



State Commission on Aircraft  
Accidents Investigation

## MESSAGE [Preliminary Report]

2 July, 2015

on paraglider accident  
(SCAAI reference number: 860/15)

On 31 May, 2015 in Rudniki near Częstochowa a paraglider accident occurred.

### Paragliding set used for the flight:

Wing: manufactured by AirG Emilie Peace 20

Harness: manufactured by AVA SPORT, ACRO BASE XL

Rescue parachute in Cut Away System: manufactured by Apco, Guided Mayday (with attached RSL system)

Ejection rescue parachute: manufactured by Skyline, Survive

### Injuries to persons:

Injuries	Crew	Passengers	Others
Fatal	1	-	-
Serious	-	-	-
Minor/None	-	-	

### Findings:

The pilot was an experienced pilot performing aerobatic flights.

On the day of the accident, around 14.40 hours the pilot began a launch to perform aerobatic flight. It was a towed launch. The pilot released the towline at a height of about 500 meters. After completing a few aerobatic maneuvers and incorrect finishing of one of them at a height of approximately 150 m the risers were twisted. The pilot activated CUT AWAY SYSTEM but only the left riser was separated. However, the RSL system pulling out Guided Mayday rescue parachute was attached to the right riser which was not separated. The pilot was falling in this configuration up to a height of about 5 m, when he activated Survive ejection rescue parachute. The parachute did not open.

The pilot collided with the ground at a high speed. Due to suffered injuries the pilot died.

At the scene it found that the cut away handle was fully pulled out - Bowden cables entirely outside the housings, while the right karabiner remained not released in the 3-ring system.

Two versions of the manual: *ACRO-BASE-old-version.pdf* and *ACRO-BASE-MANUAL-2015-Series.pdf* were published on the website of the harness manufacturer:

<http://avasportcentral.com/product/acro-base/>].

In both versions of the manual the photos show that the wing is attached to the harness through a shackle and not through a karabiner. However, in the *ACRO-BASE-MANUAL-2015-Series.pdf* manual among the specified parts of the CUT AWAY SYSTEM shackles have been clearly indicated by the manufacturer as karabiners [Item 1. CUT AWAY SYSTEM on page 6 - Photo No. 2]. There is no such indication in the *ACRO-BASE-old-version.pdf* manual [item 1. CUT AWAY SYSTEM on page 4 - Photo No. 1]. These issues will be the subject of further analysis.

