

**DIVE LAB (XLDS)
LIGHT WEIGHT UMBILICAL
ANNUAL MAINTENANCE & INSPECTION CHECKLIST**

APPENDIX A2.1

01-13-12

NOTE: This inspection and maintenance should be performed at least annually and as dictated by condition revealed during daily/monthly inspection. Monthly inspections determine necessity for overhaul with more accuracy than simply placing a number of hours of use.

Complete Overhaul and Maintenance Recommendations and Guidelines:

Complete System Overhaul: A complete system overhaul is defined as disassembly of all major components for inspection, cleaning, and soft goods replacement followed by a leak test of all systems, as well as a flow test of each diver supply circuit and umbilical.

The frequency or periodicity for a complete inspection and testing of the XLDS Umbilical is dependent on frequency of use, and conditions under which the system is used. This procedure is intended to not only inspect the umbilical assembly, but to also test the components. For this reason, the final decision determining how often the umbilical should be inspected and tested should be determined by the user. Generally, the XLDS umbilicals will not have internal contamination issues due to being supplied by high pressure storage systems however day to day use can cause wear and chafing of the gas hose, pneumo hose and communication cable. At a minimum Dive Lab recommends pressure testing at least once a year. For umbilicals being used up to 30 hours a week for commercial diving, i.e. salvage, marine harvesting work, harsh work conditions users should look at performing this procedure more often or whenever reliability and suitability is in question. The monthly inspection should help in determining the schedule.

The above are recommendations based on keeping and maintaining a good log book on the XLDS umbilical, the use, maintenance and repair record will help in determining how often routine maintenance and overhauls are required. This inspection checklist should be retained in the organizations maintenance files to show history of use and maintenance.

NOTE: XLDS umbilicals being used around polluted waters, or extreme environments, will require more frequent inspection.

NOTE: Check the Dive Lab web site for the latest product improvement bulletins concerning the XLDS UMBILICAL.

Date:
XLDS UMBILICAL Serial #:
Associated Equipment Serial #(s):
Technician (print name):

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XLDS UMBILICAL & HARDWARE	
PROCEDURES	INITIALS
1. Visually inspect entire hose length (Main Gas, Comm Wire, Pneumofathometer) for cuts, abrasions, and any damage that could result in component failure Guidance O & M Manual.	
2. Inspect umbilical supply and pneumofathometer fittings for wear and damage. Change fittings and components as necessary if any damage is found. Guidance O & M Manual.	
3. Inspect communication wire end connections (diver/top side), fittings for serviceability. Repair/replace as necessary. Guidance O & M Manual.	
4. Perform communications check. Repair/replace as necessary. Guidance O & M Manual.	
NOTE: It is very important that all D-rings and seizing materials are present. Refer to umbilical diagram for locations of D-Rings and number of seizing points.	
5. Inspect D-Ring connections on the topside and divers ends. Use 550 Cord/Parachute cord to re-seize if necessary. Guidance O & M Manual	
XLDS UMBILICAL & HARDWARE	
PROCEDURES	INITIALS
6. Pressure test umbilical to 800 psi for 5 minutes.	
7. Complete a flow test of the umbilical using a HP supply pressure of at least 800 psig to the console. Set console regulator to 100 psig. The flow at the divers end should be a minimum of 700 lpm LPM. Guidance O & M Manual	

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8. Purge Pneumofathometer, ensure adequate flow to attain accurate readings on the Pneumofathometer. If blockage is detected flush hose and retest.	
NOTE: If umbilical contamination is suspected the umbilical will have to be cleaned flushed with suitable cleaning solution & dry using diver's air. Guidance O & M Manual	

The complete system overhaul procedure is intended to be used as a guide for persons that have received factory authorized training in the maintenance and repair of DIVE LAB XLDS surface supplied system.

Technician Signature: _____ Date: _____

Comments: _____

Dive Lab **highly** recommends that a certified Dive Lab Repair Technician make all repairs and that only genuine Dive Lab repair and replacement parts be used. Owners of Dive Lab products that elect to do their own repairs and inspections should only do so if they possess the knowledge and experience. All inspections, maintenance, and repairs should be completed using the appropriate Dive Lab Operations and Maintenance Manual(s). Persons performing repairs should retain all replacement component receipts for additional proof of maintenance history. Should any questions on procedures, components, or repairs arise, please contact Dive Lab, Inc., by telephone at (850) 235-2715 or via e-mail at divelab@aol.com.