

THE

Starduster

JANUARY 1978

MAGAZINE

DEDICATED TO THE ACTIVE HOMEBUILDER





It is hard for me to realize, but we are now starting our fourth year of publication of our little magazine. Circulation has grown from a little over 100 to around 600.

We wish to thank our readers for staying with us-- For putting up with our trivia and contributing to it, with articles and letters and pictures. We appreciate it very much.

I believe the ultimate mark of a successful man is whether or not he derives pleasure and satisfaction from living. A minimum amount of money is necessary. For some people, more minimum than others. But over and above that, is the way you make your living a source of satisfaction, or an annoying boredom, to be endured?

We in the Amateur built aircraft movement who are lucky enough to be in it full time and be able to make a living at it, are especially fortunate. We are able to indulge our hobby thruout a full working day-- every day. Not only are we fortunate from a mechanical standpoint (what could be more fascinating than building and first flying a brand new airplane) but we are fortunate from a Human Relations standpoint.

Most businesses are wary about taking customer checks. The percentage of such checks in the food business, in the auto business, in most routine businesses is very high. But after six years of running Stolp Starduster Corp., I can count on the fingers of one hand bad checks given with the deliberate intention to defraud. And none of them were from Airplane people.

There is no doubt about it. Our customers are something special.

And the people who make STARDUSTER go. My wife Hanako. On the job every day with a smile and a cheerful disposition. And never a complaint about my flying across the continent, or spending money in other ways on flying.

Eric Shilling- Ex Flying Tiger fighter pilot, and a Gentleman from old Virginia. Over 23000 flying hours and still has the enthusiasm of a student pilot. Knowledgeable, courteous, and helpful.

And Bill Clouse-- Retired Air Force- Master parachute jumper with over 1000' jumps. A ferociously enthusiastic individual who is always working on ways to improve his skill and increase his knowledge.

The Shipping Department-- Run by Dan Dial-- Competent, reliable, and innovative. And the other specialists who work here. Like our customers, we are Airplane people- dedicated- enjoying life- taking pleasure in assisting our builders in any way we can.

Thank you for being our Customer.

Jim Osborne

THE STARDUSTER MAGAZINE- DEDICATED TO THE PROPOSITION THAT THE ULTIMATE IN SPORT AIRCRAFT WAS REACHED WITH THE DESIGN AND DEVELOPMENT OF THE OPEN COCKPIT, TAIL DRAGGING BIPLANE--AND THAT EVERYTHING ELSE HAS BEEN DOWNHILL--EVER SINCE

TABLE OF CONTENTS

PAGE ONE, EDITORIAL-----1
 WHY "STARDUSTER" WINGS ARE BETTER-----3
 SHOCK CORD INSTALLATION TOOL-----6
 SHIPPING SHENANIGANS-----8
 FEEDBACK FROM THE SHIPPING DEPARTMENT-----10
 NEW BATTERY HOLDER-----11
 BROCHURE AND 3-VIEW, \$2.....12
 NEW EQUIPMENT--NEW TRAINING-----13
 NEW DRAWING-----14
 PIREPS PAGE-----17
 CLASSIFIED ADS-----30

THIS MAGAZINE IS NOT COPYRIGHTED--MAY BE REPRODUCED, IN PART, FOR THE BENEFIT OF SPORT AVIATION--PLEASE GIVE CREDIT TO THE STARDUSTER MAGAZINE

The STARDUSTER MAGAZINE is a quarterly publication, published in January, April, July, and October of each year--Subscription rate--\$5.00/year. Published by Stolp Starduster Corporation, 4301 Twining, Riverside, California, 92509

On our front cover is a shot of Bud Thomas's STARDUSTER TOO taking off in close formation with Jim Osborne's ACRODUSTER TOO. Shot at Ramona, California

On our Back Cover is a picture of the beautiful STARDUSTER TOO, owned by John Snyder, of Richardson, Texas. A beautiful job. Thanks for the picture, John.

OUR TWO INFLATION FIGHTING POLICIES

1. WE GIVE 3-5 LBS OF SHORT LENGTHS OF TUBING FREE WITH EACH SUBSTANTIAL ORDER. SUITABLE FOR WELDING PRACTICE. NO SIZE SELECTIONS. JUST ASK FOR IT.
2. A 10 PER CENT DISCOUNT WILL BE GIVEN TO CUSTOMERS WHO WALK IN AND SELECT THEIR TUBING FROM OUR SHORT LENGTHS RACK, PROVIDING NO CUTTING IS DONE. IF CUTTING IS PROVIDED, REGULAR PRICES WILL PREVAIL.

