

Kirby Morgan®

KMB 18/28 BandMask®

A2.3

BandMask® and Emergency Gas System Daily Set-Up and Functional Checklist

THIS DAILY SET-UP AND FUNCTIONAL CHECKLIST SHOULD BE COMPLETED PRIOR TO COMMENCEMENT OF DAILY DIVING OPERATIONS AND AT LEAST EVERY 24 HOURS IF IN CONTINUOUS USE.

⚠ WARNING

These are recommended minimum checks when using Kirby Morgan KMB 18/28 Band Masks. Additional checks may be required as dictated by the conditions and tasks being performed. Failure to perform in-water checks may result in serious injury or death



Mask(s) being used in extreme environments will require more frequent inspection.

NOTE



During removal of components for inspection, O-rings and other consumable items may be re-used, providing they are clean and a visual inspection does not reveal any damage or deterioration.

NOTE



Perform the Side Block/Demand Regulator inspection procedures with gas supplies not connected to the Side Block. Attach the gas supply at Step 5 of the "Side Block/Demand Regulator" inspection procedure.

NOTE



Steps 3(a)–3(e) use the EGS for setting up and checking the Mask's systems. For a proper check of the Demand Regulator adjustment, the First Stage Regulator must have an intermediate supply pressure output between 135–150 psig (10–11 bar). The First Stage Bleed/Relief Valve should be set between 180–200 psig (12.4–13.8 bar). Do not attach the Umbilical until Step 6.

NOTE

Date: _____

Mask Serial Number _____

Associated Equipment Serial #(s): _____

Technician (*print name*): _____

1. Hood and Band Assembly



When the screws that hold the Bands in position are properly torqued, the Hood and Face Seal cannot be removed from frame.

NOTE

DIVER/TENDER - CHECK THE FOLLOWING:

Procedures	Initials
1) Visually inspect the Hood and Face Seal for signs of damage. Check the Hood for tears, holes, and/or cuts. Ensure the Face Seal is properly glued to the Hood.	
2) Check the screws that hold the Bands in position. They must be properly torqued to 26 inch pounds (28 kg cm). Guidance Modular O & M Manual.	

⚠ WARNING

If the Bands become loose, the Hood and Face Seal could separate from the Mask. This would cause the Mask to flood, which could cause drowning.

3) Inspect the Head Harness/Spider to ensure there are no tears and/or cracks in the material. Ensure all five legs are present. If it is worn and/or cracked, it must be replaced.	
4) Ensure band keepers are installed and properly torqued, Guidance Modular O & M Manual.	

2. Visually Inspect Mask



KMDSI recommends replacement of the Hose Assembly on the KMB-18A every 2 years, regardless of condition.

NOTE

DIVER/TENDER - CHECK THE FOLLOWING:

Procedures	Initials
1) Visually inspect the interior/exterior of the Band Mask for any obvious signs of damage. Check to make sure the Oral Nasal Valve is correctly installed and the Oral Nasal Mask is installed on the Regulator Mount Nut properly. Ensure the Nose Clearing Device operates smoothly. Lubricate as necessary. Guidance Modular O & M Manual.	

Procedures	Initials
2) Ensure the Earphones and the Microphone are installed correctly. Check the Wire Lugs to ensure they are not touching each other. Guidance Modular O & M Manual.	
3) Ensure the demand regulator cover is not excessively dented. As a general guideline dents in the regulator cover should not exceed $\frac{1}{8}$ "/3.2 mm	
4) Inspect and replace the bent tube if it is excessively scratched, dented, or compressed deeper than $\frac{1}{8}$ " (3.18 mm). Check for erosion of the metal and severe corrosion. Replace if any erosion is present or integrity is in question. The bent tube is a critical component that routes breathing gas to the regulator system.	
5) Check all moving parts to ensure smooth and proper operation. a) Defogger/Steady Flow Control Knob b) EGS Valve c) Nose Block Device d) Regulator Adjustment Knob	
⚠ WARNING	
The One Way Valve must be tested daily prior to commencing diving operations. DO NOT DIVE THE MASK if the One Way Valve is not operating properly. If the hose parts near the surface, serious injury could result to the divers' lungs and/or eyes. In extreme cases, this could be fatal.	
6) Oral Method: Orally check the One-Way Valve. With the steady flow valve open, orally blow air thru the one-way valve. Air should pass freely. Next suck back on the umbilical adapter, no air should pass back thru the one way valve and umbilical adapter. If air can be drawn back thru the one way valve, the one way valve will require overhaul or replacement. DO NOT DIVE IF TEST FAILS.	
7) Connect the First Stage Regulator to the EGS Cylinder and the Mask Emergency Supply Valve. With the Cylinder turned OFF, open and close the Side Block Auxiliary Valve (EGS) to check for smooth operation. Then open and close the Defogger/Steady Flow Valve to check for smooth operation. Guidance O&M Manual.	

