

# KIRBY MORGAN EXO (FULL FACE MASK) MONTHLY MAINTENANCE, AND INSPECTION CHECKLIST

## APPENDIX A2.2

05-27-10

This inspection is the minimum recommended maintenance and **should be** performed at least **ONCE A MONTH** with Mask(s) in continuous use (used for more than 20 diving days in a month) or at least every **TWO (2) MONTHS**, with Mask(s) used less than 10 diving days a month.

**NOTE:** Mask(s) being used in polluted waters, or extreme environments, will require more frequent inspection.

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

**NOTE:** Perform the Manifold Block/Demand Regulator inspection procedures with gas supplies not connected. Attach the gas supply at Step 5 of the “Manifold Block/Demand Regulator” inspection procedure.

**NOTE:** Check the Kirby Morgan web site for the latest product improvement bulletins concerning the EXO Full Face Mask

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

<b>Head Harness &amp; Buckles</b>	
<b>PROCEDURES</b>	<b>INITIALS</b>
1. Remove and inspect Head Harness (Spider) for signs of tearing, deterioration, and/or damage. Ensure all five legs of the Spider are present. Guidance O & M Manual.	
2. Visually inspect for damage and clean all parts of the Buckle assembly components. Replace if necessary. Guidance O & M Manual.	
3. Buckles that show signs of excessive corrosion, bent, or damage should be removed cleaned, repaired or replaced. Guidance O & M Manual	

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<b>MASK ASSEMBLY PROCEDURES</b>	
<b>PROCEDURES</b>	<b>INITIALS</b>
1. Visually inspect the Mask exterior and interior for loose and/or missing fasteners and obvious signs of damage; including cracks, gouges, and/or damage due to chemical exposure (fuel oils).	
<b>NOTE:</b> Any cracks in the EXO mask frame cannot be repaired. The cracked or broken components must be replaced	
2. Remove communication components if installed. Guidance O & M Manual	
<b>NOTE:</b> Remove covers from the Earphones. Remove Microphone from the Oral Nasal Mask. Inspect and repair/replace as necessary. Perform a communications check. Guidance O & M Manual	
3. Remove the Oral Nasal Mask. Remove Oral Nasal Mask plug, if installed. Clean and inspect mask assembly for damage. Guidance O & M Manual	
<b>NOTE:</b> The EXO Original did not utilize a oral nasal mask	
4. Remove the Nose Clearing Block. Clean and inspect the Nose Clearing block. Guidance O & M Manual	
5. Remove the Comfort Insert if installed. Clean and inspect the Comfort Insert for damage and/or deterioration.	
<b>MANIFOLD BLOCK (OPTIONAL)</b>	
<b>PROCEDURES</b>	<b>INITIALS</b>
<b>NOTE:</b> The Manifold Block is only required when using the EXO with surface supported systems (umbilical diving)	

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<b>NOTE:</b> Maintenance procedures for the manifold block are in the EXO Full-Face Mask manual, chapter 5, section 5.8	
1. Attach a regulated gas supply (normally the EGS system), adjusted to between 135 – 150 psig (9.3 – 10.3 bar), to the Emergency Valve on the Manifold Block. Open the Emergency Supply Valve all the way, and then slowly open the regulated gas supply. Check for gas exiting from the One-Way Valve. There should be no gas exiting the Umbilical Adapter.	
<b>DEMAND REGULATOR</b>	
<b>PROCEDURES</b>	<b>INITIALS</b>
1. Ensure the Adjustment knob (dial-a-breath) rotates smoothly and there is no binding.	
2. Remove the Regulator Cover, Nylon washer, and Diaphragm. Visually inspect the interior of the Regulator Body for corrosion and/or contamination. Clean as necessary. Guidance O & M Manual.	
3. Carefully inspect the Diaphragm for cuts, tears, and deterioration. If any damage is found, replace the Diaphragm.	
4. Attach an air supply source to the Umbilical Adapter and set the supply pressure to between 135 - 150 psig (9.3 – 10.3 bar). Adjust the Regulator Adjustment Knob out, until a slight free flow develops, then adjust in until the free flow just stops and check the Lever play. There should be between 1/16” - 1/8” of play in the Lever. Adjust as necessary. Reinstall the Diaphragm, nylon washer, and cover. Guidance O & M Manual.	
5. Depress the Purge Button. The Button should travel 1/16” – 1/8” before gas starts to flow and a strong purge should be felt when the Button is fully depressed. If the Regulator Purge travel is less than 1/16” or greater than 1/8”, readjust the Lever. Guidance O & M Manual.	
6. Secure the gas supply, then bleed down and remove the gas supply from the Inlet Adapter.	
<b>Emergency Gas System (EGS)</b>	

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PROCEDURES	INITIALS
<b>NOTE:</b> The EGS is only required when using the EXO with surface supported systems (umbilical diving)	
<b>NOTE:</b> 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. 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.	
4. If a submersible pressure gauge is used, ensure it has been compared to a gauge of known accuracy.	
5. Test the First Stage Bleed/Relief Valve. Guidance per “Appendix 4: Bleed/Relief Valve Cleaning, Inspection, and Overhaul Procedures”.	
6. Log the lifting pressure _____ psig.	
<b>NOTE:</b> An adjustable First Stage Regulator and a Gas Cylinder with a minimum of 500 psig (34.5 bar) available are required for this step.	
<b>NOTE:</b> The Bleed/Relief Valve should be adjusted to start relieve 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 Regulator to ensure it is within the manufacturer’s specified pressure range. For KMDSI Helmets and Masks, the minimum over-bottom for the emergency supply is 135 psig (9.3 bar) and the maximum 165 psig (11.4 bar). 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.	

Technician Signature: \_\_\_\_\_ Date: \_\_\_\_\_

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 Systems, Inc., by telephone at (805) 928-7772 or via e-mail at [info@kirbymorgan.com](mailto:info@kirbymorgan.com), or contact Dive Lab, Inc., by telephone at (850) 235-2715 or via e-mail at [divelab@aol.com](mailto:divelab@aol.com).

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