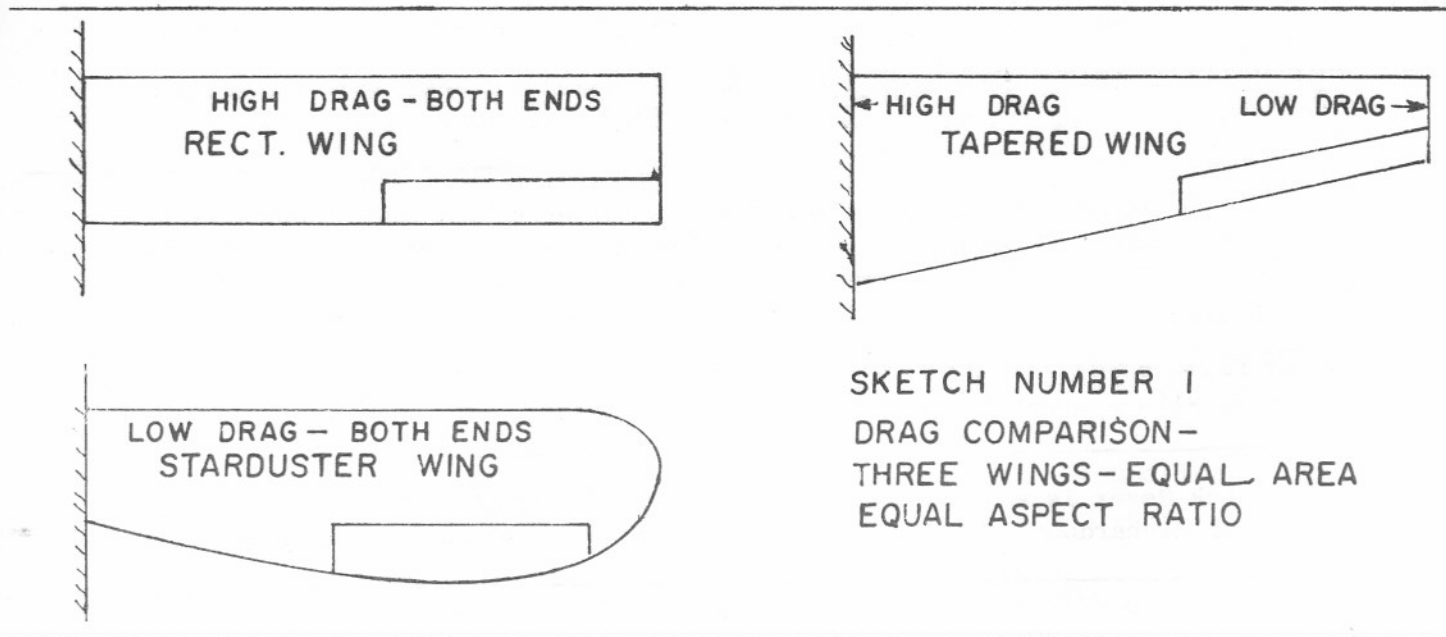
WHY "STARDUSTER" WINGS ARE BETTER

The word that comes first to mind when describing wings from STARDUSTER is "beauty". The elliptical shape makes them stand out from any other wings produced today. Some owners have been known to wax lyrical when describing them, and have gone so far as to call them "sensuous".

However, many builders stop short at appreciating their beautiful lines, and do not realize that these wings are also more efficient aerodynamically. In fact, I have heard it argued that, for small airplanes, rectangular wings are more efficient.

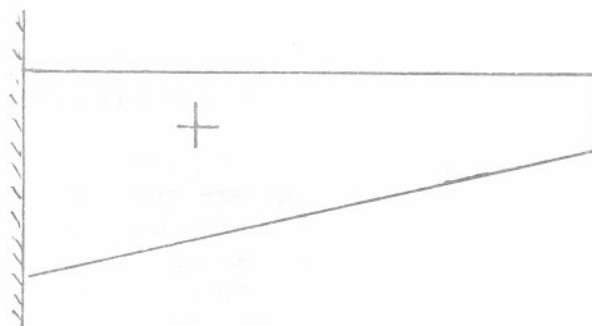
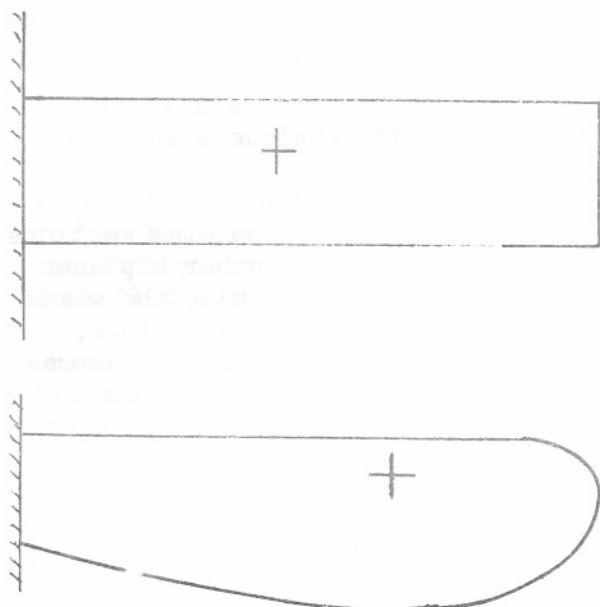
The facts are as follows:

1. There are two areas of high drag on any airplane wing. These are the wing tip, and the wing to fuselage junction. (Or wing to Cabane junction.) The wing tip normally has higher drag than does the wing/fuselage junction.
2. A tapered wing cuts down on tip drag, while increasing wing/fuselage drag. Since tip drag is normally greater than wing/fuselage drag, the result is a net decrease in drag.
3. A "STARDUSTER" type elliptical wing has both a small tip and a small wing/fuselage junction. Drag is therefore near a practical minimum. (See sketch 1)



Other advantages are as follows:

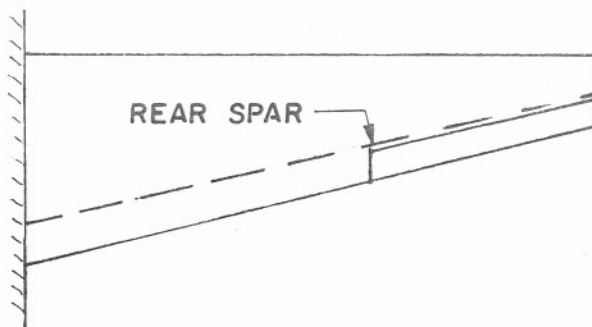
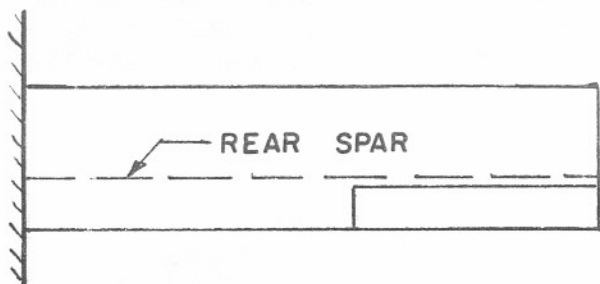
4. Lateral center of pressure moves outboard. This means that more of the lift enters directly into the flying wires (top wing), and I strut (bottom wing.) There is, therefore, less bending load on the spar. (See sketch 2)



SKETCH NUMBER 2

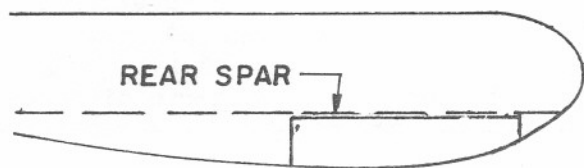
SHOWING LATERAL CENTER OF PRESSURE LOCATION OF THREE WINGS.

