

**KMB 18/28 (BANDMASK)
OVERHAUL, MAINTENANCE, AND INSPECTION CHECKLIST
APPENDIX A2.1**

08-01-17

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.

NOTE: Masks being used in extreme environments, will require more frequent inspection.

This checklist is intended to aid persons performing routine overhauls of the KMDSI KMB 18/28 Band Masks. The checklist should be used in conjunction with the latest version of the KMDSI Modular Operations and Maintenance Manual for the KMB18 and 28 Band Masks. This checklist is primarily intended to document the maintenance as it is completed and to help guide the technician during overhauls. Specific detailed procedures for each section of this checklist can be found in the Modular Operations and maintenance manuals. This checklist, when completed should be retained in the equipment maintenance files. This checklist is generic in nature and should be used for all models of the KMDSI Band Masks.

NOTE: Remove any and all NON KMDSI factory stickers from the Mask Shell for proper inspection.

NOTE: KMDSI strongly recommends that all repairs be performed by trained personnel.

NOTE: When performing the A2.1 as a scheduled overhaul, all O-rings must be replaced. When using the A2.1 as an “inspection” only, in-between annual overhauls, O-rings and exhaust valves may be reused if inspection reveals the soft goods are serviceable.

Date:
Mask Serial #:
Associated Equipment Serial #(s):
Equipment belonging to: (print name):

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PROCEDURES	INITIALS
HOOD ASSEMBLY	
1. Remove Head Harness (Spider) and inspect for signs of tearing, deterioration, and/or damage. Ensure all five legs of the Spider are present. Replace if necessary. Guidance Modular O & M Manual	
2. Remove the Earphones from their pockets in the Hood. Remove the Hood from the Mask. Perform a visual inspection of all components. Guidance Modular O & M Manual.	
3. Visually inspect the Hood for signs of damage, t and/or deterioration. Replace if necessary. Guidance Modular O & M Manual.	
4. Remove the Top and Bottom Bands from the Hood. Visually inspect all metal parts of the Band Assembly and Band Keeper components, including the Band Screws, for damage. Replace if necessary. Guidance Modular O & M Manual.	
MASK ASSEMBLY	
1. Visually inspect the Mask exterior and interior for loose and/or missing fasteners and obvious signs of damage; including cracks, gouges, and/or depressions.	
NOTE: On the KMB 18 any gouges in the fiberglass shell deeper than 1/16” (1.59mm) exposing fiberglass should be repaired. Fiberglass and gel coat repairs MUST be completed by a technician that has received certification for Helmet Shell repairs by KMDSI or Dive Lab, Inc. Any cracks or depressions with fractures must be checked by an Authorized KMDSI Repair Facility. Any cracks or damage in the plastic frame of the KMB 28 will require replacement of the frame. Further info contact Dive Lab.	
2. Remove the Covers from the Earphones. Remove Microphone from the Oral Nasal Mask. Inspect and repair/replace as necessary. Perform a complete communications check. Guidance Modular O & M Manual	
CAUTION: The Nose Block device MUST be removed before installing a new Oral Nasal Mask. Stretching the Oral Nasal Mask over the Nose Block Device can cause the Oral Nasal Mask to tear.	
3. Remove the Nose Clearing Device. Clean and inspect the Nose Clearing Pad and Shaft. Replace O-Rings.	

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4. Remove Oral Nasal Mask and Oral Nasal Valve as an assembly. Remove the Valve body from mask and remove valve and discard. Replace the Valve and clean the Valve Body. Clean and inspect Mask and Valve Assembly for damage. Guidance Modular O & M Manual.	
5. Remove the Comfort Insert [KMB 18 only]. Clean and inspect the Comfort Insert and fastening hardware for damage and/or deterioration. Mark N/A for KMB 28.	
6. Remove the Demand Regulator from the Mask and set aside. Guidance Modular O & M Manual.	
NOTE: Demand Regulator annual maintenance will be addressed in the Demand Regulator section of procedures.	
7. Remove, clean, and inspect the Exhaust Whisker assembly from the regulator assembly. The Main Exhaust and all Exhaust Valves should be replaced during annual overhaul. Replace the whisker exhaust rubber components if the rubber shows any signs of deterioration, wear, and/or damage. Guidance Modular O & M Manual.	
8. Remove the Face Port Retainer, Face Port and O-ring. Perform a port insert test (trained authorized repair technician only). Note: insert replacement and repairs must only be done by technicians that have been trained and certified for insert replacement. Replace the Face Port O-ring.	
NOTE: Testing of the Port Inserts should be done ONCE A YEAR , or whenever Port Insert damage is present or suspected. (KMDSI P/N 525-115 Thread Insert Testing Block Kit) Guidance Basic Repair Technician Training Guide, Thread Insert Testing Procedure.	
9. Install top band keeper mount, and lower band keeper mount (if removed) Guidance Modular O & M Manual.	
10. Remove the Main Exhaust Valve Cover and replace the Main Exhaust/Dewatering Valve. Inspect seating surface for damage and/or contamination. Guidance Modular O & M Manual.	
SIDE BLOCK	
NOTE: The Side Block does not need to be removed from the Mask every year, providing excessive internal corrosion is not present. However, KMDSI recommends that every THREE (3) years the Side Block Assembly be physically removed from the Mask and reinstalled per Modular O & M Manual.	
1. Remove, discard, and replace Umbilical Adapter with a new one.	
2. Remove, disassemble and overhaul the One-Way Valve. Guidance Modular O & M Manual.	

