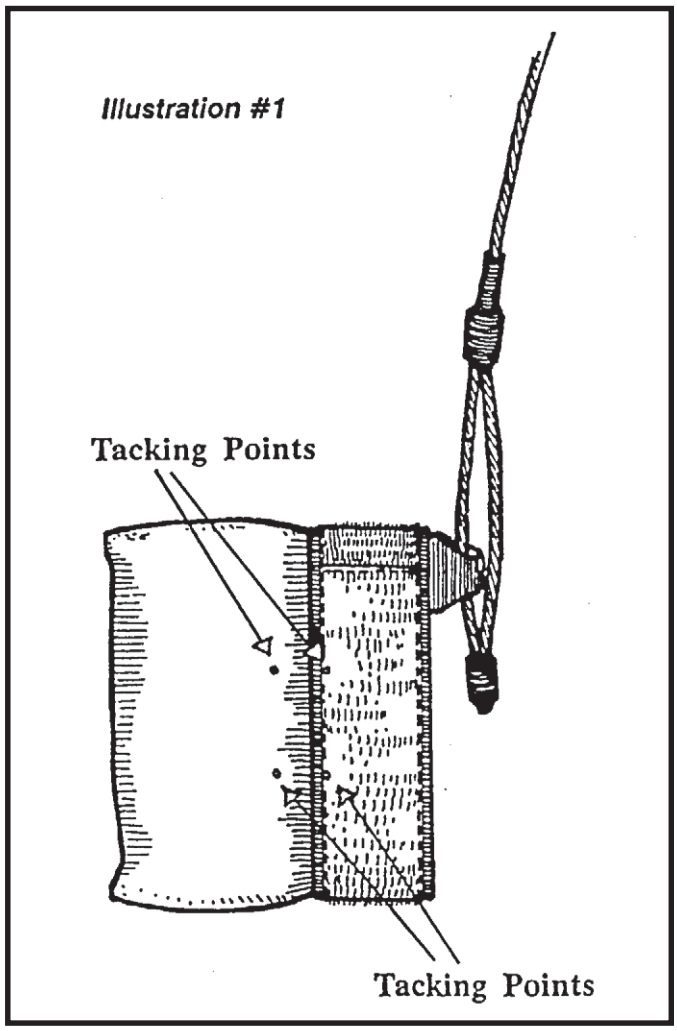
PSB#111788
Tandem Vector Chekclist
November 11, 1988

TANDEM VECTOR RESERVE HANDLE MODIFICATION

Some Tandem Vector owners have suggested that they would prefer the soft reserve handle to "stick out" from the main lift web at a sharper angle than it does now. For those who would prefer the handle to have a more ponounced angle, these directions explain what to do. You will need waxed tacking cord and needle. You need not remove the handle completely from the rig to perform this modification.

Lay the handle on a table so that the cable is on the right. Make two marks about an inch apart from each other in the center of the handle and about 1/4" from the edge of the velcro. The other tacking entry point will be just inside the edge of the velcro as shown in illustration #1.



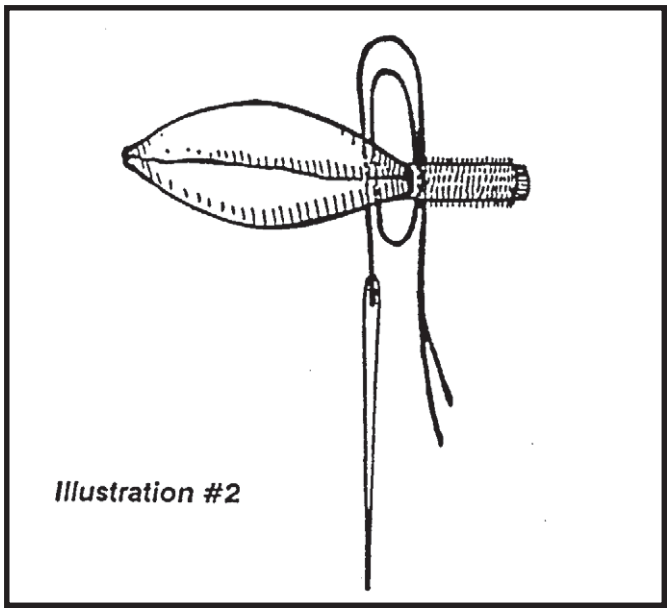


Illustration #2 shows the handle from on end. Sew twice through the tacking points with the entry and exit points on the back of the handle.

When you tighten the tacking cords, you'll force the handle to an angle as shown in illustration #3