5. Due to the wings being widest where the ailerons are, it is possible to have larger ailerons with this type wing than with the rectangular type. If the ailerons are aerodynamically balanced, the result is very fast roll rate and light aileron control pressures. (See sketch 3)



SKETCH NUMBER 3

SHOWING HOW A STARDUSTER WING CAN HAVE A HIGHER % OF THE WING IN AILERON



6. Due to the wings being widest where the ailerons are, the Reynolds number is also highest where the ailerons are. This widest part of the wing will normally be the last part of the wing to stall. Result: good aileron control thru a stall. There is no need to incorporate twist or slots in order to get good stall characteristics, as is required for so many tapered wings.

In addition to the structural advantage inherent in the outboard lateral center of pressure, (see #4) STARDUSTER wing design has other unique structural advantages.

7. Our top wings are made in either two or three pieces. Where the wing sections join, we have only one bolt, which acts as a pin bolt. Most other biplanes have the top wing in one piece. This means that under high "g" loads, the wires stretch, and the top wing spars bend around the Cabane struts. In our wings, with pin bolts, bending is impossible. With no bending loads transmitted across the attaching bolts, STARDUSTER OWNERS enjoy an extra measure of strength and security.
8. Internally, our wings do not have drag and anti-drag crossed wires. This type of bracing puts a rather high compression load on the Spars, right from the start. Add this compression load to the compression load the flying wires put on the spars in a high "g" pullout, and the total is very high. Also, the crossed wires generally have cut threads. These pose an extra hazard in that they are more likely to develop a crack and break, than the type bracing we use. In addition, the tension of the wires varies with temperature. What might be an acceptable tension in winter might be loose enough to induce wing flutter in hot weather. Our wings have either steel or aluminum tube diagonal type bracing. This type bracing has no cut threads to pose a potential problem. There are no unnecessary compression loads placed on the spars. And the stiffness of the wing is not compromised with temperature changes.
9. Our flying wires are installed so as to stabilize the wings and avoid putting any load on the drag truss assembly. The front spar, top wing, of all our airplanes is tied down by two flying wires, which form an inverted V. As these wires stretch, the wing can only move up. It is restrained from forward or backward movement by the inverted V. The rear spar is tied down by one wire. All our flying wires go to separate fittings. These fittings are NOT part of the landing gear, and so cannot be injured by landing gear shock loads. The strength of these wires and fittings are such that any two out of three could fail, and the airplane could still fly home.
10. Our landing wires are doubled for safety. Each wire has its own fitting. One wire could fail, and the other would still get you home. On the Starduster too, one landing wire slants forward and attaches to the front spar, center section. The other attaches to the aft spar, center section. Drag loads are counteracted by the forward leaning wire. On the Acrodusters, both landing wires go to the rear spar, center section. Under high negative "g" loads it was felt that the forward leaning wire might put too much of a forward load on the bottom wing. Further study has indicated that it is pretty much of a tradeoff.
11. Due to the two or three piece top wings of our airplanes, handling, building, storage, assembly, and rigging are all simplified. Any of you who have struggled with all these factors in a one piece top wing understand the advantages.

Many observers have commented on the supposed hardship of having each rib different, and the supposed difficulties of building such a wing. They might have a case if each customer built all pieces of his wing from scratch. But almost all our builders buy a wing kit and go from there. And a wing kit has all the ribs cut out, and the trailing edge is furnished ready made. With this work done, putting together one of our wings is no harder than building an ordinary wing.

So, why not build the best?

A SHOCK CORD INSTALLING TOOL

Those of us who have tried it know that there is no harder, meaner, more precarious job in building an airplane than trying to get the shock cords in place so that they can do their duty. In fact, without a shock cord tool, it is nearly impossible to install the pesky little rubber bands once the fuselage has been covered.

