash the oral-nasal mask with soap and water, rinse with fresh water and allow to dry.	
9. Dry the inside of the helmet, including oral-nasal mask, by wiping. If required, wash with soap and water, rinse with fresh water and allow to dry.	
10. Clean neck dam, neck retainer and latch catches with soap and water, rinse with fresh water and allow to dry.	
11. Wipe helmet down to remove any standing water and allow to air dry. <u>DO NOT STORE A WET HELMET OR COMPONENTS.</u>	
12. Wash the outside of all EGS components, gas cylinder, submersible pressure gauge and the harness assembly with soap and water, rinse with fresh water and allow to dry.	
13. Any defects or damage found during post-dive procedures must be noted on the front page and brought to the attention of the supervisor and/or helmet technician.	

DEFECTS AND DAMAGES: Any defects or damages found during post-dive procedures must be noted and brought to the attention of the supervisor and/or technician.

Signature: _____

Date: _____

Comments: _____

TECHNICAL SECTION

V. HELMET TECHNICAL INFORMATION

AUTHORIZED TECHNICIANS

The technical procedures in this manual are to be performed only by personnel who have received factory authorized training through an Aqua Lung Service & Repair Seminar.

FACTORY PRESCRIBED PROCEDURES

This manual provides factory prescribed procedures for the correct service and repair of the G3000SS diving helmet. It is strongly recommended that all repairs are completed in accordance with this manual.

If you do not completely understand all of the procedures outlined in this manual, contact Aqua Lung to speak directly with a technical advisor before proceeding any further.

SCHEDULED SERVICE

1. The G3000SS Diving Helmet is subject to annual service regardless of usage.
2. The *Annual Inspection and Maintenance Checklist* must be followed for annual service. See *Checklist 6* for details of annual service.
3. The annual service kit (P/N 400180) contains all parts that are replaced annually (See *Appendix R*) for details of this kit.

LUBRICATION

A oxygen compatible lubricant must be used when diving with 100% oxygen or gas containing oxygen percentages greater than 40%. All helmet components requiring lubrication are lubricated with Christo Lube MCG-111 during assembly.

All o-rings must be lubricated prior to assembly.



CAUTION: DO NOT lubricate diaphragms or one-way valves. Lubrication attracts dirt and debris, this may cause the item to malfunction.

TECHNICIAN CHECKLIST

The following technician checklists are provided to assist all technicians:

- Monthly Inspection & Maintenance Checklist Section VII
- Annual Inspection & Maintenance Checklist Section VII

GENERAL GUIDELINES

1. In order to correctly perform the procedures outlined in this manual, it is important to follow each step exactly in the order given. Read over the entire manual to become familiar with all procedures before attempting to service or repair the G3000SS diving helmet.
2. Keep the manual open beside you for reference while performing each procedure. Do not rely on memory.
3. All service and repair should be carried out in a work area specifically set up and equipped for the task. Adequate lighting, cleanliness, and easy access to all required tools are essential for an efficient repair facility.
4. As each unit is disassembled, reusable components should be segregated and not allowed to intermix with non-reusable parts. Delicate parts, including inlet fittings and crowns which contain critical sealing surfaces, must be protected and isolated from other parts to prevent damage during the cleaning procedure.
5. Use only genuine Aqua Lung parts provided in the service kits. DO NOT attempt to substitute any part with another manufacturer's, regardless of any similarity in shape or size. Substitution with other manufacturer's parts constitutes an after-market modification of the product and renders all warranties null and void.
6. Do not attempt to reuse mandatory replacement parts under any circumstance, regardless of the amount of use the product has received since it was manufactured or last serviced.
7. When reassembling, it is important to follow every torque specification prescribed in this manual, using a calibrated Newton Meter (Nm) or Inch Pound (in lb) torque wrench. Some parts are made of either brass or composite materials and can be permanently damaged by undue stress.

VI. STEP-BY-STEP ASSEMBLY INSTRUCTIONS

The technical procedures in this section are to be performed only by personnel who have received factory authorized training through an Aqua Lung Service and Repair Seminar.

NOTES ON DISASSEMBLY AND ASSEMBLY

1. Disassembly procedures are the reverse of assembly.
2. All components must be clean and fully serviceable prior to assembly.
3. All o-rings must be lubricated prior to assembly.

HELMET SUB-ASSEMBLIES IN THIS SECTION

- Second Stage Regulator
- Free Flow / Water Dump Valve
- Manifold
- Defogger
- Oral-Nasal Mask
- Nose Clearing Device (NCD)
- Face Port Assembly
- Communications
- Head Liner
- Neck Retainer and Locking System
- Helmet Final Assembly
- Neck Dam Assembly
- Quad Ring Installation

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	



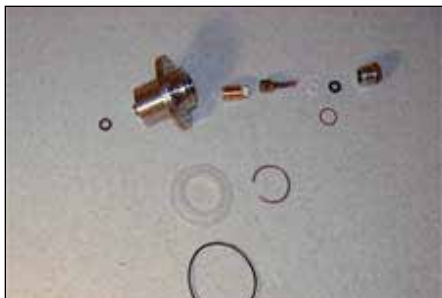
NOTE: Additional tools are required for maintenance of the Apeks GX300 Second Stage Regulator. Details are contained in the separate Apeks document **GX300 REGULATOR FOR THE AQUA LUNG G3000SS DIVING HELMET - MAINTENANCE MANUAL**.

SECOND STAGE REGULATOR

The G3000SS Diving Helmet is fitted with the Apeks GX300 Second Stage Regulator (P/N AP0300). Complete service and maintenance instructions for the Apeks GX300 Second Stage Regulator are contained in the separate Apeks document **GX300 REGULATOR FOR THE AQUA LUNG G3000SS DIVING HELMET - MAINTENANCE MANUAL**.

The above named manual forms part of the formal support documentation for the G3000SS Diving Helmet. It is to be read, and the instructions applied as directed, in conjunction with this manual.

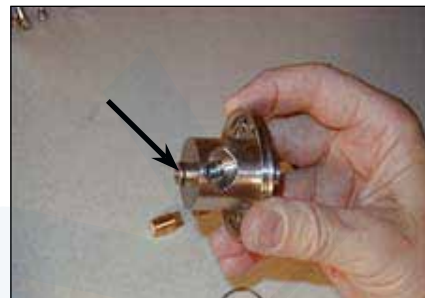
FREE FLOW / WATER DUMP VALVE



Step 1: Breakdown of free flow/water dump valve parts.



Step 2: Install small o-ring (51) onto valve body (52).



Step 3: O-ring (51) installed on valve body (52).



Step 4: Install o-ring (53) onto the valve body (52) groove.



Step 5: Put flapper exhaust valve (18) on the valve body (52).



Step 6: Flapper exhaust valve (18) installed on valve body (52).



Step 7: Install snap ring (54) in the groove on the valve body (52).



Step 8: Snap ring (54) installed.



Step 9: Place valve seat (55) into the valve body (52).

FREE FLOW / WATER DUMP VALVE (continued)



Step 10: Thread in the valve seat (55) with valve stem (57).



Step 11: Place two copper washers (56) on top of the valve seat (55) in the valve body (52).



Step 12: Place o-ring (59) into the valve bonnet (60).



Step 13: Place Teflon washer (58) over the o-ring (59) in the valve bonnet (60).



Step 14: Place the valve stem (57) into the valve body (52) over the seat (55).



Step 15: Place the valve bonnet assembly over the valve stem (57) into the valve body (52).



Step 16: Thread the valve bonnet (60) into the valve body (52).



Step 17: Tighten the valve bonnet (60) with a 11/16" socket to 35 ft.lbs (47 Nm).



Step 18: Free flow / water dump valve assembled.



NOTE: Final assembly instructions for the Free Flow / Water Dump Valve are detailed in the *Helmet Final Assembly* section of the Operations and Maintenance Manual.

MANIFOLD



Step 1: Break down of manifold assembly.



Step 2: Insert screen (44) into the manifold body (45). **Failure to install may cause debris to block the flow of gas to the diver.**



Step 3: Line up screen (44) with the end of threads in the manifold body (45).



Step 4: Install o-ring (26) onto manifold plug (43). Screw manifold plug to the manifold body (45).



Step 5: Tighten the manifold plug (43) with a 7/8" socket to 90 in. lbs (10 Nm).



Step 6: Install o-ring (33) onto port plug (46). Using a 3/16" hex key, screw the port plug to the manifold body (45).



Step 7: Tighten port plug (46) with a 3/16" hex key until to 45 in. lbs (5 Nm).



Step 8: Screw check valve (47) (with Teflon tape) into the first port of the manifold body (45).



Step 9: Screw check valve (47) (with Teflon tape) into the 2nd port of the manifold body (45).



Step 10: Screw scuba fitting (48) (with Teflon tape) to the first check valve (47) and tighten firmly.



Step 11: Screw hose fitting (49) (with Teflon tape) to the 2nd check valve (47) and tighten firmly.



Step 12: Tighten both check valve assemblies to the manifold body (45) with an 7/8" socket. Replace caps (50).

DEFOGGER



Step 1: Two parts of defogger train (36), lower and upper unit.



Step 2: Insert lower unit over the free flow / water dump valve body.



Step 3: Push lower unit until it stops.



Step 4: Align upper unit with the lower unit.



Step 5: Slide upper unit over the bracket of the lower unit.

ORAL-NASAL MASK



CAUTION: The head liner and oral-nasal mask must be used at all times when diving. The head liner ensures that the oral-nasal mask maintains a good fit on the diver's face and reduces dead space in the helmet, this helps prevent CO2 build up.



Step 1: Oral-Nasal mask (37) with inhalation valve (34) and inhalation valve housing (35).



Step 2: Line up and install inhalation valve (34) with the inhalation valve housing (35).
DO NOT lubricate the valve.



Step 3: Inhalation valve assembly (34 & 35) for oral-nasal mask (37).



Step 4: Insert inhalation valve assembly (34 & 35) into the pocket on the left side of the oral-nasal mask (37).



Step 5: Outside view of the correctly installed inhalation valve (34) and inhalation valve housing (35).

Step 6: Insert second stage regulator into the helmet shell (1).



NOTE: Refer to the separate Apeks Technical Manual: **GX300 REGULATOR FOR THE AQUA LUNG G3000SS DIVING HELMET - MAINTENANCE MANUAL** for guidance on installation of the regulator.



NOTE: Inhalation valve must be installed on the inside of the oral-nasal mask. If reversed it could cause serious problems including injury or death of the diver.

ORAL-NASAL MASK (continued)



Step 7: Install microphone (30) in the right pocket of the oral-nasal mask (37).



Step 8: Point microphone wire downwards.



Step 9: Install oral-nasal mask (37) onto the regulator mouthpiece.



Step 10: Install nose clearing device (62) into the helmet shell (1).



Step 11: Secure NCD knob (64) on the NCD shaft (62). Ensure that it is snug.

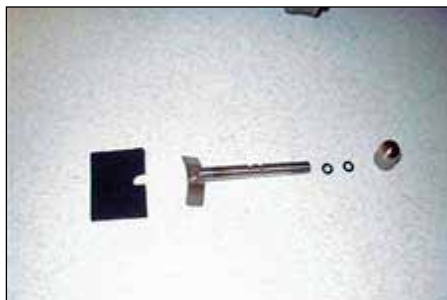


Step 12: Always check before diving to ensure that no threads are visible in order to prevent loosening the knob (64).



Step 13: Inside view of installed oral-nasal mask assembly.

NOSE-CLEARING DEVICE (NCD)



Step 1: Breakdown of nose clearing device parts.



Step 2: Install two o-rings (63) into the grooves on the NCD shaft (62) using o-ring pick.



Step 3: O-rings (63) installed.



Step 4: Place neoprene nose pad (61) over nose cleaning device (62) as shown.

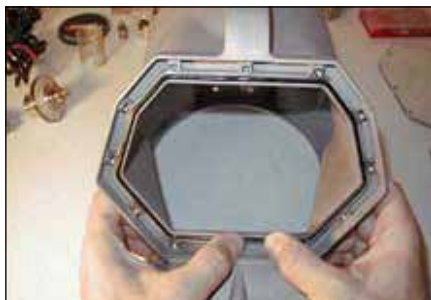


Step 5: Fold over and press the pad ends together.

FACE PORT ASSEMBLY



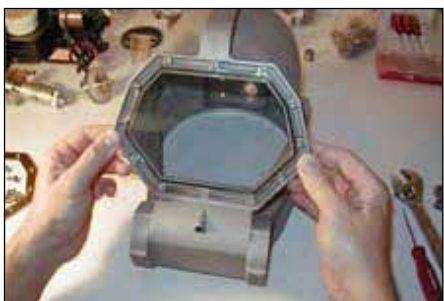
Step 1: Place o-ring (14) in the port groove.



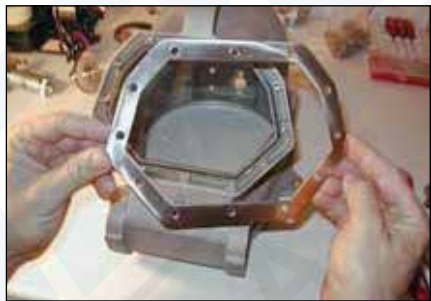
Step 2: O-ring (14) installed in port groove.



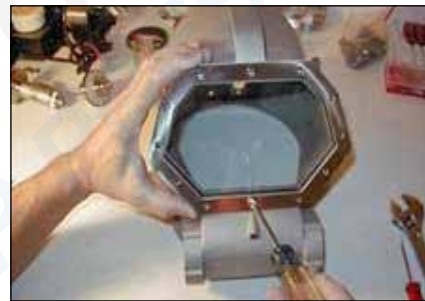
Step 3: Place face port (13) into the helmet shell (1).



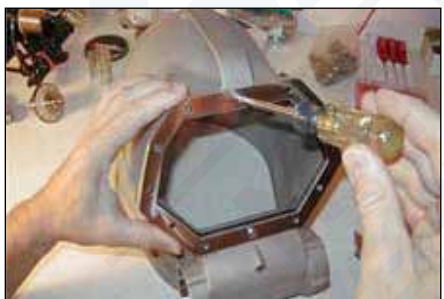
Step 4: Face port (13) installed.



Step 5: Place port retainer (12) over face port (13) and line up holes.



Step 6: Install bottom screw (11) in the port retainer (12) with a Phillips #3 screwdriver.



Step 7: Install top screw (11) in port retainer (12), all holes should be lined up.



