

# TANDEM NEWS

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Since the last issue of TANDEM NEWS in October 1989, much has happened in the "tandem world". Strong Enterprises recognizes the importance of communication and will use this forum to discuss tandem issues confronting the skydiving public. Please read, enjoy and comment. WE NEED YOUR INPUT!

## EXEMPTION RENEWAL

Although FAA Exemption 4943, which allows SE to make tandem jumps, is to expire 30 June 1990, FAA Headquarters in Washington, DC, has advised SE the exemption will be ~~renewed~~ before the end of the month for two years. SE will be forwarding necessary paperwork to each tandem operation as soon as possible.

FAA notified SE that they currently have a rulemaking project underway which will publish the proposed rule in the Federal Register in August 1990. In the meantime, the FAA has promised to provide periodic status reports of their progress.

## TANDEM FATALITY

7 March 1990, northwest of Rome, Italy, a Vector Tandem Master and his student cut-away and fell to their deaths without activating their reserve.

As reported by Marco Carrera and Michael Fitzmaurice, both SE Tandem Examiners in Italy, the jump was made by a tandem pilot who started the tandem certification process a year earlier and had finished it about 30 days before the incident. He had logged 34 tandem jumps in the year.

Before the jump, it was confirmed the Stevens cut-away system was hooked up but for some reason, the tandem master elected to release it upon opening.

From the ground, the canopy was observed turning slowly in one direction. Later, it was determined the tandem master had released the brake on one side and the "flare" toggle on the other side. It was not known whether the canopy was fully or partially open.

At 1,000 feet AGL, the tandem master cut-away and did not activate the reserve.

## BAGLEY AT STRONG ENT.

Effective 15 May 1990, Larry K. Bagley joined the staff at Strong Enterprises. Although Bagley's main field of endeavor will be the

tandem program, he will also assist the company in international sales.

A jumper since 1963 with almost 4,400 jumps, Bagley still owns and operates the Utah Sky Ranch Parachute Center and the Special Delivery Skydiving Team in Salt Lake City, Utah.

Bagley earned his tandem pilot certification in 1985, owns three Dual-Hawk rigs and has made over 300 tandem jumps. He became a tandem examiner for SE in 1986 and has represented the company in their effort to introduce tandem jumping in Iceland, Italy and the People's Republic of China.

Since 1975 Bagley has served on the Board of Director's of the U.S. Parachute Association and is now Chairman of the Board after presiding as President for an unprecedented eight years. He served almost four years as chairman of the Competition Committee and is an advisor to the Safety and Training Committee. Last month, he was appointed to the General Aviation Sub-committee of the Salt Lake City Airport Authority in Utah.

#### **TANDEM PILOTS--SE REPS.**

When the FAA granted the FAR exemption to allow "tandem parachute jumps" back in 1984, they actually granted the petitioners, Strong Enterprises and The Relative Workshop, the right to designate representatives to be tandem instructors. The FAA specified that tandem jumping "shall be under the direct control and supervision..." of the petitioners and that buying a rig by "any interested party" did not allow the rig to be used "without an exemption" from the FAR.

Since 1984, over one thousand skydivers have earned the right to be

representatives of SE and thousands of jumps have been made by those representatives in strict compliance with the FAR exemption.

However, SE has been notified, from time to time, about violations to the FAR exemption and everyone should know SE's policy about violations and how they are handled within the company.

Last month a tandem pilot called SE to ask about a used rig he was considering buying. It was owned by a "retired" tandem pilot who wanted to sell it because he had quit skydiving. The "potential" buyer/tandem pilot found the rig in total disrepair and unsafe. SE immediately grounded the rig and asked the owner to return it to SE for evaluation.

In another case, a tandem examiner happened onto a drop zone in an area he was visiting and observed the tandem program in operation. After several student jumps, the examiner asked the pilot to discuss some of his techniques, some of which the examiner found unacceptable and, in fact, unsafe.

After several minutes, it was obvious the tandem pilot was not going to change his method of tandem jumping and the examiner advised him of his intentions: to call SE and make a full report.