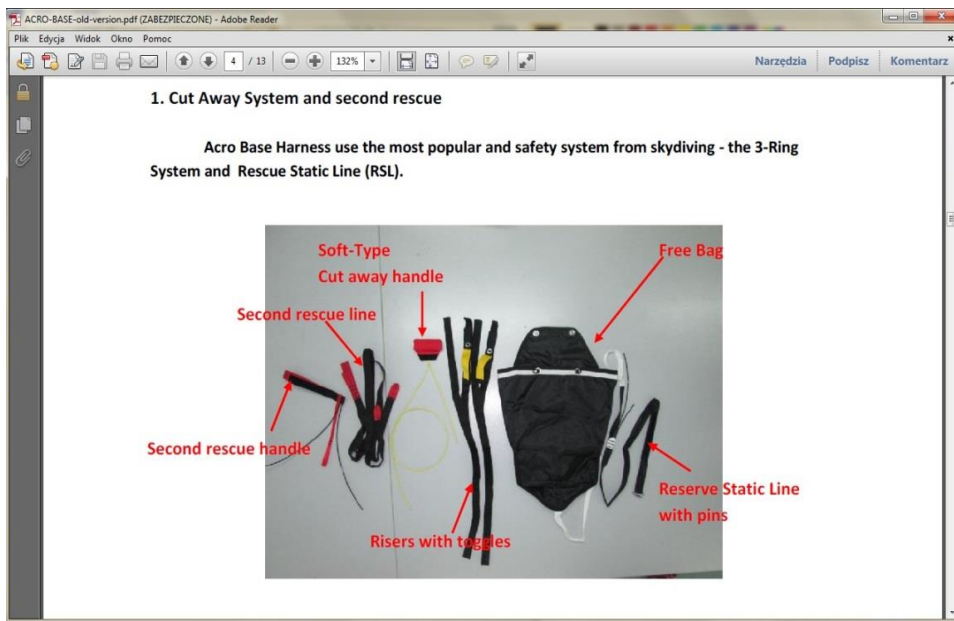


Photo No. 1

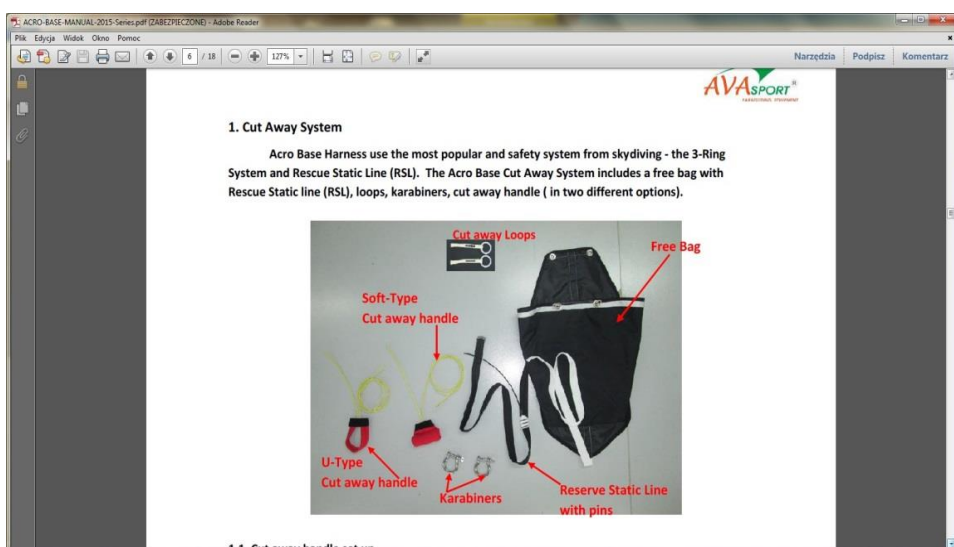


Photo No. 1

The CUT AWAY SYSTEM used by the pilot, called by the manufacturer 3-Ring System, actually had two rings and a karabiner instead of two rings and a shackle as published in the manuals on the manufacturer's website.

A preliminary functional tests of the CUT AWAY SYSTEM used by the manufacturer in ACRO BASE harness have been carried out. Various types of karabiners have been used. It has been found that some situations have occurred in which the cut away process of paraglider wing risers has been blocked. At this stage of the investigation it has been concluded that blocking the cut away process is due to the shape of the karabiner used to attach paraglider wing [including its thickness and geometry] and its orientation to the tapes of the 3-Ring System. Below are photos showing the way of blocking of the risers cut away system.



Photo 3. During the tests harnesses were suspended. Their own weight was enough to block.



Photo 4. SupAir karabiner (aluminum) used in the accident flight. The blocking of cut away process was due to pressing on the small ring by the karabiner and blocking the movement of the bigger ring on the karabiner gate.

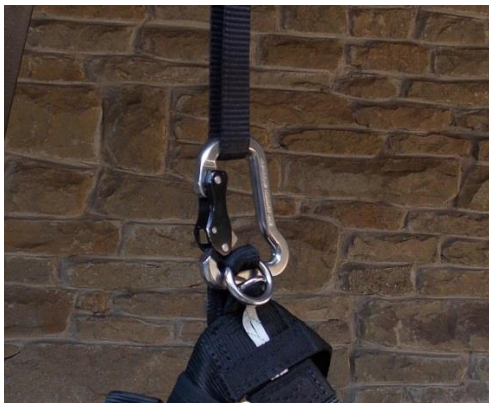


Photo 5. Different shape karabiner (Australpin Parafly). The blocking of cut away process was due to locking the bigger ring tape by the karabiner gate.



Photo 6. Different shape karabiner (SupAir - steel). The blocking of cut away process shows the same nature as in the case of SupAir aluminum karabiner - see photo 4.

Tests with a harness of another manufacturer using CUT AWAY SYSTEM were also carried out. The results were the same as in the case of ACRO BASE harness, i.e. the same karabiner blocking occurred in an identical karabiner position in 3-Ring System.

**The Commission reminds** that each device, including each component of a set arranged for paragliding flight, must be operated in accordance with the manufacturer's instructions and limitations provided (described) in user instructions and manuals. Any modification of a system arrangement which is not agreed with manufacturer is burdened with enormous risk of malfunction.