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Technical Bulletin – AAD Cutter Placement

Date of Issue: 25th January 2022

Subject: Aerodyne ICON AAD Cutter placement

Bulletin: TB-250122

Status: Recommended

Background:

During a recent series of static ground testing with activation of an AAD, it has been determined that on certain sizes of the Aerodyne Research Icon container system, some abnormalities in the deployment of the reserve pilot chute have been recorded. Tests were performed with fully packed containers (main / reserve canopy in the container) to replicate non-pull situations by the jumper.

Although static ground tests do not fully replicate the function of the equipment in live conditions with surrounding airflow and movement of the jumper, we recognize the concern from such results.

The Icon container system has been in use since 2002 and has from that time thousands of reserve deployments and many AAD activations with subsequent saves of life. No incidents of the reserve system have been reported under use in live conditions.

The French Parachute Federation has already in 2008 on their own account determined a preferred AAD cutter location above the reserve pilot chute. At that time, Aerodyne Research tested and approved an alternative AAD cutter location upon request (reference to Service Bulletin SB210108). To our knowledge, the French Parachute Federation has had no other observations or experiences from real-life use of the Icons with this cutter placement compared to what is the regular position of the cutter on the remainder of the Icons in the rest of the world.

Reasoning:

Static ground test videos which highlight different equipment not functioning properly are becoming more commonly accessible and shared which can cause insecurity to the users. The scenario of hesitations or delays of reserve openings being tested on the ground are not uncommon or unknown throughout the skydiving industry.

To address this concern, and to introduce an improvement in the AAD integration, Aerodyne Research recommends the AAD cutter placement to be moved from the existing position on flap #1 (underneath the pilot chute) in the reserve container to flap #3 (above the reserve pilot chute) on Icon containers in the IX- series from sizes I-1 through I-5/S-5 which are fitted with an AAD.

Recommended action:

Move the AAD cutter placement from current placement on reserve flap #1 to reserve flap #3 at the owners' earliest convenience.

Since there are no practical changes in the construction of the reserve container referring to the AAD cutter placement since the French bulletin on request from 2008, the modification instructions in this bulletin, SB210108, still provide general direction to perform the modification and is included as part of this bulletin.

Products affected by the bulletin:

Icon containers in the IX- series from sizes I-1 through I-5/S-5 which are fitted with an AAD.

Personnel:

Master rigger or foreign equivalent.

Conclusion:

Skydiving equipment is rigorously tested to work in the conditions it is intended to be used for. After performing extensive testing in proper conditions, Aerodyne Research remains confident that the reserve activation of the AAD is safe and fully functional in its working environment.

When new knowledge becomes available this leads to further development and creates better equipment. When a change or an improvement is implemented, it does not necessarily imply that previous solutions suddenly become unsafe.

At this opportunity, Aerodyne Research would like to reiterate the need to always follow the manufacturer's instructions for proper packing and maintenance of all parts of any parachute system, such as reserve loop lengths and proper sizing of all components etc.

Authority:

AD Hayhurst
(*sign*)

President
Aerodyne Research LLC



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Status : Bulletin Upon Request

Identification: All ICON Harness/Container.
Part Number: P120, P125

Background: French Parachute Federation have certified it compulsory for all Harness/Containers used in France must have the AAD cutter fitted above the reserve spring loaded pilot chute.

The ICON Harness/Container was designed, tested and certified with the AAD cutter positioned below the reserve spring loaded pilot chute and positioned on reserve Flap #1. Aerodyne has also certified the AAD cutter to be positioned above the reserve spring loaded pilot chute. Both positions of the AAD are approved and effective. The Technical Bulletin is hence classified as optional.

Materials: Size E Nylon Thread
43mm TYPE 12 Webbing
25mm TYPE 3 Tape



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Pictures:

1. Removal of Existing AAD Cutter Position



1.1 Reserve Flap #1



1.2 Remove Type 12 Webbing



1.3 Carefully un-pick Edge binding and cut TYPE 12 Webbing



1.4 Cut TYPE 12 Webbing



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cont. - Removal of Existing AAD Cutter Position

