UpSki

Model: Explore II

User Manual

Equipment for

Wind Mountaineering

2014 Revision 3

Warning: Use of this product can cause injury or damages. Read these instructions before use. Use this product with caution!

The UpSki is designed for use on snow with skis or snowboard for wind-powered ascent. UpSkis are used in winds ranging from 5 to 40 mph. UpSkis may be used in higher winds by experts.

WARNING: Be careful in high wind! High winds and an inexperienced user is a recipe for disaster in any wind sport! Feel the speed of the wind during a gust, and assess whether you can safely maneuver downwind if you were being pulled at the same speed. IF NOT, DO NOT LAUNCH!!

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UpSki LLC

WAIVER OF LIABILITY AND ASSUMPTION OF RISK FOR PARTICIPATION IN SPORT & USE OF EQUIPMENT

As a user of equipment manufactured by or for UpSki LLC (from here-forward referred to as "The Company"), including canopy, rigging, controls, harness and release mechanisms (from here forward referred to as "UpSki"), and/or participant in UpSkiing and backcountry travel, you are fully responsible for these risks and liabilities.

ACTIVITIES AND RISKS

The Company has taken reasonable steps to provide appropriate equipment and safety precautions for UpSkiing. However, UpSkiing and travel in backcountry terrain have risks, including risks that cannot be eliminated without destroying the unique character of the activity. These risks include loss or damage to property, injury, illness, disability and death. The following describes some, but not all, of these risks.

● UpSkiing occurs in remote locations; immediate medical and emergency services will NOT be available. Communication between members within a group is often difficult or impossible.
● UpSkiing and backcountry travel often occur in avalanche prone terrain. Risks associated with avalanches include: full or partial burial, injury, illness and/or death to the user and/or other persons in the path of the avalanche. Use of an UpSki will not reduce the risks associated with avalanches, and in some cases may increase these risks. The Company recommends that users receive avalanche specific training prior to UpSkiing and always carry appropriate avalanche safety equipment.
● UpSkiing is a wind sport. Wind is unpredictable by nature. Wind speed and direction can change without notice, and can include vertical uplifts and downdrafts. Extreme winds, including any wind in excess of 40 mph, should be considered very hazardous for UpSkiing.
● Terrain hazards may include but are not limited to: rocks, trees, ridges, cornices, mountain summits or saddles, and man-made structures. Terrain hazards may be visible but in many cases are covered with snow. Terrain hazards can cause collision, falls, loss of control of the UpSki, and unpredictable wind conditions.
● Travel near or on frozen ice includes the risk of thin ice and open water. In these cases there is risk of hypothermia and/or drowning.
● Environmental risks and hazards include falling and rolling rock, lightning, avalanches, falling timber, and unpredictable forces of nature, including weather that may change to extreme conditions without notice. Possible injuries and illnesses include hypothermia, frostbite, non-freezing cold injury, high altitude illnesses, sunburn, dehydration, and other mild or serious conditions.
● UpSkiing activities may involve travel either by foot, snowmobile, or automobile. The Company has no responsibility for any incident arising out of such travel.
● UpSki equipment may malfunction or fail, despite proper maintenance and use. Failures and malfunctions can include, but are not limited to: failure of canopy to vent or deflate; tangles in the lines and venting system; inversions; entanglement with terrain hazards; entanglement with the user or third party; unintended inflation or deflation; unintended release or separation from the UpSki; failure of UpSki components due to high loads or excessive wear. Risks specifically associated with equipment malfunction or failure can include collision with terrain hazards, uncontrolled dragging, and vertical lift off of the ground.
● Limitations of UpSki safety release mechanisms: UpSki safety release mechanisms – including the riser release, harness release and safety knife – are intended for emergency only. These mechanisms require user activation. The location of these release handles must be visible and accessible to the user. In high-wind applications the user will have limited time to locate and engage release mechanisms. Release mechanisms may not work in all instances due to body orientation, additional gear hindering its effective function, type of UpSki malfunction or failure, improper assembly of the release mechanism, and/or circumstances not yet identified.
● Limitations of safety equipment and protective gear: The Company recommends the use of safety equipment and protective gear, including but not limited to: warm clothes, sturdy gloves, helmet, avalanche beacon, shovel, probe and ski-release mechanisms. Safety equipment and protective gear is designed to reduce the risk level of UpSkiing and backcountry travel, but will never eliminate these risks.
● All backcountry decisions and evaluations are by nature imprecise and subject to reasonable errors in judgment. Misjudgments may pertain to, among other things, user capability, environment, terrain, snow conditions, wind and weather conditions, natural hazards, routes and medical conditions.

