

# SCHWEIZER SAILPLANE DEVELOPMENTS

by PAUL A. SCHWEIZER

We are asked quite often as to the status of our various projects at SAC so we thought an article would answer many of these questions at one time. There are also inquiries from newcomers to the sport of soaring who are not familiar with our operation and who would like to know more about it.

Schweizer Aircraft was originally organized 28 years ago to build sailplanes and this is all that we did until the latter part of World War II when all training glider production phased out. With the war still on, our facility was converted to making aircraft parts for other manufacturers and we produced units that went into the Curtiss C-46; Fairchild C-82; Republic P-47 and other service planes.

When the war ended, the training gliders that we and other manufacturers had made for the Air Force were declared surplus. The availability of these training gliders at very low cost gave gliding a good boost, but limited the market for any new sailplanes. As a result, in order to keep our plant efficiently busy we continued subcontract work and carried out as much glider development work as we could afford; and produced a limited number of sailplanes.

Although our glider work is steadily growing; it still is only a small part of our business, and our main volume of work continues to be the manufacture of parts and major assemblies for the large aircraft companies. The present production includes making helicopter cabins for Bell Helicopter; tail surfaces and loading ramps for the Fairchild C-123; boom assemblies for Gruman Aircraft; parts for the Republic Thunderjet; electronic and missile parts for Raytheon and Sylvania; as well as smaller projects for other companies.

Since we are predominantly doing Air Force and Navy aircraft work, our shop is geared to the high quality standards that they require. Our sailplane parts are produced along with these Air Force and Navy parts to the same quality standards. Ma-

terial is also purchased to the same high standards. Our aircraft subcontract work keeps us abreast of the latest production methods and the tooling and production experience gained in this work is available for glider production. Due to the relatively small quantity produced, we have far from realized the production possibilities on sailplanes. As the volume continues to grow, we can do an increasingly better job in simplifying production and making better sailplanes available at lower cost.

Probably the question most often asked is, what we are doing about a super-duper laminar job, therefore we will cover the high-performance projects first.

It is our Company's policy to produce sailplanes that have CAA Approved Type Certificates, which feature maximum safety, and that have as high performance as possible compatible with reasonable costs and the purpose for which the sailplane is designed. Our ships also are designed for average condition performance rather than for "special" conditions. In designing for top performance we

are guided by our "total performance" concept.

## "Total Performance"

By "total performance" we mean the combination of all factors that enter into a top soaring performance. We feel that features such as pilot comfort, stability and ease of handling and the pilot's sense of security are important factors to be considered, just as are high L/D, low sink and good speed performance. A pilot who is comfortable in a nice handling ship and who has well-founded confidence in his sailplane's structural integrity and the protection that it affords, can more than overcome a few points on the L/D curve which might be attained at the expense of safety; or to put it another way: The ability to climb fast can make up for another design's greater speed or better L/D.

We feel this total performance is more important to the pilot than a particular special feature or two which might be useful only in special conditions.

We approach any new high-performance design with this philosophy in mind and we have been working for a long time on design studies on various laminar-type sailplanes. As a result of these studies and the observation of ships of this type that have been built both here and abroad, we are moving cautiously, for there

Aircraft production-type jigs for Schweizer 1-26 wing panels assure interchangeability of parts. Note laminar profiles for the 1-29 on the two panels at the left.

Photo: Schweizer Aircraft Corp.