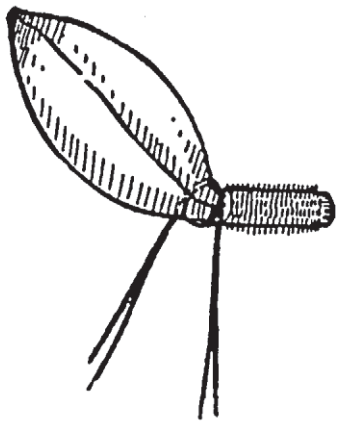


Illustration #3

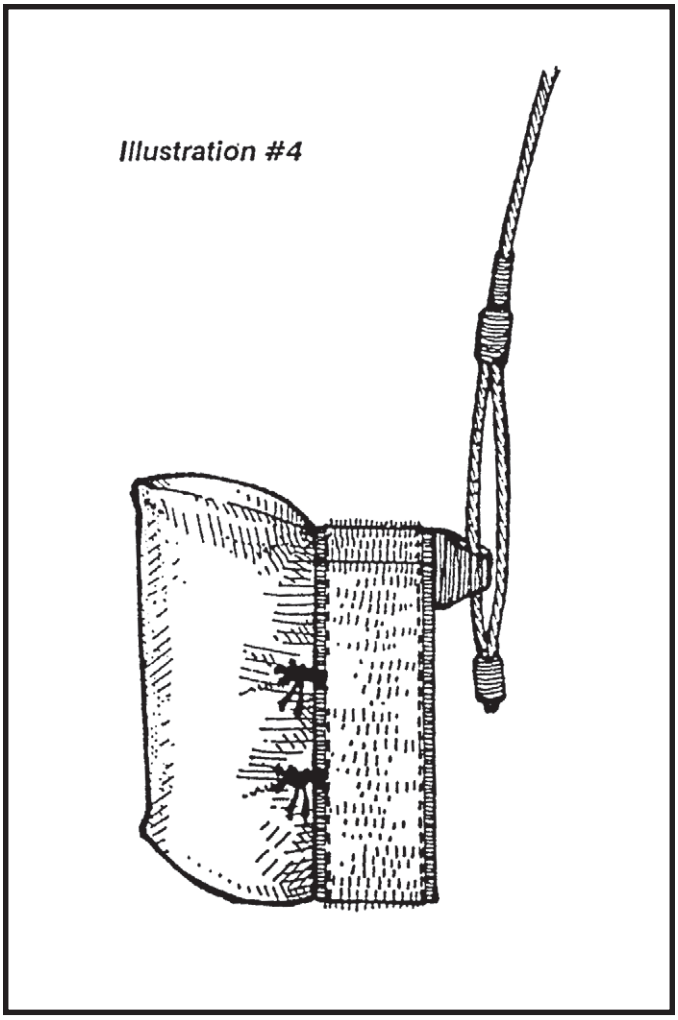


Illustration #4

Secure the ends of the tacking cord with a surgeon's knot. Repeat the process through the other tacking marks and tie. When your're done, your handle should look like illustration #4, with two secure knots on the back of the handle, When reattachd to your rig, the handle will stand out from the harness.

INSTALLATION OF RIGHT HAND DROGUE RELEASE ON RELATIVE WORKSHOP TANDEM VECTOR

For those who prefer, the Relative Workshop now offers a right hand drogue release/ training ripcord for Tandem Vectors. The system is intended mainly as a right hand drogue release handle for the Tandem Master. With the addition of this handle, the Tandem Vector system will have drogue release handles on both sides as well as reserve ripcords on the right and left sides. In other words, if either arm of the tandem master is incapacitated, he can still activate either the drogue release or the reserve ripcord. The handle can also be used as a training ripcord for the student (a dummyhandle can serve the same purpose without creating the hazards inherent in giving the student access to the new handle).

CAUTION:

Use of this new handle carries with it new and greater responsibility for the Tandem Master. Read these warnings carefully before using the new right hand drogue release/ training ripcord on the Tandem Vector.

WARNING:

Always attach the handle to the right main lift web of the Tandem Master immediately after each jump. DO NOT put on the rig if the handle is dangling and not attached to the main lift web. For those who prefer, the handle may remain attached to the Tandem Master's main lift web for jumping instead of being transferred to the student's harness.

WARNING:

Use of this handle creates new malfunction possibilities. Among these are:

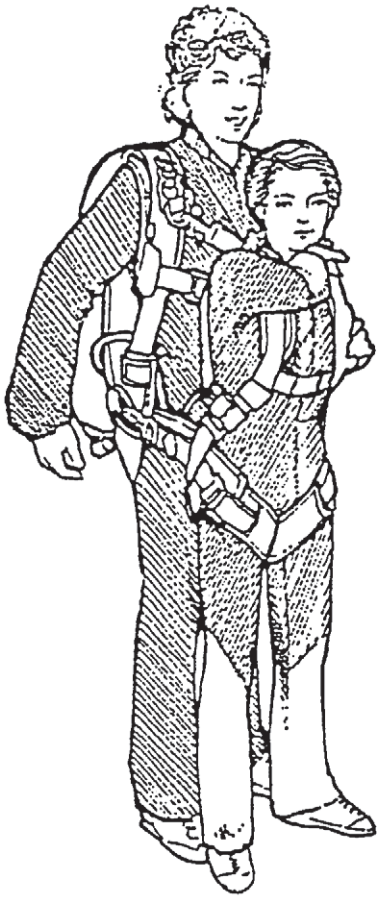
1) Dangling housing and handle. If the handle is not attached, it will trail behind the jumpers, possibly to entangle with the drogue, the main or the reserve.

2) If the release system is not attached properly, it may be necessary to pull BOTH drogue release handles in order to release the drogue. If you pull one drogue release handle and the drogue does not release, PULL THE OTHER I MMEDIATELY.

Included In this conversion kit are the following Items:

1) Student release handle.
2) Cable housing.
3) New drogue release riser with three double ended release loops (two spares).

This conversion can be performed with or without a sewing machine. If you elect not to use a sewing machine, you will need waxed tacking cord.