ACKNOWLEDGEMENT AND ASSUMPTION OF INHERENT AND OTHER RISKS

By using UpSki equipment, the user acknowledges and personally assumes liability for the following:

- Full responsibility for managing any and all risks.
- With respect to the aforementioned activities and risks: full responsibility for the consequences (including but not limited to injury, illness and death).
- The Company has been available to fully explain to me the nature and physical demands of this activity and the inherent risks, hazards and dangers associated with this activity.
- The user shall assume responsibility for the aforementioned risks and all other risks of UpSkiing, and any other activity, whether those risks are known, unknown, inherent or otherwise.
- The above description of the risks is not complete. Other unknown or unanticipated risks, inherent or otherwise, may result in property loss, injury, illness or death.
- Participation in UpSki activity is purely voluntary and users elect to participate in spite of, and with knowledge of the inherent risks.

By using UpSki equipment, the user acknowledges and assumes liability for the risks identified herein as well as inherent risks not specifically identified. The user assumes and accepts full responsibility for injury, death and loss of personal property, and expenses suffered as a result of these risks and dangers.

AGREEMENTS OF RELEASE AND INDEMNITY

By using UpSki equipment, the user acknowledges to the fullest extent allowed by law to the following:

- To release and discharge The Company, its owners, members, staff, sponsors, contractors, and all other persons or entities associated with it and its activities (individually and collectively referred to as “Released Parties”) from any and all claims of injury, disability, death or other damage or loss that may be suffered arising out of, or in any way related to my use of the UpSki product. The user understands that by using UpSki equipment, he or she surrenders all rights to make a claim or file a lawsuit against a Released Party for personal injury, property damage, wrongful death, products liability (including strict liability), or breach of warranty or contract.
- To defend and to indemnify any and all Released Parties from all claims.

The Release and Indemnity described above also includes claims arising in whole or in part from negligent acts or omissions of the Released Parties.

Contents

1. Warnings & Safety Messages

1.1. Safety features: Canopy & Controls

Canopy fully inflated and powered

Canopy vented before full collapse

1.1.1. Vent Lever

The vent lever and the red vent line it controls are the primary method for depowering and inflating the canopy.

ACTION:
Let go of the vent lever

RESULT:
Vent lever releases and
allows canopy to collapse

Note: The vent lever is a spring lever with short travel. It controls a line-lock that – when locked (lever held in) – prevents the vent line from being drawn into or released from the control center.

1.1.2. Vent Cleat

ACTION:
Grab red handle
at end of vent cleat

ACTION:
Pull the handle to separate vent cleat from control center

RESULT:
Canopy may be depowered by releasing the vent lever

Note: The vent cleat may be used to lock the vent line sheeted in or out to keep the canopy inflated or deflated, depending on the application. Beginners should NOT use the vent cleat to lock the canopy into an inflated state.

1.1.3. Riser Release

ACTION:
Grab handle here

ACTION:
Pull handle completely free of control center

RESULT:
Risers are released from the control center

The riser release separates the risers and perimeter of the canopy from the control center. The canopy will remain attached to the control center by the vent line. Riser Release may be found on the bottom or top of the control center

1.2. Safety features: Harness

1.2.1. Harness Release

ACTION:
Grab handle here

ACTION:
Pull handle free
and fully extend arm

RESULT:
Ends of harness-release straps are disengaged

The harness release is designed to completely release the canopy and controls from the user.

