# Kirby Morgan®
## Deep Sea Diving Helmets

## SuperLite® 17B

# A2.3
## Helmet 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 OR AT LEAST ONCE A DAY IF BEING USED DURING CONTINUOUS DIVING.

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.

**⚠ WARNING**

**These are recommended minimum checks when using Kirby Morgan Helmets or 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.**

**⚠ CAUTION**

**All diving conducted using Kirby Morgan Helmets or Band Masks must include the use of a fully functional, properly maintained Emergency Gas System ("EGS"). The EGS should be maintained in accordance with the Modular Operations and Maintenance Manual(s).**

NOTE

Section 3 steps (1)–(4) use the EGS for setting up and checking the Helmet 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 (12–14 bar). Do not attach the Umbilical until Step 6.

Date: _____

Helmet Serial Number: _____

Regulator Serial Number/Model _____ ☐ No Serial Number

Technician *(print name)*: _____

# 1. Yoke/Neck Clamp Assembly SL 17B

**⚠ WARNING**

**Anytime Helmets and Neck Clamps / Yoke Assemblies are mixed, the Neck Clamp must be checked for proper function, fit and adjustment prior to diving.**

## 1.1 Yoke/Neck Clamp Assembly SL 17B

Helmet Attachment Components

| Procedures | Initials |
|---|---|
| 1) Visually inspect the Neck Clamp/Yoke Assembly for signs of damage. Check the Neck Dam for tears, holes, and/or cuts. Ensure the Neck Dam is of the proper size and fit. | |
| 2) Test-mate the Yoke Assembly to the Helmet and check for proper Neck Clamp adjustment. If adjustment is necessary, use a 7⁄16" open-end wrench on Nut as a back-up wrench and a 7⁄16" deep well socket with a torque wrench and ensure Lock Nut is tightened using sound engineering practices. Repair/replace and/or adjust parts as necessary.<br><br>**GUIDANCE:** SuperLite® 17B Neck Clamp Area (Including Internal Chin Strap and Yoke) (17BNK) | |
| 3) Ensure the Latch Catch Assembly works properly, is not bent or deformed. Also check that the Safety Pin is present and attached with lanyard.<br><br>**GUIDANCE:** SuperLite® 17B Neck Clamp Area (Including Internal Chin Strap and Yoke) (17BNK) | |
| **NOTE** All Kirby Morgan helmet models, must be equipped with an internal chin strap. This internal neck strap is intended as a secondary helmet retainer in an unlikely event the helmet should separate from the neck ring/clamp assembly. | |
| 4) Visually inspect the helmet chin strap and fasteners. Check for signs of wear or damage and ensure it is fully functional. Replace if any damage is found.<br><br>**GUIDANCE:** SuperLite® 17B Neck Clamp Area (Including Internal Chin Strap and Yoke) (17BNK) | |

## 2. Visually Inspect the Helmet

| Procedures | Initials |
|---|---|
| 1) Inspect and replace the bent tube if it is excessively scratched, dented, or compressed deeper than ⅛" (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. | |
| 2) Visually inspect Helmet Shell interior and exterior for damage and/or contamination. Check that the Oral Nasal Valve is correctly installed and the Oral Nasal Mask is installed on the Regulator Mount Nut. Ensure the Nose Clearing Device operates smoothly. Lubricate as necessary. | |
| 3) Ensure the Earphones and Microphones are installed correctly. | |
| 4) Inspect the Head Cushion for proper fit, broken snaps, tears, and/or rips. Lightly lubricate male snaps with silicone 111 and secure snaps into helmet. | |
| 5) Check the O-ring at the base of the Helmet for signs of damage. Ensure the O-ring is lightly lubricated. | |

## 3. EGS Inspection

NOTE

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

| Procedures | Initials |
|---|---|
| 1) Visually inspect all EGS Hoses for signs of damage. | |
| 2) Check the hydro date and ensure the cylinder is within the VIP and the hydrostatic date. Visually inspect the cylinder and valve for obvious signs of damage. | |

| Procedures | Initials |
|---|---|
| 3) Ensure the First Stage Regulator pressure and the Over-Pressure Bleed/Relief Valve settings have been checked within the past month. | |
| 4) Inspect the Safety Harness and Cylinder Retainer for wear and/or damage. Repair/replace as necessary. | |

## 4. Check the Helmet EGS

| Procedures | Initials |
|---|---|
| **⚠ WARNING**<br>**The One Way Valve must be tested daily prior to commencing diving operations. DO NOT DIVE THE HELMET 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.** | |
| 1) 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.** | |
| 2) Connect the First Stage Regulator to the EGS Cylinder and the Helmet Emergency Supply Valve. With the cylinder turned OFF, open and close the Side Block Emergency Valve to check for smooth operation. Then open and close the Steady Flow/Defogger Valve to verify smooth operation. | |
| 3) Rotate the Regulator Adjustment Knob in fully (clockwise), then rotate out (counterclockwise) 3–4 rotations to check for smooth operation. | |
| 4) Open the EGS Supply Valve on the cylinder. Log the pressure _____ psig. Next open the Emergency Supply Valve on the Side Block. | |
| 5) Momentarily open the helmet steady flow ¾ to 1 full turn. Check for a strong flow of gas out of the defogging train, and then close. | |

| Procedures | Initials |
|---|---|
| 6) 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. Check the Demand Regulator Adjustment


If the Purge Button travels further than ¼" before gas starts flowing, or has a weak flow of gas when fully depressed, the adjustment of the Regulator is necessary. Guidance Modular O&M Manual.

| Procedures | Initials |
|---|---|
| 1) Rotate the Demand Regulator Adjustment Knob out (counterclockwise) until a slight free flow develops. Next rotate in (clockwise) until the free flow stops. | |
| 2) For helmets 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 1/16" 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. | |

| ***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 shut and the Bail Out Cylinder Valve is open. Log the cylinder pressure _____ psig. | |

## 6. Attach the Umbilical

| Procedures | Initials |
|---|---|
| 1) **TENDER:** Blow down the Umbilical and attach it to the Umbilical Adapter on the One-Way Valve. | |

## 7. Check the Communications

| Procedures | Initials |
|---|---|
| 1) **DIVER:** Perform communications check. | |

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

| Procedures | Initials |
|---|---|
| 1) Check hot water supply connections if applicable. | |

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

| Procedures | Initials |
|---|---|
| NOTE When securing the inflation hose to the side block, Kirby Morgan P/N 555-210 Restrictor Adapter must be used to limit gas flow in case of an inflator hose failure or rupture. | |
| 1) **TENDER:** Check the dry suit Inflation Hose Connection. Ensure the dry suit Inflation Valve and Exhaust Valve function properly. | |

## 10. Tender-Check the Entire Rig

| Procedures | Initials |
|---|---|
| 1) **TENDER:** Soap and leak check the Helmet/Mask gas fittings and connections including the EGS. | |

## 11. Neck Clamp Pin

| Procedures | Initials |
|---|---|
| 1) Neck Clamp properly adjusted and Safety Locking Pin present. | |
| 2) Diver's Safety Harness is properly rigged and in good condition. | |
| 3) Umbilical Strain Release. | |
| 4) EGS Hose Quick Disconnect in good working order. | |
| 5) Boots, gloves, knife, and other accessories. | |

## 12. Tender

| Procedures | Initials |
|---|---|
| 1) Note comments or discrepancies below in the comments section. Log maintenance in the applicable maintenance log. | |

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.