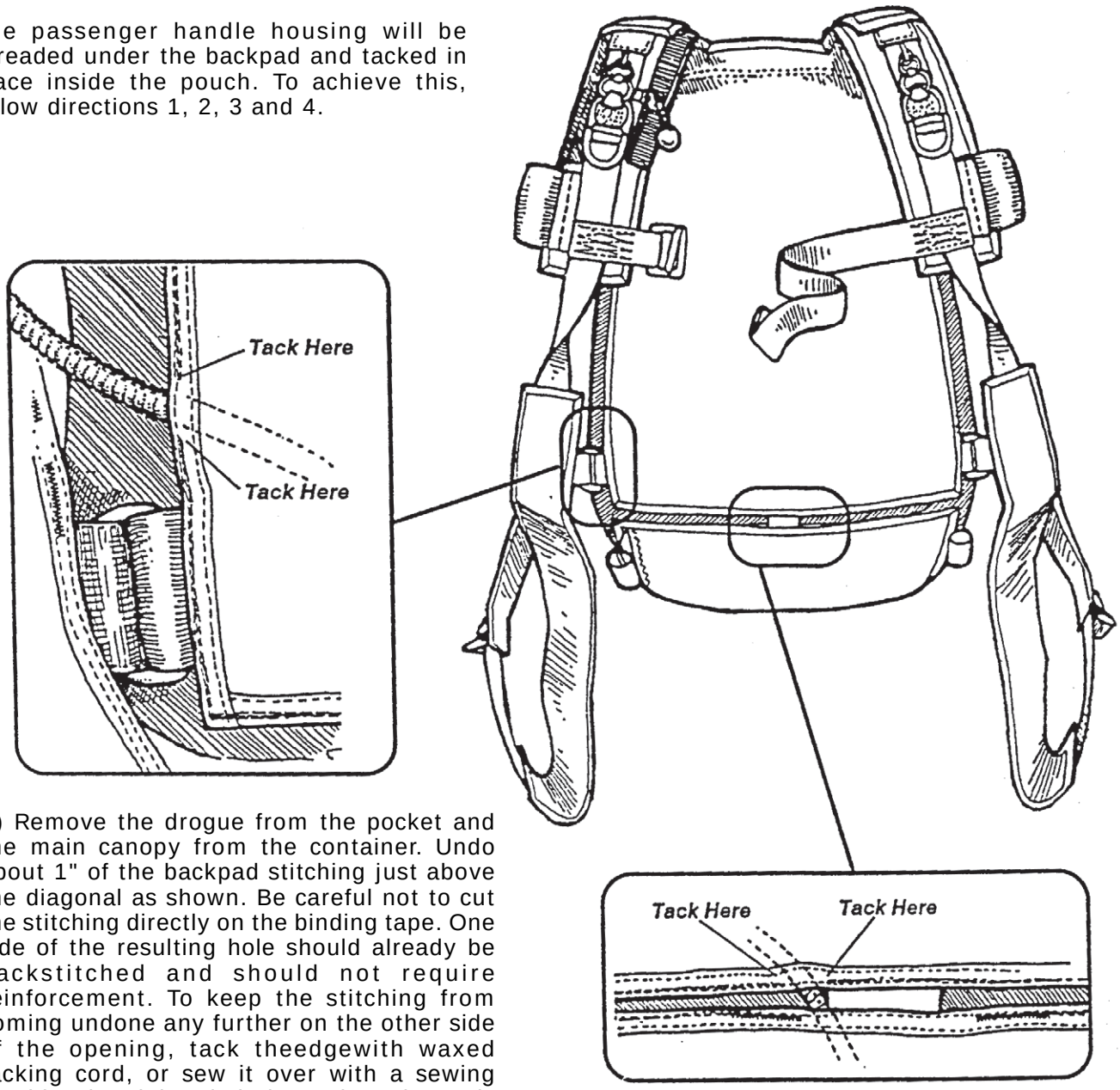


WARNING:

If the right hand drogue release handle is installed and is accessible to the student, then ALLRWISPOSITMLYPROHIBITED. Here is what can happen: a solo jumper docks on a tandem pair. The student then pulls the right hand drogue release handle. The tandem pair drops sharply and the solo jumper is pulled down on top of them. As the canopy deploys, the tandem pair is then hoisted up very quickly and knocks the solo jumper unconscious. There is also the obvious danger of the student pulling at any time during the jump. Anyone overhead would be in serious trouble. For this reason, any photographer accompanying a tandem pair with this new handle must plan the exit and dive so that he/ she is NEVER above them.