1.2.2. Hook Knife

ACTION:
Grab handle

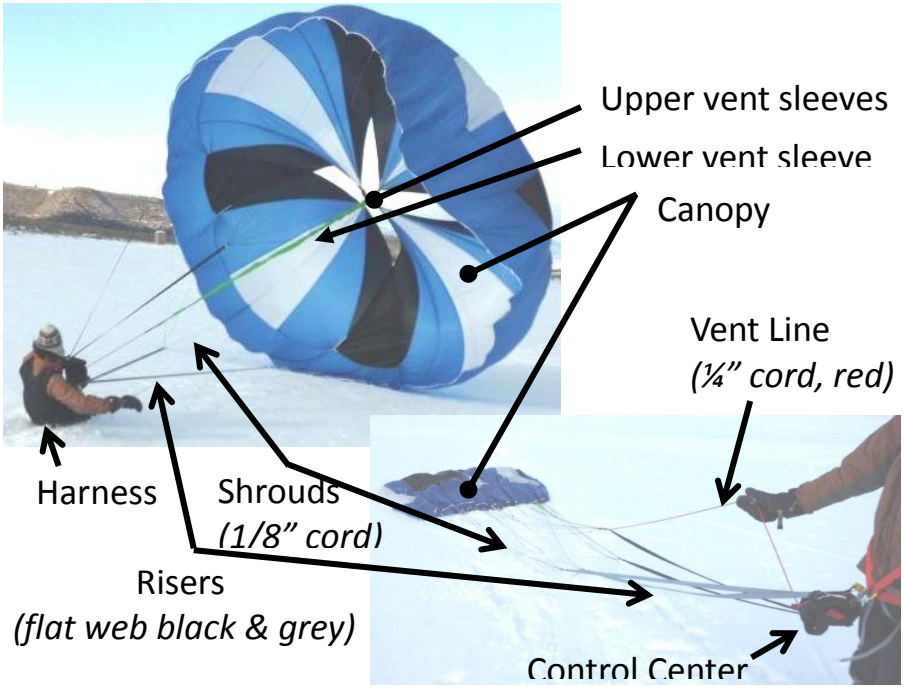
ACTION:
Pull knife down and out of pouch

Keep the hook knife in mind during situations where you may become entangled in your lines. Be especially weary of entangling lines with your ski tips/tails, bindings, boot buckles and hands.

