

Annual Soaring Safety Foundation Safety Summary  
by Soaring Safety Foundation Trustees

This report covers the FY11 (November 1, 2010 to October 31, 2011) reporting period. A review of the NTSB accident database shows a 15.6% decrease in the number of US soaring accidents during this time period compared to the FY10 reporting period. However FY11 saw a 66.7% increase in the number of fatal accidents. In addition, in early August 2011 the SSA was informed of a large increase in the number of accidents and incidents reported to the insurance company. While this report does not typically report insurance claims, the report of 1 claim per day in July cannot be ignored.

The large number of fatal accidents, and the increase in insurance claims lead the SSF and SSA to issue a special safety notice to the entire SSA membership. The SSF and SSA are also followed up this letter with a special 2 hour session during the SSA convention in Reno NV. The outcome of this meeting was a dialog between SSA members on ways they can improve the safety culture of every soaring operation in the country. This report carries a summary of that safety session and interested parties should check the SSA and SSF web sites for more information as it becomes available.

For the twelve-month period ending October 31, 2011, twenty-four (24) gliders, two (2) motorgliders, and one (1) towplane were involved in twenty-seven (27) separate accidents meeting the reporting requirements of NTSB Part 830 of the Code of Federal Regulation. This represents a 15.6% decrease from the number of accidents reported during the FY10 reporting period. The five-year average for the FY07 – FY11 reporting period is 33.0 accidents per year, representing a 4.6% decrease in the average number of accidents from the previous five-year period.

While the average number of accidents per year has shown a steady decline since 1981 (averaging 45.6/year in the 80's, 38.6/year in the 90's and 33.3/year in the 00's) the number of accidents each year remains too 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 FY11 reporting period ten (10) accidents resulted in fatal injuries to ten (10) pilots and passengers. In addition, four (4) pilots and two (2) passengers received serious injuries while twenty-three (23) pilots and six (6) passengers received minor or no injuries during the FY11 reporting period.

A review of the ten (10) fatal accidents showed that five (5) accidents occurred during the launch phase of flight, three (3) gliders were in cruise flight, one (1) motorglider crashed while making an off-airport landing, and one (1) glider crashed in mountainous terrain for unknown reasons. There were no mid-air collisions reported during the FY11 period, down from a record of four (4) in the previous reporting period.

It should also be noted that ALL (100%) of the PT3 accidents resulted in fatal injuries to one person (tow-pilot, glider pilot, or passenger) involved in the accident. All fatal accidents are still under investigation by the NTSB, more details are given in the main report.

Continuing a long historical trend, the largest number of accidents occurred during the landing phase of flight during this reporting period. In FY11 landing accidents represented 59.3% of all accidents. It should also be noted that nine (9) of the sixteen (16) landing accidents, or 56%, occurred while the pilot was attempting an off-field landing. The remaining seven (7) accidents occurred while the pilot was attempting to land on their home airport. It should also be noted that three (3) of these on-airport landing accidents occurred while a CFGI was on-board providing instruction. Causes of these accidents include; the pilot exercised poor judgment by attempting to perform a low-altitude pass, flight over unlandable terrain in an attempt to complete a contest flight, and misjudged the approach due to improper use of the flight controls.

To address the landing accidents, the SSF continues to promoting that pilots and instructors adopt a 'goal oriented approach' to pattern planning and execution. The 'goal' is to arrive at your selected landing spot, so that you can stop at a pre-determined point. In this approach, pilot continuously evaluates the gliders flight path 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 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 (but not held during flight) 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.

Aborted launch accident, called PT3 (Premature Termination of The Tow) events, accounted for 18.5% of the FY11 accidents. Four (4) of these accidents involved the glider being aerotowed while the remaining accident involved a glider conducting an auto-tow. Pilots can, and should, mentally prepare for a failed launch by developing 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.

Two (2) motor-gliders, both Pipistrel's, were involved in two (2) landing accidents in the FY11 reporting period. One accident was an off-airport landing, while the other occurred when the aircraft ground looped during a cross-wind landing. Motor-glider pilots must consider the possibility that the engine will fail to start or may not continue to operate after it has started. A suitable landing site must be kept within range eventhough the engine is operating.

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.

Their main job is to provide the foundation upon which a strong safety culture can be built. Other pilots and people involved with the ground and flying activities also need to be trained to recognize and properly respond to any safety issues during the daily activity. Everyone, students, pilots, ground operations, and instructors, should continuously evaluate both ground and flight operations at US chapters, clubs, commercial operations and at contests. An operations safety culture should encourage anyone to raise safety issues with fellow pilots, club officers, and instructors. Only by addressing issues before they become accidents, we can improve soaring safety. Only by the combined efforts of ALL pilots can we reduce the number of accidents.