INSTALLING THE HOUSING AND HANDLE

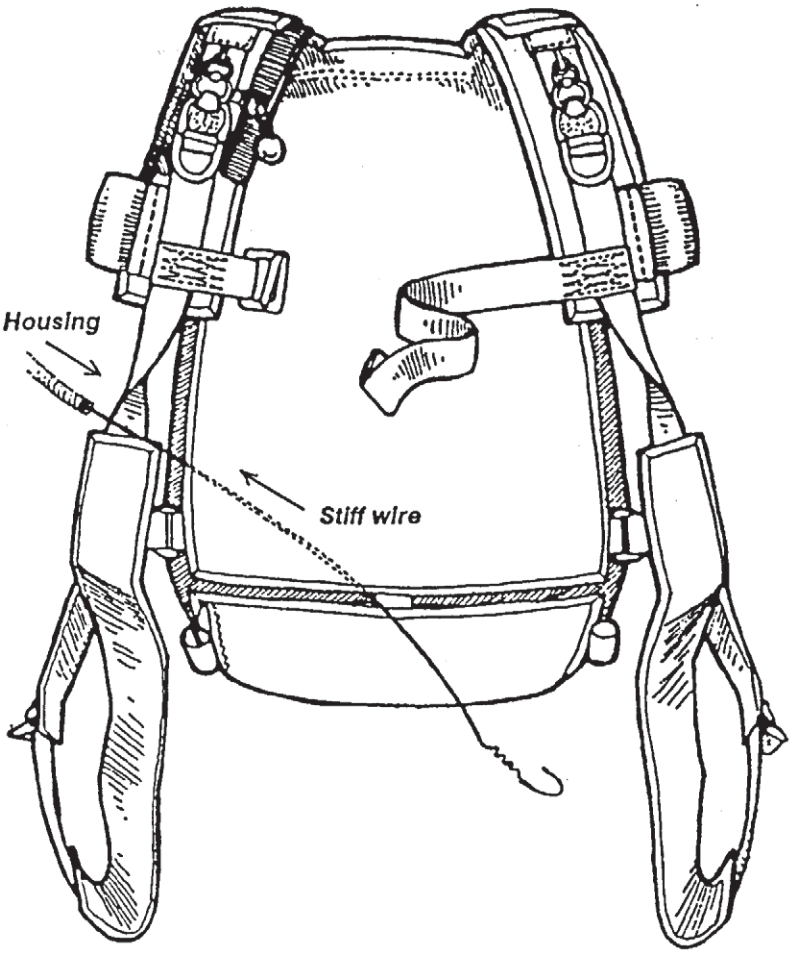
The passenger handle housing will be threaded under the backpad and tacked in place inside the pouch. To achieve this, follow directions 1, 2, 3 and 4.

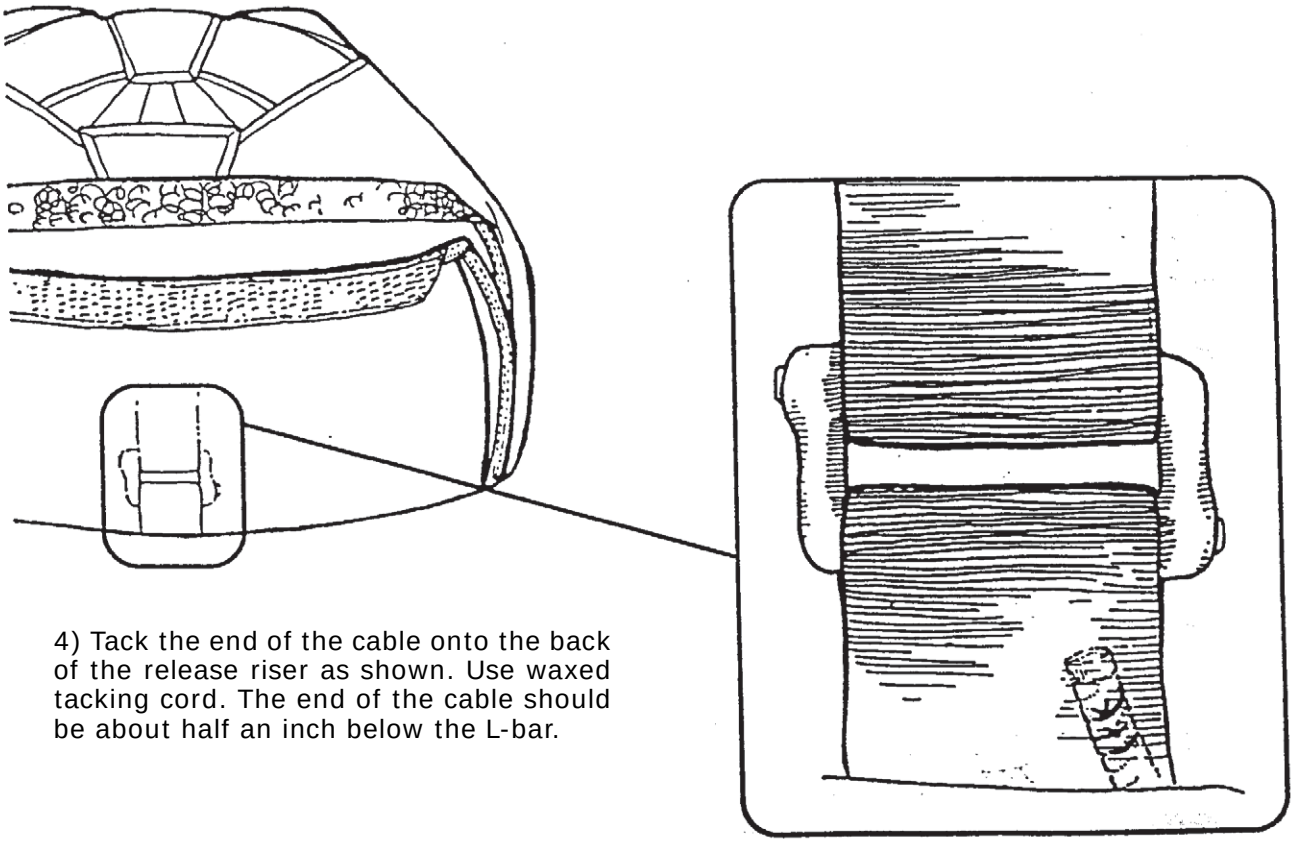


1) Remove the drogue from the pocket and the main canopy from the container. Undo about 1" of the backpad stitching just above the diagonal as shown. Be careful not to cut the stitching directly on the binding tape. One side of the resulting hole should already be backstitched and should not require reinforcement. To keep the stitching from coming undone any further on the other side of the opening, tack theedgewith waxed tacking cord, or sew it over with a sewing machine (straight stitch, bartack or zig zag is fine). If you use a sewing machine, you may have to unpack the reserve.

