



Soaring Safety Foundation Annual Safety Summary Report FY08

SSF Trustees

This report covers the FY08 (November 1, 2007 to October 31, 2008) reporting period. A review of the NTSB accident database shows US soaring accidents during this time period decreased over 28% compared to the FY07 reporting period. FY08 also saw a 57% decrease in the number of fatal accidents. While these numbers indicate that the US soaring community has reversed the recent trend, reducing both the number of accidents and the number of fatalities, more improvements are needed. Only by instilling an “operational safety culture” can we continue to reduce the number of accidents that impact us all.

For the twelve-month period ending October 31, 2008, twenty-six (26) gliders, five (5) motorgliders, and one (1) towplane were involved in thirty (30) separate accidents meeting the reporting requirements of NTSB Part 830 of the Code of Federal Regulation. This represents a 28.6% decrease in the number of accidents compared to the FY07 reporting period. The five-year average for the FY04 – FY08 reporting period is 33.6 accidents per year, representing a 0.6% decrease in the average number of accidents from the previous five-year period.

While the average number of accidents has shown a steady decline since 1981 (averaging 45.6/year in the 80's, 38.6/year in the 90's and 33.2/year so far this decade) the number of accidents each year remains unacceptably high. In addition, the average number of fatalities has remained nearly constant, at just over 6 per year since the mid 1990's. In the FY08 reporting period three (3) accidents resulted in fatal injuries to the pilot. In addition, seven (7) pilots received serious injuries while twenty-two (22) pilots and thirteen (13) passengers received minor or no injuries during the FY08 reporting period.

A review of the fatal accidents failed to show any common themes among the three accidents. The NTSB is still investigating two of these accidents; the probable cause for the third is listed as pilot incapacitation due to a cardiac event. While FAR 61.23(b)(1)(ii) states that glider pilots are not required to hold an FAA medical certificate, FAR 61.53(b) does state that glider pilots must self-certify, before every flight, that they are fit to act as pilot in command of a glider.

Of major concern is the continuing high percentage, over 54%, of accidents that occur during the landing phase of flight. It should also be noted that of the sixteen (16) landing accidents, ten (10), or 63%, of them occurred while the pilot was attempting to land on an airport. Eight (8) of these accidents involved the glider striking an object (i.e., tree, cactus, fence, etc) while on final approach, and wind shear was a contributing factor to three (3) of those accidents. In three of these accidents the glider struck an object during the ground roll.

The SSF has been promoting that pilots and instructors adopt a ‘goal oriented approach’ to pattern planning and execution. In this approach, pilots continuously evaluate how the glider is progressing while taking into account wind speed/direction, lift/sink, distance remaining to the

landing spot, and the height above the landing spot. The key to accomplishing this approach is to recognize that while most pilots have difficulty picking out a specific angle, every pilot is very adept at recognizing changes in angles. Responding to the slightest change, by making small changes in the gliders flight path or sink rate, will help the pilot remain on the intended glide path to the landing spot. This increases the pilot's chances of successfully dealing with unexpected conditions throughout the landing phase of flight.

Instructors should also consider the use of hand-held GPS based flight recorders to capture the landing profile of the glider. The student's flights can be displayed on the computer and used as an aid in critiquing the student's performance. Students can also be encouraged to download flight traces off the Internet, i.e., the OLC web site contains thousands, and these traces can be used to show how other pilots solve this challenging flight maneuver.

Takeoff accidents, accounted for 23% of the FY08 accidents. Both PT3 (Premature Termination of The Tow) and motorglider engine failure accidents occurred in the FY08 reporting period. Seven (7) accidents occurred during the take-off phase of flight. Five (5) gliders being aerotowed and two (2) motorgliders were involved in these accidents. Pilots can mentally prepare for an emergency and develop a specific set of action plans to deal with several contingencies. The task is then to execute the proper plan at the proper time. Flight instructors should continue to emphasize launch emergencies during flight reviews, club check rides and flight training.

