

DUST
RAG

k | | | e

The text is arranged in two rows. The top row contains the word "DUST" in large, bold, black letters. To its left is a stylized lowercase letter "k". To its right are several small, simple line drawings of airplanes and birds. The bottom row contains the word "RAG" in large, bold, black letters. To its left is a stylized lowercase letter "e". To its right are more small line drawings of airplanes and birds. The drawings include a bird in flight, a glider, a propeller airplane, and a jet airplane.

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FROM THE EDITOR

No news of any recent completions but I suspect that there are several of us who are about to pop the news. When last heard from, Scott Thomas wrote that his Duster lacked only the final painting and canopy. Scott says "To get my wings wet sanded after putting the filler over the 1.3 oz. cloth we had a '1st. Annual Wing Sanding & Beer Festival'- worked great- 5 cases of Coors beer, 11 chickens and a great party after the wings were done, they took less than two hours as we had a "his" and "hers" wing. The girls did a much better job." I wonder if the day will come when a "person" makes a home-built sailplane. Kathy(Silver Altitude-July Soaring) doesn't think she could complete mine if I ever became a basket-case. She enjoyed installing the hardware but hates the sound of a saw or file. The wings only need completing before starting that "last 5%"

Like the Cherokee, the Duster has become an established breed of sailplane and in the years to come there should be a high demand for parts. If anyone has a kit that they know they will never build, please let us know so that we can pass it on to someone who is held up on parts.

Statistically speaking, there should be at least some small supply. I heard an estimate that of all home-built plans bought that 5% ever become completed aircraft. Anyone interested in making duplicate hand-made hardware can count on a free ad in the Dust Rag to dispose of it. Same applies to anyone on the plan-holders list who wants to dispose of an entire kit.

HISTORICAL NOTES ON THE DUSTER

The Duster Sailplane (previously thought to be designed by H. Thor & B. Jansson) was actually discovered intact in an Egyptian tomb. In fact, several were found in flying condition although their EAA airworthiness certificates had long since expired (Egyptian Aircraft Authority). Lift was abundant in the absence of smog so only a ten-meter span was required. Translation of the picture-writing on the walls reveals that problems with the water-ballast system caused an occasional drenching of the rear of the cockpit. This condition is thought to be the origin of the term "wetback".

Due to the abundance of thermals and travel restrictions, altitude and distance flights were not considered important. Their main objective was duration. Flights of several weeks were commonplace. The sport was further enhanced with the construction of pyramids. These were used for ridge soaring, to be used over-night until the sun rose the next morning. Several dozen Dusters could be seen on the windward slopes on any given night. Pilots were required to circle to the right until morning and would depart for the thermals in the desert floor in a sequence according to their social rank. The lower class venturing first in case the thermals were still weak.

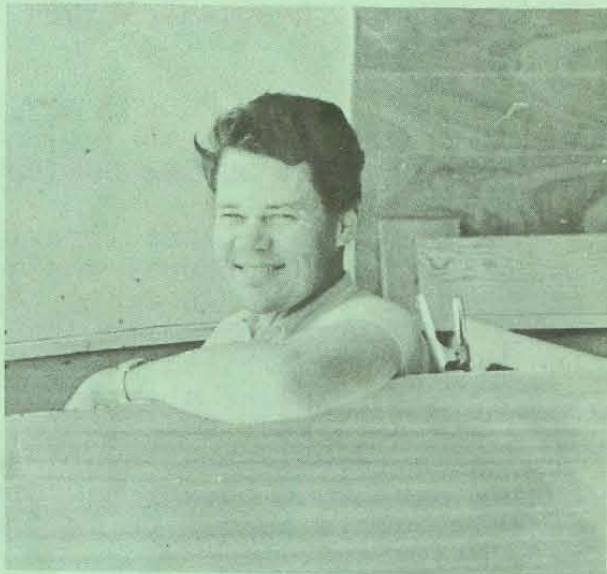
A splinter group who insisted on circling in the other direction (left-wingers), lead by Osh Kosh, was forced to flee to the North-American Continent. They settled in an area which is now Wisconsin.



LETTER FROM THE DESIGNER

The power pod program is currently at a standstill. We can't seem to find an engine that measures up to our requirements. DSK has recently purchased a 2-cyl in-line 2-cycle unit that is very smooth in operation in the stand. Perhaps it will solve the problem.

There is no 2-place in the works and with the everyday chores of making a living crowding out my leisure time, I don't foresee any such project in the future. Besides I don't think the limited interest in a home-built 2-place would justify the enormous effort necessary to produce a prototype and drawings.