Step 8: Install the remaining screws (11).

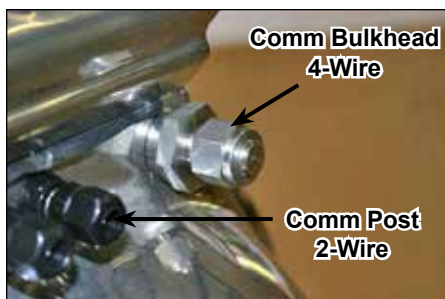


Step 9: Tighten all screws (11) to 45 in.lbs (5 Nm) with a Phillips #3 screwdriver.

COMMUNICATIONS



NOTE: The communications system is designed and built by Ocean Technology Systems (OTS) specifically for the G3000SS Diving Helmet.



Step 1: Communications bulkhead (25) with blank plug for use with 4-wire communications. Communication post assembly (24) for use with 2 wire communications.



Step 2: Breakdown of communications assembly parts.



Step 3: Securely install all terminals to the internal posts using a 3/8" nut driver.



Step 4: Install microphone (30) in the right pocket of the oral-nasal mask (37).



Step 5: Microphone (30) installed in oral-nasal mask (37).



Step 6: Install left speaker (38) and right speaker (28) with the long wire on the left side.



Step 7: Place left speaker (38) in left pocket of head liner.



Step 8: Place right speaker (28) in right pocket of head liner.



Step 9: Communications system installed.



NOTE: The G3000SS helmet is supplied with a 4-wire communications system or 2-wire communications system. Helmets may be converted easily from one to the other.

Refer to Appendix N for wiring schematic diagrams and instructions.

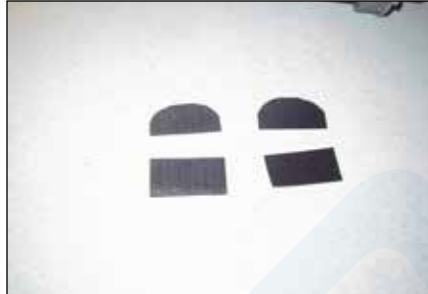
HEAD LINER



CAUTION: The head liner and oral-nasal mask must be used at all times when diving. The head liner ensures that the oral-nasal mask maintains a good fit on the diver's face and reduces dead space in the helmet, this helps to prevent CO₂ build-up.



Step 1: Cut hook and loop tape into 4 pieces, 2 in x 1 in each.



Step 2: Round off corners on 2 pieces of hook and loop tape.



Step 3: Stick hook and loop tabs on front sides of the helmet shell (1).



Step 4: Stick hook and loop tabs on both rear sides of the helmet shell (1).



Step 5: Head liner.



Step 6: Line up head liner as shown.



Step 7: Place left speaker (38) in left pocket of head liner.



Step 8: Place right speaker (28) in right pocket of head liner.



Step 9: Head liner installed into helmet shell (1). (No oral-nasal mask fitted).



NOTE: The head liner may be washed by hand or machine. Recommended Hook and Loop Tape: Industrial strength, sticky back tape, waterproof.



NOTE: The head liner should be fitted carefully into the helmet shell so that visible parts of the helmet shell (i.e. bare spots) are minimized.

NECK RETAINER AND LOCKING SYSTEM



Step 1: Breakdown of locking system parts.

Note: There are left and right latch catch assemblies



Step 2: Insert left latch (2) or right latch (3) into corresponding latch base left (6) or latch base right (7).



Step 3: Latch inserted in latch base.



Step 4: Fit latch spring (8) over shaft of left latch (2) or right latch (3).



Step 5: Fit latch spring washer (9) onto manifold hex screw (10).



Step 6: Insert manifold hex screw (10) and washer (9) into shaft of left latch (2) or right latch (3).



Step 7: Tighten manifold hex screw (10) using a 3/16" hex key to 80 in.lbs (9 Nm).



Step 8: Fit assembled latch base left (6) or latch base right (7) onto correct side of helmet shell (1).



Step 9: Fit latch spring washer (5) onto latch screw (4).

NECK RETAINER AND LOCKING SYSTEM (continued)



Step 10: Insert latch screw (4) and latch spring washer (5) through helmet shell (1) into latch base assembly.



Step 11: Tighten latch screw (4) using a 1/4" hex key to 140 in.lbs (16 Nm).



Step 12: Repeat the procedure for the other latch.



Step 13: Test the operation of each latch assembly.



Step 14: Check condition of neck retainer (21).



Step 15: Place the neck retainer (21) to the hinge at rear of helmet shell (1). Insert the neck retainer bolt (23) and secure with neck retainer nut (22). Use a 3/16" hex key to hold the bolt and 7/16" nut driver to hold the nut. Tighten until the nut touches the hinge. Adjust as required.



Step 16: Ensure that the neck retainer and locking system mate correctly.



NOTE: Ensure that neck retainer moves freely.

HELMET FINAL ASSEMBLY



Step 1: Install free flow / water dump valve assembly.



Step 2: Free flow / water dump valve in place.



Step 3: Inside view of free flow / water dump valve.

Step 4: Install second stage into opposite side.



NOTE: Refer to the separate Apeks Technical Manual: **GX300 REGULATOR FOR THE AQUA LUNG G3000SS DIVING HELMET - MAINTENANCE MANUAL** for guidance on installation of the regulator.



Step 5: Place o-ring (33) on swagelock connector (31).



Step 6: Screw connector into free flow / water dump valve body (52).



Step 7: Tighten swagelock connector (31) into free flow / water dump valve body (52) using 5/8" open end wrench to 45 in.lbs (5 Nm).

HELMET FINAL ASSEMBLY (continued)



Step 8: Airway assembly (29).



Step 9: Stick open end of airway assembly into swagelock connector (31).



Step 10: Press airway assembly (29) inside the helmet shell (1).



Step 11: Press bracket end of the airway assembly (29) to the back wall of the helmet shell (1).



Step 12: Manifold connecting insert (40) and o-rings (41).



Step 13: Place o-rings (41) in both grooves of the manifold insert (40).



Step 14: Manifold connecting insert assembled.



Step 15: Place manifold insert (40) through the wall of the helmet shell (1) into the airway bracket socket.



Step 16: Manifold insert installed.

HELMET FINAL ASSEMBLY (continued)



Step 17: Tighten swagelock nut onto airway assembly (29) hand tight, then an additional $1\frac{1}{4}$ of a turn with a $11/16$ " open end wrench.

Step 18: Secure the regulator in place.



NOTE: Refer to the separate Apeks Technical Manual: **GX300 REGULATOR FOR THE AQUA LUNG G3000SS DIVING HELMET - MAINTENANCE MANUAL** for guidance on installation of the regulator.



Step 19: Place dual exhaust bushing (15) over free flow / water dump valve stem (57).



Step 20: Dual exhaust bushing (15) installed onto free flow / water dump valve stem (57).



Step 21: Place dual exhaust seat (16) over the dual exhaust bushing (15).



Step 22: Place water dump / flapper exhaust valve (18) onto the dual exhaust seat (16).

DO NOT LUBRICATE.



Step 23: Place all spacer rings (17) onto the dual exhaust seat (16).



Step 24: Spacer rings (17) in place.



Step 25: Place exhaust valve cover (19) on top of spacer rings (17).

HELMET FINAL ASSEMBLY (continued)



Step 26: Insert retainer port screws (11) and tighten by hand.



Step 27: Tighten screws (11) using a Phillips #3 screwdriver to 45 in.lbs (5 Nm).



Step 28: Place handwheel knob (20a), spring (20b) and nut (20c) onto the free flow / water dump valve stem (57).



Step 29: Tighten nut (20c) until snug using a 3/8" flat blade screwdriver.



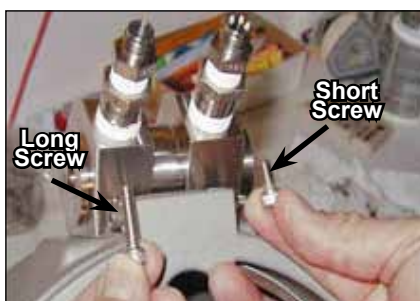
Step 30: Double water dump exhaust installed.



Step 31: Place the manifold gasket (42) over the back side of helmet shell (1) and line up the holes.



Step 32: Line up assembled manifold body (45) with the manifold insert (40) and holes.



Step 33: Use longer manifold hex screws (10) on left side and short manifold hex screws (39) on right side.



Step 34: Tighten the longer manifold hex screws (10) onto inner airway bracket using a 3/16" hex key to 80 in.lbs (9 Nm).



Step 35: Tighten short hex screw (39) onto the bottom of helmet using a 3/16" hex key to 80 in.lbs (9 Nm).



Step 36: Tighten short hex screw (39) onto the top of helmet using a 3/16" hex key to 80 in.lbs (9 Nm).



Step 37: Manifold installed.



Step 38: Line up neck retainer (21) with the hinge and insert the neck retainer bolt (23).



Step 39: Put the neck retainer nut (22) on the neck retainer bolt (23).



Step 40: Use a 3/16" hex key to hold the bolt (23) and 7/16" nut driver to hold the nut (22). Tighten until the nut touches the hinge. Adjust as required.

Note: Ensure that neck retainer moves freely.

ORAL / NASAL ASSEMBLY



Step 41: Install nose clearing device (62) through the inside of helmet shell (1).



Step 42: Screw NCD knob (64) into the nose clearing device (62).

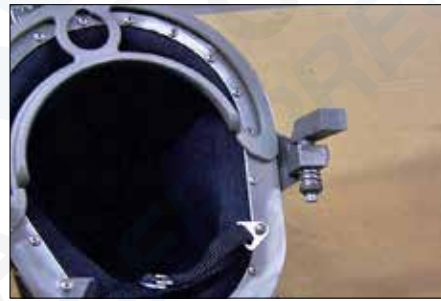


Step 43: NCD installed outside view (No oral-nasal mask).

NECK DAM ASSEMBLY



Step 1: Place front portion of neck dam into the front of the helmet. Use neck retainer (21) to push the back side of the neck dam in place.



Step 2: Check operation of both latch assemblies. Photos shows neck retainer with right latch catch open.

QUAD RING INSTALLATION



Step 1: Lightly lubricate quad ring (65) and install in groove of upper neck ring (66).



Step 2: Quad ring (65) installed.

VII. TECHNICIAN CHECK LISTS

Checklist 5 G3000SS Diving Helmet Monthly Inspection and Maintenance Checklist

Checklist 6 G3000SS Diving Helmet Annual Inspection and Maintenance Checklist

AMERON
INTERNATIONAL
EVERYTHING UNDER PRESSURE™

CHECKLIST 5

G3000SS DIVING HELMET

MONTHLY INSPECTION AND MAINTENANCE CHECKLIST

Inspection and maintenance procedures in accordance with this checklist are to be conducted at least once a month for helmets used frequently and once every two months for helmets used less than ten times (i.e. ten dives) in any given month.

This checklist is to be used in conjunction with the helmet Operations and Maintenance Manual for guidance in conducting each step in the inspection and maintenance of the G3000SS diving helmet.



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 strongly recommends completion of this checklist and meeting the minimum requirements provided before using the G3000SS diving 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.**

COMPLETE THE FOLLOWING BOXES PRIOR TO THE CHECKLIST

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

Helmet Serial No:	Date:
Diver/Tender: (Print Name)	

MONTHLY INSPECTION AND MAINTENANCE CHECKLIST (continued)

1. All parts are to be visually inspected for damage or deterioration.
2. Any damaged or defective parts must be replaced.
3. Between annual overhauls certain consumable parts (e.g. o-rings) may be reused if no damage or deterioration is revealed by the inspection process.

STEPS	PROCEDURE	INITIALS
NECK DAM	• Visually inspect the neck dam ring for signs of damage, such as bends, scratches on the quad ring surface area, or any other deformities. • Visually inspect the neck seal for cuts and /or deterioration. A damaged neck seal must be replaced. • If the quad ring is dry, lightly lubricate the quad ring. • Replace the neck dam assembly onto the helmet and ensure a proper fit.  NOTE: Refer to the neck dam assembly section of the Operations and Maintenance Manual for guidance.	
NECK RETAINER AND LOCKING ASSEMBLY	• Visually inspect the neck retainer for damage, bends, wear or loose screws. • Confirm correct operation of locking system.  NOTE: Refer to the neck retainer and locking system section of the Operations and Maintenance Manual for guidance.	
HEAD LINER	• Visually inspect for deterioration and/or damage. If necessary, replace with new head liner.  NOTE: Refer to the head liner section of the Operations and Maintenance Manual for guidance.	

MONTHLY INSPECTION AND MAINTENANCE CHECKLIST (continued)

STEPS	PROCEDURE	INITIALS
COMMUNICATIONS	- Without removing the comms system, check condition of speakers and microphone by visual inspection. If inspection reveals poor quality of sound, replace with new speakers and/or microphone. - Without removing them, check communication posts and terminal block for insulator cracks or damage. If necessary, replace with new posts.  NOTE: Refer to the communications section of the Operations and Maintenance Manual for guidance.	
NOSE CLEARING DEVICE (NCD)	- Check NCD for ease of movement and then remove NCD and check for damage to the NCD body and components. - Visually inspect o-rings and neoprene pad for damage and/or deterioration and if necessary replace. Lubricate o-rings lightly as required.  NOTE: Refer to the nose clearing device section of the Operations and Maintenance Manual for guidance.	
ORAL-NASAL MASK	Remove oral-nasal mask and check for damage (e.g. splits, cuts, tears) and/or deterioration. No damage is permitted.  NOTE: If no damage or deterioration is found, wash oral-nasal mask with soap and water, rinse with fresh water and allow to dry.  NOTE: Refer to the oral-nasal mask section of the Operations and Maintenance Manual for guidance.	
INHALATION VALVE HOUSING AND INHALATION VALVE (one way valve)	Remove and visually inspect both components for damage and/or deterioration. <u>DO NOT remove the inhalation valve from the valve housing.</u>  NOTE: All spokes of the "wagon wheel" must be present.  NOTE: Refer to the oral-nasal mask section of the Operations and Maintenance Manual for guidance.	

