

**KIRBY MORGAN AIR CONTROL SYSTEM-5
(KMACS-5)
ANNUAL OVERHAUL & INSPECTION CHECKLIST**

APPENDIX A2.1

05-23-17

NOTE: This inspection and maintenance should be performed at least annually or 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.

The frequency for a complete overhaul of the KMACS-5 is dependent on frequency of use, and conditions under which the system is used. For this reason the final decision for overhaul is determined by the end user. Generally KMACS-5 and DCS II systems used with LP compressors will need more care and service than those used with HP systems only. KMDSI recommends systems being supplied by LP compressors and used up to 30 hours a week for commercial diving i.e. salvage, marine harvesting work, and construction be overhauled at least once every three to five years. Users that only use HP air, (no LP air) and only use the system five to ten times a month should be able to go up to five years between major overhauls. KMACS-5 normally used with LP air compressors are far more susceptible to contamination from moisture and the corrosive effects from moisture than KMACS-5 used with HP air only. Systems used more than 250 days a year under extreme or harsh conditions such as extremely hot or cold environments may require more frequent overhauls.

Typically, KMACS-5 used by public safety and law enforcement divers with HP air supply systems only, used less than 20 times a year resulting in less than 100 hours use a year, should perform a complete overhaul every five years.

The above recommendations are based on keeping and maintaining a good log book on the KMACS-5, the use, maintenance and repair record will help in determining how often routine maintenance and overhauls are required.

NOTE: This checklist should be used in conjunction with the KMDSI Modular Operations and Maintenance Manual.

NOTE: KMACS-5 being used around polluted waters, or extreme environments, will require more frequent inspection.

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NOTE: Check the Kirby Morgan web site for the latest product improvement bulletins concerning the KMACS-5

Date:
KMACS-5 Serial #:
Associated Equipment Serial #(s):
Technician (print name):

KMACS-5 Panel & Case	
PROCEDURES	INITIALS
1. Remove the pneumofathometer supply valve stems, clean, inspect, and lightly lubricate the stem threads, inspect the valve body internal surfaces for contamination and corrosion clean as necessary. Guidance Modular 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 Modular O & M Manual.	
3. Compare all gages with gages of known accuracy. Guidance Modular O & M Manual.	
4. With no pressure supplied to the system, check the HP selector valve for smooth operation.	
NOTE: If HP selector valve does not operate smoothly it must be replaced.	
5. Replace LP umbilical shut off valve O-rings, inspect for smooth operation by opening and closing. Guidance Modular O & M Manual	

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6. Inspect the HP hoses for damage in the form of worn or damaged fittings, hose fitting slippage, blisters, cracking, and bulges any wear. Change HP yoke Filters. Guidance Modular O & M Manual	
7. Service relief valve and set relief valve to (300 psig)	
8. Service LP air check valve. Guidance Modular O & M Manual	
9. Service regulator check valve. Guidance Modular O & M Manual	
10. Service HP regulator. Guidance Modular O & M Manual	
11. Inspect all external fittings and tubing surfaces for signs of corrosion and damage. Clean as necessary. Perform a leak check of all circuits.	
12. Test operate all valves	
13. Perform a liquid leak check of all fittings, then perform a pressure test of the LP system to 225 psig for a minimum of ten minutes zero leakage allowed.	
14. Perform a liquid leak check and then a 3500 psig pressure test or maximum supply pressure test of all HP components for a minimum of 10 minutes.	
15. Complete a flow test of the control console using a supply pressure of at least 1500 psig. Set loader to 150 psig. The flow at the outlet fitting of each outlet should be a minimum of 800 LPM.	
16. Test the communications unit, charge the battery if necessary. Guidance Modular O & M Manual	

Recorded service in maintenance log book: YES_____ NO_____

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NOTE: KMDSI strongly recommends that only trained certified KMDSI technicians perform overhauls. The below statement is intended to discourage non trained and non certified persons from posing as certified KMDSI technicians.

I _____ hereby certify that I have performed the work required in the A2.1 and that I am a certified KMDSI / Dive Lab technician.

Print name _____ Signature _____

Date _____ ID# _____ Date of Certification _____

I _____ hereby certify that I have performed the work required in the A2.1 and **I am not** a certified KMDSI / Dive Lab technician

Technician / Owner: Print name _____

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 KMDSI DCS and KMACS-5 surface support air control consoles.

KMDSI **highly** recommends that a certified KMDSI Repair Technician make all repairs and that only genuine KMDSI repair and replacement parts be used. Owners of KMDSI 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 KMDSI Modular 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 Kirby Morgan Dive Systems, Inc., by telephone at (805) 928-7772 or via e-mail at kmdsi@kirbymorgan.com, or contact Dive Lab, Inc., by telephone at (850) 235-2715 or via e-mail at divelab@divelab.com.

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