

## THE POSTWAR RECORD

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Recently a question was asked of the Safety Committee. It was phrased generally along the line, "How do the war surplus two-place trainers compare as to type of accident?" This is an interesting question and the answer can be found only in the recorded statistics.

The sailplanes referred to were the TG-1 (Cinema), TG-2, TG-3A, TG-4 (L-K) and the TG-32 (P-R). All were produced in quantity for the military services during WWII and the majority were declared surplus after the war. The two-place sailplane market has been dominated by the TG's a total of some fourteen years. Some were more popular than others; however, since they were generally the only two-place ships available in quantity and at a low cost, they formed the backbone of most soaring groups.

No exact figures are available on the usage or accident exposure rate so a listing of the quantities built, those ships active in 1950 and again in 1958 might give an indication.

Sailplane	TG-1	TG-2	TG-3	TG-4	TG-32
Manufactured total	55	47	114	154	73
1950 inactive	4	17	42	57	30
1950 active		15	34	52	19
1958 inactive	8	15	34	46	19
1958 active	6	15	28	41	17
Accidents on record	7	6	20	30	22

As can be seen, there were, in 1958, 107 or roughly 25% of the total of 443 ships still flying. There were another 122 still registered but not flown in 1958 so it would seem the five types will be with us for some time to come although none are less than 16 years old.

The five types vary in configuration, weight and handling characteristics. The TG-1, TG-2 and TG-4 are prewar designs while the TG-3A and TG-32 were designed during the war to military requirements. Both the TG-3A and TG-32 have empty weights about 300 lbs. more than the prewar designs. The TG-3A, TG-4 and TG-32 have approximately the same performance. The TG-1 and TG-2 are somewhat lower in performance. Two of the types are unique in that the TG-1 has a high wing and the TG-32 has a side by side seating configura-

tion. The two most popular ships are the TG-2 and TG-4 with over 25% of the number produced still active. The TG-4 has been modified more than any other type with the standard configuration seldom seen nowadays.

Do the records indicate that one type is more prone to a particular accident than any of the others? Below is a tabulation.

First, an explanation of the accident types.

Spin - a stall, followed by a well defined spin either into the ground or with a recovery too low to prevent a crash.

Stall - a well defined stall occurring in close proximity to, and resulting in contact with, the ground.

Ground loop- inadvertent horizontal rotation after the wheel touched the ground.

Caught wing tip - one wing tip contacted the ground; generally due to very low turns and while the fuselage was still airborne. Usually resulting in a violent ground loop.

Hit obstruction - contact with avoidable objects such as cars, trees, buildings, etc.

Miscellaneous - unexplained dives into ground, structural or control system failures, controls not hooked up, pilot hypoxia, etc.

Solo accidents are differentiated from dual accidents to see if the C.G. shift resulted in a dominance of one type accident over the other.

	TG-1		TG-2		TG-3A		TG-4		TG-32	
	solo	dual	solo	dual	solo	dual	solo	dual	solo	dual
Spun in (20)			3		4	1	4	4	1	3
Undershot (13)	3		1		3		3		2	1
Hit obs. (10)			1		4		2		1	2
Stalled in (19)	1	3			1	3	5	1	3	2
Ground loop (2)			1				1			
Caught tip (8)					1	2	2	2		1
Misc. (13)					1		2	4	3	3
Totals (85)	1	6	0	6	13	7	16	14	10	12

The tabulation is interesting in a number of ways. 46% of the total of 85 accidents resulted from stalls or stall-spins into the ground. All of these occurred below 1000 ft. altitude, while either taking off or landing. Close proximity to the ground did not allow time or space for a recovery.

Next most popular accident is undershooting. Why is it we never hear of overshooting? Is it because the potential over shoots end up as an attempted 360° turn on the base or final legs, resulting in a stall, spin or undershoot? or maybe effective use of spoilers is being properly taught.

The category of "Hit obstruction" all occurred while landing with one exception; the pilot struck a ridge while trying to stretch a glide across to a valley beyond.

On the record, the TG-4 does not appear to be the "touchy" ship it has the reputation of being. Or perhaps because of the reputation, more care has been taken in flying them.

Other viewpoints may be drawn from the data but one thing is certain. The use of a modern, up-to-date two-place training ship, designed specifically for the purpose of taking students safely up through the solo stage would have eliminated many of the accidents.

### HIGH FLIGHT

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with the use of both hands. A spiral descent was established with partial spoilers at 110 mph indicated. This resulted in an initial descent rate of 2500 fpm.

At 18,000 feet, two-way radio communication was again established with my crew and the turn and bank began functioning normally.

A landing was made at 5:00 p.m. at Hawkins Flying Service. I had been aloft for seven hours and was somewhat weary, but pleased with the day's operation. My only regret was that I had not followed through with my initial plan to get the lowest release altitude. A subsequent flight in which I reached an altitude of