

# Kirby Morgan Dive Systems, Inc.®

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### General Notice #1 of 2009, December 23, 2009 Kirby Morgan Helmet Retaining Systems

Kirby Morgan encourages customers to review the Operations section of their Kirby Morgan Manual to insure that helmet users as well as tenders and supervisors are up to date on all Kirby Morgan helmet and mask dressing procedures and helmet retaining systems.

It is imperative that all diving personnel involved with the use of Kirby Morgan helmets understand how these systems work and how they can be adjusted to fit the individual diver.

Recent inquiries have shown that there is some confusion over which helmet retaining systems are approved and recommended by KMDSI. The purpose of this notice is to clear up any confusion as to what type of helmet and BandMask® retaining systems are recommended or approved by KMDSI and to remind all users of KMDSI helmets and masks of the importance of proper maintenance, inspection and dressing procedures.

### **Retaining Systems Background:**

Kirby Morgan SuperLite 17A/B helmets have several back up features and components intended to prevent the helmet from coming off the diver in the event the primary securing system fails due to damage, wear, improper dress-in or improper use.

The SL-17A is no longer produced. However, the retaining systems from the SL-17B work on the SL-17A, making upgrade easy.

The SL-17B comes standard with a safety pin (part no. 535-900) that prevents the inadvertent operation of the latch catch mechanism that secures the helmet to the neck clamp / yoke assembly. In many cases the pin is not used due to the user removing and discarding it. This is not recommended.

Another secondary retaining feature is the helmet head cushion. The head cushion for the SL-17B has a chin strap that secures the head cushion to the head and has snaps that secure the head cushion to the helmet. If the head cushion is not snapped to the helmet or the chin strap is not in use, the head cushion will not work as a restraint.

The head cushion is often shoved into the helmet without securing it to the four retaining snaps thus rendering this retaining system useless.

Some divers remove the chin strap on the head cushion because they find it uncomfortable. This is not recommended unless the helmet is fitted with the internally mounted chin strap retainer.

Currently all helmets, except the 17C, manufactured by Kirby Morgan are equipped with a chin strap placed internally and attached to the shell in a manner similar to that of motorcycle helmets. The internal chin strap was made to simplify and standardize a secondary retaining system that could be used in all KMDSI helmets. The internal retaining strap has been well received. Up-grade kits are available for all older helmets.

In addition to the chin strap, the SL-17B also has a low profile strap retainer system that connects the helmet

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to the neck clamp/yoke assembly which can be used instead of the new internal shell mounted chin strap or in addition to the chin strap.

Regardless of the retaining system used, for the SL-17B, the safety pin (535-900) should always be used. The safety pin prevents inadvertent or accidental operation of the pull latch catch mechanism that secures the neck clamp/yoke assembly to the helmet

All other models of KMDSI helmets, (KM-77, 57, 47, 37, 37SS, 27, 17C, 17K) have secondary retaining features and systems built into the helmets that will prevent the helmet from accidentally coming off the diver.

First are the two independent oil filled sealed pull pins, part no.505-110. If these pins are properly engaged they will lock the helmet securely in place.

Second, the neck pad slider assembly when properly adjusted fits comfortably around the neck and helps prevent the neck dam ring assembly from dropping free from the helmet ring unless the users head is bent downward and the shoulders are dropped and a downward pressure is applied to the yoke.

Third, in 2006 KMDSI started installing the motorcycle type chin strap retainer inside all helmet models except the 17C. This chin strap is used as a final back up. Kirby Morgan strongly recommends the use of the chin strap and discourages the use of any other non approved retaining systems and/or modifications.

The KMDSI pre-dive inspection and supervisor checklists outline the recommended dressing and inspections procedures that should be conducted by the tender and diving supervisor. **Performing the KMDSI recommended inspections in accordance with the KMDSI checklists will help insure the proper set up and function of the helmet or mask being used.** All the KMDSI helmet and Band Mask® maintenance and operation checklists can be downloaded from the KMDSI web site. KMDSI strongly recommends all supervisors, tenders, divers and diving personnel become familiar with the KMDSI checklists and applicable operations and maintenance manuals for the models of helmets being used.

With the addition of the new style chin strap mounted to the helmet shell, the strap which used to be fixed to the neck dam ring assembly on all helmets except the SL-17B has been removed. The old style chin strap on the outside of the neck ring only provided a pull point for neck ring removal during undressing which can also be accomplished by the pull strap located at the rear of the neck dam ring assembly. The exterior chin strap was never intended as a secondary retaining system. This strap may still be used in addition to the internal chin strap if desired.

Further information on the SL-17B chin and yoke strap retainers can be found in KMDSI bulletin 3 of 2003 and further information on the chin strap changes for all the helmets using sealed pull pins can be found in bulletin 16 of 2005. www.kmdsi.com

#### **Entanglement Hazards:**

To ensure that there are no entanglement hazards which may interfere with the operation of your Kirby Morgan helmet, KMDSI strongly recommends that all diving supervisors, tenders and divers visually inspect all man worn support equipment such as diver worn harnesses, as well as equipment that has been attached to the helmet, such





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as underwater lights, cameras, and any other equipment that will be used by the diver.

During dress in of the diver using the SuperLite® 27, 17C, 17K, KM 37, KM 37SS, KM 47, KM 57, KM 77 it is imperative to check that the pull pins are fully engaged and do not rotate when twisting force is applied. Rotation of the knob indicates that the pin is not fully engaged.

In some cases modified head cushions or additional neck pads, as well as long hair or pony tails can get caught between the neck dam ring and the helmet ring preventing one or both of the pull pins from fully engaging due to binding in the pin bore. When binding occurs sometimes one pin will engage fully while the other may not. The "Tender" must insure both pull pins are fully engaged by visually checking as well as manually attempting to rotate the pull-pin knob. If a pull-pin knob rotates when twisted, the pin is not engaged properly.

All KMDSI helmets and masks sold in the EU are CE marked and cannot be modified, altered or used with aftermarket, non-KMDSI components such as neck dams, head cushions or oral nasal masks. Companies or persons that modify alter or use non standard components do so at their own risk. Divers and tenders using KMDSI helmets and masks as well as technicians servicing the equipment should be properly trained in accordance with the recommendations and guidelines as stated in the KMDSI operations and maintenance manuals as well as the KMDSI technician and operator user guides.

Kirby Morgan has always put the safety and comfort of the diver as our top priority. A properly fitted diving helmet or Band Mask® is key to both, comfort and safety.