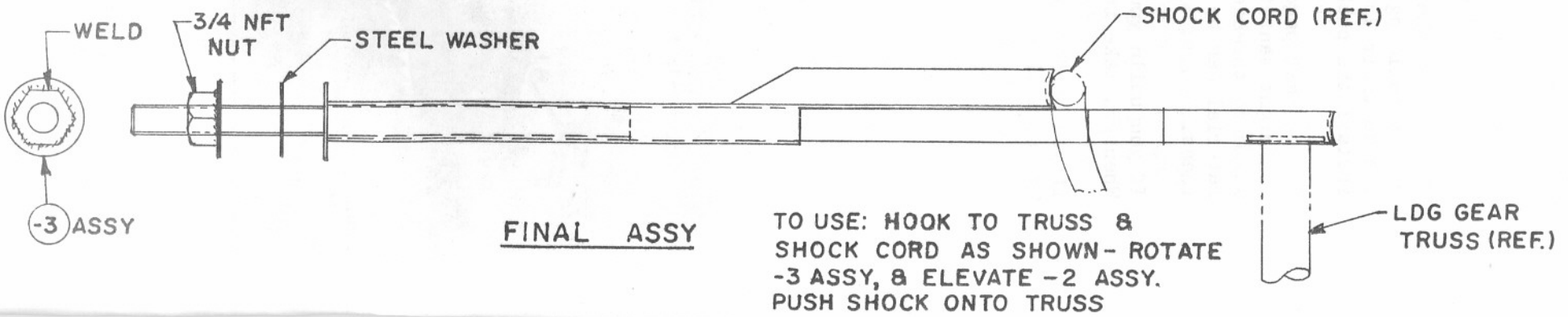
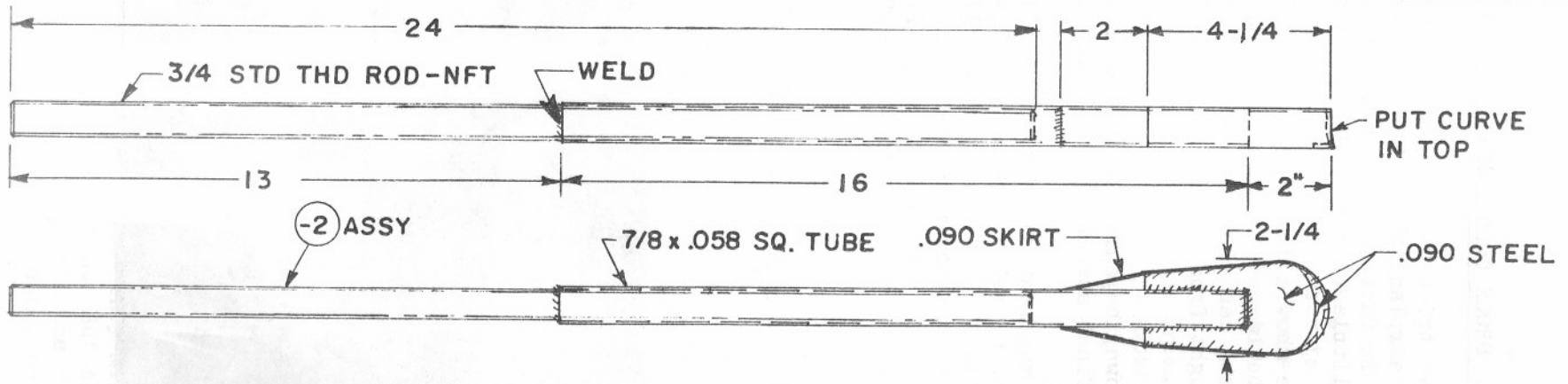
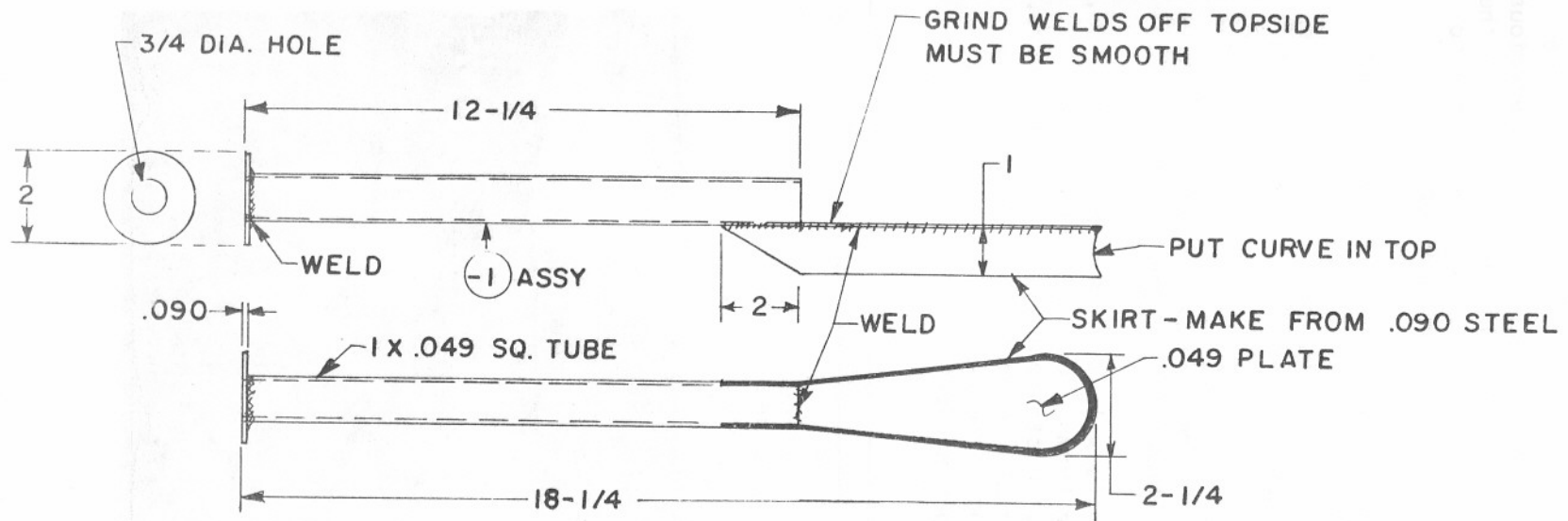
On the next page we show a drawing of the tool we have been using for many years. You might want to build one for your own use. The nut, the washers, and the standard threaded rod can all be bought at most hardware stores. The rest of the material can be bought from STOLP STARDUSTER CORPORATION. Thank you for the business.

If you build your own, be sure the sliding surfaces are filed absolutely smooth. When you make the final assembly, use plenty of LUBRIPLATE or other good grease.

If you prefer, you may rent our tool, or buy it. We will sell you one for \$100.00. Or, we will rent it, by mail, under the following terms. Customer is charged \$100.00 deposit, plus \$5.00 packing and handling. Customer pays freight both ways. When tool is returned, customer has deducted from his deposit \$1.50 for each day the tool was gone, with a minimum charge of \$10.00. The remainder of deposit is returned to customer, or entered as credit, if open account.



THE PICTURE ABOVE SHOWS JOHN AND JANET HELTON WITH TWO OF THE THREE TROPHIES JOHN HAS WON FLYING OUR ACRODUSTER TOO. HIS LATEST VICTORY WAS AT BORREGO SPRINGS, WHERE HE PLACED FIRST IN ADVANCED CATEGORY. HE DEFEATED FOUR SINGLE PLACE PITTS AND TWO TWO PLACE PITTS. HE WAS FLYING THE ONLY NON PITTS MACHINE IN HIS CATEGORY.



SHIPPING SHENANIGANS

Buying goods by mail is a three way business proposition. The parties concerned are (1) The Buyer, and (2) The Seller, and (3) The transportation company which contracts with you, the buyer, to deliver your goods safely to you.

Happily, most such transactions come off without a hitch. However, occasionally a shipment suffers loss or damage in transit. Our experience has been that it is very difficult to collect from the Transportation Company when this occurs. In fact, sometimes it is like pulling eye teeth.