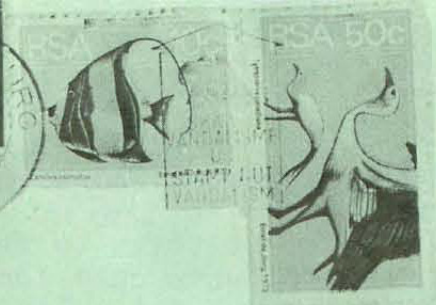
Hank Thor

Regarding the...letters..I think... the Dust Rag ... is supposed to be a builders' newsletter & should remain an open forum. DSK can probably benefit from a little heat now and then as long as we don't overlook the problems they face in trying to cater to the needs of a very limited market. Honestly I don't see how they do it. You'll never find me in the kit business! Rising material costs are creating constant cashflow problems for the guys, and in the case of the wheel I think it is simply a case of availability of a suitable product versus a realistic price compatible with the kit philosophy. The Duster was designed around a Tost 100 x 300 wheel which is now veeerry expensive.

I can relate that Sinclair did it again. This time he won the "sportsclass" of the Region II soaring meet at Minden. I hope he will favor us with a story about it. I really enjoy his tales and think he's a super guy. We're lucky to have him in the group.

HANK

LETTERS
TO
THE
EDITOR



FIRST CLASS

Dear sir/ Our two Dusters (Adrian Grays & mine) are progressing quite well. The launch date however seems to be still 3 months or so away. Anyway that gives me more time to practice flying- I only went solo a few months ago.

We are now covering the wings and have just completed the centre-section. The only major work after this will be the canopy, turtle-back & painting.

Whilst building the Dusters we performed a number of operations differently to that described in the building instructions. Some of these variations may be of interest to future builders-

1/. We used epoxy glue in all bolt holes and around or under each metal fitting. This fills up any slight drilling errors and provides for an even load bearing area.

2/. Drill the main spar flight pin holes and ream to fit ordinary 14 MM steel bright shaft. We used 14 MM shafting for the pins right up until we were ready to ream out the extra 10 thousandths of an inch for the proper pins. This operation was done just before covering the wings.

3/. We used expandable parrallel reamers but on the heat treated 4130 they only last sharp enough for one glider.

4/. We clamped and glued the leading edge onto the wing before coverup. The top skin is made to butt up to the leading edge. This saves nailing it on afterwards.

5/. We fitted the intercostal framework to the fuselage whilst it was uncovered and still upside down in the jig. It was then faired for a good fit with the $\frac{1}{2}$ " ply bottom which was glued on immediately afterwards.

LETTERS Continued.....

6/. The bottom longerons were laminated from 3/4 X 3/8" along the entire length. We preformed them during lamination before fitting to the glider by laying them out in the desired curve on a long flat bench. When the lamination was complete we had a long Y-shaped assembly which just fell into position on the fuselage.

7/. By keeping the fuselage a little higher than recommended off the floor at the tail end we were able to fit the fin spar onto the fuselage whilst it was still upside down on the jig. This is quite a short cut and insures a truly alligned fin spar.

8/. To maintain true alignment of the centre-section to the wings we kept these coupled together with the 14 MM pins during the construction and bottom covering of the wings. During final coverup the flight pins are used to maintain alignment.

9/. The wheel assembly from the Duster kit builders is not exactly the same as that shown on the plans. For the price its well worth buying, but we had the drum skimmed and better fitting brake linings bonded on.

10/. Whenever foam shapes were required we employed a two part polyurethane pourable foam which we roughly cast on the job itself. During curing it glues onto the wood. We used cardboard to obtain the rough shapes required during the casting. It shapes well and there is very little wastage. The foam was shaped to about 95% correct shape, then glassed over, sanded and then any errors were corrected with polyester putty. Finally it was finished with another layer of glass cloth. Don't try to fill the foam directly with putty, its too hard. If you get any large voids when pouring the foam just mix some more and fill with new foam.

.....there are two more Dusters building nearby-they should be ready some time next year. We can't wait to get in the air now. Price wise one certainly saves some money building your own glider. The price of a new left wing for our club's pranged KA 7 costs more than a fully instrumented scratch-built Duster!

Peter How
Transvaal
R.S.A.

PLAN HOLDERS LIST UPDATE

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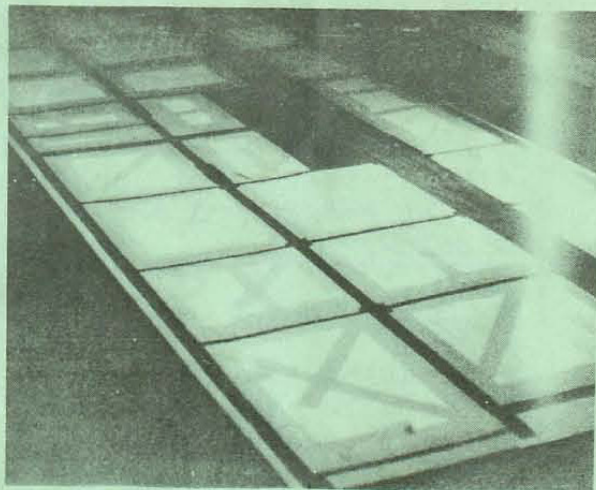
BUILDING TIPS

As shown on Sheet 8, now glue ribs A, B, C, D & E on face of spar F.