MONTHLY INSPECTION AND MAINTENANCE CHECKLIST (continued)

STEPS	PROCEDURE	INITIALS
GX300 SECOND STAGE REGULATOR	- Remove the GX300 second stage regulator from helmet. - Remove the regulator valve cover and visually inspect the exhaust valve diaphragm assembly for damage or deterioration. Clean components as required. Replace diaphragms if damaged or deteriorated. - Remove the valve spindle assembly from the regulator case. - Visually inspect this assembly, then clean it as required. - Re-set the spindle adjuster to the correct setting (refer to Apeks GX300 Technical Manual). - When dry, re-install valve spindle assembly into the regulator case. - Adjust the lever as required and check regulator adjustment (refer to Apeks GX300 Technical Manual). - Complete the reassembly of the regulator and fit the regulator back into the helmet.  NOTE: If regulator performance is suspect, the valve spindle assembly may need to be disassembled and serviced by a trained technician.  NOTE: Refer to: Apeks GX300 REGULATOR FOR THE AQUA LUNG G3000SS DIVING HELMET - MAINTENANCE MANUAL for guidance.	
FREE FLOW VALVE KNOB	Remove the handwheel knob and check the condition of the guide hole. It should be square and firm. If any deterioration or excess play is present, replace knob.  WARNING: Knob slippage on the stem may cause dangerous conditions to the diver, including death.  NOTE: Refer to the free flow / water dump valve section of the Operations and Maintenance Manual for guidance.	

MONTHLY INSPECTION AND MAINTENANCE CHECKLIST (continued)

STEPS	PROCEDURE	INITIALS
FREE FLOW / WATER DUMP VALVE	- Remove the exhaust valve cover and without removing the free flow / water dump valve from the helmet, remove the snap ring and flapper valve. - Visually inspect flapper valve for damage or deterioration. Clean flapper valve with soap and water, rinse with fresh water and allow to dry. If damaged, replace flapper valve. - Clean the external seating surface on the valve body (i.e. where the flapper valve makes contact).  NOTE: Refer to the free flow / water dump valve section of the Operations and Maintenance Manual for guidance.	
MANIFOLD	- Without removing the manifold body from the helmet, remove the manifold plug and clean the manifold screen. Replace on completion. - Check both one-way valves for proper operation by sucking on the umbilical and scuba hose adapters.  NOTE: Refer to the manifold section of the Operations and Maintenance Manual for guidance.	
HELMET SHELL AND COMPONENTS	- Visually inspect the helmet with the above listed components removed from the helmet. - Verify condition and inspect for damage to the helmet shell. - Check all o-ring placement surfaces to ensure proper seal. - Wash the shell with soap and water, rinse with fresh water and dry with air and towels. Blow water out of inner airway using compressed air.	
FINAL ASSEMBLY AND TEST	- Follow procedures in the Operations and Maintenance Manual to assemble helmet to original condition. - Pressurize the helmet and perform a functional test and leak check.	

Signature: _____

Date: _____

 Comments: _____

CHECKLIST 6

G3000SS 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 Operations and Maintenance Manual for guidance in conducting each step in the inspection and maintenance of the G3000SS.



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 strongly recommends completion of this checklist and meeting the minimum requirements provided before using the G3000SS 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 400180 (See Appendix R).
2. Any damage or defective parts must be replaced.
3. All parts should be cleaned using the standard procedures detailed in Appendix Q of the Operations and Maintenance 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	Additional tools for the Apeks GX300 Second Stage Regulator are listed in the separate Apeks document GX300 REGULATOR FOR THE AQUA LUNG G3000SS DIVING HELMET - MAINTENANCE MANUAL.

ANNUAL INSPECTION AND MAINTENANCE CHECKLIST (continued)

DISASSEMBLY - SEQUENCE OF EVENTS

This sequence is for guidance. Maintenance instructions are located in **Section VI-Step-By-Step Assembly Instructions** of the Operations and Maintenance Manual.

Step	Activity	Tools Required
1	Remove neck dam assembly.	No Tools Required
2	Remove neck retainer (21).	7/16" Nut Driver or Wrench 3/16" Allen/Hex Key
3	If required, remove both (L and R) locking system catches (2 & 3).  Note: No requirement to remove catches unless defective.	1/4" Allen/Hex Key 3/16" Allen/Hex Key
4	Remove head liner.	No Tools Required
5	Remove NCD (62).	No Tools Required
6	Remove oral nasal mask (37) (remove microphone first)	No Tools Required
7	Remove comms assembly components.	3/8" Nut Driver on Terminals
8	Remove the comms bulkhead assembly (25).	15/16" Deep Socket
9	Release tension from the swagelock connector nut and fitting on airway tube (29).	5/8" Flat OE Wrench for back up 11/16" Flat OE Wrench on nut
10	Remove handwheel knob (20a) from the valve.	3/8" Flat Screwdriver
11	Release tension from the valve bonnet (60).	11/16" Socket
12	Unscrew both long (10) and short (39) manifold hex screws.	3/16" Allen/Hex Key
13	Remove the manifold body (45) from the helmet shell (1).	No Tools Required
14	Remove the manifold insert (40).	No Tools Required
15	Using screwdriver, slightly bend the airway assembly (29) and pull the manifold body end out of the helmet	3/8" Flat Screwdriver
16	Unscrew swagelock connector (31) and remove the airway assembly (29) from the helmet.	11/16" Flat OE Low Profile Wrench
17	Unscrew swagelock connector (31) from the free flow / water dump valve body (52).	5/8" Flat OE Low Profile Wrench
18	Unscrew regulator housing (See Apeks GX300 regulator manual).	5/32" Allen/Hex Key
19	Remove the second stage regulator from the helmet (See Apeks GX300 regulator manual).	No Tools Required
20	Remove defogger train (36) from the free flow barrel (32).  Note: Do not use force, it should slide out easily.	No Tools Required
21	Remove the free flow / water dump valve from the free flow barrel (32).  Note: Do not use force, it should slide out easily.	No Tools Required
22	Unscrew the exhaust valve cover (19).	Phillips #3 Screwdriver
23	Remove the free flow / water dump valve from the helmet.	No Tools Required
24	Unscrew the port retainer (12).	Phillips #3 Screwdriver
25	Remove the face port (13) and o-ring (14).	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**

Helmet Serial No:	Date:
Technician: (Print Name)	

STEPS	PROCEDURE	INITIALS
NECK DAM ASSEMBLY  NOTE: Refer to the neck dam assembly section of the Operations and Maintenance Manual for guidance.		
CHIN STRAP	• Visually inspect for tears and cuts. • Replace if damaged or defective. • Check that all screws are present and secure.	
QUAD RING	• Remove and inspect for cuts and/or deterioration. • If necessary, replace the quad ring.  NOTE: The quad ring has a long service life and is not normally replaced annually.	
NECK SEAL	• Visually inspect for cuts and/or deterioration. • If necessary, replace the neck seal.	
UPPER NECK RING	• Visually inspect the o-ring groove for damage.	
BOTTOM NECK RING	• Visually inspect for damage. Check that all screws are present and secure.	

ANNUAL INSPECTION AND MAINTENANCE CHECKLIST (continued)

STEPS	PROCEDURE	INITIALS
NECK RETAINER AND LOCKING SYSTEM  NOTE: Refer to the neck retainer section of the Operations and Maintenance Manual for guidance.		
LATCH CATCHES	• If required, disassemble both (L and R) latch catch assemblies. • Inspect all components for damage. • Clean, reassemble and check correct function.	
NECK RETAINER	• Visually inspect for damage. • Remove neck retainer bolt and replace neck retainer nut (annually).	
HEAD LINER  NOTE: Refer to the head liner section of the Operations and Maintenance Manual for guidance.		
HEAD LINER	• Remove head liner from helmet. • Visually inspect for deterioration and/or damage. • If necessary, replace with a new liner.  NOTE: The liner may be washed as required.	
NOSE CLEARING DEVICE (NCD)  NOTE: Refer to the nose clearing device section of the Operations and Maintenance Manual for guidance.		
O-RINGS (2)	• Remove NCD from helmet. • Visually inspect for damage and/or deterioration. • Replace o-rings annually.	
NEOPRENE PAD	• Visually inspect for damage and/or deterioration. • If necessary, replace neoprene pad.	
NCD BODY	• Visually inspect for damage to NCD stem. • Confirm ease of movement.	

ANNUAL INSPECTION AND MAINTENANCE CHECKLIST (continued)

STEPS	PROCEDURE	INITIALS
ORAL-NASAL MASK  NOTE: Refer to the oral-nasal mask section of the Operations and Maintenance Manual for guidance.		
ORAL-NASAL	- Remove oral-nasal mask (microphone must be removed prior to oral-nasal mask) and check for damage and/or deterioration. - The oral-nasal mask may be washed as required. - If necessary, replace the oral-nasal mask.  NOTE: The oral-nasal mask has a long service life and is not normally replaced annually.	
INHALATION VALVE HOUSING	- Remove and visually inspect for damage. All spokes of the "wagon wheel" must be present. - If necessary, replace the inhalation valve housing.	
INHALATION VALVE (one way valve)	- Remove and visually inspect for damage and deterioration. - Replace the inhalation valve annually.	
COMMUNICATIONS  NOTE: Refer to the communications section of the Operations and Maintenance Manual for guidance.		
SPEAKER AND MICROPHONE	- Remove and visually inspect the speakers, microphone, cables and connections. Ensure that contact surfaces are cleaned thoroughly. - During reassembly check the comms system. If sound quality is poor, replace speakers and/or microphone.	
COMMUNICATIONS POSTS	Visually inspect for insulation cracks or damage and re-tighten each nut from inside. Replace posts as required.  NOTE: There is no requirement to remove the posts unless damaged.	
COMMUNICATIONS TERMINAL BLOCK	- Visually inspect the internal 4-wire comms terminal block for damage. - Replace as required.	

ANNUAL INSPECTION AND MAINTENANCE CHECKLIST (continued)

COMMUNICATIONS BULKHEAD	- Remove and visually inspect the 4-wire comms bulkhead connector and cable (if fitted) for damage. - Replace the o-ring annually.  NOTE: The ferrules are normally reused.	
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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
APEKS GX300 SECOND STAGE REGULATOR  NOTE: Complete service and maintenance instructions for the Apeks GX300 Second Stage Regulator are contained in the separate Apeks document GX300 REGULATOR FOR THE AQUA LUNG G3000SS DIVING HELMET - MAINTENANCE MANUAL.		
GX300 REGULATOR CASE	Follow step-by-step instructions for dis-assembly of the regulator case.	
VALVE SPINDLE ASSEMBLY	Follow step-by-step instructions for dis-assembly of the valve spindle assembly.	
VALVE DIAPHRAGM	Follow step-by-step instructions for dis-assembly of the valve diaphragm.	

ANNUAL INSPECTION AND MAINTENANCE CHECKLIST (continued)

STEPS	PROCEDURE	INITIALS
FREE FLOW / WATER DUMP VALVE AND DEFOGGER  NOTE: Refer to the free flow / water dump valve and defogger section of the Operations and Maintenance Manual for guidance.		
FREE FLOW / WATER DUMP VALVE BODY	Remove the free flow / water dump valve from the helmet shell. Disassemble fully and visually inspect all parts for damage. Clean as required.	
WATER DUMP EXHAUST FLAPPER VALVES	Visually inspect for cuts and damage. Wash with soap and water, rinse with fresh water and allow to dry. If necessary, replace water dump / exhaust flapper valve.  NOTE: The flapper valves have a long service life and are not normally replaced annually.	
O-RINGS (3)	Replace all o-rings (3) annually.	
COPPER WASHERS (2)	Replace both copper washers annually.	
VALVE SEAT	- Visually inspect and check nylon seat condition. - If necessary, replace entire free flow / water dump valve seat.	
FREE FLOW / WATER DUMP VALVE STEM	- Visually inspect for damage, bends and thread condition. - If necessary, replace with new valve stem.	

ANNUAL INSPECTION AND MAINTENANCE CHECKLIST (continued)

STEPS	PROCEDURE	INITIALS
FREE FLOW VALVE KNOB	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.  WARNING: Knob slippage on the stem may cause hazardous conditions for the diver.	
DEFOGGER	Visually inspect the free flow barrel and defogger train for damage. Replace the o-ring on the swagelock connector.	
AIRWAY ASSEMBLY	- Visually inspect the airway assembly. - Clean as required. Blow any moisture out of airway assembly using compressed air.	
MANIFOLD  NOTE: Refer to the manifold section of the Operations and Maintenance Manual for guidance.		
MANIFOLD BODY	Remove the manifold body, complete, from the helmet.	
CHECK VALVES (2)	- Remove check valves and adapters. - 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.	
O-RINGS (2)	Replace o-rings on the manifold and port plugs annually.	
SCREEN	Visually inspect the screen for damage. Wash with soap and water, rinse with fresh water and allow to dry.	
MANIFOLD HOUSING	Visually inspect for damage. Wash with soap and water, rinse with fresh water and dry by blowing through with compressed air.	
MANIFOLD GASKET	Replace the manifold gasket annually.	
O-RINGS (2)	Replace o-rings on the manifold connecting insert annually.	
TEFLON TAPE	Clean <u>all</u> Teflon tape residue from check valves and hose fittings. Apply new Teflon tape prior to reassembly.	

ANNUAL INSPECTION AND MAINTENANCE CHECKLIST (continued)

STEPS	PROCEDURE	INITIALS
FACE PORT ASSEMBLY	 NOTE: Refer to the face port assembly section of the Operations and Maintenance Manual for guidance.	
PORT RETAINER	- Visually inspect the port retainer and screws for damage. - Clean as required.	
O-RING (1)	- Visually inspect the groove for damage and clean as required. - Replace the o-ring annually.	
FACE PORT	- Check condition of the face port. - If necessary, wash with soap and water, rinse with fresh water and allow to dry. - Replace the face port if damaged.  NOTE: DO NOT scrub, use aerosol or chemicals on the face port, it will weaken it.	
HELMET SHELL - Verify condition and inspect for damage to the helmet shell. - Clean as required with soap and water, rinse with fresh water, and dry. - Blow any moisture out of airway assembly using compressed air.		
HELMET REASSEMBLY - The reassembly sequence of events is the reverse of disassembly. - Follow <u>Section VI - Step-By-Step Assembly Instructions</u> of the Operations and Maintenance Manual to reassemble the helmet to original condition. - All components must be clean and fully serviceable prior to assembly. - All o-rings must be lubricated prior to assembly.		
HELMET FINAL TEST Test the helmet after completion of assembly to confirm that it performs correctly and that there are no leaks.		