In order to increase the chances for a successful monetary recovery, we offer the following advice.

Inspect the shipment before signing delivery papers. Request the Company Agent, usually the Truck Driver, to note on the Bill he gives you any damage or apparent shortage. He is required by Law to do this, if requested. **IT IS YOUR RESPONSIBILITY TO SEE THAT THESE NOTATIONS ARE MADE BEFORE YOU ACCEPT SHIPMENT.**

After you accept delivery, unpack and inventory the shipment. For both the visible damage, (which should be noted on your delivery papers) and concealed damage, you must now contact the delivering Transportation Company, or their agent. You must request, in writing, that they make an inspection and furnish you with their inspection report covering both visible and concealed damage. This request should be made as soon as possible, but by all means it should be made within 10 days of delivery.

YOU MUST FILE CLAIM IMMEDIATELY, following receipt of Carriers inspection report. This claim should consist of a letter to the delivering company briefly listing the damage and the amount of the Claim. It must be accompanied with copies of all the shipping papers you have. (Bill of Lading, Freight Bill, Copy of our invoice, and inspection report.) Be sure to send copies or duplicates of Documents. Hang on to the originals.

One of the favorite ploys of the Carriers in trying to deny a claim is to claim that the Goods were improperly packed. The facts are: When the shipment was picked up by the Carrier, their agent receipted for it as being in good and acceptable condition. It was packed in accordance with the Carriers Tarrif specifications. Otherwise, they would not have accepted it. According to the terms of their tarrif schedule, they agree to deliver it to you in the same good condition.

A favorite trick of some Transportation Companies has been to change the classification of the shipment on the Bill of Lading AFTER they take possession of the shipment. Airplane or glider parts are subject to a higher Freight Rate than raw materials. Apparently this arbitrary reclassification has been done in many instances merely because the shipment is picked up from a known aircraft supply house. ICX was quite bad about this for a while. The last time this occurred we contacted their office, and their rate clerk stood us down that he was within his rights in reclassifying our shipment because the material was destined for an airplane. We then contacted the Interstate Commerce Commission in Los Angeles, and got a contrary ruling from them. Faced with this ruling, ICX changed its tune and revised our Freight Bill from \$145 down to \$46.00. Quite a substantial saving.

The facts are; IF the shipment is a finished aircraft part, such as a set of wheels and brakes, a finished fuselage or a set of wings, then it is Aircraft Parts, and we so note on the Bill of Lading. To do otherwise would be illegal. The customer pays a higher freight rate, but is supposedly protected by higher insurance, to cover the high value of the shipment. But when the part consists of steel tubing, milled lumber, plywood, hardware, etc, by no stretch of the imagination is material of this type to be construed as aircraft parts. The lower, raw material rates apply.

If you receive a shipment from us, and you pay high aircraft rates for raw material, we suggest the following procedure.

1. Complain, in writing, to the Carrier. Do this within ten days.
2. Contact the nearest FCC. They have offices in all the major cities. Get a ruling from them.
3. Write a letter to the FCC outlining your complaint and claim. Send a copy of this letter to the Carrier.
4. If your State has Small Claims Courts, File suit in such Court for the overcharge.

If you follow the above procedure, the probability of receiving satisfaction is very high.

Note that in the above procedures, the onus of collecting is put on you the buyer. This is not to say that we here at Starduster are unconcerned about your plight. We will help you in every way that we can. But it is just the nature of the system that you the buyer must follow a certain procedure in receiving shipments and claiming damage.

If you have followed the proper procedure and have not received satisfaction, we are here to help. In one recent case, we replaced the damaged merchandise free to the Customer, and we are now awaiting a Small Claims Trial against the Carrier. But we CANNOT replace every damaged or lost shipment free of charge. Nor should we be asked to. The Carrier maintains insurance against loss and damage. You, the customer, pay for that insurance in your Freight Bill. Reimbursement to you, the Customer, should come from the Insurance which you have bought and paid for.

In the case of UPS, a different procedure is called for. They prefer that claims for loss or damage be handled thru us. Therefore, follow the same receiving procedure as for any other freight shipment. Inspect the shipment. Note on the receiving papers any damage or shortage. Request in writing, an inspection of the damage. Then forward all papers to us, and we will recover from UPS at this end.

For mail losses, report the loss to your local postmaster, and to us. We will handle mail losses and damage, as we do UPS damage and loss. However, be sure and report to your local postoffice, and fill out any papers required. We have had very few mail losses, as we ship everything we can thru UPS.

FLYING TIGER P-40

Recently, (January 1978) Popular Mechanics ran an article on homebuilt airplanes. Heading the page of pictures was a picture of our rather gaudily painted 260 H.P. Acroduster Too. The picture was taken at Oshkosh. The caption states that the plane is "Semi-aerobatic". This "semi-aerobatic" airplane recently took First place in the Borrego Springs IAC contest, in the advanced category. This "semi-aerobatic" airplane is probably the best two seat aerobatic airplane in the world today. I wonder where POPULAR MECHANICS gets such misinformation.

On the same page mention was made of ERIC SHILLING'S FLYING TIGER background. Mention was also made of W.A.R. and their line of half scale WWII Fighters.

Wouldn't you know it? within the last week we have had three requests by mail for brochures on "our Flying Tiger P-40" homebuilt airplanes.

We have forwarded these requests to W.A.R.

FEEDBACK FROM THE SHIPPING DEPARTMENT

As you all probably know and realize, the shipping department is the final link in the chain that determines WHAT, WHEN, and HOW you receive your orders. I would like to elaborate on this, and explain why your orders may take a little more time to be processed than others, why the shipping cost may be more than you expected, and why you may have received a duplicate order. I will start by trying to explain how your orders are processed by mail, and by phone. First of all, by mail.

