

ing, is the potential of One-Design and Standard Class types of sailplane activity. Here the similarity lies between soaring and the early days of sail boating. At the turn of the century, sailboats became so big and expensive as a result of the efforts to improve them, that sailboating soon became restricted to the rich. It wasn't until the establishment of the one-design class sailboats that sailing really started to become popular with the general public. Friendly competition among enthusiasts sailing the same type of craft was found to be the best possible competition and principally as the result of this type of competition, sailing has grown tremendously. Although the 1-26 "One-Design" Sailplane has been around for five years and a number of successful regattas have been held, we have not even begun to scratch the surface of the possibility of One-Design activity in this country. We are firmly convinced that flying class sailplanes will become the most popular type of soaring.

As more 1-26's become available, the One-Design idea will become more popular. During 1959, the one hundredth 1-26 was delivered and we have a good start on the second hundred. From the incomplete reports that we have received from the field, we estimate that the 1-26's have totalled considerably more than 15,000 hours and so they account for a good portion of the flying in the USA. Some of the most active 1-26's are: The Southern Ontario Soaring Association's ship which has totaled 625 hours, Les Arnold's "Wim" which has over 550 hours; and the Iroquois Soaring Club's 1-26 which has over 450 hours. The Rochester Soaring Club put in 162 hours in six months and the Antelope Valley Soaring Club put in 160 hours in approximately 7 months. Most gratifying to us is the fact that these ships have had an excellent safety record with only a very few accidents and only one where injury was involved and this not serious.

Steady improvements have been made on the 1-26 and the latest extra features are: Fiberglass nose fuselage and flush riveted metal turtle deck. These features plus all-metal wings, are now included in the standard factory built 1-26 at no increase in cost. Other extra kits are available for owners to improve their ships within the One-Design limitations.

Internationally the introduction of the Standard Class sailplane a few



Photo: Schweizer Aircraft Corp.

The 2-22C Standard Kit showing greater degree of completion.

years ago by the FAI was well received and provided a very interesting competition at the World Soaring Championships in Poland in 1958. In the preliminary entry in the 1960 internationals, the entrants in the Standard Class out-numbered those in the Open Class approximately 2 to 1. Although enthusiastically received in Europe, the Standard Class has not yet taken hold here, probably because it has not been sufficiently encouraged. We feel that the Standard Class should be encouraged in this country, first because it is another interesting phase of soaring that will help the movement to grow and second, because it is an important part of the World Soaring Championships and international competition.

We recognize that the present Standard Class specifications are too broad for successful development of a class, and it would seem that these specifications must be tightened to avoid having the Standard Class gradually become very refined and expensive 15 meter super sailplanes. This presents many problems for it is difficult to try to control simplifications and low cost in a design formula. However, it is felt that the SSA, as a member of OSTIV, should take a more active interest in the development of this Class and take the lead in working on changes to make the class more acceptable. From a pilot's point of view, the Standard Class will not be as completely satisfying as the One-Design Class. However, from a designer's point of view, it does offer greater opportunities for new ideas.

With these thoughts in mind, we have decided to put into production, our 1-23 series in an international Standard Class version, called the 1-23H-15. This can be converted to the long wing version, which is

called the 1-23H, by the addition of a removable tip portion. These models have new, limiting speed dive brakes.

A very extensive flight test program has been carried out to determine the terminal velocity speed with the dive brakes open; as well as to incorporate changes to the dive brakes to reduce this terminal velocity speed to the desired limits and to meet the opening and closing standards as required by the FAI. We have found that it takes considerable practice and careful technique to be able to obtain terminal velocity and it requires 2,000 to 3,000 feet to stabilize out for the 1,000 meter vertical dive as required by the FAI. This means vertical dives of 5,000 to 6,000 feet — the next thing to parachute jumping.

It also has been necessary to work with the FAA to tie in the international requirements with the FAA regulations. European regulations are different than ours and they only carry their maximum gust load factor up to the 90 to 100 mph range and then use a reduced "smooth air" load factor up to their maximum placard speed. FAA requires a somewhat lower gust factor, but carries it all the way to the maximum placard speed which, because of this, is usually lower than the European value. Consequently, although FAA requirements are more severe and our sailplanes stronger, it would take very large brakes to limit the speed to the U.S. placard speeds. A temporary agreement has been reached with the FAA, which allows a caution zone and a reasonable increase of the placard speed. In this manner, we have met the requirements and we expect the ATC for this model shortly and deliveries are scheduled to start in June. The prototype, which Bernie Carris flew in the Nationals