BELOW

To obtain a clean, run-free joint between skin and structure, try masking the center-section skin as shown in photo. Key the skin once at each end of the spar with a brad head. The head should remain in the spar, not the skin because of the difficulty in locating the hole once the glue is spread. Put the center-section on the skin to guide you in the masking.

and draw around the the framework to guide you in the masking. Remove centersection and mask out non gluing surfaces. The thickness of the tape is sufficient to create channels for spreading the glue. Time spent in masking is regained here. A surprisingly clean frame is revealed when the tape is peeled. The glue I am referring to is Resorcinol which stains the wood and more area is thus left exposed to varnishing.



LEFT: Duster by Kenneth Gooch
Note tinted canopy.

LETTERS Continued.....

As an encouragement to those builders who feel their progress is too slow, I offer the following lack of progress report. My squadron deployed to the Philippines for a 6-mos. to a year period beginning in November.

In the five months that I've been here, all I've managed to do is fabricate all the aluminum parts, and two steel parts. This was all done with a hack saw, belt sander, and hand file with the emphasis on the hack saw and hand file. All the woodwork I've completed is waiting back in San Jose for my return in May along with the welded control assemblies. I hope to assemble the fuselage at that time and get started on the wings and tail feathers.

Unfortunately the deployment has caused me to miss the National Soaring Convention and the Dusters at the wave camp at Minden. However, I should be able to take in the Standard Class Nationals as well as any Duster events which might take place. I will be looking for news of these events in future issues of the Dust Rag.

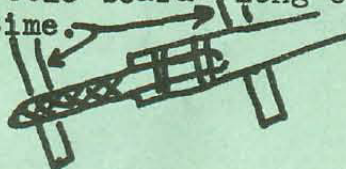
Doug Bell
San Jose.

I started building my byrd on April 28.75 and have up to date 65 hrs (This number includes building the cradle, fighting my beloved and her car out of the garage, the fuselage is ready for closing.)

A little hint- How I do it:- cleaning and shaping bulkhead cutouts (for longerons.) I purchased a shoemakers rasp and ground the rasp down to 3/4". (see picture below)



creating sharp corners. It works very good for me. I installed the rasp on a little board- long enough- to cover two bulkheads at a time.



LETTERS Continued.....

Looking around for some kind of inexpensive sander I discovered one at Montgomery-Ward. It is a belt sander The Belt size is 36X4"

Catalog No 84B 2705M \$38.95.

without motor (page 699) Shop around for a used elec. motor. 1/3 H.P.- 1725 RPM. Ward sells also the motor. Catalog No. 83B-4521 MX, \$32.80.

36 X 4" Belts (Alum-oxyde) \$2.39 a pair.

No 01 = Fine
" 02 = Medium- I would reccommend.
" 03 = Coarse

Belts are in the catalog on Pg 693.
Catalog No 2-84-b-8006.

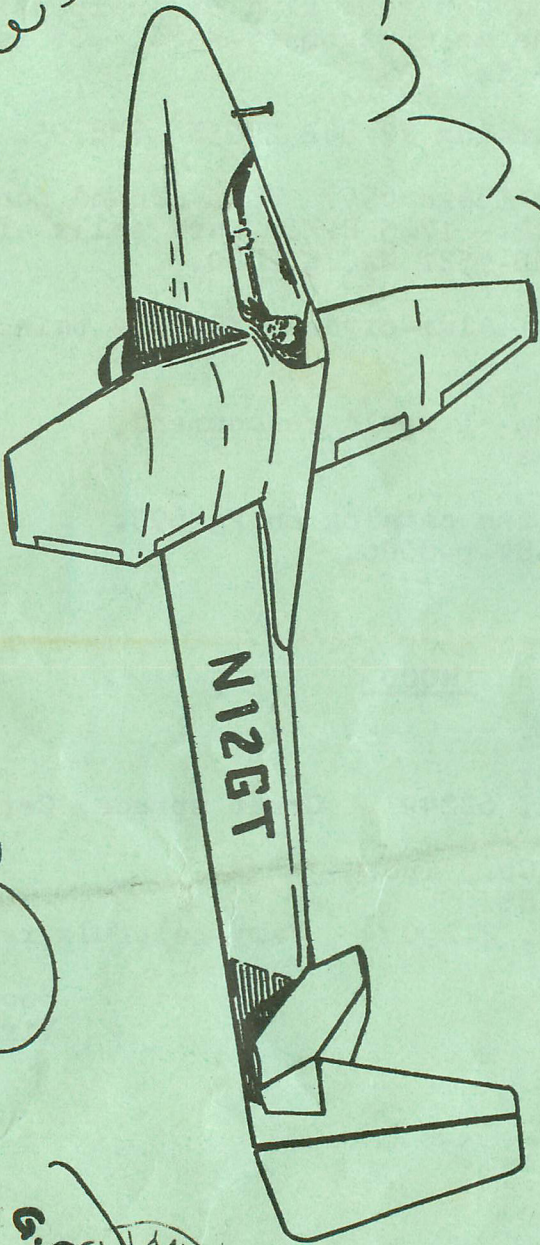
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FIRST CLASS