3. EGS Inspection



NOTE

The EGS being used must be properly maintained and fully functional.

DIVER/TENDER - CHECK THE FOLLOWING:

Procedures	Initials
1) Visually inspect all EGS hoses for signs of damage.	
2) Check to ensure the cylinder is within the VIP and the hydro dates.	
3) Ensure the First Stage Regulator pressure setting and the Over Pressure Bleed/Relief Valve settings have been checked within the past month. (Maintenance Log).	
4) Inspect the Safety Harness and Cylinder Retainer for wear and damage. Repair/replace as necessary	
5) Document inspection/maintenance in Maintenance Log (Appendix 3).	

4. Check the Mask

DIVER/TENDER - CHECK THE FOLLOWING:

Procedures	Initials
1) Rotate the Regulator Adjustment Knob in fully (clockwise), then rotate out (counterclockwise) 3-4 rotations to check for smooth operation.	
2) Open the EGS Supply Valve on the cylinder. Log the pressure _____ psig. Then open the Emergency Supply Valve on the Side Block.	
3) Momentarily open the Mask Defogger/Steady Flow Valve $\frac{3}{4}$ to one full turn. Check for a strong flow of gas out of the Air Train, and then close.	

Procedures	Initials
4) Check for gas escaping from the One-Way Valve. If any gas flow is detected the One-Way valve should be overhauled or replaced. DO NOT DIVE IF TEST FAILS.	

5. Attach the Umbilical

TENDER - CHECK THE FOLLOWING:

Procedures	Initials
1) Blow down the Umbilical and attach it to the Umbilical Adapter on the One Way Valve.	

6. Check the Demand Regulator Adjustment



NOTE

If the Purge Button moves more than ¼" before gas starts flowing, or if there is a weak flow of gas when fully depressed, adjusting the 455 Regulator is necessary. Guidance Modular O&M Manual.

DIVER/TENDER - CHECK THE FOLLOWING:

Procedures	Initials
1) Rotate out (counterclockwise) on the Demand Regulator Adjustment Knob until a slight free flow develops. Then rotate in (clockwise) until the free flow stops.	
2) For masks equipped with a SuperFlow or SuperFlow 350 regulator, slowly depress the purge button to check for excessive travel. The purge button should travel in no less than ⅛" and out no more than ⅛" (1.5–3 mm) before gas flow is heard. For masks equipped with a 455 balanced regulator depressing the flexible cover the cover should travel approximately ¼" (6 mm) before gas starts to flow.	
3) Fully press the purge button on the regulator and confirm a strong surge of gas.	

Procedures	Initials
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NOTICE

Pushing the purge all the way may cause a venturi free flow that requires back pressure (e.g., your hand) to stop the gas flow.

4) Ensure the Side Block Emergency Valve is closed , and the Bail Out Cylinder Valve is open . Log the cylinder pressure _____ psig.	
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7. Check the Communications

DIVER - CHECK THE FOLLOWING:

Procedures	Initials
1) Perform communications check.	

8. Check the Hot Water Supply (*If Applicable*)

TENDER - CHECK THE FOLLOWING:

Procedures	Initials
1) Check the hot water supply connections. Ensure topside supply has been switched to the diver and verify flow to hot water shroud and suit (if used).	

9. Check the Dry Suit Inflation Hose (*If Applicable*)

TENDER - CHECK THE FOLLOWING:

Procedures	Initials
1) Check the dry suit Inflation Hose Connection. Ensure the dry suit Inflation Valve and Exhaust Valve function properly.	

10. Check the Entire Rig

TENDER - CHECK THE FOLLOWING:

Procedures	Initials
1) Soap and leak check the Mask gas fittings and connections including the EGS.	

11. Check the Diver's Entire Rig

SUPERVISOR/TENDER - CHECK ADJUSTMENT/FIT OF THE ENTIRE RIG, INCLUDING THE FOLLOWING

Procedures	Initials
1) Diver's Safety Harness	
2) Umbilical Strain Release	
3) EGS Hose Quick Disconnect	
4) Boots, gloves, knife, and other accessories	
 NOTE All equipment must be adjusted properly and functioning correctly.	

DIVER - CHECK THE FOLLOWING:

Technician Signature: _____ Date: _____

Comments: _____

KMDSI strongly 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 user guide and 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.



The Maintenance Log, Appendix 3, found in the Misc. Appendices checklists on the Kirby Morgan website, may be used as a template to create blank pages to record all the maintenance performed.