

EN-lightenment revisited

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I RECENTLY FOUND SOME TIME TO PUT DOWN MY THOUGHTS ON YOUR INTERESTING EN-LIGHTENMENT ARTICLE IN SEPTEMBER'S SKYWINGS. The article observed that the modern EN B market has become unacceptably wide, with ever-higher aspect ratios leading to some gliders becoming too hot for the average recreational pilot to handle. It also suggested that it had become possible for manufacturers to cheat the testing criteria.

I wouldn't say that manufacturers have learned how to cheat the testing criteria; however I do think the test criteria were executed more strictly a few years ago than they are now. An example: If a glider's reaction after two out of ten test-collapses was outside the EN/LTF norm, some years ago the wing would have failed the certification. If a glider's reaction after two out of ten test-collapses is within the EN/LTF-norm today, the wing usually passes the certification.

It's also true that paragliding flight test will always involve a huge grey area. A skilled test pilot knows lots of different ways to induce a collapse. Often seemingly small details make a huge difference, like exactly when you shift your weight, or exactly what direction

(downwards, inside-downwards and so on) you pull the A-risers.

So a skilled test pilot can make a glider look good or look bad to correspond to the EN/LTF norm. I'm not talking about a high-level EN B glider that could have been tested with one or two C ratings; rather I'm talking about an EN B glider that would

be outside the D class if it was tested differently.

In the past, with the DHV monopoly, the (one and only) test house was probably focusing more on the weak points of a paraglider. If a test pilot considered a glider's reaction to be potentially

dangerous it didn't pass. No matter if the wing showed this reaction in just two out of ten cases.

Today we have competing test houses, and this development has changed the motivation of the test houses and the test pilots. Many of those test pilots are freelancers, and it's quite

Mentor4 targets the very same group of pilots as the Mentor3, the Mentor2 and the Mentor1 did. Accordingly it's not more difficult to fly. In the long run it would be stupid to constantly increase the demands on the pilots. Who would be able to fly a Mentor3?

I hope that pilots and manufacturers will begin to stop focusing so much on the EN certification. I can clearly understand the pilot who wants an independent judgement of the glider he entrusts his life to. But even in a perfect certification world the EN rating would say nothing about a glider's stability in turbulence, which is crucial for its safety. That's what a good manufacturer has to work on. There are also a couple of other important things that the EN tests can never test.

So, to summarise: certification flight tests are clearly overrated by most pilots. EN B - or EN D - says very little about a glider's safety. Every manufacturer knows a lot more about his wing's safety than the EN tests can ever say.

I hope that more and more pilots come to realise that. And I think that most of the manufacturers will act responsibly. As I said before, in the long run it would be simply mad to increase the demands from one wing to its successor. It could be that this trend of high-aspect ratio EN B wings is already nearly over.

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obvious that super-strict testing won't lead to more customers (i.e. money) in the long run. So if a wing shows a potentially dangerous reaction in just two out of ten cases, the judgement is likely to be different from the test pilot I mentioned above.

I think it's really hard to find a solution to this problem. It definitely can't be solved by making the criteria more strict, as your article suggested, for example by reducing the degree of turn allowed after a collapse. The problem of the huge grey area will remain, and I don't see a way of getting rid of it to an acceptable extent.

From the manufacturer's point of view, however, I think that it's not clever in the long run to sell a super-high-aspect ratio EN B wing. That's why we haven't increased the aspect ratio in the fifth generation of our high-level B wings (from Mamboo and Mentor1 to Mentor4). The

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