



2013 CIVL PLENARY – ANNEX 19E

PARAGLIDING XC – MANDATORY SECOND RESERVE

Making mandatory a second reserve in paragliding XC Category 1 events has been studied extensively. The first study was published by the Competition Safety Task Force in their December 2011 report. It said :

“One of the fatalities in Piedrahita is partially attributed to the fact that the pilot was unable to deploy his reserve parachute with his left hand, since the deployment handle was placed on the right-hand side of his harness. The task force discussed advantages and disadvantages of harnesses with two reserves or two reserve handles, one on each side. There is some concern that while such a design may provide additional safety in some situations, this gain may well be neutralized again by the higher probability of accidental reserve deployments. The task force also feels that introducing rules that require pilots to change costly parts of their gear should be done only with great care and when absolutely sure of the positive consequences.”

...

“To avoid further turmoil, we [the task force] concluded that any regulation regarding pilot equipment should fulfil these criteria, both in the short and the long term:

1. Stay in alignment with PWCA rules...
2. Avoid forcing competition pilots to change their gear more often than they can afford.

...

“Further research should be done on the topic of ambidextrous and/or automatic reserve deployment, answering, amongst others, the following questions: Is there an actual need; how can it be achieved; are front-mounted reserves a solution, even in high-G spiral incidents; how can the higher risk of accidental deployment be mitigated; one or two reserves? A reserve system that would automatically deploy upon detecting G forces sufficient to produce blackout would be attractive if the cost could be kept within reach of most pilots.”

...

“Long Term recommendations

- Establish in CIVL's procedures and regulations that all rule changes affecting harnesses are only to be made with a minimum lead time of 22 months: Changes accepted by the CIVL Plenary in 201x will become effective for the seasons starting in 201x+1 (both in the northern as in the southern hemisphere) at the earliest.
- Encourage, support, fund research and development in the area of paragliding reserve systems.”

In February 2011, the CIVL Plenary elected in its Bureau a majority of new comers. Also the Paragliding Subcommittee did not work as it should have. It might explain – if not excuse – why the Task Force report and its recommendation on supporting research on paragliding reserve systems was not answered.

The Safety committee, though, studied the advantages and disadvantages of harnesses with two reserves (one on each side), or with one reserve, with one central handle or two side handles. They did not agree on what the best solution was and let the matter lay.

During the northern hemisphere Summer, one fatality was registered in the Bulgarian test-event for the 2013 World championship. Witnesses reported that the pilot could deploy his reserve parachute, but too late. As he laid on the ground he was still holding his breaks.

A month and half later, during the European championship in France, two pilots fell from the sky without deploying their reserve parachute. Miraculously, they survived.

Early this November, CIVL Bureau met for its Autumn meeting. The reserve parachute issue was on its agenda. Once again, the respective merits of one or two reserve were discussed at length.

During its meeting, the Bureau received this recommendation from PMA:

"The PMA recommends making a second reserve mandatory for FAI Category 1 competitions. The PMA does not wish to go into any detail on precisely what and how, but all pilots should carry the current mandatory reserve parachute plus one more, the latter must be deployable with the opposite hand compared to the main reserve or even better with both hands. Harness manufacturers will be able to supply owners of existing competition harnesses with pods with integrated reserve parachute container (for example as front container in the place of a cockpit). Pilots would not necessarily need to buy a complete new harness."

The Bureau felt that it could not postpone anymore a decision that – even if imperfect – was sure to make things safer. It choose unanimously the two reserve, for it was felt that this solution was the safest. The pilots were given 18 months to adjust.

The Bureau used PMA terms: "From May 1st, 2014... all pilots should carry the current mandatory reserve parachute plus one more. The latter must be deployable with the opposite hand compared to the main reserve or, even better, with both hand."

Such a decision has to be ratified by the 2013 Plenary. So it was put on the agenda of a renewed Paragliding Subcommittee that was asked to give its advice.

One or two reserve. Again the subject was discussed at length and some manufacturers consulted. Was also discussed:

- The need to take care of one's equipment and to be trained to use it.
- The difficulty to reach handles for under seat reserves, or if the harness shoulder straps are too loose.
- The systematic use of a second reserve in PG aerobatics.
- The need to use reserves adapted to one's weight.
- The possibilities to finance research for automatic deployment system.
- The consequences for Category 2 competitions.

In early December, data from paragliding accident and incident reports received in the CIVL accident and incident reporting system were collated and discussed. These data were not available for the Bureau Autumn meeting (see [Annex 19g](#)).

As the discussion came to an end, no unanimity was found. Supporters of mandatory second reserve and supporters of not making anything mandatory were still holding their ground with reasonable arguments.

Still in the end there was a strong majority to support the Bureau decision (8 to 1).

So the Paragliding Subcommittee proposals stand like this:

Proposal 1:

Section 7b 2.18.4 is modified as follow

A helmet is compulsory.

Pilots must carry a serviceable reserve parachute.

From May 1st, 2014, all pilots must carry this reserve parachute plus one more. The latter must be deployable with the opposite hand compared to the main reserve or, even better, with both hand.

Pilots are encouraged not to wait for this deadline to get equipped with a second reserve.

Pilots should make sure that both reserve parachute, main and second, are within the maximum certified weight. Pilots should check and repack their reserves regularly and get used to throw them while in flight simulators.

The alternative proposal was adding:

A pilot may apply for a waiver from the second reserve requirement if their NAC certifies that they are proficient in the required manoeuvres outlined on the Pilot Experience Form on the gear they will be flying in the event and they post video evidence publicly for confirmation.

Proposal 2:

The Paragliding Subcommittee request a budget of 2,000€ to test the Automatic Rescue and Alert System (ARAS) in the next Category 1 event.

The developers would supply four or five units (even if prototype), without the cutter for the parachute system, simply to be issued to volunteering pilots by the steward (keep records as per the pilot experience form for reference or possible extra data).

The idea is that :

- It could provide relevant data and field experience to assist the developers.
- It could bring pilot awareness of the existence of this sort of technology since they will see an actual unit.

The developers could use the live tracking data streams also for their development of the system, since that would provide them with much more data. However it may be that the data update rate of the GPS unit internal to the ARAS system is providing data multiple times per second, in which case actual trial units would be beneficial.

Benefits from such a trial:

- The developers get data and exposure to a potential market.
- Pilots get to see the units and the data could be presented so that they could see (and hear if they are one of the volunteers) if the alarm would activate.
- CIVL might benefit from determining whether such technology which could then be extended to the actual automatic deployment, could assist in the particularly dangerous cases where pilots either consciously choose to not throw, or fail to choose at all (because of distraction with the malfunctioning wing).

Since both sides get benefits, the cost of any such trial units should be heavily discounted, or failing that, get a secured deal with the developers for large future discounts on the final product.