Immediately a call was made to the tandem pilot by SE to advise him he was no longer allowed to make tandem jumps. In addition, SE notified the local FAA Flight Standards District Office of the decision. Immediately the pilot was unable to perform as a tandem pilot and is still grounded.

Everyone making tandem jumps as representatives of SE must know the facts: Tandem jumps using Dual

Hawks must be made in compliance with SE policy or SE will take action to ground the rig, pilot or drop zone, whichever is appropriate.

As a holder of the FAA Exemption, SE has the legal authority to stop DZ's and/or individuals from making tandem jumps. The FAA has stated that they must act if SE requests some action with regard to tandem jumping.

### POLICING TANDEM

Not long ago, a tandem pilot visiting a drop zone outside his area was overheard talking to a "potential" skydiver. The conversation went something like this: "So, how many jumps do you have, young lady?" "Oh, none. They only teach using the tandem method and I won't be 18 for another year." "Come to my center some time and I'll take you up 'cuz the age limit thing doesn't mean anything to me."

Unfortunately, those who heard the conversation did nothing about it--no one called the manufacturer or discussed it with the tandem pilot.

Everyone involved in the tandem program must assume the responsibility of policing tandem for everyone's benefit. The above situation could have been an honest misunderstanding on the tandem pilot's part and a brief discussion with him could have corrected the problem. But before the FAA gets involved, and for our own protection, we must police ourselves.

### STUDENT AGE LIMIT

It appears there might be some question in the field as to the age limit imposed by the FAA on "Tandem Test Jumpers" and SE wants to clear it up. In a conversation with the principles of the Tandem

Program in November 1985, Leo Weston, Manager, General Aviation and Commercial Branch of the FAA, stated unequivocally that all tandem passengers are to be 18 years of age or older--NO EXCEPTIONS.

As representatives of SE, all tandem pilots must ensure all tandem jumps are made in compliance with this interpretation by the FAA of the exemption.

### TANDEM DEMO JUMPS

Also part of the discussion with Leo Weston in 1985 was the question of "tandem demo jumps". SE reemphasizes Mr. Weston's direction: Tandem jumping is to be conducted only "...in a training environment." Tandem pilots are reminded that local FSDO's CANNOT issue a waiver (or Certificate of Authorization) for jumps into airshows or other special events.

### USPA AND TANDEM

On 13 March 1990, Strong Enterprises issued a press release stating they would "...require a Jumpmaster or Instructor rating ...for all future Tandem Pilot candidates effective June 1, 1990." Because of that press release, an urgent letter from Strong Enterprises to all SE Tandem Pilots dated 4 March 1990 and an "At Press-time" report in USPA's April 1990 Parachutist Magazine, questions and misunderstandings have developed that must be addressed.

Although it may appear SE's change in policy of requiring a Jumpmaster or Instructor rating was a result of the board meeting, everyone should know that is not the case. This was in the mill before the first of the year and is specifically meant to "upgrade the experience level of the people entering the Tandem Program."

USPA only further confused the issue when they stated, "...Strong's decision to require its tandem pilots to hold USPA instructional ratings will bring company policy into compliance with the BSR's." SE vehemently states that the tandem program is between the FAA, the Relative Workshop and Strong Enterprises AND NO ONE ELSE.

At USPA's Board of Director's meeting in Salt Lake City, 8-10 March 1990, the Safety and Training Committee unveiled a new document entitled "3-3 USPA INSTRUCTIONAL RATING TRAINING PROGRAM". Although SE encouraged the development of a new training program, it reminded the board that "by law, Exemption 4943 clearly places Tandem Jumping exclusively within the domain of the FAA, Strong Enterprises and the Relative Workshop." When it became obvious SE could not convince USPA to leave tandem out of the document altogether, SE's second choice was to have any reference to tandem placed in *italics* with a statement saying it would become USPA doctrine when and if tandem was placed within USPA's domain.

If unconditionally approved, 3-3 could have placed USPA in a position:

- a. to discipline it's members for making tandem jumps without an instructor's rating;
- b. to discipline it's group members for allowing USPA members to jump contrary to USPA doctrine;
- c. of affecting the success of the tandem program by limiting the number of tandem pilots available to make tandem jumps.
- d. to stop tandem jumping at member DZ's if the tandem pilot did not have a USPA jumpmaster or instructor rating, even though the exemption holder, SE, did not require a USPA rating.

