

WHITHER STATISTICS?

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A statement was made, at the recent directors' meeting, by a member of the Safety Committee, to the effect that it seemed power pilots were reasonable candidates for an accident if in a glider and off on their own, if their glider time was within a certain range of hours. In order to verify the accuracy of this statement, the available records were examined.

It soon became apparent that the majority of the reports were very incomplete. The hours shown are sometimes total hours in all types of aircraft, sometimes hours in that particular sailplane or sometimes hours in that particular flight. There are many different interpretations of the data requested on the CAA and SSA forms. In a fair percentage of the cases, no time is given at all. Of the 141 accident on record with the Safety Committee, only 89 list the pilot's time and only 46 of the 89 clearly define the pilot's time when he has both categories. Only 21 of the reports indicated sailplane time only.

The resultant data has been presented in several ways. Keep in mind however that these are accidents which occurred in sailplanes being

flown by pilots of two categories (1), those with both sailplane time and power time; and (2), those with sailplane time only. Figures 1 and 2 present data based on pilots whose experience includes both categories. It is total air time we are concerned with here. Figures 3 and 4 are concerned only with those pilots in the first category. The presentation was made in this form to see if there is any relationship between pilots with varying ratios of power time and sailplane time. As indicated, there does appear to be a significant relationship.

The accidents listed in Figure 2 follow the classifications as used in the 1957 Summary, i.e., take-off to include such incidents as tow line breaks and the resultant maneuvers resulting in spins or stalls, downwind take-offs and so on; Midair includes structural failures, hitting objects such as ridges or power lines while not in a landing pattern, etc. Approach to land accidents, by far the largest group, are those occurring while the pilot is still in the air and attempting to get the aircraft down. Landing accidents are after the air-

craft has touched the ground and generally are of the groundloop and hitting objects variety.

Statisticians and other people who deal in large round numbers will have a ball with the few numbers wrung out in this article. It is admitted the small quantities do not prove anything conclusively, but they do indicate trends. Another factor is that these figures are not tied in with total hours logged, total number of flights in the country or type of launch. Unless the complete statistics are known, it is impossible to define actual probabilities in terms of flight hours or numbers of launches.

The records cover a 9 year period of time from 1948 through the present.

Now to get to the data itself. Figure 1 shows the relationship of total logged pilot time versus the relative density of sailplane accidents. A pilot with a total time of 40 hours, power and glider, will stand a better chance of having an accident than one with 300 hours power and glider. Until a pilot has logged more than 125 hours total air time his judgment and experience are sometimes not sufficient to cope with the various emergencies that may arise. This, after all, is a well known fact; it is the numbers themselves that are of interest here.

Figure 2 shown the various categories of accidents with relation to total number of hours flying time. As can be expected, approach to land accidents outnumber other types by two to one in the low time areas. The significance of the increase beyond 600 hours is not known.

Figure 3 shows the relationship between power time and glider time with regard to probabilities. The areas have been divided into a "high" probability area, a "low" probability area and a random area. Each point represents a sailplane accident and there appears to be a fairly well defined area contained within a line drawn from 200 hours power time to 25 hours glider time. The pilots of accidents represented here had both power and glider time in the proportions shown and 5 hours glider time would be a safer glider pilot than one with 100 hours power and 10 hours glider time. To put it another way, if the pilot has over 200 hours power time, he will be relatively safe with a minimum amount of familiarization and only moderate supervision thereafter as compared

