



Planning for a PT3 event

By Richard Carlson - SSF Chairman

In reviewing the 2008 accident statistics, the Trustees noticed a disturbing trend that needs to be addressed. This trend deals with aborted aerotow take-off's or Premature Termination of the Tow (PT3) events. While there are many reasons that a tow might terminate before the glider reaches the planned release altitude, these events can be classified into two major categories. That is planned or unplanned releases.

A planned release occurs when the glider pilot intentionally pulls the release handle to terminate the tow. This may occur because the glider pilot has lost sight of the tow-plane or the tow-pilot may signal the glider pilot to 'release immediately'. In either case, the glider pilot intentionally terminates the tow and then evaluates the situation and executes the proper action to safely land the glider.

An unplanned release includes things like a rope break, a release by the tow-pilot, a back release on some tow-hooks, and other such causes. In this event the glider pilot suddenly, and possibly unexpectedly, finds him or her self detached from the tow-plane. The glider pilot must then evaluate the situation and execute the proper action to safely land the glider.

According to reports filed with the NTSB, in the past 5 years (2004 through 2008) there have been a total of 19 PT3 accidents involving a glider being aerotowed. The question then becomes, how many of these accidents occurred after a planned release, and how many occurred after an unplanned release? As the following figure shows, the majority of accidents occur after a planned release!

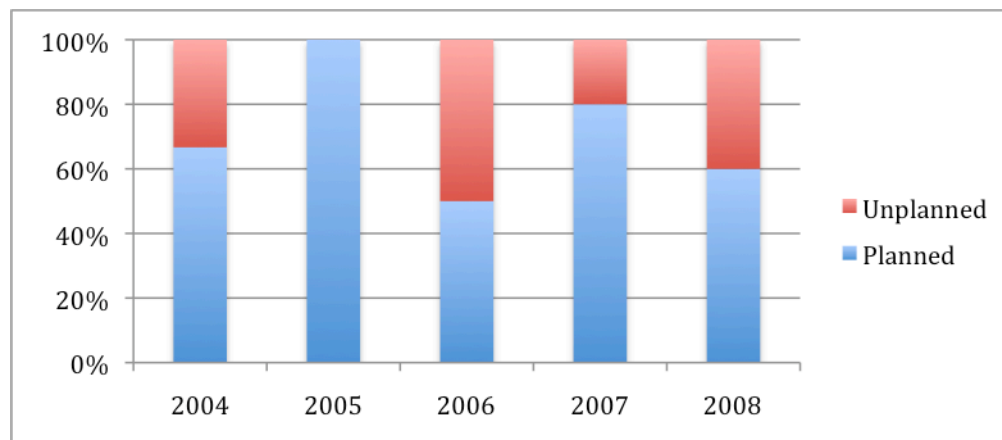


Figure 1: the percentage of PT3 accidents that occur after a planned or unplanned release

After reviewing the accident summaries, it becomes clear that some of these accidents occurred after the glider pilot lost sight of the tow-plane or the glider pilot was in danger of this event occurring. Thus the glider pilot selected the proper course of action and released the rope to prevent injuring the tow-pilot. However, that does not address the reason as to why the glider pilot was unable to successfully land the glider following this planned release.

The vast majority of glider pilots receive training in ways to deal with PT3 events. This training includes ground school discussions on how to recognize when the glider is getting out of position, and how to plan and execute a downwind landing following a '200 ft' rope break. After these discussions, every glider pilot should practice, with a proficient instructor, a simulated rope break with a downwind landing.

While the vast majority of glider pilots receive this type of training, some instructors provide additional practice in dealing with PT3 events. When it is safe to do so, emergencies are simulated at a variety of altitudes allowing the student to gain experience in dealing with these events.

However, the glider flight instructor needs to carefully consider the implications of the situation presented in this article. When the flight instructor pulls the release, the student is presented with an unplanned release. The student must overcome the shock of the event and then take the appropriate action. While this is a valuable training exercise, it does not fully prepare the student for the planned PT3 release.

To prepare the student for this type of PT3 event, a new set of training scenarios needs to be created. The student needs practice in dealing with planned releases. There are 2 ways that the instructor and student can properly plan and execute this maneuver.

The first case requires that the instructor command the student to pull the release twice. The instructor should begin the lesson by briefing the student on the maneuver that will be performed. The discussion about decision heights, the effects of wind and other traffic needs to occur before beginning the tow. At the appropriate altitude, the instructor will tell the student to pretend they just lost sight of the tow-plane. The expected action would be for the student to pull the release twice and execute a safe return to the runway.

Another variation on this theme is to let the student become a more active participant in the planning for this maneuver. During the pre-flight briefing the instructor will inform the student that the flight will terminate with a simulated low altitude emergency. The student will begin to fly a normal tow. When the student believes they have enough altitude to safely return to the runway, the student will

tell the instructor “we can return to the runway now”. The flight instructor will evaluate the gliders position and altitude and if the student is correct, the instructor will say “I agree, activate the release now”. At this point the student will pull the release twice and return for a landing.

Note that to better prepare the student these maneuvers should be done at a variety of altitudes. Doing them just at ‘200 ft’ will train the student to follow the rote procedure and simply execute a downwind landing. Performing this maneuver at many different altitudes will reinforce the need for the student to evaluate the situation and determine the proper course of action for this particular PT3 event.

Training to prepare for the unexpected is the major task for the glider flight instructor. It is important for the instructor to recognize that not every PT3 release is an unplanned event. NTSB accident reports indicate that the majority of PT3 accidents occur after the pilot intentionally released and then failed to successfully complete the landing. Proper training can prepare the pilot to deal with the planned PT3 release.