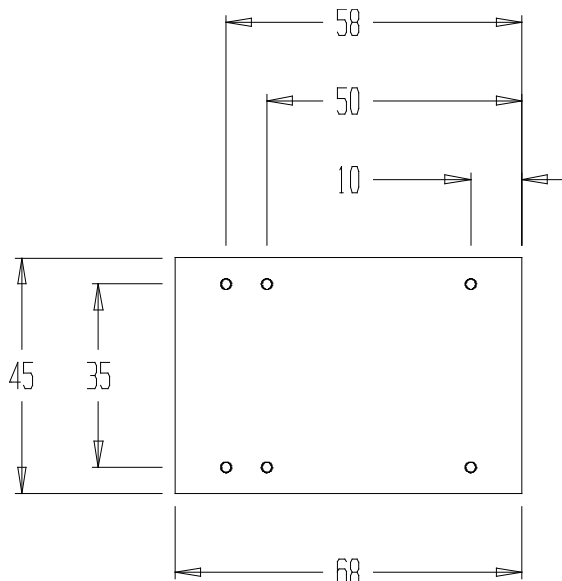


1.5 Carefully unpick Elastic Keeper.
Elastic Keeper is reused



1.6 Rebind. Reserve Flap #1 is complete.
Binding stitch shown in white. Back tack
at least 10mm

2. Preparation



2.1 TYPE 12 Webbing Template.
Dimensions in mm



2.2 Cut TYPE 12 Webbing as per Template

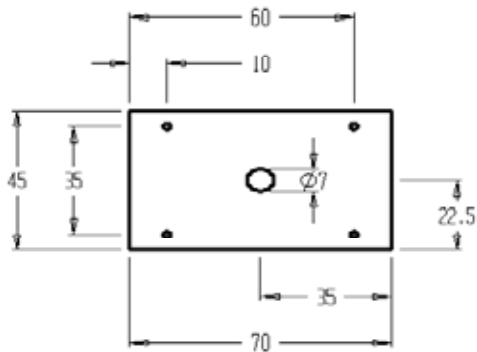


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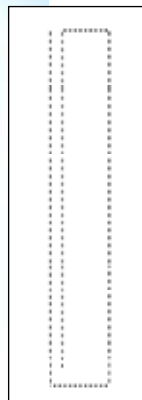
cont. - Preperation



2.3 TYPE 12 Webbing Template.
Dimensions in mm



2.4 Cut TYPE 12 Webbing as per Template



2.5 Stitch Elastic Keeper onto TYPE 12 Webbing as shown. Use Nylon E Thread



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3. New AAD Cutter Position



3.1 Stitch TYPE 12 kit onto Reserve Flap #2 as shown

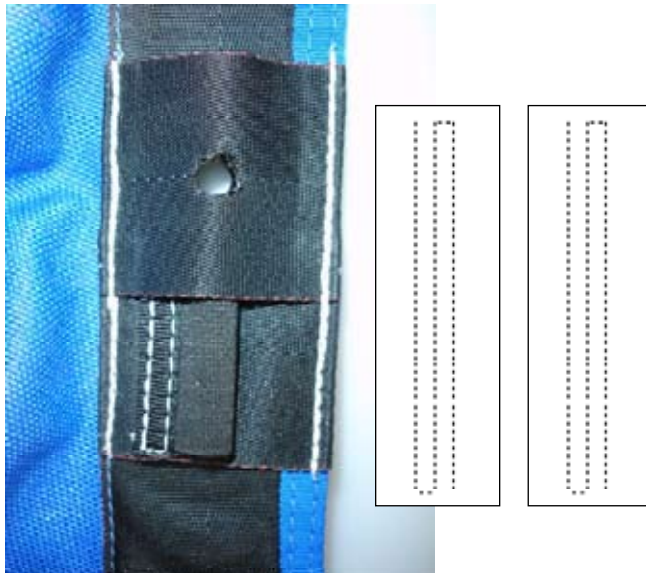
NOTE: ref TB-250122:

On Icon IX models the Type 12 kit is placed on Flap # 3 (same reserve flap).

(Illustrations from 2008 show Icons without the current flap 2 installed).



3.2 Fold edge of TYPE 12 webbing and stitch opposite side down on top of Edgebinding



3.3 Stitch Type 12 AAD Cover Piece as shown



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4. AAD Cutter Cable Tunnel



4.1 Finished Product



4.2 Measure and mark 20mm from Intersection between Flap #1 and Flap #2. This mark is the alignment mark for the start of the tunnel



4.3 Prepare Tunnel with 25mm TYPE 3 Tape. Match size to Container



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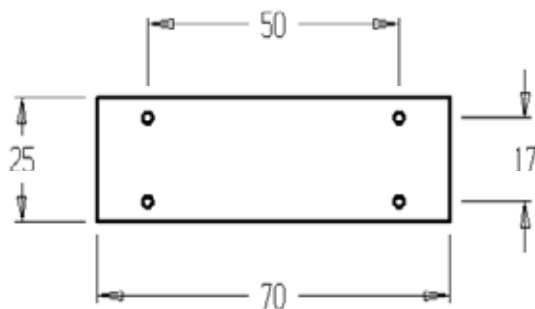
cont. - AAD Cutter Cable Tunnel



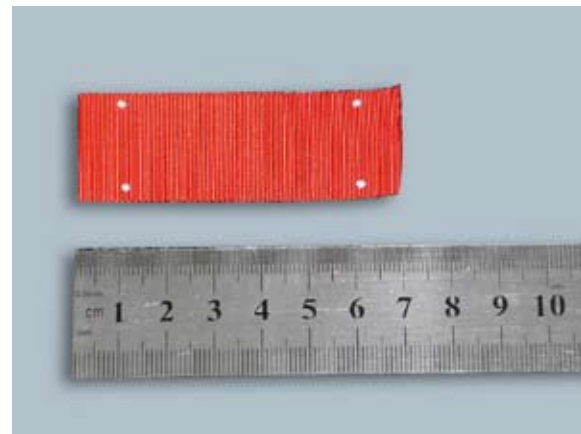
4.4 Start of Tunnel at 20mm mark.
Backtack at least 10mm



4.5 Finish Tunnel as shown. Backtack at
least 10mm



4.6 TYPE 3 Template.
Dimensions in mm



4.7 Cut 25mm TYPE 3 Tape



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cont. - AAD Cutter Cable Tunnel



4.8 Stitch TYPE 3 Tape as shown



4.9 Mark 10mm along Flap #1 from intersection as shown



4.10 Use a hot knife and cut 15mm slot in Flap #1 as shown



4.11 Finished Product



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5. Packing



5.1 Thread Cutter thru slit in Panel #1



5.2 Thread Cutter as shown



5.3 Thread Cutter as shown



5.4 Thread Cutter as shown



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cont. Packing



5.5 Thread Cutter as shown

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