2) In the middle of the pocket is the base of the release riser. There is space next to this riser for the housing '° to fit, so no modification need be made directly on the pocket. Undo the stitching on the backpad for about an inch just to the left of the riser end as shown. Be careful once again not to cut the stitching right on the binding tape. One end of the resulting opening should already be backstitched and should not require reinforcement. To keep the stitching from coming undone any further on the other side of the opening, tack the edges with either waxed tacking cord. or a sewing machine, as described in #1.

3) Thread the cable 'through the two " spaces in the back pad and into the pouch so that it is under the release riser. To do this, you will need to use a piece of stiff wire (a straightened out coat hangar with a rounded or taped end will work fine). Run the wire under the back pad from the riser to the diagonal. Slide the housing over the wire from the diagonal to the riser. Carefully remove wire.

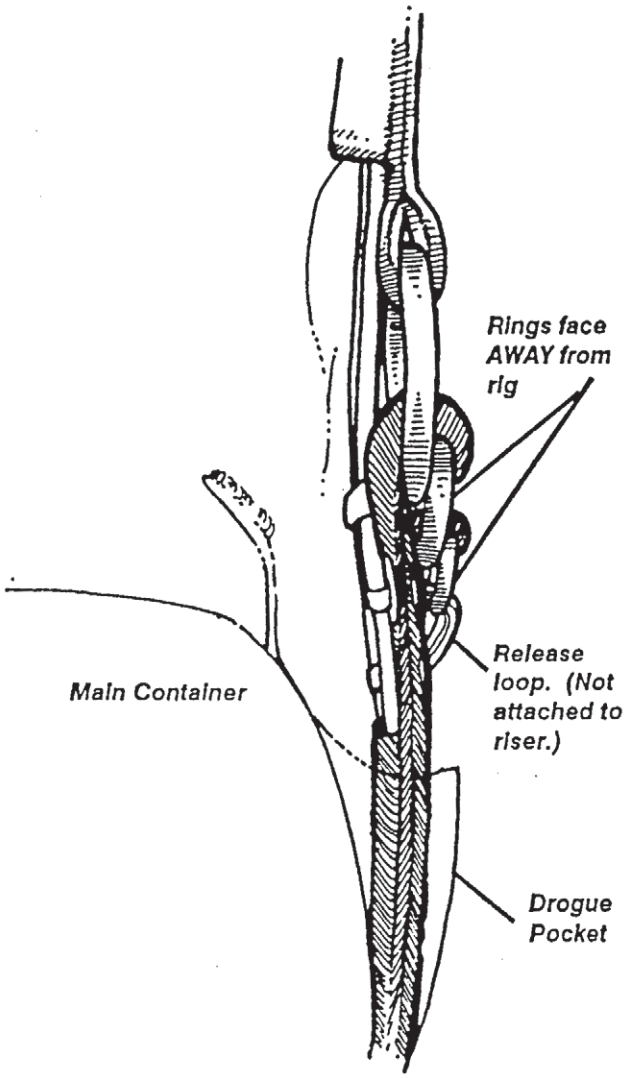


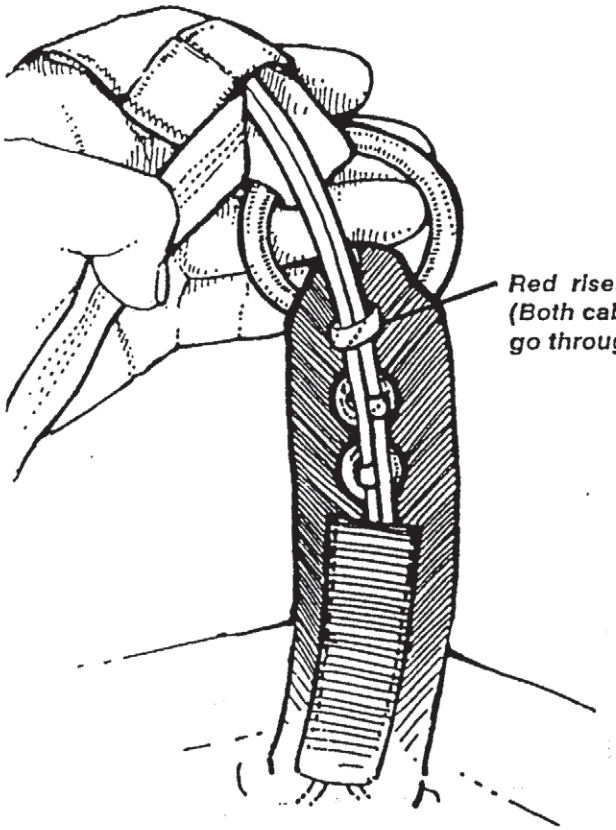


4) Tack the end of the cable onto the back of the release riser as shown. Use waxed tacking cord. The end of the cable should be about half an inch below the L-bar.

The new drogue release riser comes with a set up that allows either the tandem master or the student to release the drogue. To install it, simply undo the L-bar inside the drogue pouch, and replace the old riser with the new version. Be sure the rings on the riser face away from the rig as shown.