Signature: _____

Date: _____

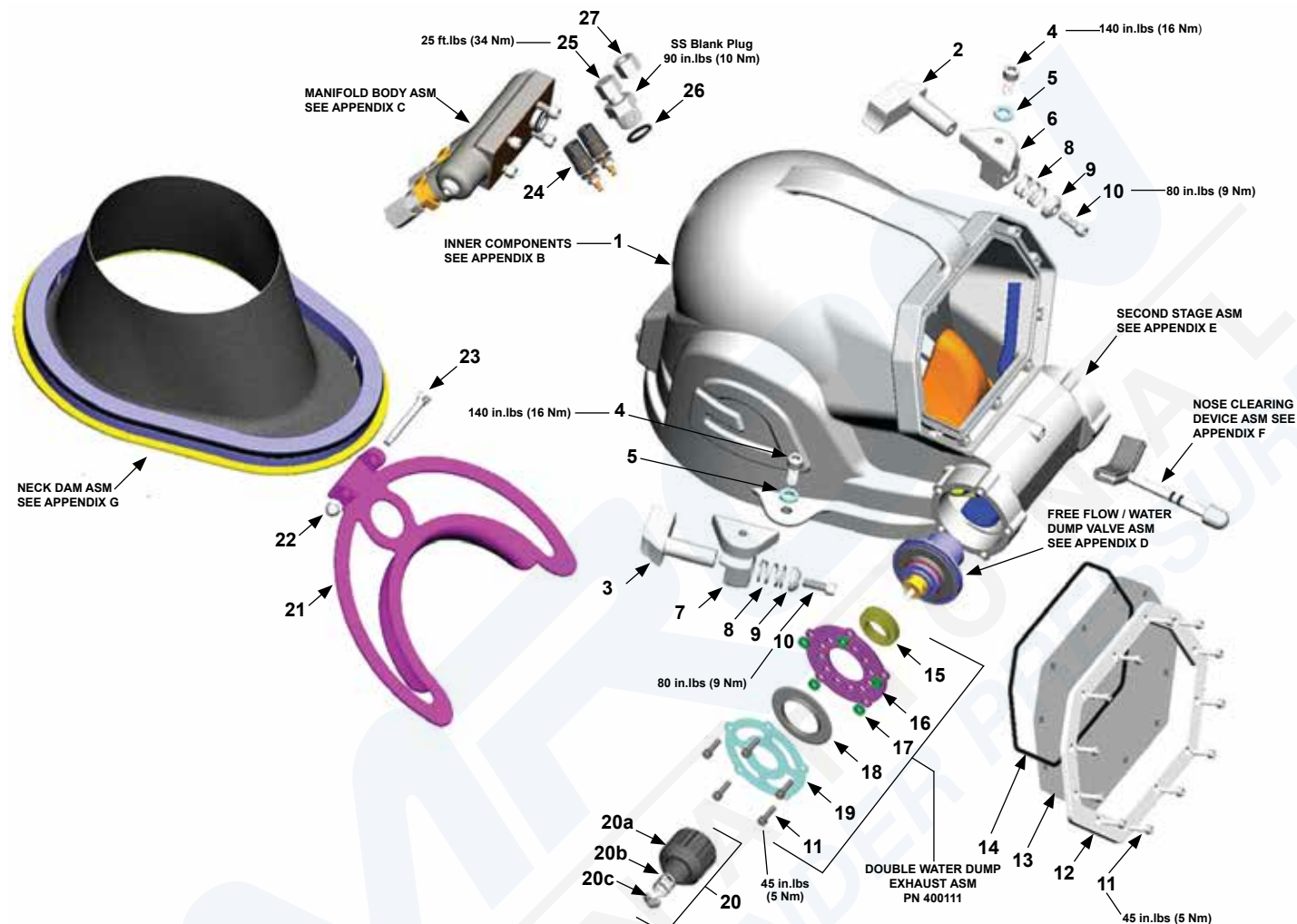
Technician Comments (e.g. Specific items noted during maintenance):

Comments: _____

VIII. APPENDICES

Appendix A	Main Assemblies
Appendix B	Inner Components
Appendix C	Manifold Body Assembly
Appendix D	Free Flow / Water Dump Valve Assembly
Appendix E	Second Stage Regulator Assembly
Appendix F	Nose Clearing Device (NCD) Assembly
Appendix G	Neck Dam Assembly
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Appendix J	Free Flow Plug Insert Kit Installation Instructions
Appendix K	Camera / Light Bracket Installation Instructions
Appendix L	Terminal Block Communications Kits
Appendix M	Twist-On Communications Kits
Appendix N	Communications Kit Installation Instructions
Appendix O	Torque Specifications
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Appendix Q	Cleaning and Lubricating
Appendix R	Annual Service Kit

APPENDIX A – MAIN ASSEMBLIES

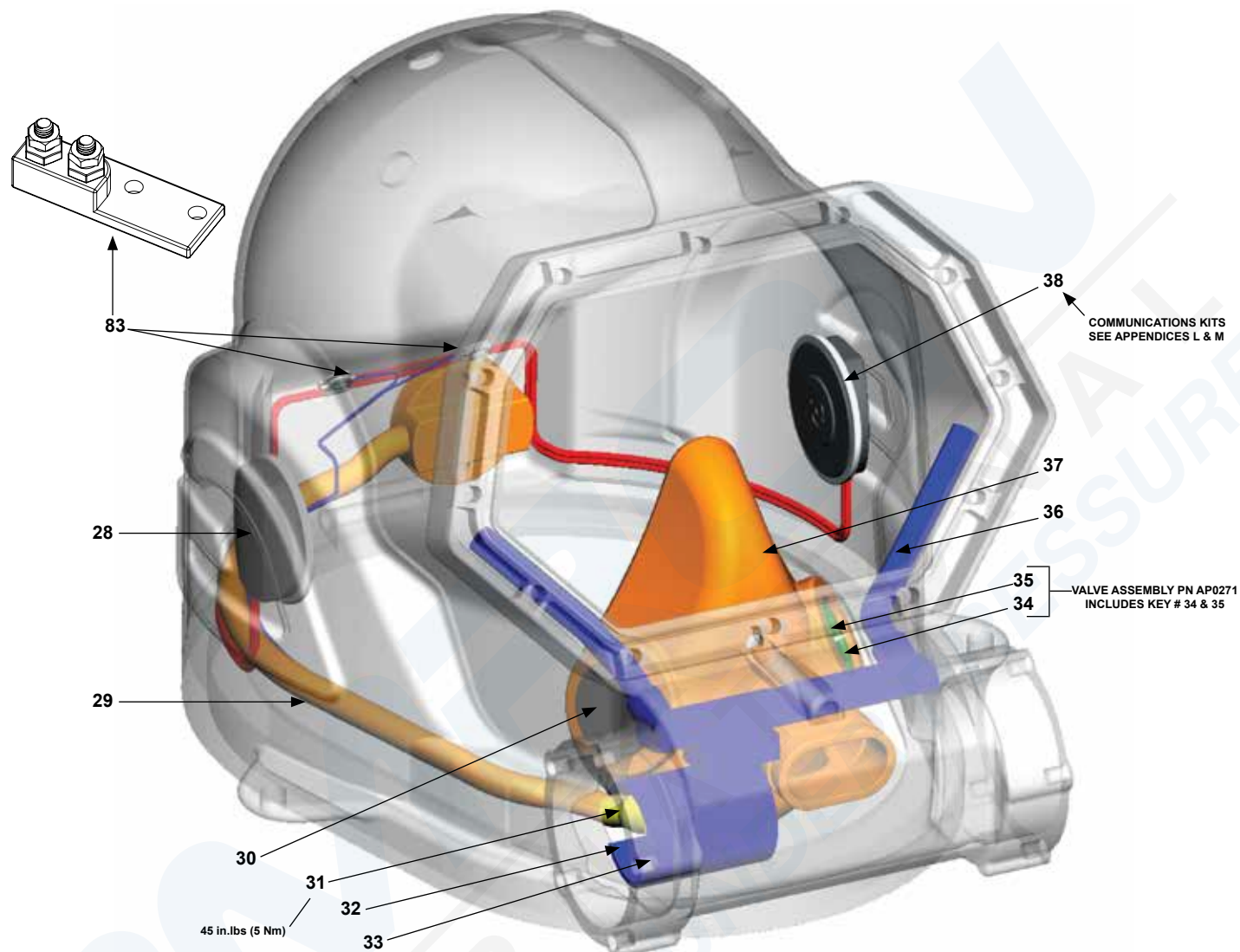


KEY #	QTY	P/N	DESCRIPTION
1	1	400001	SHELL, HELMET
2	1	400118	LATCH, LEFT
3	1	400119	LATCH, RIGHT
4	2	400113	SCREW, LATCH 5/16" - 18 X 3/4" LONG
5	2	400120	WASHER, LATCH SPRING (2 PK)
6	1	400116	BASE, LATCH, LEFT
7	1	400117	BASE, LATCH, RIGHT
8	2	400005	SPRING, LATCH (5 PK)
9	2	400120	WASHER, LATCH SPRING (2 PK)
10	2	400036	SCREW, HEX, MANIFOLD (5 PK)
11	17	400015	SCREW, RETAINER PORT (5 PK)
12	1	400014	RETAINER, PORT
13	1	400013	PORT, FACE
14	1	400012	O-RING, FACE PORT
15	1	400097	BUSHING, DUAL EXHAUST

KEY #	QTY	P/N	DESCRIPTION
16	1	400098	SEAT, DUAL EXHAUST
17	5	400099	RING, SPACER (5 PK)
18	1	400047	VALVE, WATER DUMP / FLAPPER EXHAUST
19	1	400010	COVER, EXHAUST VALVE
20	1	AP0270	HANDWHEEL ASSEMBLY
20a	1	N/A	KNOB, HANDWHEEL
20b	1	N/A	SPRING
20c	1	N/A	NUT
21	1	400114	RETAINER, NECK, MOD 1
22	1	400004	NUT, NECK RETAINER (5 PK)
23	1	400003	BOLT, NECK RETAINER (5 PK)
24	2	400016	POST, COMMUNICATION ASSEMBLY
25	1	400017	BULKHEAD, COMM W/ SS BLANK PLUG ASSY
26	1	400031	O-RING, MANIFOLD PLUG (10 PK)
27	1	400122	CAP & PLASTIC FERRULES, BULKHEAD ASSY
N/S	1	AP0300	REG, GX300

Part numbers in **BOLD ITALICS** indicate standard overhaul replacement part.

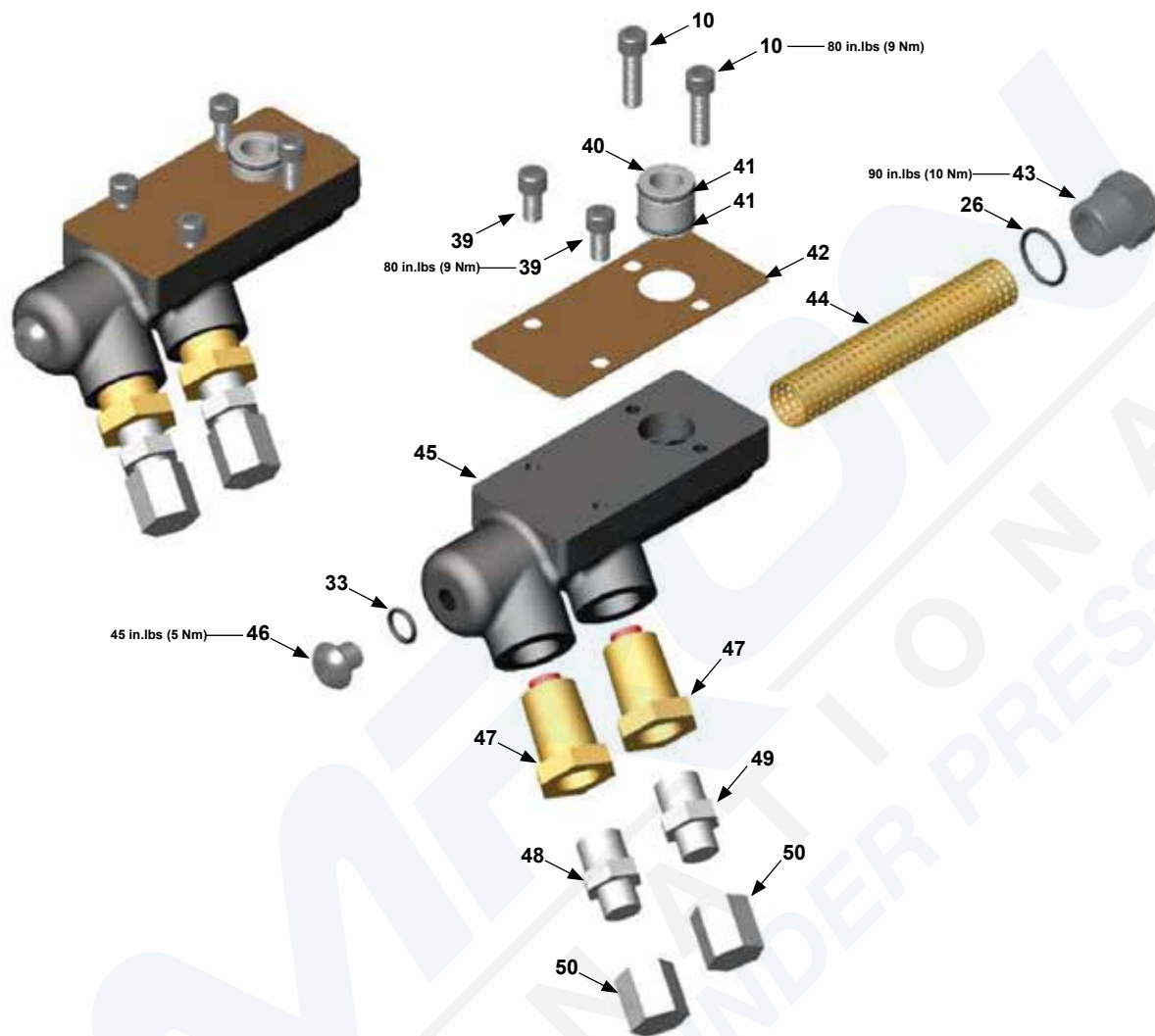
APPENDIX B – INNER COMPONENTS



KEY #	QTY	P/N	DESCRIPTION
28	1	400130	SPEAKER RIGHT
29	1	400138	AIRWAY ASSEMBLY
30	1	400131	MICROPHONE
31	1	400021	SWAGELOCK CONNECTOR
32	1	400024	BARREL, FREE FLOW
33	1	400022	O-RING, SWAGELOCK CONN & PORT PLUG (10 PK)
34	1	AP6223	VALVE, INHALATION
35	1	AP2537	HOUSING, INHALATION VALVE
36	1	400023	TRAIN, DEFOGGER
37	1	400025	MASK, ORAL NASAL
38	1	400129	SPEAKER LEFT
N/S	1	400028	HEAD LINER
83	1	400152	WIRE TERMINAL BLOCK

Part numbers in **BOLD ITALICS** indicate standard overhaul replacement part.