When your order is received, it is reviewed by our Secretary/Treasurer (Hanako). Any posting to your account will be done at this time. Then, it is forwarded to Shipping, for filling. If, at this time, there is any fabrication to be done, engine mounts, exhausts, etc, a work order will be made out by shipping and given to our manufacturing dept. The order will be held until manufacturing is complete. The completed items will be sent back to shipping, the order will be pulled, and the remaining items, if any, will be pulled, and everything will be shipped at the same time. This procedure saves the customer shipping costs. However, if your order consists of numerous small items, and it is going to take considerable time to fabricate a part for you, then you may receive a partial shipment. This depends on whether the two shipments will not cost appreciably more than one shipment, and also on the customer's wishes. The same policy applies to materials not in stock at the time we receive your order.

Phone orders are processed basically the same, except that they are normally taken by our General Manager, Eric Shilling, He in turn forwards them to Shipping. From then on it is handled the same as mail orders, except that Hanako doesn't see them until they are filled. This is where we occasionally run into duplicate orders. If you phone in an order, and then write a letter confirming the order, please state in the letter, "This is a confirming order, as per phone call". Without this note, you may receive two shipments (and two bills), as mail orders are initially processed by one person, and phone orders by another. And the two orders may be filled by two different people in the shipping department, each completely unaware that it is a duplicate order.

I personally review all orders, but it is practically impossible for me to catch all duplicate orders, so I ask for your help in this.

Now that I've tried to explain the What and Why, I would like to explain the How. How your shipment is sent depends on weight and size. Here are a few statistics.

UPS: Max size-108" overall length and girth.
 Max weight-----50 pounds
 Max weight of all packages to any one person in one day--100 lbs.
 Note: If your package measures 84" or over, length and girth combined,
 and weighs less than 25 lbs, you will still be charged for 25 lbs.

When you are ordering tubing, please specify the minimum lengths you can use. All tubing is sent using shipping tubes of two different sizes, the smallest of which is 3" in diameter. Therefore the longest length of tubing we can send UPS is 96", since the length and girth of the packing tube, with ends plugged, would be just short of 108". To keep from paying for oversize, (25lb min), the maximum length would be 72".

The other size tube is 4" in diameter. These tubes are used for larger orders. The maximum length tubing for these tubes would be 92" and 68".

TRUCKING LINES: The minimum charge is for 125 pounds. This is approximately \$15.00

for distances up to 1000 miles, or thereabouts. However, rates are very hard to figure in advance, since they charge by commodity, as well as weight, and distance, and each trucking line's rate clerk may interpret the commodity differently.

MAIL: Not recommended, except for Canada and Overseas. To our customers in Canada, this is the only way we can ship, except by truck, or Air Freight. The max size to Canada cannot exceed 42" in length, and max length and girth combined cannot exceed 60". We realize this creates a high cost for shipping, for most items, so, if anyone up there has any suggestions, please let us know.

NOW: To all the unfortunate customers who have been overcharged by the Trucking Lines because they are changing Bills of Lading to reflect Aircraft or Glider parts, we are sorry for this, and we are trying our best at this end to rectify the situation. We at STARDUSTER CORPORATION have also paid our share of these overcharges. We have contacted the ICC, and have had visits from representatives of the Trucking Lines involved to our place of business, and we believe we may have this particular practice of thier rate clerks stopped. If you continue to receive shipments of raw materials billed as aircraft or glider parts, please contact us.

DAMAGE CLAIMS: UPS: If you receive something from UPS that is damaged, call them, and have thier representative inspect it. Then notify us, since we usually have to file the claim.

TRUCKING LINES: It is your responsibility to make sure that everything you receive is in good shape. Don't sign the Bill of Lading if you have any doubts, especially if it has a notation on the bottom "Received in good shape, except as noted". Truck Lines carry insurance for thier cargo, and you should file a claim against them within ten days, in case your shipment is damaged or incomplete.

If you have any questions regarding orders, or shipping, please feel free to call us. We will be happy to help in any way that we can.

DAN DIAL, Supervisor
Shipping department

NEW BATTERY HOLDER

Commercially built aluminum battery boxes have become very expensive.(The last suggested list price we saw was \$86.00) Therefore we have quit handling them.

Also, they didn't fit our new 12 volt Gel Cel battery as good as they should.

Our talented assistant Foreman, Norman Eaves, has come to our rescue with a mounting rack which he personally designed and developed. It is built for easy mounting on the firewall. It can also be mounted behind the seat, but 90 % of our builders will be mounting the battery on the firewall. It is made of 4130 steel, and the Gel Cel battery fits like a hand in a glove.

The battery is not inclosed on this rack, so only the Gel Cel is suitable for mounting on it. However, we don't anticipate selling many of any other kind of battery, so that should be no problem.

The battery is easily installed. It can be visually inspected at any time. Or jumper cables can be hooked up with out removing anything. The battery is easy to remove. The price is just \$45.00. And we will have them in stck so that your order can be immediately filled.

BROCHURE AND 3-VIEW, \$2....."

By

LARRY WEISHAAR, EAA #9250

(With apologies to all the good guys whose Designer-Builder-Pilot Reports I have Thoroughly enjoyed.)

WHAT IT SEZ

We're pleased to find that the prototype exceeds design specifications.

Pilot visibility is just about perfect.

We approached the test flight with the usual first-flight jitters.

Acceleration is amazingly quick, and it lifts off by itself in about 200 feet

Initial rate of climb is 1500 FPM.

It flew hands-Off on the very first flight.

Control Responses are very business-like, but anyone with a few hours in a Grumman American, or similar type, should find it a piece of cake.

The stall is usually gentle, and there's plenty of warning

Comparison tests with standard aircraft indicate a cruising speed of 170 MPH.

Red line is 215 Knots

The skybomb SOB-1 was designed with the amateur builder in mind--Only ordinary hand tools are required.

WHAT IT MAY MEAN

For some damned reason its 145 pounds heavier than I figured.

You can tell if somebody's sitting in it from 'way the hell down the ramp.

Every time I got up nerve enough to fly 'er, I was too drunk to drive to the airport.

--If you make an everything-in-the-corner barnyard turn onto the active, into a 30-kt wind.

One cool morning I was able to jump it over a 100 foot pine in about 4 seconds.

...Well--I had to let go of the stick for a couple of seconds to use both hands on that damn sticking throttle.

