APPI Control & Maintenance PRO-WORKSHOP
Tsukuba, Japan 2020

Safety aspects of paragliding
Evaluation and certification for experimented maintenance operators

Place:	Tsukuba, Japan
Date:	Course: March 30th – April 3rd Exams: april 4th - 6th
Master Instructor APPI:	Manu Bonte
APPI Instructor:	Naohisa Okada
Language:	English/japanese
Partnership:	Aerotact corp. www.aerotact.co.jp
Planning:	5 days class + 1 day evaluations Meeting at 7h00, course from 7h to 13h and 14h to 19h

Fees:

part I open to any Pilot:	**350** Euros	5 days class
part 1+exams:	**450** Euros	5 days class +1 day evaluations

Included:
Organization of workshop and courses, instructional material, written and electronic documents,

Accommodation:
Is not included, contact okada.n1969@gmail.com for options

More Information and registration:
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To apply:
1 if you are not APPI member yet, register in APPI https://appifly.org/?Equivalence-form

2 fill the following questionnaire providing your APPI number

Program:

1: GENERALITIES:

✓Gliders EN certification, flight and structure, history, what does certification mean?
✓Considerations about indicated total flying weight range and safety

2: WING COMPONENTS AND AGEING

A/ The cloth

✓Manufacture and characteristics
✓Ageing and consequences
- Pigments
- Porosity
- Stiffness
- Breaking and tearing strength

✓How long does the cloth last? typical alerts
✓Ageing agents, how to limit cloth ageing
✓practical training: cloth status assessment and minor repairs

B/ The lines

Generalities

- ✓ Materials and characteristics
- ✓ Where to find information about the lines of a glider (length, materials)
- ✓ Effect of a knot on the strength
- ✓ How to splice a line
- ✓ G load in flight, various maneuvers
- ✓ Line load depending on glider's design

Basic intervention in the line set

- ✓ read a plan
- ✓ identify a line
- ✓ replace a line
- ✓ change a line set

Line ageing control

a) Lines loosing breaking strength

- ✓ What materials are concerned
- ✓ How to proceed to control
  - build a low tech low cost tool
  - destructive and non destructive methods
  - “survival technique”
- ✓ Replacement criteria
- ✓ practical training: lines breaking strength measurement

b) Glider getting out of trim

- ✓ Definition of the trim of a glider
- ✓ What happens, what lines materials are concerned
- ✓ Typical alerts
- ✓ Measurement and correction of line set up
- ✓ High tech and low tech methods, advantages and disadvantages
    - The differential method
    - Make a differential table
    - Measurement technique
    - correction techniques
    - Permitted tolerances
- ✓ Practical training: Trim control and adjustment using laser and differential method

Conclusion about Lines

- ✓ Control frequency and life of a line set, depending on material and glider's type
- ✓ Controls after an intervention prior to fly

C/ The reserve

- ✓ Models
- ✓ Certification (shock resistance, sink rate, aperture time, oscillations)
- ✓ Types of mounting, benefits and disadvantages
- ✓ Problems that may occur: extraction, aperture, glider neutralization
- ✓ Maintenance
- ✓ Conclusion:

    Technique to find the handle

    Five cases in which you should pull reserve immediately

    The three types of situation when its time to throw, and the technique to use in each of those situations

D/ The connectors

- ✓ Karabiners, maillons rapides, textiles: materials, characteristics, certification, appropriate sizing
- ✓ Spreaders, reserve risers
- ✓ notion of personal protective equipment (PPE)
- ✓ PPE maintenance

3: HUMAN FACTORS AND SECURITY

A/ Safety

- ✓Introduction, 3 simple rules
- ✓The Tony Kern studies, Risk homeostasis
- ✓What is the definition of the risk?
- ✓Conclusion, the 3 cursors, attitude, how to really improve the safety level

B/ Psychological aspects of paragliding

- ✓Stress
  - oThree stages of stress
  - oCoping: four strategies
  - oThree times to deal with the stress
  - oFour stress factors
- ✓A few other known syndromes
- ✓Conclusion: Two tools

C/ Risk management

- ✓The Reason theory and how to apply it in paragliding activity
- ✓Accidentology: analyze of accident causes
- ✓Avoid typical accidents: identification of typical risky situations
- ✓what to do in case of accident

4: SAFETY CHECKS

- ✓ generalities about preflight safety checks
- ✓ presentation of APPI method
  - safety checks in solo
  - safety checks in tandem
  - safety checks instructor in charge of student

EXAMINATION

The examination consists in a one day evaluation where the participant shows his ability to check the airworthiness of a glider and make the necessary adjustments.
are also evaluated his ability to check, fold and re-integrate a reserve.
His knowledge about the theory given during the class will be also evaluated.