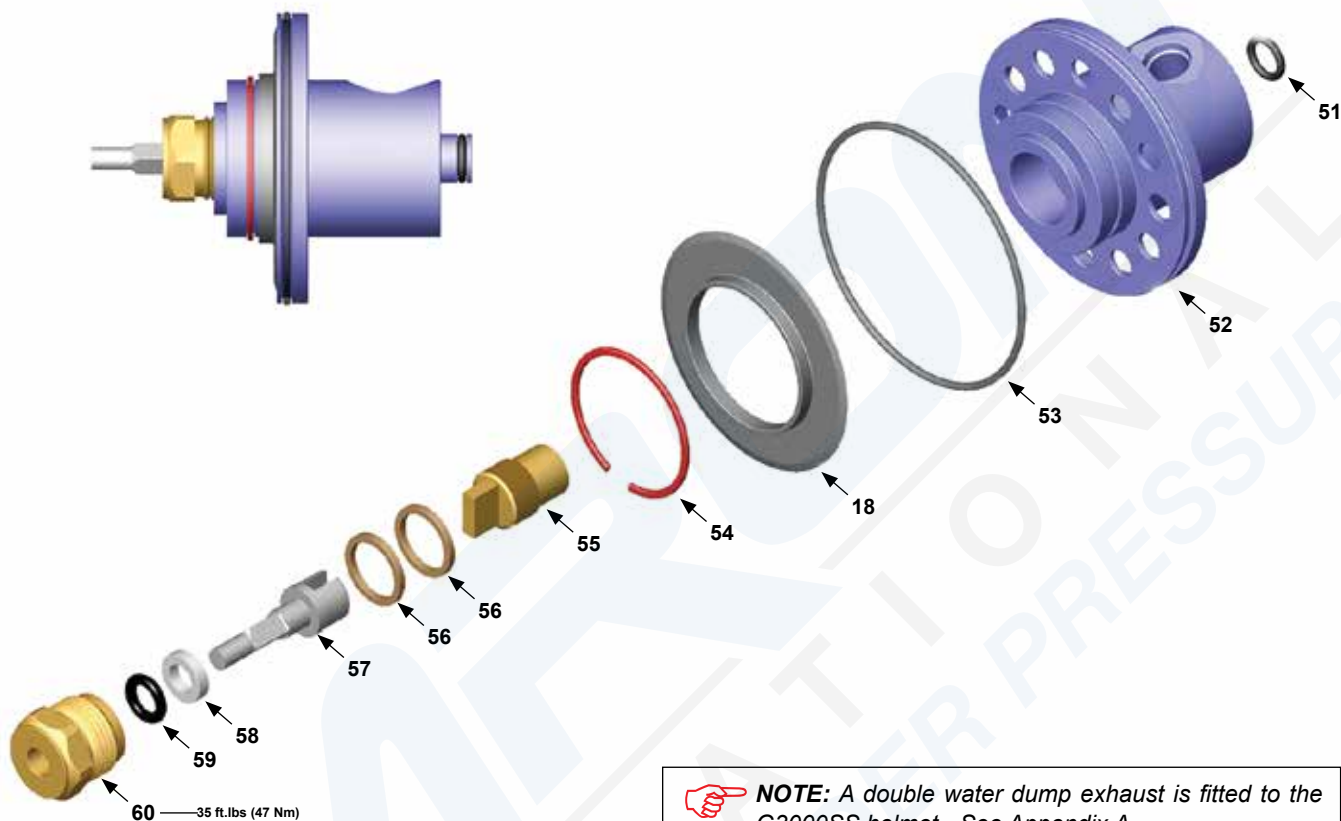
APPENDIX C – MANIFOLD BODY ASSEMBLY



KEY #	QTY	P/N	DESCRIPTION
10	2	400036	SCREW, HEX, MANIFOLD (5 PK)
39	2	400035	SCREW, HEX, MANIFOLD (5 PK)
40	1	400033	INSERT, MANIFOLD
41	2	400034	O-RING, MANIFOLD CONNECTOR (10 PK)
42	1	400037	GASKET, MANIFOLD
43	1	400030	PLUG, MANIFOLD (LARGE)
26	1	400031	O-RING, MANIFOLD PLUG (10 PK)
44	1	400032	SCREEN
45	1	400029	BODY, MANIFOLD
33	1	400022	O-RING, SWAGELOCK CONN & PORT PLUG (10 PK)
46	1	400039	PORT PLUG
47	2	400040	VALVE, CHECK
48	1	400041	FITTING, SCUBA
49	1	400042	FITTING, HOSE
50	2	400043	CAP, FITTING, BRASS

Part numbers in **BOLD ITALICS** indicate standard overhaul replacement part.

APPENDIX D – FREE FLOW / WATER DUMP VALVE ASSEMBLY



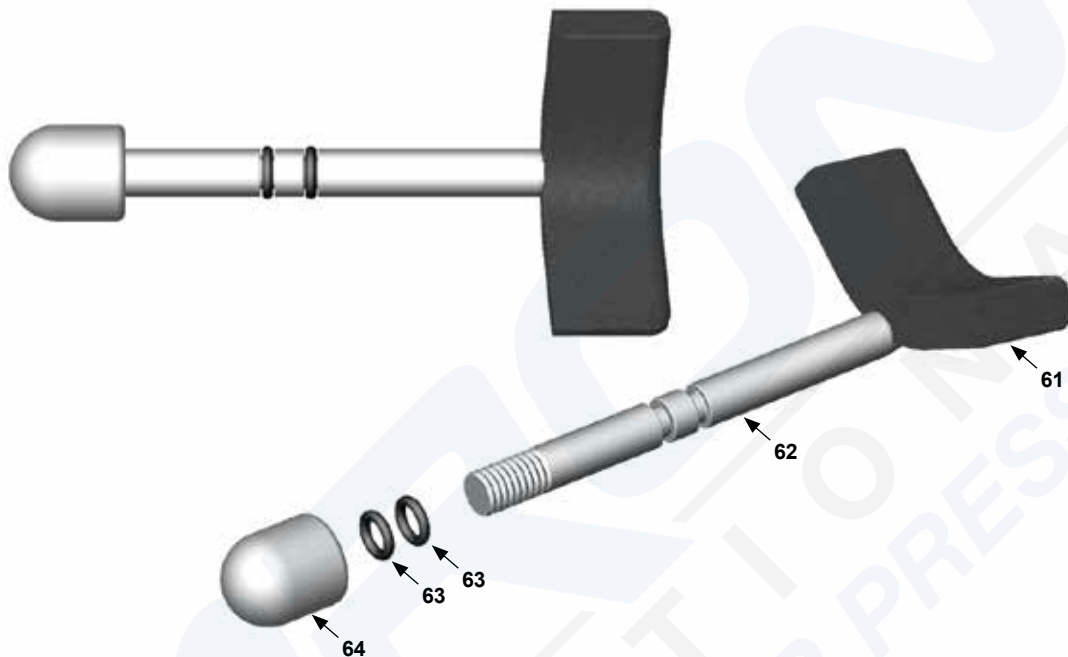
KEY #	QTY	P/N	DESCRIPTION
51	1	400045	O-RING, EXHAUST, SMALL (10 PK)
52	1	400044	BODY, FREE FLOW / WATER DUMP VALVE
53	1	400046	O-RING, EXHAUST, LARGE (10 PK)
18	1	400047	VALVE, WATER DUMP / FLAPPER EXHAUST
54	1	400048	RING, WATER DUMP / FLAPPER VALVE SNAP
55	1	400049	SEAT, FREE FLOW / WATER DUMP VALVE
56	2	400050	WASHER, COPPER (5 PK)
57	1	400051	STEM, FREE FLOW / WATER DUMP VALVE
58	1	400053	WASHER, TEFLON (5 PK)
59	1	400052	O-RING, FREE FLOW / WATER DUMP VALVE STEM (10 PK)
60	1	400054	BONNET, FREE FLOW / WATER DUMP VALVE

APPENDIX E – SECOND STAGE REGULATOR ASSEMBLY



NOTE: Complete service and maintenance instructions for the Apeks GX300 Second Stage Regulator are contained in the separate Apeks document **GX300 REGULATOR FOR THE AQUA LUNG G3000SS DIVING HELMET - MAINTENANCE MANUAL**.

APPENDIX F – NOSE CLEARING DEVICE (NCD) ASSEMBLY



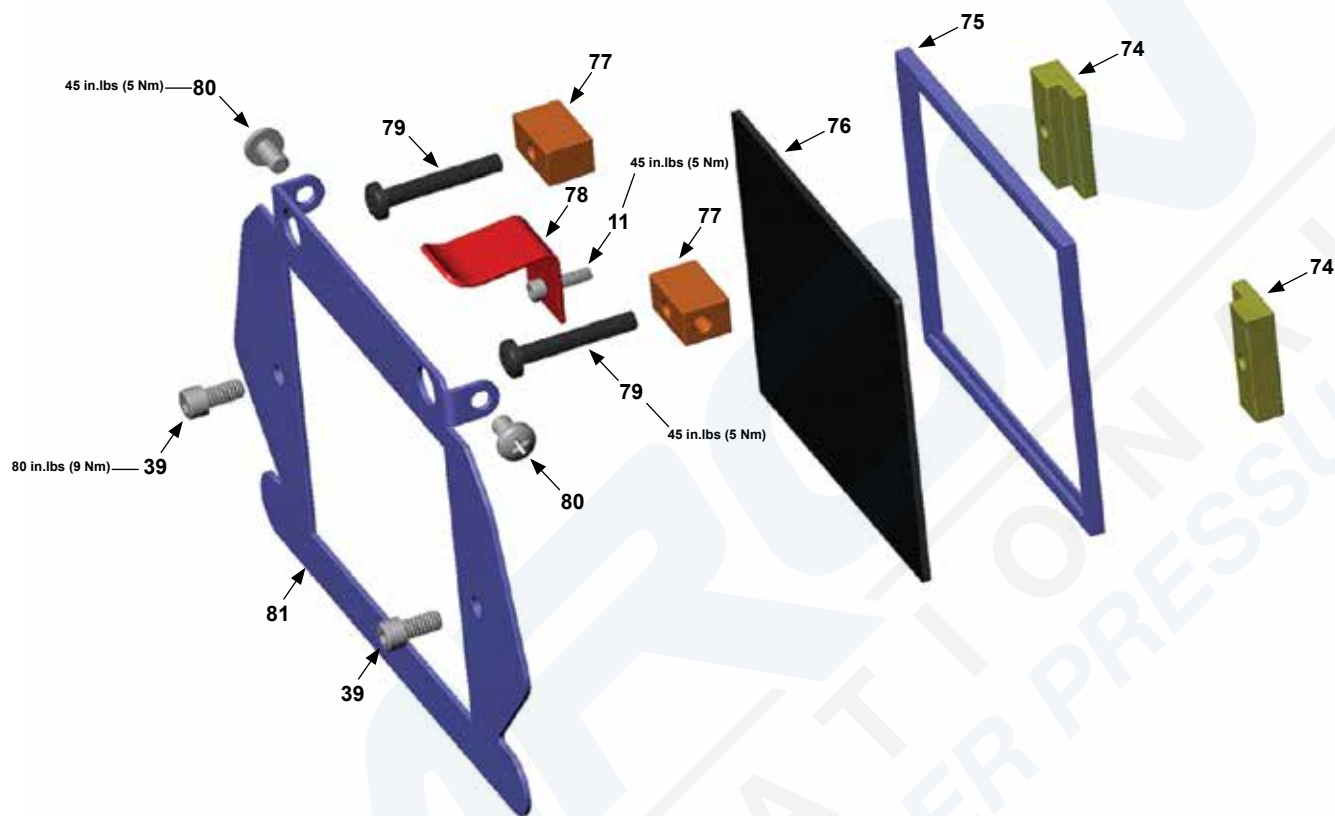
KEY #	QTY	P/N	DESCRIPTION
61	1	400077	NOSE PAD, NEOPRENE (5 PK)
62	1	400140	NOSE CLEARING DEVICE (WELDED)
63	2	400074	O-RING, NOSE CLEARING DEVICE (NCD) (10 PK)
64	1	400073	KNOB, NCD

APPENDIX G – NECK DAM ASSEMBLY



KEY #	QTY	P/N	DESCRIPTION
65	1	400078	RING, QUAD
66	1	400079	RING, NECK UPPER
67	1	400080	SEAL, NECK
68	1	400081	RING, NECK LOWER
69	18	400082	SCREW, NECK RING LOWER (5 PK)
70	2	400085	BUCKLE, STRAP
71	2	400084	BUSHING, BUCKLE STRAP (5 PK)
72	2	400083	SCREW, BUCKLE STRAP (5 PK)
73	1	400086	STRAP, NYLON W/ D-RINGS

APPENDIX H – WELDING SHIELD KIT



KEY #	QTY	P/N	DESCRIPTION
74	2	400089	BRACKET, LENS HOLDING (2 PK)
75	1	400090	GASKET, WELDING LENS
76	1	400088	LENS, WELDING
77	2	400092	HINGE, BLOCK WELDING LENS (2 PK)
11	1	400015	SCREW, RETAINER PORT (5 PK)
78	1	400095	SHIELD, WELDING SPRING
79	2	400093	SCREW, HINGE BLOCK MOUNTING (5 PK)
80	2	400094	SCREW, HINGE (5 PK)
81	1	400087	BODY, WELDING SHELL (SHIELD)
39	2	400035	SCREW, HEX, MANIFOLD (5 PK)

APPENDIX I

SHIELD, WELDING ASSEMBLY (P/N 400102)

INSTALLATION INSTRUCTIONS

This procedure is to be performed only by personnel who have received appropriate training. If you do not completely understand all of the procedure, contact Aqua Lung to speak directly with a Technical Advisor before proceeding any further.