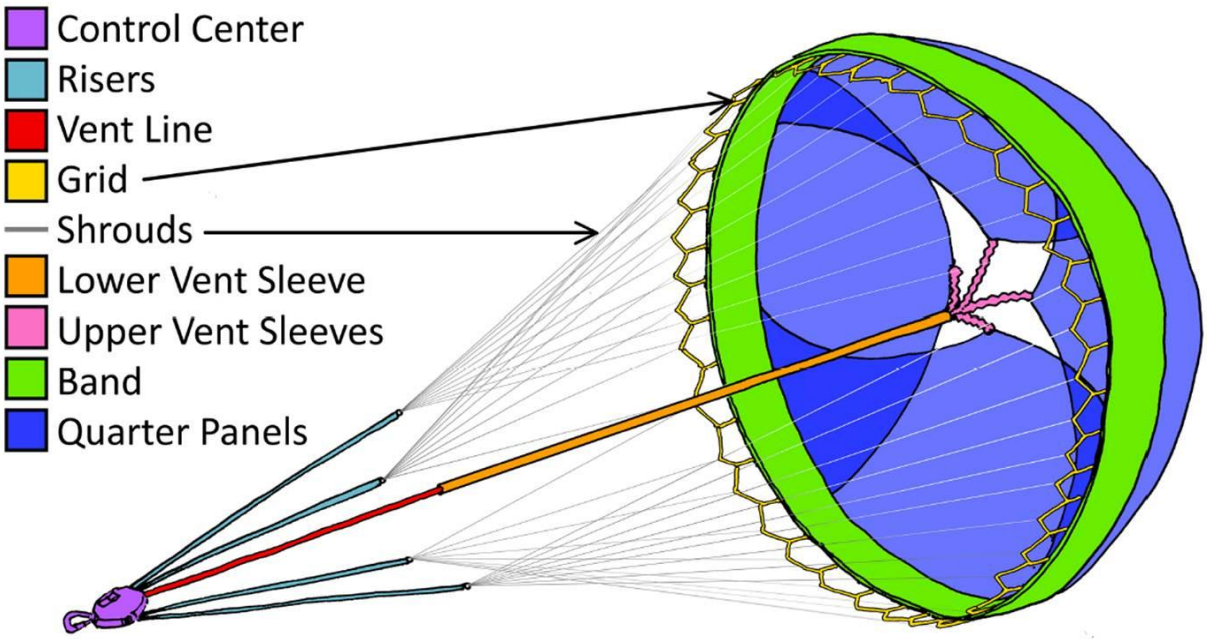
2. Summary

2.1. Product Description

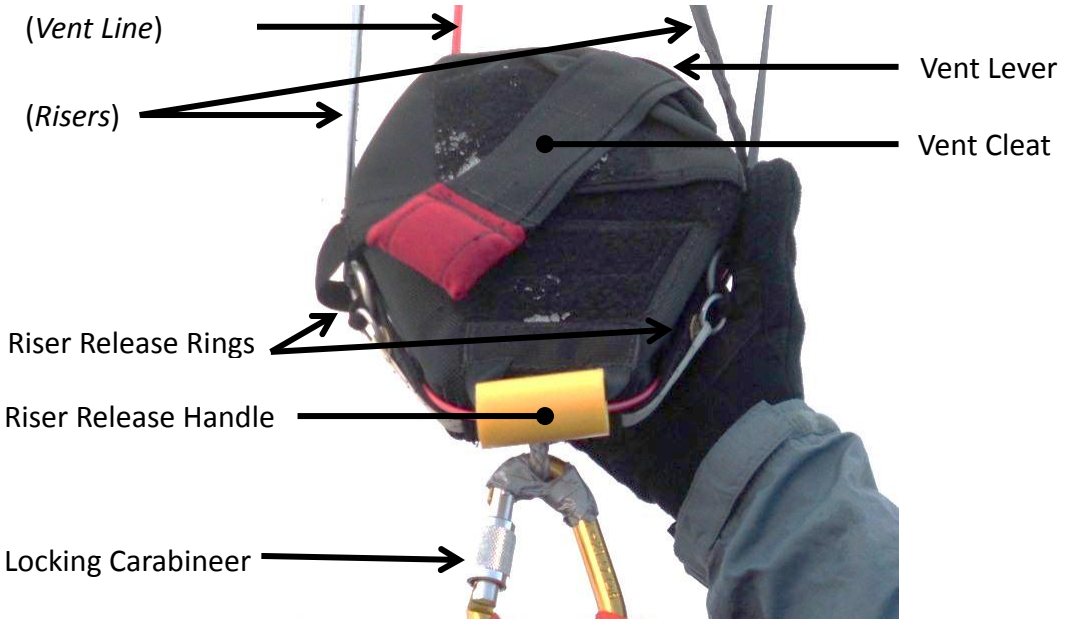
2.1.1. Overall



2.1.2. Connections Diagram:



2.1.3. Control Center



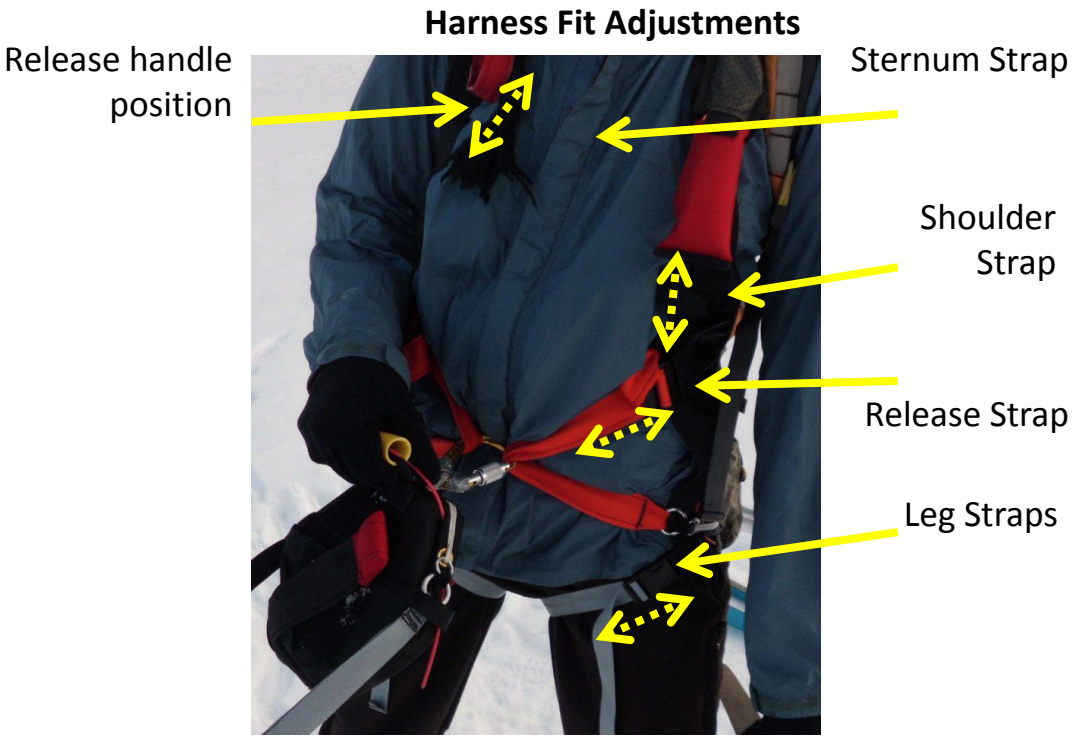
2.1.4. Harness

- Harness
- Shoulder straps
- Harness release handle
- Safety knife
- Harness release straps
- Release rings
- Leg straps
- Carabiner to control center

3. Instructions for Use

3.1. Harness Fit & Adjustment

3.1.1. Standard Adjustments



There are 3 buckles total: one for each leg strap, and one for the sternum strap

WARNING: When wearing backpack- insure that the backpacks sternum & waist straps do not interfere with the the release handle, knife, and release straps. Backpacks waist strap should be threaded underneath the release straps- NOT strapped over the top of them

3.2. Unpacking

3.2.1. Procedure (light wind & high wind)

- Select a location clear of obstacles for at least 30 meters in all directions.
- Put on and buckle the harness. Adjust as needed.
- Locate the control center and clip the carabineer to the two (2) orange harness release straps.
- Remove the canopy and lines from your bag. Pile the canopy downwind of yourself and gear.
- Unclip the risers from the vent cleat.
- Re-engage the vent cleat to keep the vent line extended.

Warning: Verify that the vent line is extended fully. Verify that the vent cleat is engaged to keep the vent line fully extended

- Release the daisy chain from the lines.
- Allow the canopy to drift downwind (or ski upwind away from it) to straighten the lines. Spin the control center to release twists in the lines.

ALWAYS:

- Inspect your system.
- Stay clipped to the control center to prevent it from getting tangled or twisted in the lines.
- When releasing the daisy chain, ensure that the lines do not get tangled or hooked on you, your bag, skis, boots, bindings, etc.

3.3. Inspection

3.3.1. Harness

- Harness Release Handle:
    - Check that you can see, find, and grab the handle with your selection of clothing and pack.
    - Separate the handle from the harness to verify the resistance of the Velcro.
- Harness Release assembly
    - Inspect the ring-release assemblies and verify that they are assembled correctly.
- Knife:
    - Pull the knife from its pouch and inspect for damage.

3.3.2. Canopy & Controls

Check for tangles, twists and/or knots in the risers, shrouds, grid, canopy and vent system.

3.4.Packing

3.4.1. Procedure

- Fully vent and collapse the canopy. Ensure that the junction between red vent line and vent sleeve is all the way up into the canopy or at least beyond the risers .

- Engage the vent cleat to lock the vent line out.
- Hand-over-hand all the lines until you are holding all lines at the edge of the canopy.

