



CIVL 2024 PLENARY – ANNEXE 26B

BUREAU PROPOSAL – CIVL COMPETITION HARNESES SPECIFICATION

Background

The proposed document is the result of the joint efforts of pilots and manufacturers in CIVL Competition Harness Standards Work group.

Special thanks to:

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Proposal

To accept CIVL Competition Harness Standard as Section 7 K



CIVL COMPETITION HARNESS STANDARD

**Harnesses permitted in FAI Category 1
Paragliding Cross-Country Events**

Revision 1.3

Editor's note: Hang-gliding and paragliding are sports in which both men and women participate. Throughout this document the words "he", "him" or "his" are intended to apply equally to either sex unless it is specifically stated otherwise.

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Introduction

This document defines the harnesses permitted to be flown in FAI Category 1 paragliding cross-country events. Its purpose is to serve as a reference for manufacturers, testing laboratories, competition organizers and competition pilots.

The purpose of the CHS is to guide harness development to stay within the PG ethos while maintaining a reasonable amount of passive safety. In some respects, performance and safety can be in conflict. The CHS attempts to provide a level playing field where pilots and manufacturers can compete fairly against each other in harnesses with a reasonable minimum level of safety. It is CIVL's responsibility to ensure that the published rules, or lack thereof, do not encourage manufacturers or pilots to push the boundaries of safe paragliding harness design in pursuit of performance: CIVL is setting the boundaries for harnesses with the CHS.

It is the manufacturer's responsibility to ensure that the harnesses they release are safe enough for pilots to use in competition.

It is the pilot's responsibility to ensure that their harness is maintained to at least the level of safety it had when the manufacturer released it.

Goals

Recent advances in harness design have led to models with improved aerodynamics, but some of these advances have come at the cost of safety and convenience. The goal of this new standard is to ensure that competition XC paragliding harnesses of the future retain the essential aspects of safety and usability, specifically portability, while still allowing innovation.

The high-level goals are:

1. Evolve the safety related requirements for harnesses, including those related to back protection, pilot visibility, as well as ensuring that pilots can use the harness while keeping their hands on the controls at the critical moments of take-off and landing.
2. Define portability standards for harnesses so that the pilot's equipment can continue to fit into a standard paragliding backpack, can be reasonably carried after landing, and can be checked as regular luggage on international flights.

CIVL Competition Harness Standard

Required / Tested Elements

1. Additional Safety Requirements
 - a. The pilot must have free access to the paraglider's controls (brakes, riser steering controls) and reserve handles when the harness is being flown in its most aerodynamic configuration.
 - b. To provide access to flight instruments, a flat space at least 30cm wide by 13cm deep must be in front of and visible to the pilot, and be in a location that would permit easy, quick access to the devices.

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- c. To accommodate tracking devices, the harness must have a pocket or Velcro area that:
 - i. Has a safety tab to secure the device
 - ii. Has a minimum size of 9cm x 10.5 cm x 3cm.
 - iii. Is accessible during flight
 - iv. Is placed to provide optimal GPS and cellular connectivity (i.e. on the side or top of the harness)
 - d. A pilot must be able to launch, get their legs fully inside the harness and put the harness into its most aerodynamic flight configuration without taking any hand off the brake handles.
 - e. A pilot must be able to transition from the harness' most aerodynamic flight configuration into the "ready to land" configuration where their legs are out of the harness without requiring the pilot to take any hand off the brake handles.
2. Maximum Weight and Dimensions
 - a. The harness, fitted with any 2 certified reserve parachutes of appropriate size for a pilot at the top of the recommended weight range of the harness, must fit into a "test box" whose linear dimensions are 160cm or less.
 - b. The harness (without the reserve parachutes) must weigh no more than 10 kilograms. This is to ensure that the harness is capable of being placed in a bag that can be normal, checked luggage and that the weight and size remain reasonable for a pilot to carry on their back.
 3. There must be a pocket, or strap where a pocket could be attached, for a radio. This location must be easily accessible to the pilot.
 4. To reduce the likelihood of a pilot forgetting to buckle their leg straps, the harness must have an "anti-forgetting" or "anti-falling" system.

Validating Required Elements

1. All harnesses must be EN1651 certified and must pass the latest (at the time of certification) impact standards.
2. The manufacturer will send an EN certified harness, along with the EN1651 documentation, to CIVL for further validation. In the future, CIVL may delegate this validation to a testing house, or testing houses may incorporate the following into their initial certification.
 - a. The weight of the harness will be verified.
 - b. CIVL will verify that the harness with 2 reserves meets the linear dimension requirement.
 - c. The instrument panel dimensions and access will be verified.
 - d. The location for the radio will be verified.

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- e. Tests will be performed to validate 1.d and 1.e, above.
 - f. The “anti-falling / anti-forgetting” system will be verified.
3. After CIVL validation, the harness will be certified for PG XC Category 1 competition. The manufacturer will be notified, and the certification will be published on the CIVL website.

Additional Required Features and Attributes to be Certified by Manufacturers

All harnesses to be flown in PG XC Category 1 competitions must have additional attributes and features, as outlined below. These features are difficult to directly test or validate, so it is up to the manufacturer to ensure that the harness complies with the requirements below.

1. When transitioning from straight flight to a stall or collapse, the harness must not yaw/twist more than 180 degrees, nor should the tail obscure the pilot’s vision.
2. While launching, the harness tail can’t become a trip hazard by wrapping the pilot’s legs or a block to visibility by wrapping over the pilot’s face. Providing a mechanism to neutralize the tail for take-off is acceptable provided that releasing the tail after takeoff can be done without the pilot needing to take more than 1 hand off the controls.
3. So that the pilot has a reasonable view of pilots around them, the blind spot created by the harness should be no bigger than necessary and expected to be roughly equivalent to “pre-submarine” harnesses such as the Gin Genie Race 4 and the Ozone Excoceat.

Validation of Manufacturer-Certified Features and Attributes

If pilots in Category 1 competitions experience incidents that indicate that the expectations described above have not been met, CIVL will appoint a board of inquiry composed of manufacturers and industry representatives to investigate and issue a recommendation to the CIVL bureau as to whether the harness will be allowed to continue to be flown in Category 1 competitions. CIVL will then issue a final decision, which could range from no-action to suspension from competition until remedial steps have been taken.

Effective Date

This standard shall apply to all paragliding harnesses flown in Category 1 competitions occurring after January 1, 2026, except that harnesses certified prior to December 31 2025 will be grandfathered in. At some point the grandfather exemption will be removed, but this will be no earlier than after the World Championship held in 2029.

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