KIT CONTENTS

Part #	Item Description	Qty per Kit
400087	Body, Welding Shell (Shield)	1
400088	Lens, Welding	1
400089	Bracket, Lens Holding	2
400090	Gasket, Welding Lens	1
400035	Screw, Hex, Manifold	2
400092	Hinge Block, Welding Lens	2
400093	Screw, Hinge Block Mounting	2
400094	Screw, Hinge	2
400095	Shield, Welding Spring	1
400015	Screw, Retainer Port	1

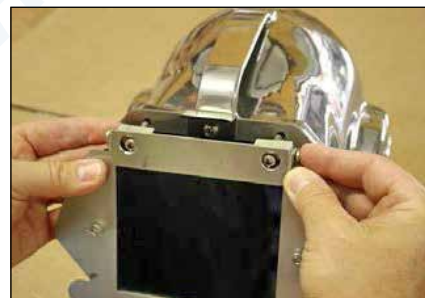
Step-by-Step Assembly Instructions



Step 1: Use a Phillips # 3 screwdriver to remove three retainer port screws (11) from top of helmet retainer port (12).



Step 2: Install shield welding spring (78) and retainer port screw (11). Tighten to 45 in.lbs (5 Nm).



Step 3: Line up welding lens assembly.



Note: Hinge blocks (77) and hinge block mounting screws (79) pre-mounted to shield.



Step 4: Secure and tighten left and right hinge block mounting screws (79) to 45 in.lbs (5 Nm).



Step 5: Secure and tighten left and right hinge screws (80) to 45 in.lbs (5 Nm).



Step 6: Confirm welding shield opens and closes correctly.

APPENDIX J

FREE FLOW PLUG INSERT KIT (P/N 400112)

INSTALLATION INSTRUCTIONS

This procedure is to be performed only by personnel who have received appropriate training. If you do not completely understand all of the procedure, contact Aqua Lung to speak directly with a Technical Advisor before proceeding any further.



CAUTION: When the helmet is used in free flow mode the free flow valve must be open and properly adjusted at all times throughout the dive in order to maintain constant air flow. The helmet should be fitted with a double exhaust when used for contaminated water diving.

KIT CONTENTS

Part #	Item Description	Qty per Kit
N/A	Plug, Insert, Free Flow	1
400046	O-ring, Exhaust (Large)	1
17306	Hook Fastener, 2.0 in Blk, Pressure Sensitive	1
17308	Loop Fastener, 1.0 in Blk, Pressure Sensitive	1
400009	Screw, Exhaust Valve Cover (5 pk)	1
400011	Cover, Regulator	1

Step-by-Step Assembly Instructions



Step 1: Remove nose clearing device (NCD) knob (64).



Step 2: Remove NCD (62).



Step 3: Remove oral-nasal mask (37) .



Step 4: Remove microphone (30).

Step 5: Remove the second stage regulator.



NOTE: Refer to the separate Apeks Technical Manual: **GX300 REGULATOR FOR THE AQUA LUNG G3000SS DIVING HELMET - MAINTENANCE MANUAL** for guidance on removal of the GX300 regulator.

FREE FLOW KIT PLUG INSTALLATION INSTRUCTIONS (continued)



Step 6: Remove defogger train (36).



Step 7: Remove free flow barrel (32).



Step 8: Lubricate and install o-ring on outside of free flow plug. Place hook and loop strip on barrel.



Step 9: Install free flow plug in helmet shell (1). Ensure hook and loop strip is facing inward.



Step 10: Replace regulator cover.



Step 11: Tighten exhaust valve cover screws using a Phillips #3 screwdriver to 45 in.lbs (5 Nm).



Step 12: Place hook and loop tab on base of microphone (30).



Step 13: Place microphone (30) on free flow plug.



Step 14: Reinstall NCD (62).



Step 15: Place NCD knob (64) on NCD (62) to secure in place.

APPENDIX K

CAMERA/LIGHT BRACKET (P/N 400107)

INSTALLATION INSTRUCTIONS

This procedure is to be performed only by personnel who have received appropriate training. If you do not completely understand all of the procedure, contact Aqua Lung to speak directly with a Technical Advisor before proceeding any further.

Step-by-Step Assembly Instructions



Step 1: Remove two retainer port screws (11) from top corner of helmet using a Phillips #3 screwdriver.



NOTE: Brackets may be bent to shape as required.



Step 2: Line up bracket holes with helmet retainer holes.



Step 3: Replace the two retainer port screws (11) and tighten using a Phillips #3 screwdriver to 45 in.lbs (5 Nm).



Step 4: Right hand bracket installed.



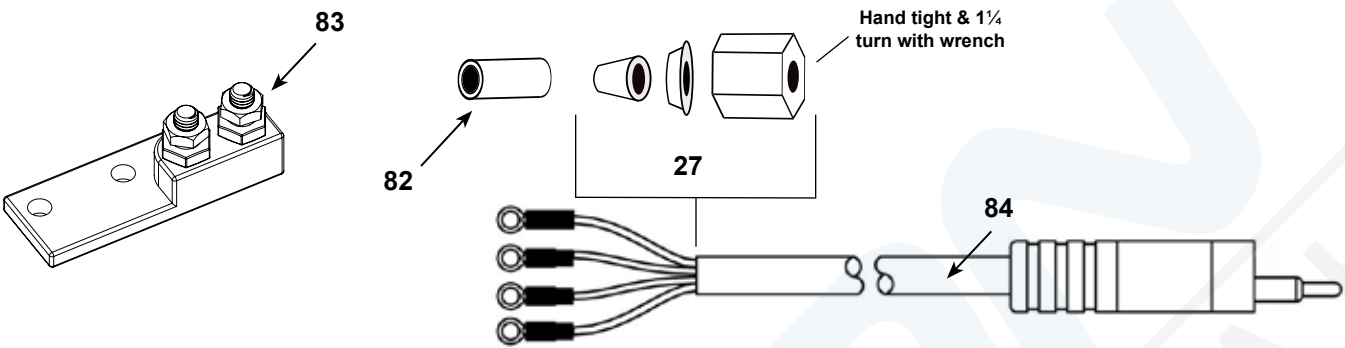
Step 5: Left hand bracket installed.



Step 6: Left and Right brackets.

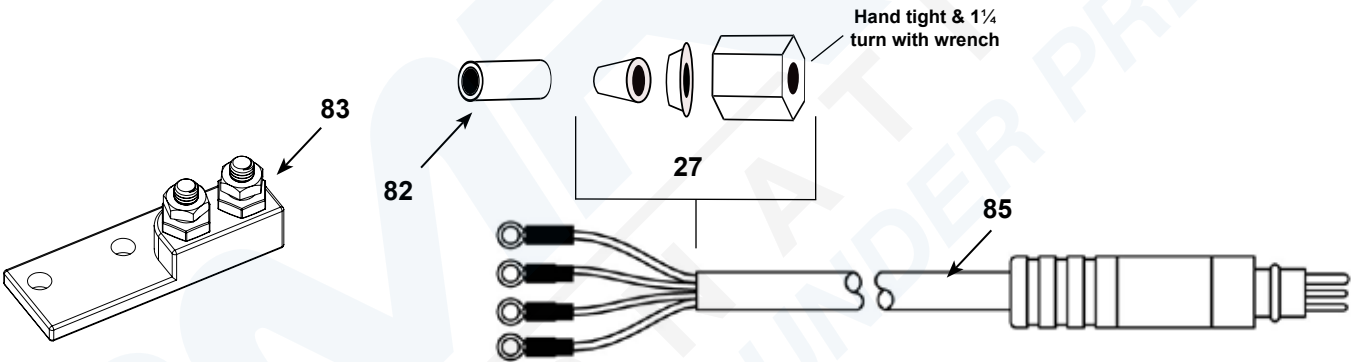
APPENDIX L – TERMINAL BLOCK COMMUNICATIONS KITS

TERMINAL BLOCK HI-USE COMMUNICATIONS MODULE KIT (P/N 400150)



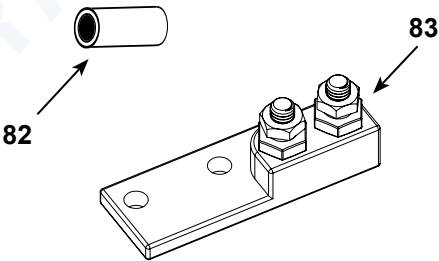
KEY #	QTY	PART #	DESCRIPTION
27	1	400122	CAP & PLASTIC FERRULES, BULKHEAD ASSY
82	1	400133	TUBING PLASTIC, PRE-CUT (10PK)
83	1	400152	WIRE TERMINAL BLOCK
84	1	400126	CABLE ASSY, OTS COMS, HI-USE

TERMINAL BLOCK MARSH MARINE COMMUNICATIONS MODULE KIT (P/N 400151)



KEY #	QTY	PART #	DESCRIPTION
27	1	400122	CAP & PLASTIC FERRULES, BULKHEAD ASSY
82	1	400133	TUBING PLASTIC, PRE-CUT (10PK)
83	1	400152	WIRE TERMINAL BLOCK
85	1	400125	CABLE ASSY, OTS COMS, MARSH MARINE

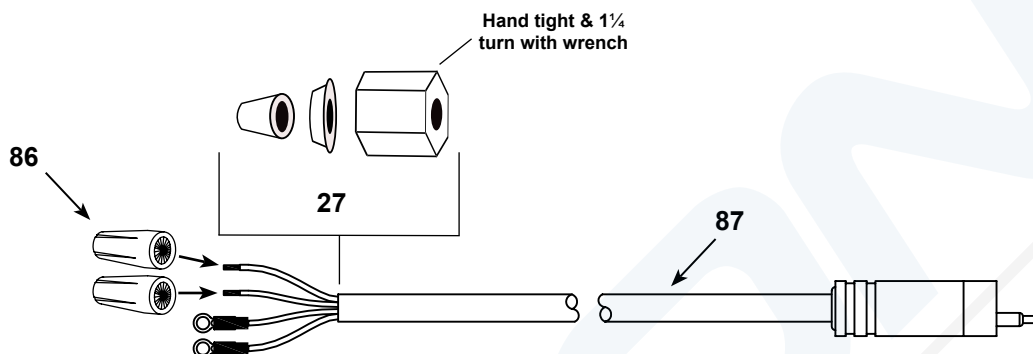
WIRE TERMINAL BLOCK (P/N 400152)



KEY #	QTY	PART #	DESCRIPTION
82	1	400133	TUBING PLASTIC, PRE-CUT (10PK)
83	1	400152	WIRE TERMINAL BLOCK

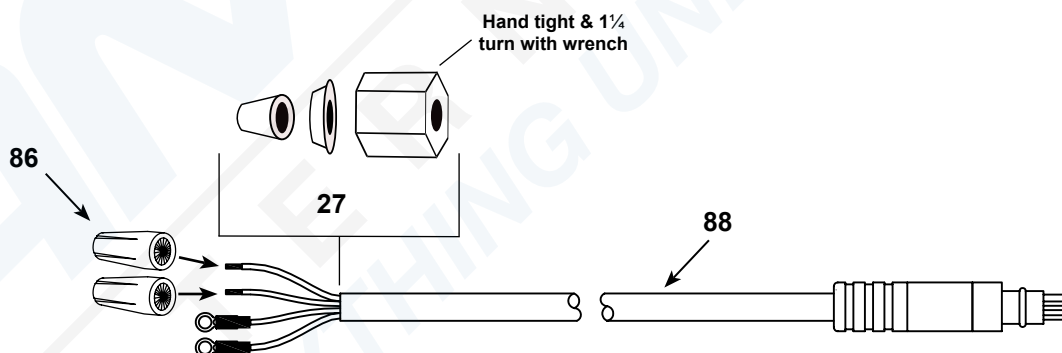
APPENDIX M – TWIST-ON COMMUNICATIONS KITS

TWIST-ON HI-USE COMMUNICATIONS MODULE KIT (P/N 400144)



KEY #	QTY	Part #	DESCRIPTION
27	1	400122	CAP & PLASTIC FERRULES, BULKHEAD ASSY
86	2	400148	TWIST-ON CONN KIT, 2 CONNS ALONE
87	1	400146	CABLE ONLY ASSY, TWIST ON, HI-USE

TWIST-ON MARSH MARINE COMMUNICATIONS MODULE KIT (P/N 400145)



KEY #	QTY	Part #	DESCRIPTION
27	1	400122	CAP & PLASTIC FERRULES, BULKHEAD ASSY
86	2	400148	TWIST-ON CONN KIT, 2 CONNS ALONE
88	1	400147	CABLE ONLY ASSY, TWIST ON, MARSH MARINE

APPENDIX N

COMMUNICATIONS KIT INSTALLATION INSTRUCTIONS

This procedure is to be performed only by personnel who have received appropriate training. If you do not completely understand all of the procedure, contact Aqua Lung to speak directly with a Technical Advisor before proceeding any further.

4-Wire Terminal Block Kit Installation Instructions

Installing Terminal Block and Cable Assembly

1. Use a 3/8" nut driver to remove the communication post hex nuts and communication posts (24) from the helmet shell (1). Remove the old plastic tubing (82) from the communication posts and replace it with new plastic tubing from the communications kit. Re-install the communication posts into the helmet shell. Insert the communication posts through the holes in the terminal block (83) with the "U" shape of the block facing up (*Fig. 1*). Secure the terminal block to the helmet shell with a 3/8" nut driver and one hex nut per communication post (*Fig. 2*).

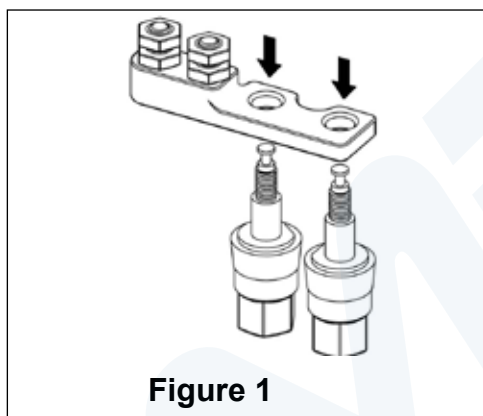


Figure 1

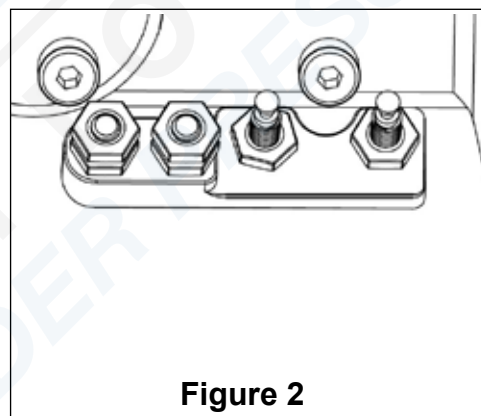


Figure 2

2. Insert the connector cable assembly (84 or 85) through the bulkhead cap and ferrules (27), then the communication bulkhead (25). Tighten the bulkhead cap and ferrules (27) hand tight, then 1 1/4 turns further with a 11/16" wrench to secure the cable.