- Start the daisy chain with 3-4 twists before the first loop. (see daisy chain diagram on next page
- Daisy chain the lines from the canopy back towards the control center.

- Clip the vent cleat through the last loop of the daisy chain.

- Start stuffing the canopy where the lines meet the canopy. The lines and control center should be packed last.

3.4.2. Safety Don'ts

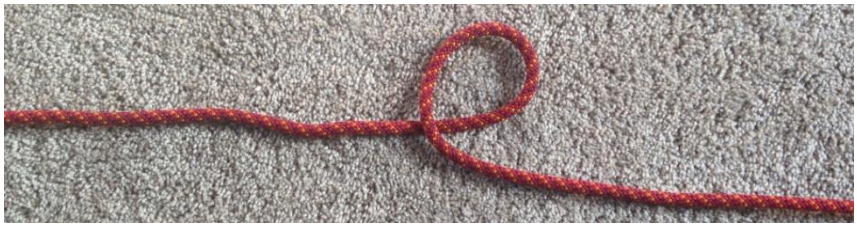
- Never daisy chain the lines with the vent line retracted. Unintended canopy inflation can occur.
- Never start daisy chaining at the control center. Unintended canopy inflation can occur.

3.4.3. Expert Tips

- Making each daisy chain loop large equals fewer loops and faster packing.
- Within your bag, isolate the control center from the vent sleeves to prevent tangles.

Daisy Chain example with rope for clarity:

Canopy



To Control Center

Create first loop in the lines.

Add 3-4 twists.

Pull lines through loop, forming new loop and first link of daisy.

Continue adding new loops to daisy chain until control center is reached.

Insert vent-cleat tab through final loop of daisy chain.

Close vent cleat.

Daisy chaining lines should include all lines, risers and vent line. Images on this page are an example only.

3.5. Inflating

ACTION:
Pull on canopy with risers to create airflow in and around the canopy.

ACTION:
Pull the vent line all the way into the control center.
Resist the pull of the vent line by engaging the vent lever

ACTION:
Brace and edge against the pull of the canopy as it inflates.
Hold in the vent lever to keep the canopy inflated

General Notes:

- Identify the white tape on the perimeter of the canopy. This tape must always be on the outside perimeter of the canopy.
- Feed the vent line into the control center. (For experts: Lock the vent cleat at this time.)

Procedure: With the canopy laid out downwind:

- Visually monitor the tape on the perimeter of the canopy to ensure that it is not inverting;
- Identify the riser leading to the top of the canopy (while it lies in the snow);
- Pull in and up on this riser to bring the edge of the canopy off of the ground;
- Maintain resistance on all lines and allow the canopy to inflate.

WARNING: If the canopy begins to inflate with the tape on the inside, STOP! Vent the canopy and finesse it to inflate with the perimeter tape on the outside. A canopy inflated with tape on the inside is called an "inversion." An inversion can also be identified by logo lettering on the inside of the canopy and the vent line tracking around the outside of the canopy instead through the center. Inversions should be prevented and/or resolved immediately.

3.6. Venting

- Release the vent cleat and control it to ensure it does NOT get re-cleated tightly.
- Let go of the vent lever, allowing the vent line to be drawn out of the control center.
- Canopy should immediately vent and collapse.
- In light or very stable winds, pull the highest riser down toward the ground to speed collapse.

WARNING: **In high winds, always ensure that you are prepared to rapidly release the vent cleat and lever when nearing obstacles or your stopping point. Performing a test vent before upkiing near terrain hazards especially after any prolonged p**eriod with canopy deflated such as unpacked during descent, unpacked while standing ground, or upon unpacking canopy

3.7. Control & Steering

3.7.1. Steering

Primary steering and directional control is through the user's skis or snowboard.

The canopy has additional steering capability with the risers. With the canopy inflated, grab and pull on the riser in the intended direction of travel.

3.8. Descent and standing ground in high winds

Descent without packing the canopy (after fully deflating the canopy):

Option 1:

- Hold the vent line in one hand and maintain moderate tension (1 to 10 pounds) on the line.
- Descend while dragging the canopy behind you.

WARNING: Failure to keep vent-line tension can tangle the upper vent sleeves.

