

SCHWEIZER AIRCRAFT CORP. REPORT

by PAUL A. SCHWEIZER

From time to time, we have reported in SOARING the activities and plans of our company. Last year we reported in the March-April issue wherein we gave a brief history of SAC, explained our present projects and plans for the future and introduced our "total performance" concept in sailplane design.

We have had many interesting comments on the "total performance" concept which, for those who may not have heard of this term, simply stated, means that the performance turned in by a pilot is the sum total of many different factors rather than being based on just the performance characteristics of the ship. Items such as confidence in the sailplane - comfort - ease of flying, are just as important factors as L/D, sinking speed, etc.

This year, in addition to giving an up-to-date report on activities at the plant as well as our plans for the future, we want to give a name to a basic idea which we will call, "Maximum Performance Possible," or putting it another way, getting the most out of the sailplane that you have.

It seems that there is prevalent in this country a condition where many a soaring pilot underrates the soaring performance possibilities of their own sailplane, particularly if it is an older type - surplus model trainer, or smaller-span sailplane. This is quite often used as justification for not trying to soar unless conditions are good, or for not entering a meet, and probably is one of the important reasons why last year, in answering the SSA census questionnaire, almost 100 owners offered to sell their ships. This represents about 20% of the ships in the country.

Another condition that exists is that some pilots, rather than settling for a sailplane that they can afford, and getting the most out of it, will stand on the sidelines dreaming about the super ship which they can't afford and probably could not do justice to if they had it, due to their limited experience. It is also true that many pilots have a frustration complex because there are sailplanes with higher performance than what

they have. The quest for more performance is a never-ending one - it is like chasing rainbows - with the cost getting higher all the time.

All these factors result in less activity and less enjoyment of the sport and so do not encourage growth. There is no one cure-all for this ailment, although there are various ways that this situation can be improved and more fun and satisfaction be obtained. First of these is for pilots to concentrate on the ships they now have or have use of, and to get the maximum performance out of them. By this we do not mean modification of the ships, but rather doing a great deal of flying and working on soaring techniques so good performance can result. A review of the past Nationals will show that every year a number of medium-performance sailplanes finish in the top ten. This demonstrates that the pilot is the biggest factor and that through improved piloting, performances can be improved 100, 200 or even 300 percent; whereas the best percentage increase that one might get just by changing to a higher performance sailplane may be in the order of 20, 30 or at best 50%. Improvement due to cleanup and modification usually is much lower than this.

In other words, the limiting factor is not so much the ship, but rather the pilot. Getting soaring experience in an intermediate or average performance sailplane is actually the best way and will probably result in a better pilot than one who has jumped too quickly into a higher performance sailplane. Working hard to stay up - learning to squeeze the last bit out of a thermal - being accustomed to having to fly carefully in order to stay up - give excellent background and will enable the pilot to do well when he does get that real high-performance ship. Also, in many cross-country flights, there is usually a period during the flight when conditions may get weak - a "hole" develop - or one gets caught short - where being able to work marginal conditions will make the difference of whether the flight continues or not.

This basic problem has been recognized internationally by the establishment of the Standard Class sailplane. The trend at international competitions had been towards the "exotic" super ships which can be afforded only by a few and if the trend were to continue, it would make the international competition an unbalanced affair. In order to create a more competitive championship, the Standard Class was developed which limited the span to 15 meters and encouraged simple and low-cost design that any of the countries could afford. The result of the first Standard Class competition in Poland at the 1958 International was excellent and many thought it was more interesting and significant than the open competition. It appears that the Standard Class is here to stay.

The one weakness of the Standard Class is that as competition gets keener in the next few years, it is going to be difficult to keep these ships simple, and it would seem that in the quest for getting more and more performance out of the 15 meter ship it would soon become as expensive and complicated as the larger ones. Consequently, we feel that the ultimate answer to this is the One-Design Class where all pilots fly the same ships, which makes the contest a true sporting competition between pilots.

We realize that when some people read this, there will be a cry that if the One-Design Competition is encouraged, it will tend to discourage new ideas and new developments which are one of the interesting and vital parts of motorless flight. Our answer to this is, that by making it more fun and more satisfying to the pilots, the sport will grow much faster and in doing so will open up motorless flight on an expanding basis. Out of this will come even greater developments and new types of sailplanes, for we always will have the super ships for record attempts, international open competition and to satisfy the designers' quest for making the best.

1-26 Kit Sailplane

We have strongly supported the One-Design idea through our 1-26 sailplane. Although this has not really caught on yet, we are firmly convinced, as a result of the successful Regattas which we already have had, that this can become, as in sailboating, the practical way for the average person to enjoy the sport of soaring. We think that it will re-