There will now be two yellow cables running up the back of the release riser; one for the primary drogue release and one for the secondary. Both run through the same channels on the back of the riser and in the drogue bridle. The new release loop has two open ends and is not attached permanently to the riser. One end of the loop goes through the top grommet and around one cable, the other end goes through the bottom grommet and around the other cable as shown. It doesn't matter which end of the loop goes with which cable. Just be sure that each cable goes through one end of the loop.





There is a red loop above the grommets on the release riser. It is important that both yellow cables go through this loop. This will prevent the double ended release loop "' from being lost when the drogue is released.

ATTACHING HANDLE TO STUDENT HARNESS

The new drogue release handle can be attached to the main lift web of the stu-dent harness below the chest strap, or it can be left on the main lift web of the Tandem Master (in which case it is inaccessible to the student).

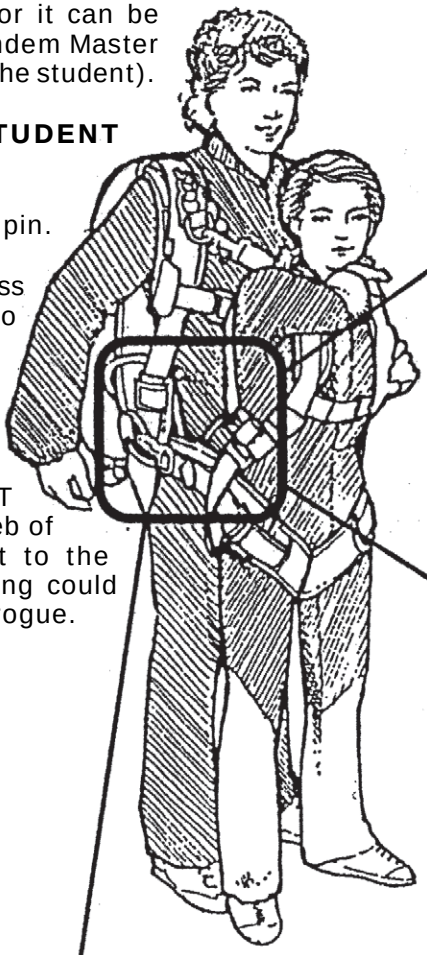
TO ATTACH HANDLE TO STUDENT HARNESS:

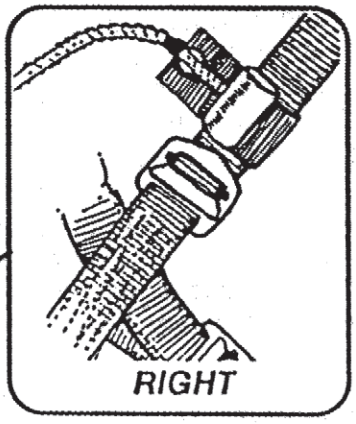
1) Clip top snaps and secure with pin.

2) Attach handle to student harness as shown (or leave attached to Tandem Master harness)

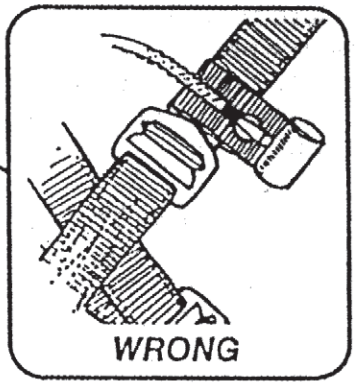
3) Do up bottom snaps.

NOTE: When attaching handle to student harness, the housing MUST be routed UNDER the main lift web of the Tandem Master. If it is left to the outside of everything, the housing could get in the way of throwing the drogue.

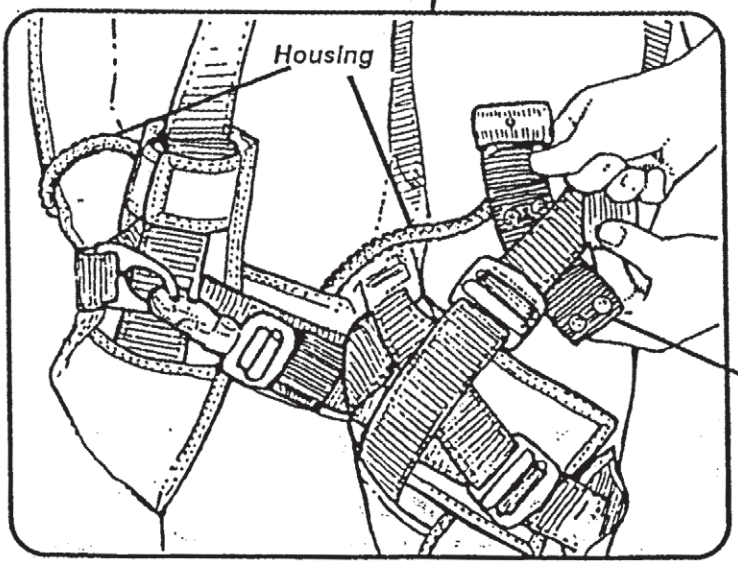




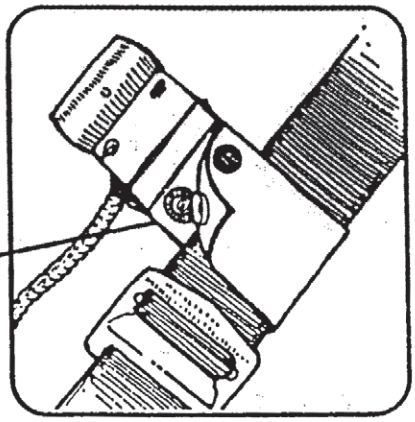
Domed side of snaps are just under the handle, on top of main lift webbing. Handle lays on main lift web.