I'm a 5000 hour spray jockey (and first runnerup in the saddle bronc competition at the Calgary Stampede) and I had no trouble to speak of.

Sometimes it zaps you with a wicked whifferdill to the right (or left, maybe,) but the placard says "...does not comply with Federal safety regulations for Standard Aircraft..." and that oughta be warning enough for anybody.

On one of my buzz jobs, I practically ate up a 150 on final.

I traded somebody out of an old Bonanza airspeed indicator.

Assuming, of course, you intend to buy \$3163.80 worth of preformed goodies from me, or else that your circle of friends includes owners of a 12-foot metal brake, a vertizontical indexing internal milling machine, and 837 assorted clecos.

Construction time is 400-700 hours, depending on the skill and experience of the builder

Total cost of the prototype was \$1838.45

That's actual tools-in-hand time, naturally. If you also count the parts hunting, coffee drinking, cockpit testing and screw-up fixing time, it comes to something like 3600 hours.

---For Bondo, paint, and sandpaper, that is; I just happened to have all the other materials on hand.

AND FINALLY

Complete plans and construction manual, \$25.00

Send me twenny-five beans, and I'll send you a 19 page, blurred, ditto book, eight grainy, high contrast pictures, and nine half dimensioned sketches I made, after the SOB was finished.

NEW EQUIPMENT---NEW TRAINING

For some time now, STARDUSTER has enjoyed an excellent reputation, as far as Air Frame work goes. We have never done any appreciable amount of engine work. We have lacked both the training and equipment for anything more than superficial engine work.

The first step has been taken, however. We have acquired a BRANSON heavy duty ultrasonic cleaner. This cleaner will clean an item as small as a fuel injector, or as big as a six cylinder engine. Cleaning dirty injector nozzles, carburetors, cylinders, or what have you, has been vastly simplified, and speeded up.

This ultrasonic cleaner will be available during working hours to Starduster customers who want to have engine, or other parts cleaned. The charge is nominal.

In February, our esteemed foreman, William C. Clouse, will go on temporary duty back to Williamsport, Pennsylvania. There, he will attend the Lycoming factory school for Lycoming engine mechanics. He will return a much better mechanic.

We have no plans to open or operate an engine repair shop, as such. A tremendous amount of equipment and training would be required. We will still send our engines out whenever major engine work is necessary.

However, most of the time major work is not necessary. For example, the last engine we installed in one of our airplanes, a 260 HP Lycoming, in an Acroduster Too, ran quite rough, initially. We finally had to get the injector nozzles ultrasonically cleaned by Bendix. There was no charge for the service, but a lot of driving and down time was involved. How much simpler and more practical it would have been, if we could have cleaned the nozzles ourselves.

We realize that engine work is not usually done by mail. However, a rather large number of our customers live within easy driving distance, or flying distance. We think that the installation, tune up, and trouble shooting service that we will soon be equipped to offer may interest them.

NEW DRAWING

Our centerpages this month feature the "A" revision of sheet 38, of the ACRODUSTER TOO set of drawings.

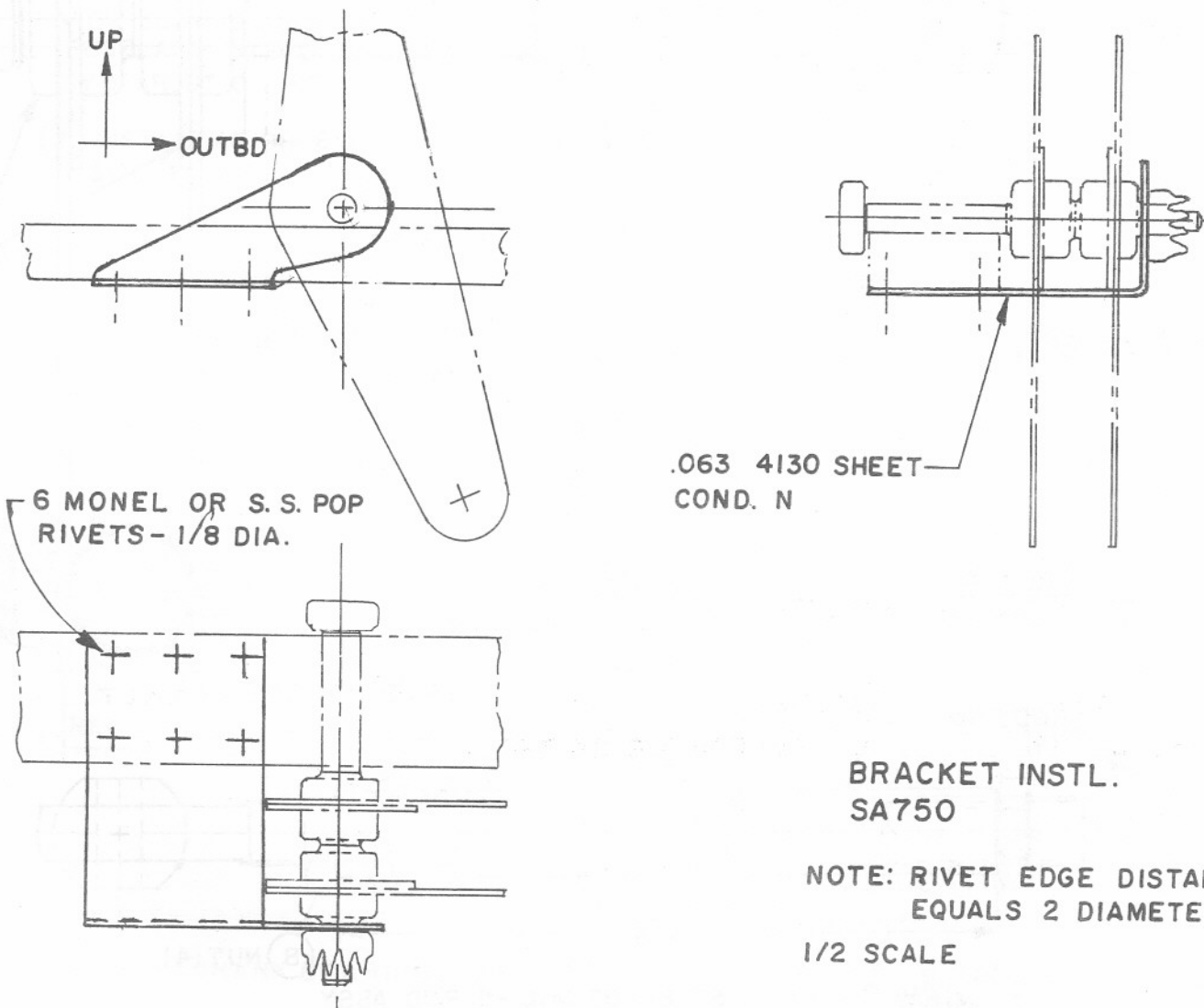
In flying our 260 H.P. ACRODUSTER TOO during the last 150 hours, we have encountered problems with the old pivot-point, $\frac{1}{4}$ " bolt. During the many hours of hard Aerobatics that have been put on this plane, we have found that high speed multiple snap rolls or long hard tail slides would cause the bolt to bend and the plane would fly home with the ailerons no longer in trail with the wings.