SE's urgent letter asked every SE tandem pilot to call a "...Conference Director and at least one National Director..." and voice concern about USPA's interference with Exemption 4943."

As was hoped by SE, hundreds of calls were received by board members from SE tandem pilots and, although the Safety and Training Committee was not swayed to exclude tandem, the full board was obviously influenced by their constituency and the arguments presented by SE, and passed the following motion: "To accept the concept of the "Modular Instructor Rating Program" with the following major amendment: The Tandem Training Modular and the Tandem Rating will only become available after appropriate changes to the Federal Aviation Regulations."

Such a motion was necessary because of USPA's actions at their 1988 San Diego board meeting when they changed the BSR's to read "tandem student" instead of "tandem passenger". According to USPA, once that motion was passed, EVERY TANDEM PILOT MAKING A TANDEM JUMP WITHOUT A CURRENT USPA INSTRUCTOR'S RATING WAS IN VIOLATION OF THE BSR'S.

After much discussion, SE's lobbying resulted in the following motion: "It is the intent of USPA to not interfere with the conducting of tandem jumping under the FAA Exempt to FAR 105.43(a); therefore, no USPA member shall be subject to disciplinary action for making tandem jumps under the exemption to the FAR 105.43(a) if that member does not have a USPA instructor rating." The motion passed and is now USPA policy.

Neither USPA'S doctrine nor BSR's are applicable to operations under FAR Exemption 4943. However, SE does support USPA developing doctrine that can become effective depending on the permanent rule change made by the FAA. But to enforce any such doctrine before the FAA acts is **PREMATURE AND INAPPROPRIATE.**

### **PULL THE SECOND RIPCORD**

Oddly enough, it is developing as a major failure among tandem pilots when faced with a drogue-in-tow situation--not pulling the second ripcord. A study of drogue-in-tow incidents shows that in over 80% of the cases of reserves being deployed into the trailing drogues, the main deployed with or just after reserve inflation. Results have been: Mains not inflating; side-by-side or down-plane openings; and **ONE FATAL ENTANGLEMENT** on a Tandem Vector.

Remember the emergency procedures recommended by SE when, at planned opening altitude, a ripcord is pulled without desired results--main canopy deployment:

- a. **PULL THE SECOND RIPCORD;**
- b. Check that the drogue has been properly deployed--not on your back (in the burble) **OR STILL IN THE POUCH;**
- c. Cut away;
- d. Activate the reserve.

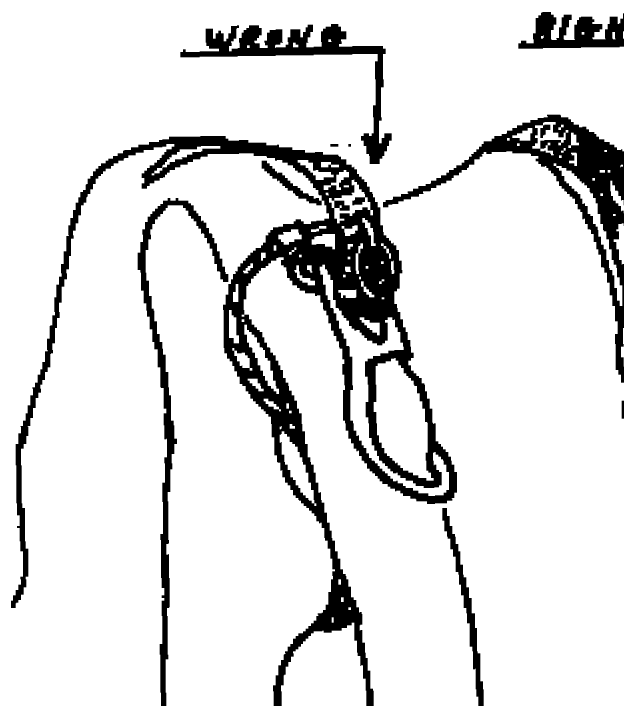
Most importantly, **BE ALTITUDE AWARE!**

### **THREE-RING RELEASE**

Recently, a video tape of tandem jumping was forwarded to SE for their review and comment. Among other things, the tape showed a "malfunction in the happening" and from the incident, we are all

reminded of the packing techniques taught by SE.