NOTE: Ensure the two piece ferrules are installed in the following order:

1. Cap.
2. Small ferrule (small side towards helmet)
3. Large ferrule (small side towards helmet).

3. Connector cable assembly is available with Hi-Use (84) (*Fig. 3*) or Marsh Marine (85) (*Fig. 4*) connector.

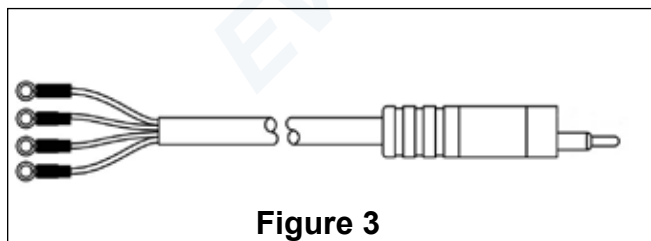


Figure 3

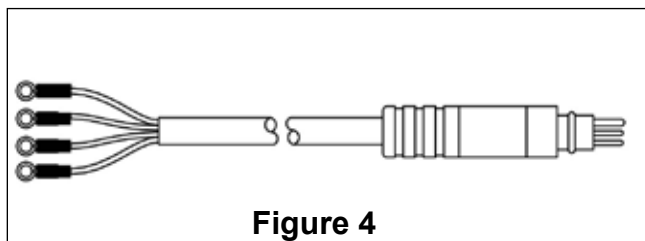


Figure 4

Wiring Terminal Block for 4-Wire Communications

1. Install connector cable lug rings onto the terminal block (83) per the terminal block pin configuration (*Fig. 5*) and wiring diagram (*Fig. 6*). Install the speakers left / right and microphone lug rings onto the terminal block per the wiring diagram. Securely tighten communication post hex nuts to terminal block with a 3/8" nut driver.

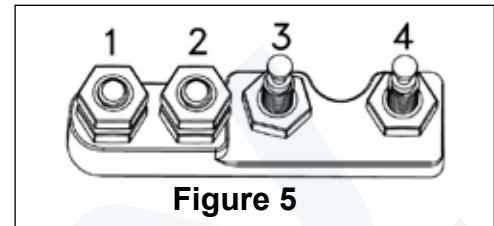


Figure 5



CAUTION: DO NOT overtighten the communication post hex nuts to the terminal block.

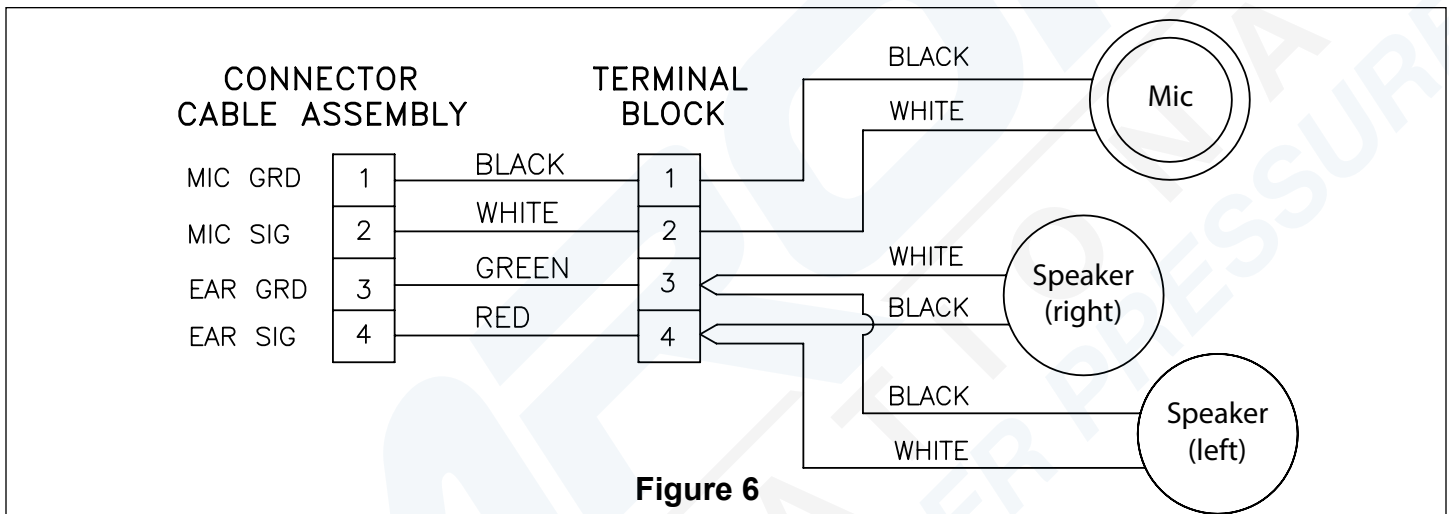


Figure 6

4-Wire Twist-On Kit Installation Instructions

Installing Cable Assembly

1. Insert the connector cable assembly (87 or 88) into the bulkhead cap and ferrules (27), then the communications bulkhead (25). Tighten the bulkhead cap and ferrules (27) hand tight, then 1 1/4 turns further with a 11/16" wrench to secure the cable.



NOTE: Ensure the two piece ferrules are installed in the following order:

1. Cap.
2. Small ferrule (small side towards helmet)
3. Large ferrule (small side towards helmet).

2. Connector cable assembly is available with Hi-Use (87) (*Fig. 7*) or Marsh Marine (88) (*Fig. 8*) connector.

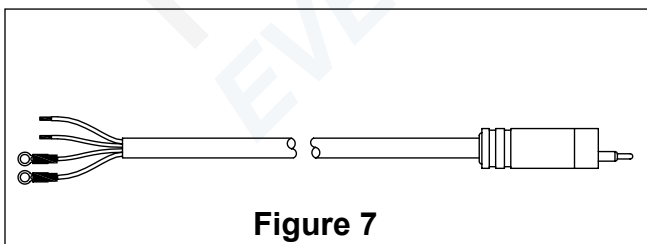


Figure 7

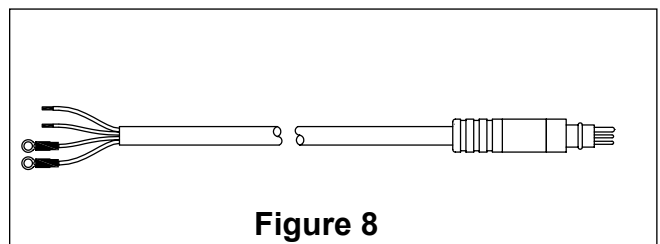


Figure 8

3. Install connector cable lug rings onto the communication posts (24) per the communication posts pin configuration (Fig. 9) and wiring diagram (Fig. 11). Install the speakers left / right lug rings onto the communication posts per wiring diagram. Securely tighten communication post hex nuts to communication posts with a 3/8" nut driver.

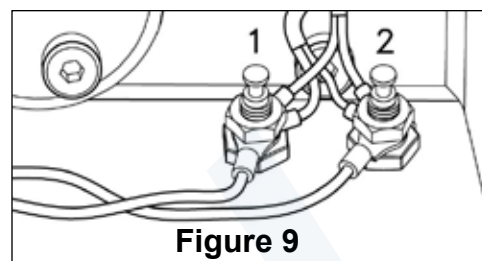


Figure 9



CAUTION: DO NOT overtighten the communication post hex nuts to the communication posts.

Installing Twist-On Connectors

1. Wire the microphone (30) to the connector cable assembly (87 or 88) per the wiring diagram (Fig. 11). Place stripped wires together with the ends of insulation even. Twist connector (86) (Fig. 10) onto wires pushing firmly until hand-tight. Wipe sealant in and around conductors and connector open while tightening.

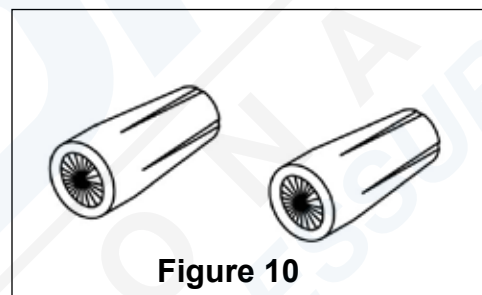


Figure 10



NOTE: Pre-twisting connector cable wires is not necessary.



NOTE: Twist-on connectors are internally treated with water proof sealant.

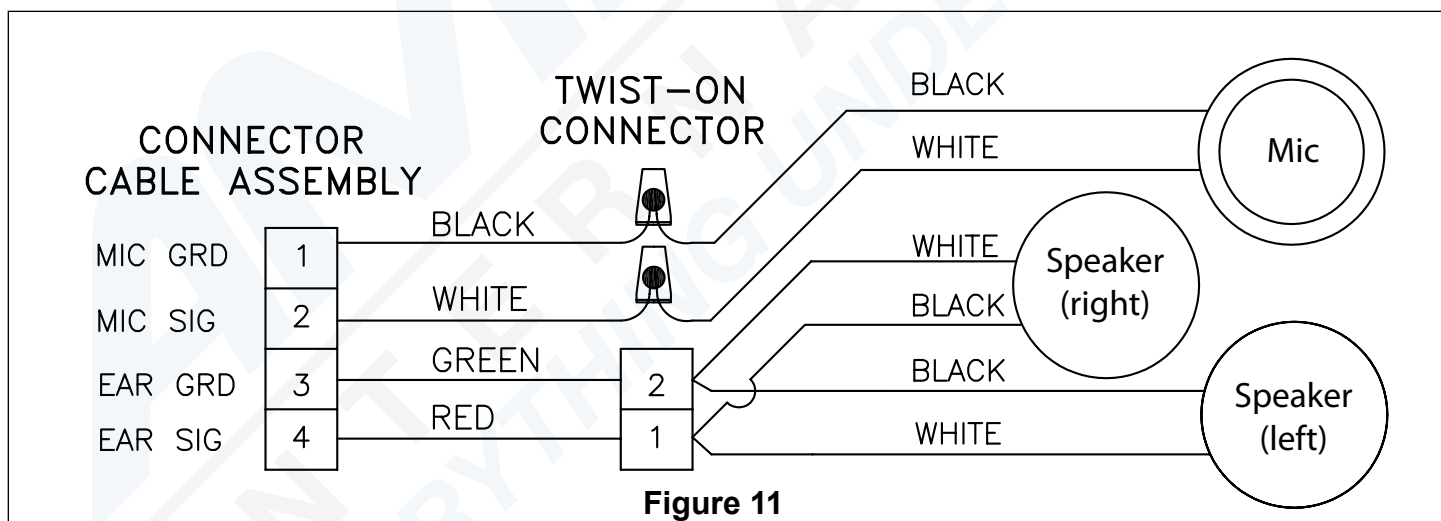


Figure 11

2. Hi-Use pin configuration (Fig. 12) and Marsh Marine pin configuration (Fig. 13).

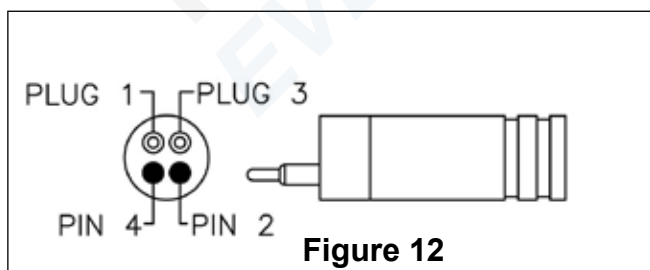


Figure 12

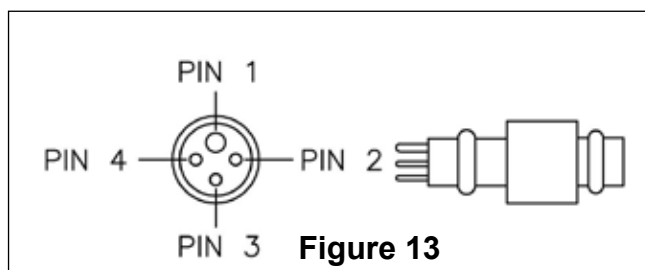


Figure 13

Wiring Terminal Block for 2-Wire Communications

1. Install connector cable lug rings onto the terminal block (83) per the terminal block pin configuration (Fig. 14) and wiring diagram (Fig. 15). Install the speakers left / right and microphone lug rings onto the terminal block per the wiring diagram. Securely tighten communication post hex nuts to terminal block with a 3/8" nut driver.

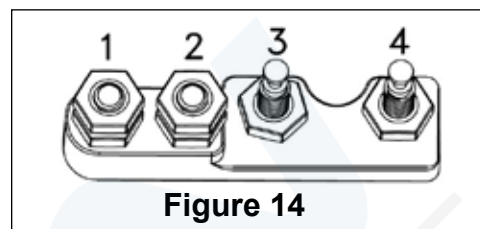


Figure 14



CAUTION: DO NOT overtighten the communication post hex nuts to the terminal block.