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3. Remove, disassemble, and overhaul the EGS and Defogger Valve components. Guidance Modular O & M Manual.	
NOTE: It is not required to remove the EGS Valve on the Side Block for the annual overhaul. However, if the Side Block is to be removed or the EGS Valve exhibits excessive corrosion/verdigris , the EGS Valve will require removal, cleaning, and re-sealing with Teflon™ tape.	
DEMAND REGULATOR	
NOTE: KMDSI recommends the following parts on the Demand Regulator be replaced on an annual basis regardless of amount of use: the Inlet Valve Seat (P/N 510-580) on the Inlet Valve (P/N 545-026), Nut (P/N 530-303), Inlet Nipple O-Ring (P/N 510-014), Exhaust Valve (P/N 510-552), Adjustment Shaft Washer (P/N 520-032), and O-Ring (P/N 510-011).	
NOTE: For Band Masks that have the SF 450 or 455 Balanced regulator, consult the applicable operations and maintenance manual for the recommended soft goods replacement parts and adjustment procedures.	
1. Disassemble the Demand Regulator. Visually inspect the interior of the Regulator Body for corrosion and/or contamination. Clean as necessary. Guidance Modular O & M Manual.	
2. After the Regulator has been disassembled and cleaned, inspect all parts. 350 & SF 350, the Adjustment Nut must never be reused . Reuse of the Adjustment Nut will not allow the Regulator to maintain proper adjustment. Guidance Modular O & M Manual.	
3. Reassemble the Demand Regulator Modular O & M Manual.	
4. Ensure the Adjustment Shaft P/N 550-057 rotates smoothly and there is no binding.	
5. Install the Exhaust Whisker Main Body onto the Exhaust Flange of the Regulator and attach the whiskers to each side of the View Port Retainer. Guidance Modular O & M Manual.	
NOTE: For the KMB18-A KMDSI recommends pressure testing the the bent tube Hose Assembly (117a) to 400 psig every year as well as replacing the end fitting O-rings	
NOTE: If this maintenance is during an annual overhaul, replace the Teflon O-Ring at the Side Block end of the Bent Tube and the O-Ring at the Demand Regulator Inlet side of the Bent Tube.	
6. Mount the Regulator to the Mask. Guidance Modular O&M Manual.	

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7. Reinstall Oral Nasal Mask, Valve Assembly, and Nose Block Device. Guidance Modular O & M Manual.	
8. Check the Regulator for proper operation and fine tune the adjustment if necessary. Guidance Modular O & M Manual.	
PROCEDURES	INITIALS
EMERGENCY GAS SUPPLY (EGS)	
NOTE: The Emergency Gas System consists of a good quality First Stage Regulator equipped with a submersible pressure gauge, an Over Pressure Bleed/Relief Valve, and an Emergency Gas Supply Hose that connects to the Emergency Valve on the Mask Side Block.	
1. Check the hydrostatic date and last visual inspection record (“VIP”) of the cylinder. Ensure date(s) are within the specified range. The VIP is done at least annually and the hydrostatic test is done at least every five years.	
2. Check the maintenance record of the EGS components to ensure the First Stage Regulator’s maintenance has been performed in accordance with the manufacturer’s recommendations.	
3. Check all Hoses for signs of blisters, cover slippage, cuts, and/or abrasions and corrosion. KMDSI recommends that all LP hoses be pressure tested to 1.5 times the maximum hose pressure rating. Replace any Hose(s) that show signs of leakage/damage. If a Quick Connect EGS hose is being used, inspect quick connect and fittings for signs of wear/damage. Replace O-rings as necessary.	
4. If a submersible pressure gauge is used, ensure it has been compared to a gauge of known accuracy. Inspect the hose and fittings for signs of damage and corrosion.	
5. Overhaul and test the First Stage Bleed/Relief Valve. Guidance as per “Appendix 4: Bleed/Relief Valve Cleaning, Inspection, and Overhaul Procedures”.	
6. Log the lifting pressure _____ psig.	
NOTE: An adjustable First Stage Regulator and a Gas Cylinder with a minimum of 500 psig (34.5 bar) available are required for this step.	
NOTE: The Bleed/Relief Valve should be adjusted to start relieving between 180 - 200 psig (12.4 – 13.8 bar) when tested.	

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7. Check the over bottom setting of the First Stage to ensure it is within the manufacturer's specified pressure range. For KMDSI Helmets and Masks, the recommended over bottom for the emergency supply is normally between 135 psig to 165 psig (9.3-10.3bar). Log the intermediate pressure.	
8. Perform a leak check of all EGS components and fittings using soapy water in a pressurized condition. Repair/replace items as necessary.	
9. Inspect the Harness Assembly for signs of wear and/or damage. Repair/replace as necessary. Document any inspection/maintenance on the Maintenance Log (Appendix 3).	

Recorded service in helmet maintenance log book YES_____ NO_____

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# _____ Expiration date _____

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 _____

Comments: _____

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 appropriate KMDSI 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

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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.

NOTE: Use your Maintenance and repair log book P/N 125-001, to record all the maintenance performed.

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