It seems that almost every time a tandem rig is put down after a jump, the middle ring on the riser rotates around the large ring on the main lift web. However, it should be corrected during the pack tray closing.



On this particular jump, neither the packer nor the tandem pilot caught it and the rig was jumped with the 3-ring misplaced. During opening, the pressure on the webbing holding the middle ring to the riser was so great the riser 3-ring locking loop failed leaving the tandem pilot and passenger under a "main canopy in tow". The tandem pilot reacted by grabbing the cut-away handle and reserve handle and simultaneously pulling them.

However, unknown to the tandem pilot, the locking loop holding the 3-ring in place on the other riser had creased into the yellow plastic

covering around the cut-away cable making it very difficult for the tandem pilot to cut-away. By now, the tandem pilot had activated the reserve. Luckily, within a few seconds, the cable released the main canopy and the duo fell away with a deploying reserve.

Two lessons should be learned from this jump:

1. The tandem pilot should thoroughly check the rig BEFORE HE PUTS IT ON; and,

2. The cut-away procedure includes two distinct steps---cut-away AND pull the reserve.

Make sure the main cuts away BEFORE the reserve handle is pulled.

### SNAP THE SNAPS!

Recently a tandem pilot and his student had a reserve ride due to a quick ejector snap on the student's harness.

While hooking up the student for the tandem jump, the tandem pilot failed to fully seat the quick ejector snap's lever on the student's lower attachment strap on the right side--the same side as the drogue.

When the pilot pulled the drogue from the pouch, the drogue bridle hooked between the lever and the snap, leaving both jumpers with a "drogue-in-tow". Of course, at pull time, they pulled both ripcords to no avail. After evaluating the situation the pilot had nothing left to do but deploy the reserve. Check those snaps!

### A HUNDRED POUNDS OF FEAR

Earlier this year, Santos Matos from Florida took a young lady on her second tandem jump. As they left the CASA at 12,000' in a "superman" exit, the 100 lb. student trapped

Matos' arms in her armpits and gripped his wrists in total fear. She was assisted in her ability to keep his arms trapped because of his wrist altimeter.

It took Matos, a 6'2", 190 lb tandem examiner with almost 1,300 tandem jumps, 3,000 feet to free his arms, gain stability and deploy the drogue.

Don't be lulled into a false sense of security--tandem jumps are not just another skydive. Beware!

### ALL HANDS ON DECK!

How many times have you opened up on a tandem jump, found the slider up and released the brakes so you could pump the slider down? Maybe you've even had the student help you.

In a recent incident, when the slider would not come down and the canopy started an uncontrolled turn, the tandem pilot elected to cut-away. Unfortunately, he forgot to remind the student to take his hands out of the toggles, so during the cut-away, the student had the "canopy-in-tow". Remind the student to release the toggles BEFORE THE CUT-AWAY.

### DROGUE IN TOW

Don't get in the habit and if you're in the habit GET OUT OF THE HABIT of holding onto the drogue pud after you've pulled the drogue from its pouch before you release it.

Alex Huber, Tandem Examiner in Austria, reported last month two cases of where the drogue TIED ITSELF INTO A KNOT when the tandem pilot pulled the drogue from the pouch but held onto it before releasing it. Pulling the ripcord did not open the main container.

The turbulent air over a duo's back, coupled with the length of the bridle, presents an excellent opportunity for the accident to happen and there's no good reason for the technique. When it's time to throw the drogue, **THROW THE DROGUE!**

### **ARE YOU HOOKED UP?**

Last year in Europe, a Pilatus Porter full of skydivers including a tandem pair, came across the DZ at 4,000 feet AGL to drop out one jumper. While exiting, the jumper's canopy deployed over the horizontal stabilizer causing the plane to roll over. A wing came off forcing the jumpers inside to fight centrifugal force to get out. In fact, one jumper was unsuccessful in his struggle and died in the crash.

The tandem pair survived because they were hooked up at all four points before the door was opened to allow the lower altitude jumper to exit and they were ready to jump.