Domed side of snaps are on backside of main lift web. Handle sticks out beyond main liftweb. WARNING: If pulled in this configuration, the whole handle setup could detach from the main lift web.



Fold up and Attach Snaps



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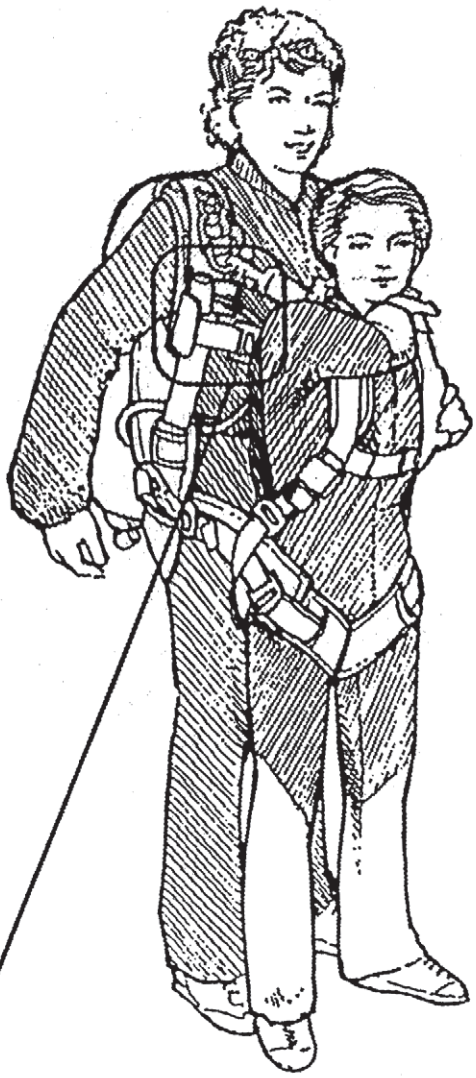
Some Tandem Masters prefer that the student not have access to anyhandle. For these, the new drogue release handle can be left attached to the right main lift web of the Tandem Master's harness.

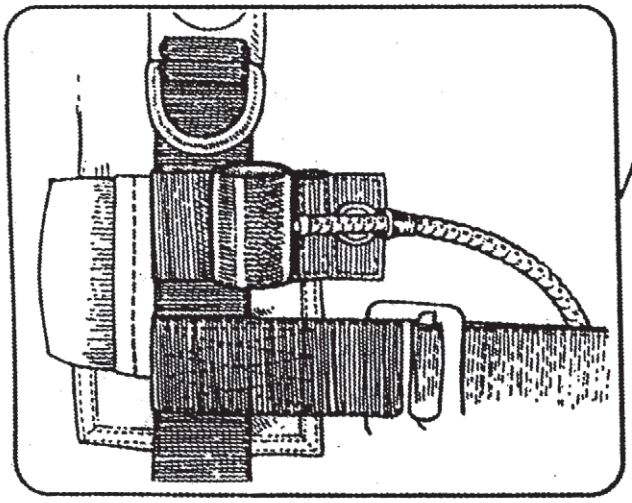
After each jump the Tandem Master should attach the housing and handle to the right main lift web of his rig, just below the D-Ring_ and above the cutaway handle.

This is very important. If the handle was to be inadvertently left loose, it could cause a malfunction of the drogue, the main or the reserve.

If the handle is going to be left on the Tandem Master's harness, put the chest strap OVER the housing when donning the rig. If the handle will be attached to the student's harness, then becareful not to put the chest strap over the housing.

The correct routing for the housing when it is to be left on the Tandem Master's harness is: UNDER the main lift web, then in a gentle S curve behind the student and UNDER the chest strap.





Relative Workshop Tandem Vector
Drogue Bridle "Stop Tab" Modification

Recently we've seen videos showing Tandem main containers open in drogue fall. This seems to be a result of the white tubular bridle whipping back and forth inside the inflated drogue. Occasionally, this motion takes up all the slackbetween the bottom of the drogue bridle and the main pin -and every so often the main pin is pulled out of its loop as a result. In a great majority of cases, this causes no problem; the main stays in place and deploys normally when the drogue release handle is pulled. In fact, the Tandem Master feels nothing. Apparently the secure attachment of the drogue bridle prevents the bag from falling out of the container.

This whole scenario occurs very rarely. However, rare as it is, it COULD have serious consequences. Many options were researched, with the "stop tab" offering the best solution. It seems to eliminate the old problem without causing any new ones. We'd still like your input. Keep your eyes and video on it for awhile and report any problems to the Relative Workshop.

