



## **CIVL 2024 PLENARY – ANNEX 38B**

### **GERMANY – PROPOSAL FOR SECTION 7 A**

## FAI Sporting Code....new proposal

### 8 EQUIPMENT AIRWORTHINESS & SAFETY STANDARDS

#### 8.1 General

##### 8.1.1 Airworthiness Standards

Each glider shall be flown within the limitations of its certificate of airworthiness or permit to fly and its manufacturer's published limitations.

Aerobatic manoeuvres are prohibited.

##### 8.1.2 Proof of Airworthiness

Upon registration, pilots are required to sign the Certified Glider Certificate provided as Appendix V and VI to this document. The organisers have the right to refuse any glider not of acceptable standard or configuration.

##### 8.1.3 Change in Glider Configuration or Construction

A glider shall fly throughout the championships as a single structural entity using the same standard of components used on the first day.

Modifications to a glider that take the glider outside of its certification are not permitted. Concessions to this rule are made to cover the case of essential repairs.

Any major damage shall be reported to the Meet Director without delay and the glider may then be repaired. Any replacement parts must conform exactly to the original specifications. If permission is given by the Meet Director to replace the glider temporarily or permanently for reasons of damage or loss or theft beyond the control of the pilot, it may be replaced by an identical make and model, or one of similar or lower performance and eligible to fly in the same class.

##### 8.1.4 Airworthiness Checks

At any time during the championships the organisers and officials have the right to inspect any competing glider and, if necessary, ground it for safety reasons. The organisers may also apply any other penalties listed in these rules and the Local Regulations for non-compliance with class or airworthiness standards. All competing pilots are to co-operate with the organisers and officials.

The organiser shall provide all necessary means to control gliders airworthiness.

#### 8.2 Airworthiness Standards of Hang Gliders

### 8.2.1 Classification

~~Prototypes are not permitted to fly.~~

Each glider must have a serial number for identification.

Hang gliders permitted to fly must fall into one of the two following categories: certified or uncertified.

Local Regulations may state that uncertified hang gliders are not permitted. If so, the organisers must declare this intention at the time of bidding

### 8.2.2 Certified Hang Gliders

Hang gliders of a make and model for which there is airworthiness approval issued either by the BHPA, DHV, HGMA or similar testing body and which have not been altered in any way since manufacture that would affect this certification. Sprogs must be set ~~within~~ **not below** the certified range.

### 8.2.3 Uncertified Hang Gliders

These are production model hang gliders which have been available for sale for a minimum of 4 months and which have not yet obtained airworthiness approval, or certified models which have been altered from the certified configuration.

Uncertified gliders are allowed to fly only if the pilot or manufacturer can produce pitch and load test results for the glider model and size. Pitch test results must specify the sprog and VG settings used during testing. Sprogs must be set ~~within~~ **not below** the ~~certified~~ **tested** range.

### 8.2.4 Strength and Structural Limits

Hang gliders must comply with the load test certification standards of the HGMA, BHPA, DHV, or similar testing body. ~~The additional standards in 8.2.5 override the certified configuration of a glider.~~

### 8.2.5 Additional Standards

#### 8.2.5.1 Sprogs

Sprogs must be set ~~within the allowed tolerance~~ **not below the specified setting of the Pitch test of the testing body (1 degree from manufacturer settings). (sprog setting measuring uncertainty is not more than 0,25 degrees)**

Organisers and officials may measure and record sprog settings.

#### 8.2.5.2 Load Test

~~All structurally relevant components in the flown configuration (for example crossbar, uprights, leading edges, keel,~~

~~speedbar, rigging cables) on the glider must have undergone a static load test to positive 6G / negative 3G as part of~~

~~the certification tests by one of the certification organisations.~~

#### 8.2.5.3 Wires

~~Minimum diameter of any structural external wire cables is 1.9 mm or 5/64 inches.~~

#### 8.2.5.4 Side and Rigging Wires

~~Where an external compression strut is braced with rigging wires they must attach within 10cm of the point where~~

~~the compression load is applied.~~

~~Side wires shall attach to A frames at no more than 10cm above the plane of the control tube, measured when the~~

~~glider is resting on a horizontal surface.~~

~~Explanatory Notes: References to compression struts and rigging wires refer to the loads placed on parts of a glider~~

~~by flight stresses. Gliders with cantilevered wings do not apply compression loads to the uprights, while in general,~~

~~Class 1 gliders have uprights which are under compression in flight.~~

~~Control cables are not deemed to be structural.~~

~~Any external part of the glider which has compression loads placed upon it during flight is an "external compression~~

~~strut", and therefore bracing wires attached to it shall conform to these rules.~~

~~Where the terminology or definitions which are used in these rules are in question with any particular glider, the relevant protest committee will provide a ruling.~~

#### 8.2.5.5 Control Bar

If a control bar is load bearing and made of materials other than metal, it must have an internal rigging cable that serves as a structural backup. The internal rigging cable can be of metallic or non-metallic material and must be strong enough to withstand the shock load from the lateral force of breaking an undamaged control bar in flight. If a non-metallic control bar does not show clear evidence of an internal rigging cable (for example end pins or vibration when tapped) the pilot must supply a manufacturer's affidavit verifying the presence of a cable in the control bar tube.

