

OPERATOR/USER TRAINING ON ALL KM HELMETS

ENABLING OBJECTIVES

Upon completion of the KMDSI Operator / User Course, the trainee will be able to perform the KMDSI recommended pre-dive inspection and maintenance procedures in accordance with the KMDSI Inspection and Maintenance Checklists:

- A2.2 Monthly Maintenance
 - A2.3 Daily Set-Up and Functional Checklist
 - A2.4 Supervisor's Equipment Checks Prior to Entry
 - A2.5 Supervisor's Equipment Checks In-Water
 - A2.6 Post Dive Cleaning
- ✓ State the KMDSI recommended maintenance periodicities and the definitions or guidelines for each.

NECK DAM/RING ASSEMBLY

- ✓ Upon instruction of this section the student will be able to:
- a) Describe/perform a proper inspection of Yoke/Neck Clamp Assemblies on the SL 17 A/B Helmet
 - b) Describe/perform a thorough inspection of the weldment areas of concern.
 - c) Explain and demonstrate the proper adjustment of the Neck Clamp and Latch Catch Mechanisms.
 - d) The areas of inspection and the difference between the Push-Pin Plunger and the new style Pull-Pin Plunger and the reasons for the upgrade.
 - e) Demonstrate proper removal, inspection, cleaning, and lubrication of Helmet/Neck Ring O- ring and state the recommended lubricants.
 - f) Explain the SL 27, KM 37 type Neck Dam with pull pins. How is it different than the SL 17A/B.
 - g) Explain/demonstrate the proper placement of the Safety Pin and Lanyard and the reasons for it (17A/B only).
 - h) Describe/perform a thorough inspection of a Neck Dam, both neoprene and latex. Explain what type of contaminants and environmental conditions will cause deterioration of each.

HELMET ASSEMBLY

- ✓ Upon instruction of this section the student will be able to explain:
- a) How the KMDSI maintenance and inspection procedures and instructions are to be used.
 - b) How the KMDSI maintenance system is structured and where information may be found.
 - c) Explain the responsibilities of a KMDSI Technician and Operator / User.

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HELMET ASSEMBLY continued

- d) Explain/demonstrate a proper, thorough exterior Helmet Inspection and explain the types of damage that might be found, and areas of concern.
- e) Explain and demonstrate the inspection of the Face Port and related components.
- f) Describe/perform a thorough inspection of the Helmet Locking Collar assembly (KM 37 type).
- g) Describe/perform an inspection of the sealed Pull-Pins and state what they are looking for and how the Pins should be serviced.
- h) Explain/demonstrate a thorough inspection of the Swing Catch Assembly and the Helmet Ring, describing areas of concern (KM 37 type).
- i) State the purpose of the Helmet Liner/Cushion and why it should be maintained in good condition, how it can be tailored to fit.
- j) Describe/perform proper inspection and required maintenance of Communications System.
- k) Explain the proper maintenance and inspection of the Oral/Nasal Mask and Valve Assembly.
- l) Explain the purpose of the Oral/Nasal Mask Valve Assembly.
- m) State the advantages/disadvantages and limitations of the Quad / Tri Valve Exhaust System.
- n) Perform Main Exhaust /Water Dump Valve Inspection, thoroughly describing, "seating surface".

SIDE BLOCK

- ✓ Upon instruction of this section, the student will be able to explain the inspection and operation of the following Side Block Components:
 - a. One-way Valve
 - b. Defogger Valve
 - c. Emergency Gas or (EGS) Valve
 - d. Valve Knob Components

DEMAND REGULATOR

- ✓ Upon instruction of this section, the student will be able to state and demonstrate:
 - a) KMDSI recommended daily and monthly maintenance.
 - b) Properly, clean and inspect using the daily post dive Checklist, reassemble, adjust, fine- tune the Demand Regulator.
 - c) Explain sanitizing procedures of the Demand Regulator and associated components, and what safety precautions must be observed.

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DEMAND REGULATOR continued

- d) Explain how Helmet parts and components are cleaned and corrosion is removed.
- e) Explain how to perform O-ring inspections and how to lubricate components.

EMERGENCY GAS SUPPLY

- ✓ Upon instruction of this section, the student will be able to:
 - a) State the periodicity for the Hydrostatic and Visual Inspection for the Emergency Gas Cylinder.
 - b) Conduct a thorough visual and functional test and inspection of all EGS components, including the maintenance records to ensure maintenance is in compliance with manufacturers' recommendations.
 - c) Demonstrate/perform testing of the First Stage Relief Valve.
 - d) Check/demonstrate/perform the correct recommended setting of the over-bottom of the First Stage Regulator for the Emergency Gas Supply (EGS) Cylinder.
 - e) Explain the hazards involved in not having EGS gas up to the First Stage when diving.