

Nitro Rigging Wingsuit Course



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History

- In the 1930s, the original birdmen were experimenting with wingsuits built from canvas, metal, and wooden spars resulting in several fatalities.
- In 1997, Partick de Gayardon developed the first nylon wingsuit.
- In 1999, Birdman Inc. became the first enterprise to commercialize wingsuits.
- In 2004, Nitro Rigging designed and built its first wingsuit the 'Rigor Mortis'.

Minimum Requirements

- 200 skydives minimum.
- Being a current skydiver.
- Ground School.
- 2-3 jumps with tracking pants mimicking wingsuit deployments.
- At least one (better more) supervised jump with a qualified instructor, until comfortable.
- Use a wingsuit designed for ease of use suitable for beginners. Avoid advanced suits.

Ground School

- Wingsuit Orientation.
- Wingsuit Rigging and Donning.
- Aircraft Safety.
- Exit Procedures.
- Flight Plan.
- Pull Procedure.
- Post Opening Procedure.
- Gear Recommendations.

Wingsuit Orientation

- Describe the suit in all its details with a bottom-up approach:
 - Fabric of choice.
 - Ram-air booties and high traction soles.
 - Leg wing with ram-air intakes.
 - Body of suit with dual zippers and dual running sliders.
 - Arm wings with three ram-air intakes and cutaway system.
 - Overall quality of construction.
 - Proper wingloading/surface/design.

Wingsuit Donning

- Have the student wear the suit without the rig.
- Show proper donning and use of zippers.
- Show and have the student practice all body positions while wearing the suit, standing up, and on the floor/creepers.
- Explain the role of arm wings and leg wing.
- Explain the dynamics of stable and unstable flight and how to execute turns.
- Show the student how to perform all maneuvers including recovery maneuvers.

Wingsuit Rigging

- Describe and show the student how to rig the suit into the harness/container.
- Have the student rig the suit a few times until they can do it effortlessly.
- Have the student rehearse the body positions while wearing the wingsuit/rig system.
- Show the student proper pull procedure and have them practice until comfortable with real throws of main PC. Include a few hidden PC procedures.

Aircraft Safety

- Explain proper aircraft loading.
- Explain bail-out procedures.
- Explain proper exit and horizontal stabilizers danger and butt-on-exit.
- Practice exit several times using mock-ups until flawless execution for poised and butt-on-exit.
- Warn students about PAC 750 and similar aircrafts featuring very low horizontal stabilizers. DO NOT poise the exit on such aircrafts.

Airplane Exit Procedure

- Make sure that one exits the airplane with all the wings collapsed. Only once the airplane is cleared, all the wings should be opened smoothly and symmetrically while belly-to-earth.
- Exiting aircrafts with low horizontal stabilizers such as PAC 750, Caravan, King Air, and such:
 1. Sit with your butt on the door facing aft.
 2. Close your knees and ankles together.
 3. Criss-cross your arms against your chest.
 4. Roll out the door and only open wings when clear.

Flight Plan

- Plan the flight, fly the plan!
- It is a flight not a skydive!
- Horizontal and vertical awareness!
- Winds aloft.
- Aircraft spotting:
 - Green light means LOOK NOT GO!
- Skyflyer-airplane pilot communication.
- Fly predictably and avoid sharp turns.
- Plan the flight, fly the plan!

Pull Procedure

- Practice pulls/throws as many times as needed in the air until comfortable.
- Pull by 5000-4000' until comfortable.
- Basic procedure:
 - Wave off and pull, pull at right altitude, pull stable, PULL, IN THIS ORDER!
- Never, ever forget to **pull**!
- If one cannot find the main PC, pull the reserve handle!
- Rehearse emergency procedures always!

Post Opening Procedure

- Unzip arm wings.
- If zipper failure, use the arm cutaway system.
- Take care of line twists if present.
- Point canopy into the wind using the rear risers.
- Unzip body zippers.
- Get the legs out of the suit and push leg wing behind you.
- Collapse the slider and unstow the brakes.
- Fly a predictable pattern and watch out for traffic.

Final Remarks

- Check your three point-harness (chest strap and two leg straps).
- Check your three handles (main, cutaway, reserve).
- Check both three-ring main risers system.
- Check the three snaps per side on the wingsuit.
- Pull!
- Fully flare the parachute prior to touchdown.
- Relax, have fun, get a canopy out!
- **DO NOT ATTEMPT TO LAND A WINGSUIT!!!**

The End