#### 8.2.5.6 Visibility

In Class 1, 5 and Sport, to improve visibility, all competitor gliders must display either very visible leading edges or a high contrast nose cone. Most visible colours are day-glow yellow, orange and green.

#### 8.2.5.7 Electrical Auxiliary motors (Class 2)

Where an electrical auxiliary motor is fitted to a Class 2 hang glider, the glider must either be certified in that configuration by the manufacturer, or must comply with 8.2.3 Uncertified Hang Gliders.

### 8.3 Airworthiness Standards of Other Hang Gliding Equipment

#### 8.3.1 Pilot Harness

~~The pilot suspension must include a non-metallic load bearing material of minimum 50mm<sup>2</sup> cross-section area (normal material Nylon woven webbing with 1000kg breaking strain). The attachment loop must have a backup, which bypasses any mechanical devices and either the main, or backup must be non-metallic. If an integral (one piece) harness suspension/hook in system is employed, the~~

backup may have a mechanical link which allows it to loop around the keel and attach to itself independently of the primary system. **The pilot harness including suspension must be stronger than 9 G, the backup must be stronger than 6 G, of the Hook in weight (Pilot with harness, ballast etc.)**

### 8.3.2 Rescue Parachutes

A serviceable rescue parachute must be carried, capable of deployment by both the right and left hand of the pilot in a normal flying attitude.

### 8.3.3 Helmets

All pilots competing in 1st Category events must wear a helmet certified to either EN966 (HPG), EN1077-A and -B (Snow Sports), ASTM 2040 (Snow Sports) or Snell RS-98, at all times while flying. A helmet is not compulsory in hang gliders with enclosed cockpits if it will restrict pilot vision

### 8.3.4 Ballast

Pilots must comply with the weight limitations set by the glider airworthiness standards. The pilot's weight is defined as body weight when dressed in jeans, shirt and underwear. Weight can be measured at take-off or landing at the request of the organisers. Pilots may carry jettisonable ballast only in the form of fine sand or water. A pilot must avoid dropping ballast at any time or in a manner likely to affect other competing gliders or third parties. The weight limit for all equipment (without glider), extra clothes and ballast is 25 kg. If a pilot is equipped with a second parachute, the weight limit is 28 kg. The organiser will provide a weight measurement scale. Pilots' nominal weight may be checked at registration. Pilots may be weighed before taking-off or after landing.

**To: Bill Hughes, CIVL President**

Dear Bill Hughes,

today we would like to address a proposal to you. Observing the development of hanggliders we see, that the competition hanggliders have not undergone any further technical development in the last years.

We see some potential to support the manufacturers and pilots with a version of the section 7 – to help them in development of gliders with a up to date catalog of technical standards.

Supporting arguments:

1. We do not require any additional standard- except what is anyway required by a valid test of a test house.
2. We let choose the manufacturer to use more advanced materials for flying wires and pilot support – such as dyneema and Kevlar- which are well proven in the paraglider scene for years And are tested by some manufacturers in serial production of modern gliders.
3. We do not want that there fly any gliders which have no valid test of a test house (Prototypes) which are not on the market for every competitor.
4. We expect to have a slightly better performance of the gliders as we do request a valid test of a test house and do not request wire dimensions and connection points. So gliders will have thinner wires or lines with same strength proven by test.
5. This proposal is supported by other nations with hang glider manufacturers- such as Italy and Swiss.

We are happy about positive decisions and hope to hear from you.

Best regards

Robin Friess – DHV managing director

Alex Ploner - 6 times World Champion Hanggliding (FAI1, FAI2, FAI5), DHV-Testpilot Hanggliding

Regina Glas -Teamleader Hanggliding Germany

Andreas Schmidtler – DHV Auditor

Website: [www.dhv.de](http://www.dhv.de)

Facebook: [www.facebook.com/DeutscherHaengegleiterverbandeV/](https://www.facebook.com/DeutscherHaengegleiterverbandeV/)

---

Deutscher Gleitschirmverband und Drachenflugverband  
40.000 Mitglieder – 310 Mitgliedsvereine – 130 Flugschulen  
Beauftragter des Bundesverkehrsministers

DHV e.V. - German Paragliding Federation and Hang Gliding Federation  
40.000 Members - 310 Clubs - 130 Flying Schools  
Official delegate from the Ministry of Transport