

UNINSURED UNITED PARACHUTE TECHNOLOGIES, LLC.



Inspection of Three Ring Release Cable Housing

Breakaway cable housings guide, minimize friction, and protect the breakaway cable. However, they must be integrated into the harness / container system so that they place no load on the three ring riser's locking loop from either opening shock or suspended weight under canopy. In simple terms, the short, right hand housing must be at least 1" (preferably 2") longer than it needs to be in the "no load" state, or be able to move upward or stretch 1" to 2" when a load is applied to the riser.

This slack must be built into the system, not only because everything stretches during opening shock, but also to allow for cases in which the harness, risers, or housings themselves may have been inaccurately manufactured. A 1/4" error in each of these components adds up to nearly an inch, and that is enough to make a hard or impossible pull at breakaway time.

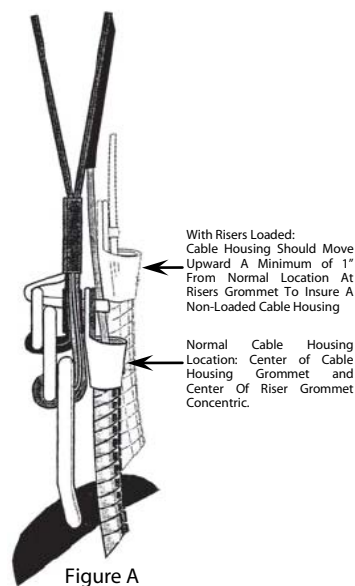
To test for slack in your short housing, put on your rig with the main container open. Sit down and have someone load your right riser. Grasp the cable housing by its upper end, and push upward. The housing ending should have no load on it, and easily move upward, past the riser grommet, at least one inch (see Figure A). This test can also be performed under canopy. And the same rules apply to rigs equipped with soft housings.

In most construction methods, the left side housing has slack built in automatically because of its curved path leading up to the riser. However, this test should also be done on the left side, because someday, someone may come up with a new construction method that might create a problem.

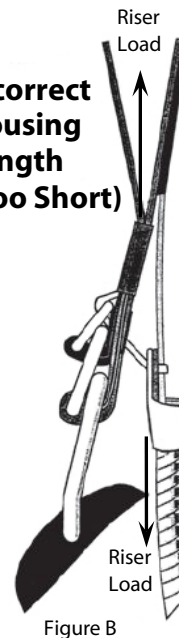
A short housing problem can be aggravated by a riser with too short a locking loop. A loop of the correct length might "give" enough to somewhat alleviate the problem caused by a short housing. On the other hand, on a rig with short housings, changing risers with a correct loop length, to new risers with a short loop, can make a three ring system that used to work, work no longer.

A short housing that cannot stretch or move upward in response to opening shock is a serious problem because it effectively bypasses the three ring system and transfers your weight directly to the locking loop (see Figure B). A load, on that loop, of just 20 pounds can cause a difficult pull at the breakaway handle. A load of just 60 pounds will suck the cutaway cable through the grommet on the end of the housing and make a breakaway impossible.

Correct Housing Length



Incorrect Housing Length (Too Short)



ENGINEERING DEPARTMENT

1645 LEXINGTON AVENUE ♦ DELAND FL 32724-2106 ♦ TELEPHONE +1 386 736 7589 ♦ FAX +1 386 734 7537
 UPT@UPTVECTOR.COM ♦ WWW.UPTVECTOR.COM

PERIODIC MAINTENANCE FOR THE BOOTH 3-RING RELEASE SYSTEM

The Booth 3-Ring release system has been in use for many years with excellent results. Although the system is as durable as the rest of the rig, it requires periodic maintenance and inspection to ensure proper operation.

The procedures below should be done at least every 3 months. This is especially important if the rig has not been used for an extended period, such as during the winter. Immediate inspection is required if it has been subjected to some abuse such as being dragged across a runway, a water landing or exposure to a lot of dust or sand. It's important to maintain the system even more frequently in humid, muddy or freezing conditions. If the Vector becomes immersed in mud or muddy water, clean the 3-Ring release system with a mild solution of soap and water. Any rusted components must be replaced.

PROCEDURE FOR PERIODIC MAINTENANCE OF THE BOOTH 3-RING RELEASE SYSTEM

1. Every 3 months operate the 3-Ring release system on the ground. Extract the cable completely from the housings and disconnect the risers.
2. While the system is disassembled, closely inspect it for wear. Check the white locking loops (the ones that pass over the smallest ring and through the grommet) to be sure they are not frayed.
3. Check the hook and loop fastener on the cutaway handle and main lift web to be sure it is clean and adequately holds the handle.
4. Check the cable ends for a smooth finish. The ends are finished at the factory to have a smooth, tapered surface. This prevents the cable from hanging up in the loop. Check the cable ends and consult a rigger or the manufacturer if a burr or "hook" is present.
5. Check the stitching, including that which holds the large rings to the harness.
6. Check that all 3-Ring release housings are firmly clamped (behind right ring cover and under yoke). The housing ends lie at the chest strap area, check for proper stretch by pulling downward on them to confirm that they don't move downwards more than 1/2 inch. The end of each housing (at the end fitting) must be even with or up to 1" (25mm) longer than the top of the large ring. Pull up and down from each end fitting, they each must be able to easily move up and down 1-2 inches.
7. Take each riser and vigorously twist and flex the webbing near where it passes through each ring. The idea is to remove any set or deformation in the webbing. Do the same thing to the white loop.
8. Check the housings for dents or other obstructions. Use the cable to do this.
9. Clean and lubricate the release cable with a silicone spray. Spray on a paper towel and firmly wipe the cable a few times. A thin, invisible film should remain, too much will attract grit and dirt.
10. Inspect the end fittings at the end of each housing. If one of these fittings were to come off the housing, a riser might release prematurely.
11. If any wear is found, consult the United Parachute Technologies or a rigger before using the Vector 3.
12. Reassemble the system. Double check it with the instructions in section 5 of this manual. Make sure the risers aren't reversed. United Parachute Technologies appreciates and welcomes any comments from users that relate to the safety, operation or maintenance of the 3-Ring release.