When it's time to jump **EVERYONE IN THE PLANE SHOULD BE READY TO JUMP.**

This policy eliminates the possibility of tandem pilots jumpmastering other students on the same jump. If you're acting as a tandem pilot **AND** putting out other students, you should rethink your priorities, duties and obligations. DZ's **MUST** be able to conduct these operations separately and safely.

### **VELCRO, EVERYWHERE**

A tandem pilot in Utah had a different experience last month. As he let go of the drogue pud after pulling it from the pouch, the drogue went nowhere. It just hung there on his wrist. After shaking it a couple of times **REAL HARD** the

drogue finally left and deployed normally. The whole thing was on film.

After careful review, it was determined the velcro hook on the drogue pud had caught on the velcro pile of the pilot's right glove. Obviously, it made for some very anxious moments.

### **Y-DEFLATION LINE**

In keeping with SE's on-going policy of product improvement in all their equipment, SE has developed a new system of drogue deflation. The idea came from Bill Jones of Air Adventures Florida in Clewiston.

The old mechanical advantage K-line that we had been using had a high wear factor resulting in drogues separating from the main parachute. In addition, the drogue did not fully deflate thereby causing pressure at the attachment point which caused stress damage to the main canopy.

Not only does the new Y-line allow for unimpeded, instantaneous and complete deflation of the drogue, the reduced wear factor adds immeasurably to the life of the stronger tubular deflation line now in use. Additionally, SE is now using 1 1/2" kevlar bridles for added strength and durability.

How to change:

1. First, think in terms of keeping your current drogue as a spare and purchasing a new system at the discounted price of \$240;

2. Second, if your drogue is in excellent condition (SE will determine your drogue's condition) and you do not wish to take advantage of having two drogues (the new one plus your old one as a back-up),

have your old drogue up-dated to the new configuration for \$105.

SE is making the offer because of the operational and safety benefits inherent in the new system. The longer life expectancy of the new assembly, in addition to the financial burden that could be caused by the loss of the drogue on opening when using the obsolete system, should be reason enough to invest in changing to the Y-DEFLATION LINE.

### TANDEM 500 UP-DATE

In SE's effort to continually up-date it's equipment, a modification has been made to all Tandem 500 canopies being produced. The modification, which is another toggle attached inboard from the standard turning toggles, enhances the Tandem 500's turn and flare capability while reducing its toggle pressure.

The two toggle system allows for steering with the standard gold toggles and the flare using both the gold and red toggles--two toggles in each hand.

Modifications already made to Tandem 500's in the field have been so successful, some tandem operators, like Cliff Dobson at the Tampa Bay Parachute Ranch in Florida, are changing from 425's to 500's.

Tandem operators who own Tandem 500 canopies and have not had them modified should send them to SE for the free modification.

### HARNESSES/CONT. EXCHANGE

Here's a deal almost too good to pass up--SE will replace early model Dual Hawk harness/containers and passenger harnesses for \$600. The offer is being made so that owners of the

early systems can avail themselves of the latest technology in tandem equipment as well as have new gear. This represents a savings of about \$385!

Here are the conditions:

1. The rig must come to SE with all components, preferably packed and ready to jump;
2. SE will inspect the entire rig to determine airworthiness;
3. SE will use some "experienced parts", i.e., drogue riser, rip-cords, etc., in the up-date;
4. Custom colors can be ordered, allow eight weeks;
5. Rig will be returned with the reserve packed;
6. Pre-payment is necessary.

### USPA NATIONALS

SE will attend the USPA Nationals in Muskogee, Oklahoma, 30 June through 4 July 1990. Besides making tandem jumps with "first timers", SE will conduct Tandem Pilot Certification Courses and issue ratings to those who qualify.

In addition, SE will have on display all their new and updated equipment including the Tandem 500 canopy for all tandem pilots to jump so stop by the SE trailer and visit!

### SKYDIVING CONVENTION

10-19 August 1990, SE will have a representative on site at the World Skydiving Convention in Quincy, Illinois, to assist with tandem jumping.

Although SE will not man a booth or run a "tandem concession", SE expects to make tandem jumps, inspect gear and verify tandem pilot qualifications as a service for those running the concession.