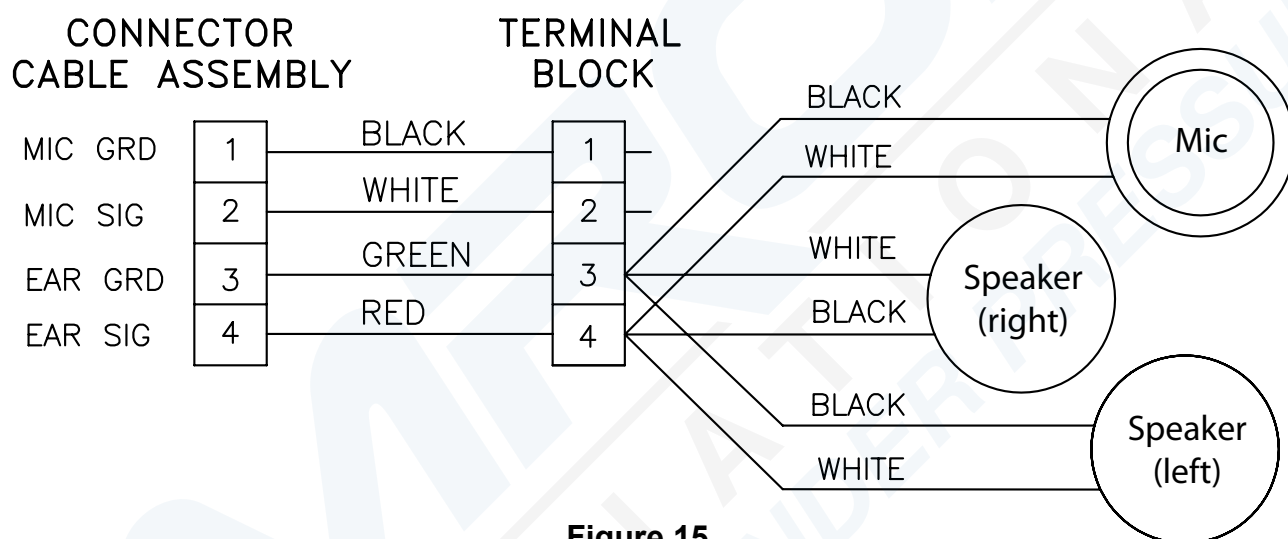


Figure 15

2. Hi-Use pin configuration (Fig. 16) and Marsh Marine pin configuration (Fig. 17).

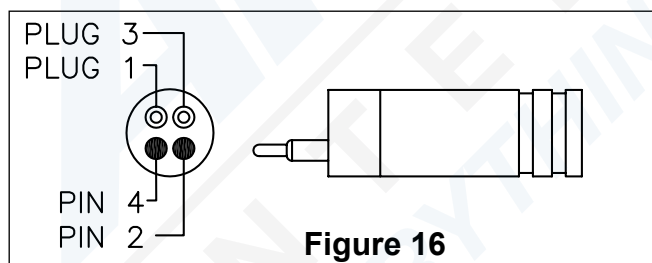


Figure 16

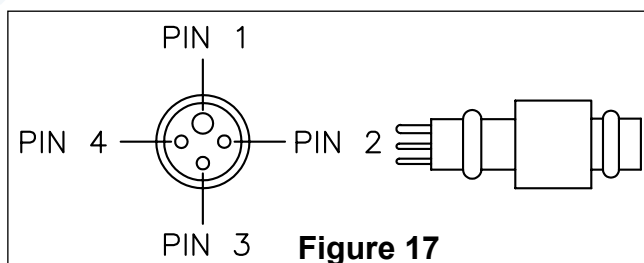


Figure 17

APPENDIX O

TORQUE SPECIFICATIONS

Part #	DESCRIPTION / KEY #	TORQUE (IN.LBS)	NOTE
40009	Screw, Exhaust Valve Cover (N/A)	45 in.lbs (5 Nm)	Used in Free Flow Plug Insert Kit only
400113	Screw, Latch (4)	140 in.lbs (16 Nm)	
400015	Screw, Retainer Port (11)	45 in.lbs (5 Nm)	
400021	Swagelock Connector (31)	45 in.lbs (5 Nm)	Fitted into free flow / water dump valve body (52)
400030	Manifold Plug (43)	90 in.lbs (10 Nm)	
400035	Screw, Hex, Manifold (39)	80 in.lbs (9 Nm)	
400036	Screw, Hex, Manifold (10)	80 in.lbs (9 Nm)	For latch catch assembly
400039	Port Plug (46)	45 in.lbs (5 Nm)	
400082	Screw, Neck Ring, Lower (69)	20 in.lbs (2 Nm)	
400083	Screw, Buckle Strap (72)	20 in.lbs (2 Nm)	
400093	Screw, Hinge Block Mounting (79)	45 in.lbs (5 Nm)	
400094	Screw, Hinge (80)	45 in.lbs (5 Nm)	
400128	Blank Plug (N/A)	90 in.lbs (10 Nm)	
Part #	DESCRIPTION / KEY #	TORQUE (FT.LBS)	NOTE
400017	Bulkhead Connector (25)	25 ft.lbs (34 Nm)	
400054	Bonnet, Free Flow / Water Dump Valve (60)	35 ft.lbs (47 Nm)	
Part #	DESCRIPTION / KEY #	TORQUE (SEE NOTE)	NOTE
400122	Cap & Ferrules Bulkhead Assy (27)	See Note	Cable installed hand tight, then 1¼ turn with wrench
400138	Airway Assembly (29)	See Note	Hand tight, then 1¼ turn with wrench
400040	Check Valve (47)	See Note	Pipe thread, no torque
400041	Fitting, SCUBA (48)	See Note	Pipe thread, no torque
400042	Fitting, Hose (49)	See Note	Pipe thread, no torque

APPENDIX P

RECOMMENDED CLEANERS AND LUBRICANTS

LUBRICANT/CLEANER	APPLICATION	SOURCE
Christo-Lube MCG 111	All o-rings	Aqua Lung, PN 820466 (2 oz.) 820467 (16 oz.), or Lubrication Technologies 310 Morton Street Jackson, OH 45640 (800) 477-8704
 CAUTION: Silicone rubber requires no lubrication or preservative treatment. DO NOT apply grease or spray to silicone rubber parts. Doing so may cause a chemical breakdown and premature deterioration of the material.		
 CAUTION: Do not use muriatic acid for the cleaning of any parts. Even if strongly diluted, muriatic acid can harm chrome plating and may leave a residue that is harmful to o-ring seals and other parts.		
White distilled vinegar	Acid bath for reusable stainless steel and brass parts.	"Household" grade
Non-ionic Liquid dishwashing detergent (diluted with warm water)	Degreaser for brass and stainless steel parts; general cleaning solution for plastic and rubber.	"Household" grade

APPENDIX Q

CLEANING AND LUBRICATING

Cleaning Brass and Stainless Steel Parts

1. If required, pre-clean in warm, soapy water* using a nylon bristle tooth brush.
2. Thoroughly clean parts in an ultrasonic cleaner filled with a solution of household white distilled vinegar (acetic acid) mixed with fresh water (max 50% vinegar). Clean ultrasonically for 5 minutes (max 10 minutes). DO NOT place plastic, rubber, silicone or anodized aluminium parts in vinegar.
3. Remove parts from the ultrasonic cleaner and rinse with fresh water. If tap water is extremely “hard,” place the parts in a bath of distilled water to prevent any mineral residue. Agitate lightly, and allow to soak for 5-10 minutes. Remove and blow dry with low pressure 25 PSI (1.7 BAR) filtered air. Inspect closely to ensure proper cleaning and like-new condition.

Cleaning Plastic & Rubber Parts

Parts made of plastic or rubber may be soaked and cleaned in a solution of warm water mixed with mild dish soap. Use only a soft nylon toothbrush to scrub away any deposits. Rinse in fresh water and thoroughly blow dry, using low pressure filtered air.



CAUTION: Do not place plastic and rubber parts in acid solutions. Doing so may alter the physical properties of the component, causing it to prematurely degrade and/or break.

Lubrication and Dressing

All o-rings should be lubricated with Christo-Lube® MCG 111. Dress the o-rings with a very light film of grease, and remove any visible excess by running the o-ring between thumb and forefinger. Avoid applying excessive amounts of Christo-Lube grease, as this will attract particulate matter that may cause damage to the o-ring.

*Soapy water is defined as “household” grade liquid dishwashing detergent diluted in warm water.

APPENDIX R

G3000SS ANNUAL SERVICE KIT (P/N 400180)

The Key # (column D) is provided to assist with correct parts identification and refers to the relevant Exploded Parts Diagram (Appendices A thru F).

A	B	C	D
Part #	Item Description	Qty per Kit	Key #
400004	Nut, Neck Retainer	1	22
400012	O-ring, Face Port	1	14
400022	O-ring, Swagelock Connector & Port Plug	2	33
AP6223	Valve, Flapper, Inhalation	1	34
400031	O-ring, Manifold Plug	2	26
400034	O-ring, Manifold Connector	2	41
400037	Gasket, Manifold	1	42
400045	O-ring, Exhaust (Small)	1	51
400046	O-ring, Exhaust (Large)	1	53
400050	Washer, Copper	2	56
400052	O-ring, Stem, Free Flow / Water Dump Valve	1	59
400074	O-ring, Nose Clearing Device (NCD)	2	62
AP0300/K	GX300 Regulator Service Kit	1	See Note



NOTE: Refer to **APEKS GX300 REGULATOR FOR THE AQUA LUNG G3000SS DIVING HELMET - MAINTENANCE MANUAL** for contents of this kit.

IX. G3000SS DIVING HELMET SPARE PARTS LIST

Part #	Description
400300	Helmet, G3000SS, w/ 2-wire comms
400301	Helmet, G3000SS, w/ 4-wire comms, Hi-Use
400302	Helmet, G3000SS, w/ 4-wire comms, Marsh Marine
400001	Shell, Helmet
400003	Bolt, Neck Retainer (5 Pack)
400004	Nut, Neck Retainer (5 Pack)
400005	Spring, Latch (5 pack)
400009	Screw, Exhaust Valve Cover (5 Pack)
400010	Cover, Exhaust Valve
400011	Cover, Regulator
400012	O-ring, Face Port
400013	Port, Face
400014	Retainer, Port
400015	Screw, Retainer Port (5 Pack)
400016	Post, Communication Assembly
400017	Bulk Head, Communications w/ SS Plug Assembly
400018	Bulk Head, Communications w/ Installation
400021	Connector, Swagelock
400022	O-ring, Swagelock Conn & Port Plug (10 Pack)
400023	Train, Defogger
400024	Barrel, Free Flow
400025	Mask, Oral Nasal
AP2537	Housing, Inhalation Valve
AP6223	Valve, Inhalation
AP0270	Handwheel Assembly (includes Key # 20a, 20b & 20c, Appendix A)
AP0271	Valve Assembly (includes Key # 34 & 35, Appendix B)
AP0300	Reg, GX300
400028	Liner, Head
400029	Body, Manifold
400030	Plug, manifold (Large)
400031	O-ring, Manifold Plug (10 Pack)
400032	Screen
400034	O-ring, Manifold Connector (10 Pack)
400035	Screw, Hex, Manifold (5 Pack)
400036	Screw, Hex, Manifold (5 Pack)
400037	Gasket, Manifold
400039	Plug, Port
400040	Valve, Check
400041	Fitting, SCUBA
400042	Fitting, Hose
400043	Cap, Fitting, Brass
400044	Body, Free Flow / Water Dump Valve

Part #	Description
400045	O-ring, Exhaust (Small) (10 Pack)
400046	O-ring, Exhaust (Large) (10 Pack)
400047	Valve, Water Dump / Flapper Exhaust
400048	Ring, Water Dump / Flapper Valve Snap
400049	Seat, Free Flow / Water Dump Valve
400050	Washer, Copper (5 pack)
400051	Stem, Free Flow / Water Dump Valve
400052	O-ring, Free Flow / Water Dump Valve Stem (10 Pack)
400053	Washer, Teflon (5 pack)
400054	Valve, Free Flow / Water Dump Bonnet
400073	Knob, NCD
400074	O-ring, Nose Clearing Device (NCD) (10 Pack)
400077	Pad, Nose Neoprene (5 Pack)
400078	Ring, Quad
400079	Ring, Neck Upper
400080	Seal, Neck
400081	Ring, Neck Bottom
400082	Screw, Neck Ring Lower (5 Pack)
400083	Screw, Buckle Strap (5 Pack)
400084	Bushing, Buckle Strap (5 Pack)
400085	Buckle, Strap
400086	Strap, Nylon w/D-Rings
400087	Body, Welding Shell (Shield)
400088	Lens, Welding
400089	Bracket, Lens Holding (2 Pack)
400090	Gasket, Welding Lens
400092	Hinge Block, Welding Lens (2 Pack)
400093	Screw, Hinge Block Mounting (5 pack)
400094	Screw, Hinge (5 Pack)
400095	Spring, Welding Shield
400097	Bushing, Dual Exhaust
400098	Seat, Dual Exhaust
400099	Ring, Spacer (5 Pack)
400102	Shield, Welding Assembly
400103	Neck Ring, Assembly
400104	Set, Communication
400107	Bracket, Light/Camera
400180	Kit, Annual Service, G3000SS
400109	Locking System, Left
400111	Kit, Double Exhaust
400112	Kit, Plug Insert Free Flow
400113	Screw, Latch 5/16" - 18 x 3/4" Long (5 Pack)
400114	Retainer, Neck Ring, Mod 1
400120	Washer, Latch Spring (2 Pack)

Part #	Description
400122	Cap & Ferrules, Bulkhead Assy
400123	Nose Clearing Device, Assy
400124	Head Liner, Thick
400125	Cable Assy OTS Comm, Marsh Marine
400126	Cable Assy, OTS Comm, High-Use
400127	Ferrules, Nylon (10 pack)
400128	Blank Plug, SS
400129	Speaker, Left
400130	Speaker, Right
400131	Microphone
400132	Locking System, Right
400133	Tubing, Plastic Pre-Cut (10 pack)
400134	Lock Washer, 5/16" (5 pack)
400138	Airway Assembly
400139	Inset, Manifold Complete
400140	Nose Clearing Device (Welded)
400142	Nut, Packing
400144	Comms Module Kit, Twist-On, Hi-Use
400145	Comms Module Kit, Twist-On, Marsh Marine
400146	Cable Only Assy, Twist-On, Hi-Use
400147	Cable Only Assy, Twist-On, Marsh Marine
400148	Twist-On Conn Kit, 2 conns Alone
400150	Comms Module Kit, Terminal Block, Hi-Use
400151	Comms Module Kit, Terminal Block, Marsh Marine
400152	Wire Terminal Block

X. G3000SS DIVING HELMET ACCESSORIES

Switch Block, G3000SS P/N AP0281/G



Helmet Flotation Bag P/N 400805



Standard Helmet Bag P/N 400804



Bailout Hose Assembly w/ (QD) P/N 400161

- Hose Assy, LP, 33", w/ QD, Yellow P/N 400167
Hose Assy, LP, 6", w/ QD, Yellow P/N 400168
- Hose Assy, LP, 33", 1/4" MNPT, Yellow P/N 400162
Hose Assy, LP, 6", 1/4" MNPT, Yellow P/N 400163
- Fitting, QD, Female, 1/4" FNPT, P/N 400165
Fitting, QD, Male, 1/4" FNPT, P/N 400166





AQUA LUNG G3000SS HELMET
OPERATIONS & MAINTENANCE MANUAL



Military & Professional

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