1) The drogue bridle has two components: a yellow kevlar outer bridle, and a white tubular inner piece. The white tubular should have a blue mark on it showing where it comes out of the yellow kevlar outer bridle. If your system does not have this mark on the white tubular, begin by attaching and "setting" drogue to its full extension as shown in illustration #1

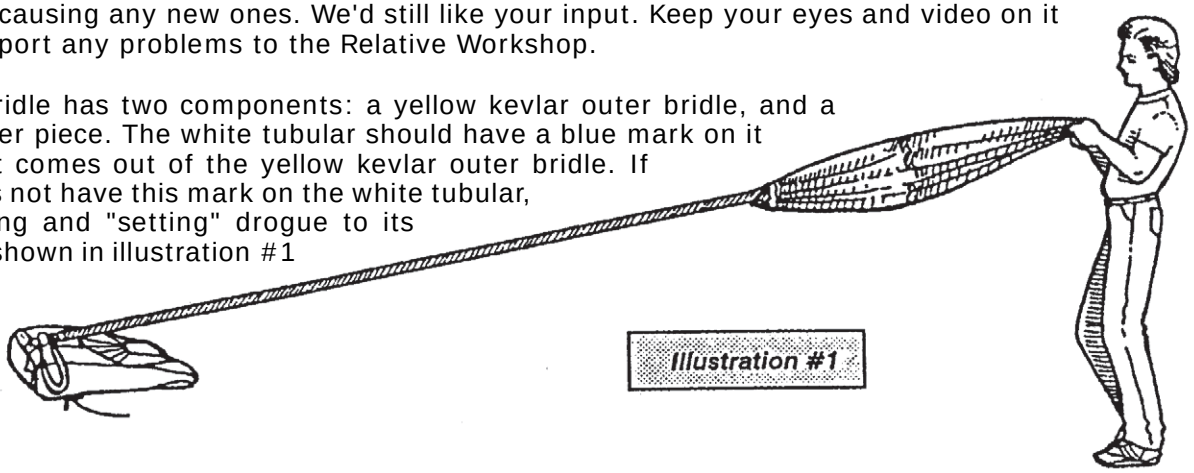


Illustration #1

2) When drogue is set, mark the white tubular with an indelible pen right where it comes out of the yellow kevlar. This will be called your "SET" mark

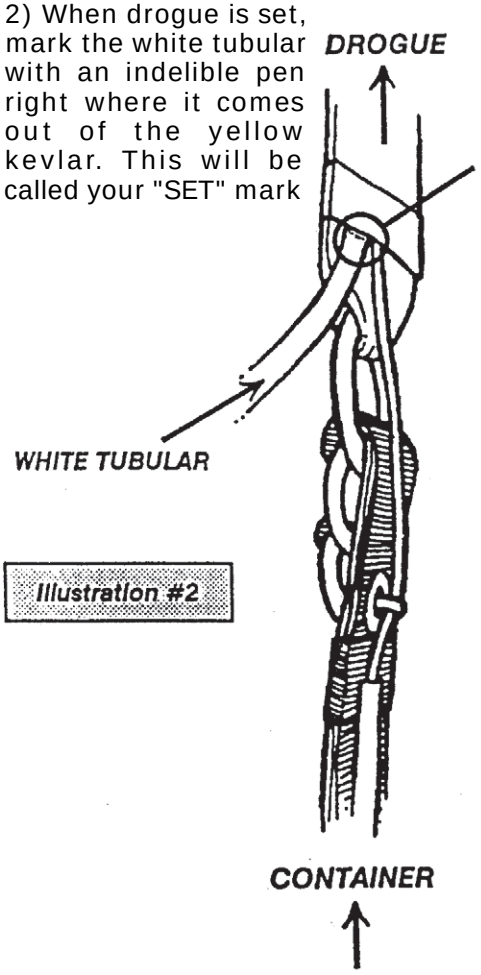


Illustration #2

3) One idea of this modification is to give a little extra slack in the white tubular between the main pin and the yellow kevlar bridle. To achieve this, make a NEW mark on the white tubular 3" TOWARDS the drogue as shown in illustration #3. This is where the new stop tab will be sewn.

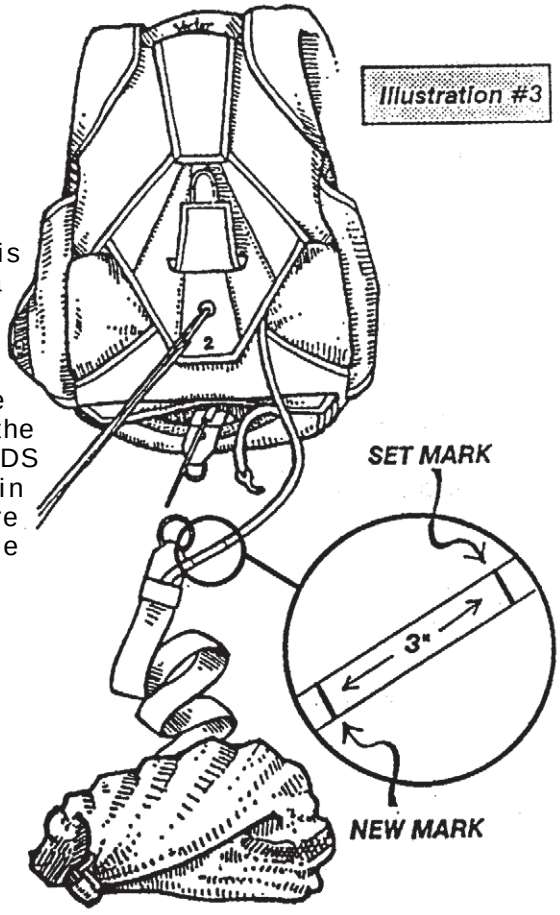


Illustration #3

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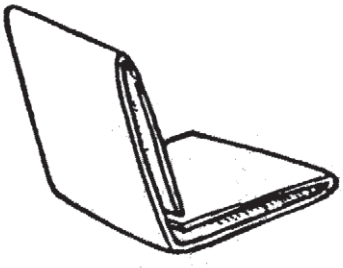

Illustration #4

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