Adding the letter "E" to the pre-takeoff checklist is a helpful reminder to concentrate on the emergency plan of action. Treating the wing runner as a member of the launch crew and using good Single Pilot Resource Management (SPRM) techniques can reduce the pilot's pre-launch workload. The wing runner can remind the pilot of the possibility of a launch emergency ("Are you ready for an emergency?") and be observant for various discrepancies such as: dive brakes left open, canopy unlatched, tail dolly left on, or positive control check not accomplished.

The tow pilot or winch operator also needs special training to be alert for signs of potential trouble. Is the glider pilot being hurried? Are conditions too gusty; is there fuel in the tow plane? Is the takeoff area clear of people and other obstructions? Has the tow pilot added the letter "E" to the pre-takeoff checklist and is he/she prepared for an emergency? Tow planes need a good rear view mirror, one that is located close to the tow pilot. Radios are highly recommended.

Five (5) motorgliders were involved in a variety of accidents in the FY08 reporting period. Motorglider pilots also have an additional responsibility during self-launch operations. They are the tow pilot and thus need to consider everything listed above. Fixing any problem before beginning a launch will help reduce the take-off type of accident.

Flight instructors play an important safety role during everyday glider operations. They need to supervise flying activities and serve as critics to any operation that is potentially unsafe. Other pilots and people involved with the flying activity also need to be trained to be alert to any safety issues during the daily activity.

All these tasks need to be performed on every flight. Failure to do so can result in another accident.

Number of Accidents since 1981

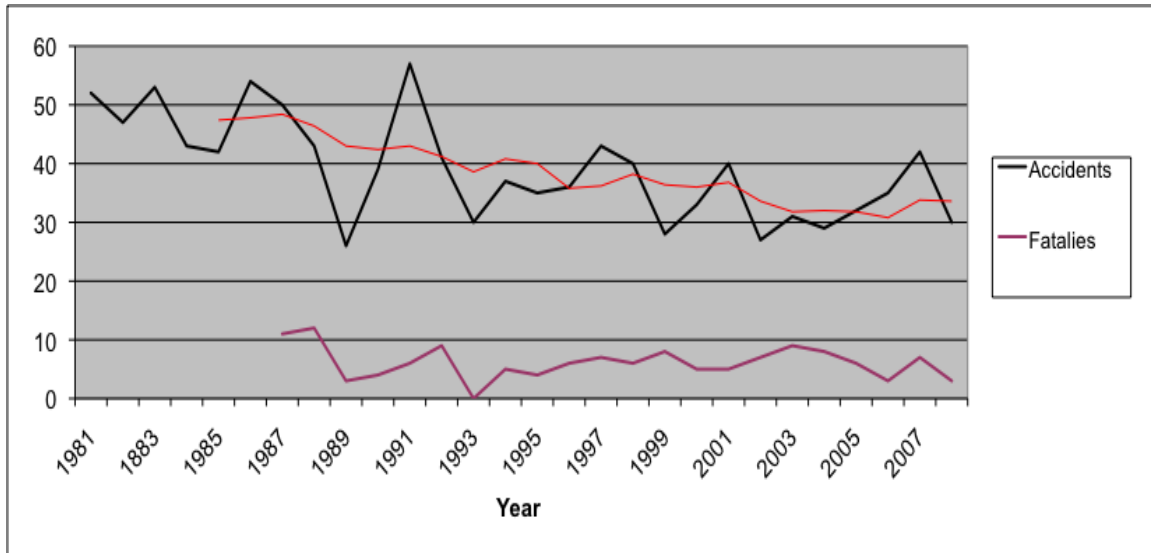


Figure 1 Number of total (with 5 year ave trend line) and fatal accidents on a per year basis.

Figure 1 shows the total number of accidents and fatalities from 1981 to the present. As the figure shows, there is a large variation in the number of accidents each year. The red line overlaying the black Accident line shows the moving 5-year average number of accidents. This trend line shows a plateau is being reached. Breaking through this plateau will require a shift in all our thinking and will require that clubs and commercial operators create a strong safety culture for US glider pilots. Increased rules and regulations may not provide the impetus for achieving this reduction. A safety culture requires everyone, pilots, line-crews, and passengers to be involved examining both flying and ground handling operations. Only by stopping accidents before they happen can we hope to break through this plateau and further reduce the number of soaring accidents.