Option 2:

- Lock the vent cleat with the vent line out past the ends of the risers
- Draw in all the lines and hold them with one hand at the opening edge of the canopy (as though preparing to daisy chain and pack).

Always choose a descent path that avoids rocks, branches and other obstructions that could snag the canopy.

4. Tangles

WARNING: Twists, tangles, and knots in the lines and canopy can cause unintended inflation and prevent canopy collapse. Resolve these problems immediately if they occur. Avoid working with tangles in high wind conditions or locations with immediate terrain hazards.

General Notes:

Tangles should always be released WITHOUT disconnecting components of the control center, lines and canopy. Only tangles or twists caused during assembly of components warrant disassembly.

4.1. Vent Sleeve Tangles

WARNING: Flogging of the canopy in high wind without tension on the vent line can cause tangles and knotting of the upper vent sleeve.

Visually inspect vent sleeves and perform test collapse after any prolonged period with the canopy unpacked and collapsed to look for tangles. It is advisable to perform a routine inspection of the upper vent sleeve junction when unpacking the canopy.

4.2. Shrouds & Grid

Shrouds should be untangled before launch. Tangles in the shrouds and grid are typically caused by:

- Piling lines after releasing daisy chain (It is safer to keep the lines fairly straight when unpacking)
- Twists between the control center and canopy found while releasing the daisy chain
- Failure to fully release the daisy chain

Run a gloved hand through the shrouds to release kinks and tangles.

4.3. Risers, Vent Line & Control Center

Twists in the risers are often caused by the control center getting flipped through the risers. Disconnect the control center from the harness and flip the control center through the risers and vent line until all twists are released.

4.4. Inversions

An inversion is caused when the canopy inflates inside out. During inflation monitor to ensure that the canopy inflates with the perimeter tape and logo facing out.

Typical causes are:

- Launching canopy by pulling on the riser leading to the bottom of the canopy instead of the top
- Excessive handling in attempt to launch or tangling canopy with obstacles

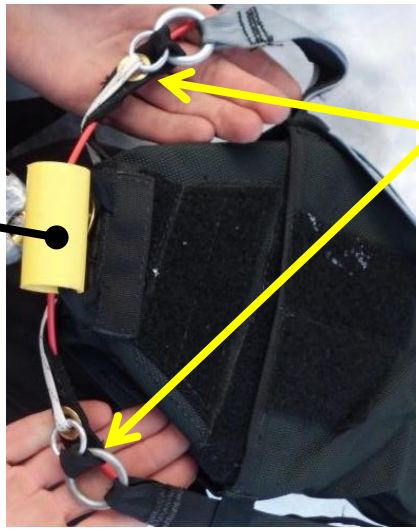
5. Maintenance, Assembly & Repair

5.1. Harness Release Assembly

HARNESS RELEASE RING PROPERLY ASSEMBLED

5.2.Riser Release Ring assembly

Control Center: Riser Release



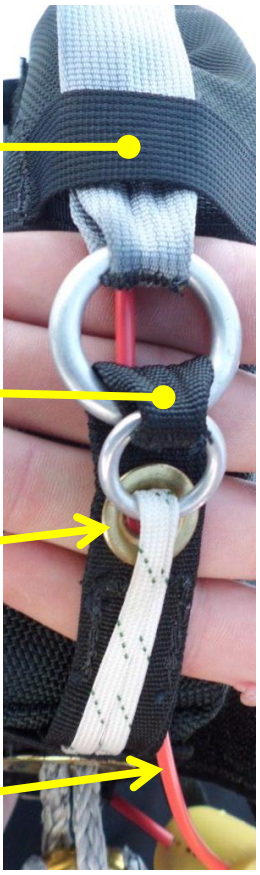
Normal Outside

(1) Riser threads through sleeve

(2) Small ring threads through large ring and folds back

(5) Lace threads through small ring and grommet

(3) Cable enters the assembly from the direction of the release handle



Backside

(7) Cable tip threads into sleeve on the riser

(6) Cable threads through the lace

(4) Cable threads through small sleeve

NOTES: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