Our fix is to increase the size of the pivot bolt to $\frac{5}{16}$ " Dia. This necessitates a larger -3 Bushing, and new bell crank bearings, as well as the larger bolt.

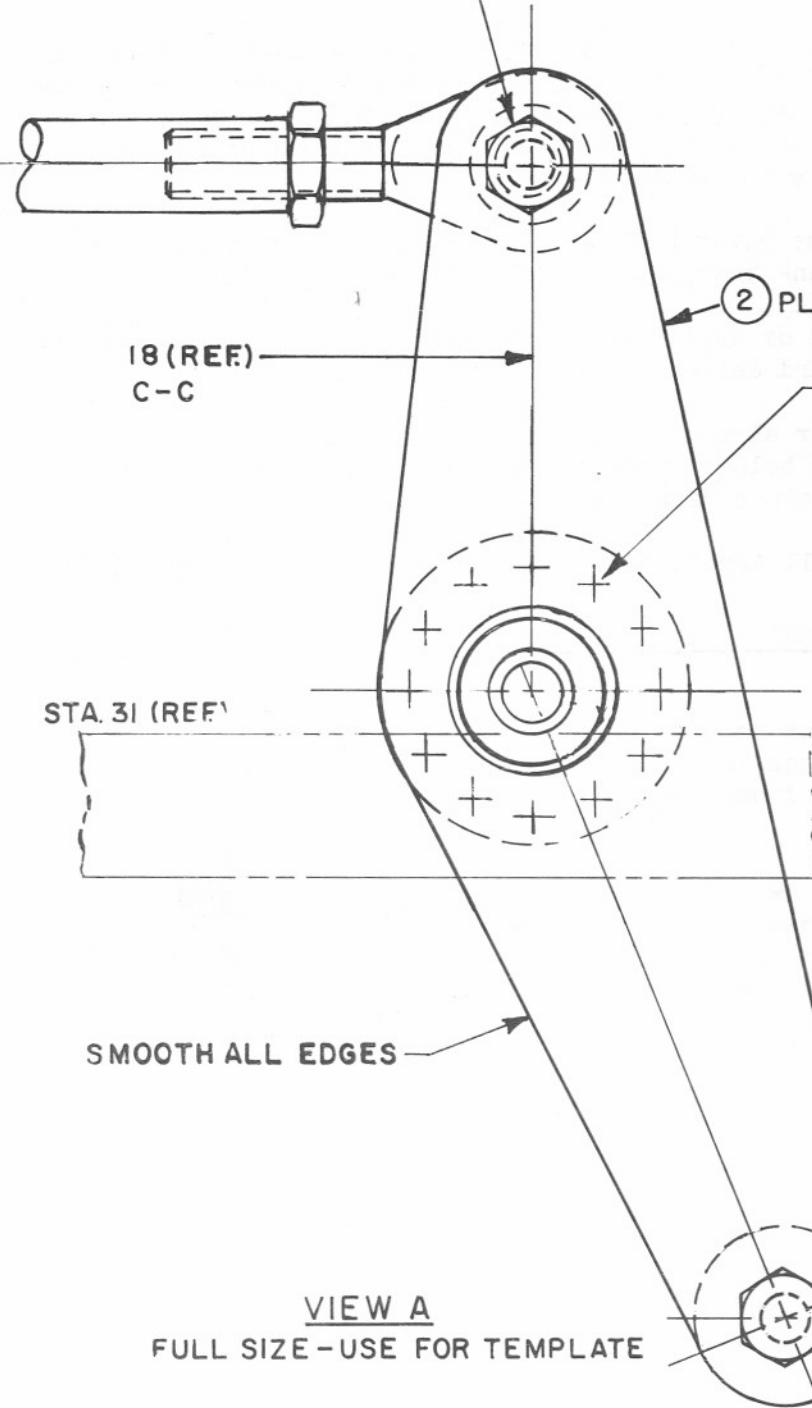
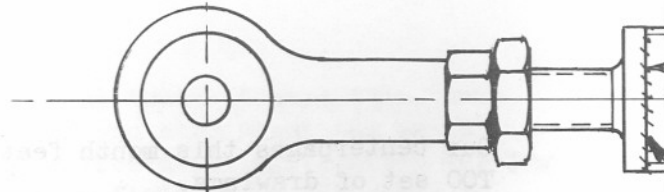
We urgently request everyone building or owning an Acroduster Too to make the changes indicated on sheet 38 before doing hard aerobatics with their machine.

For those of you who may be flying, or already past the point of easy return, we detail an alternate fix in the sketch below. This fix was used on our own SA750 and we have not had any more trouble since using this fix.

A new sheet 38 will be sent free to all Acroduster builders of record who request it.



AN4-12 BOLT
 AN960-416 WASHER
 AN310-4 NUT
 AN381-2-3 COTTER PIN
 8 PLACES



18 (REF)
 C-C

2 PLATE (4)

MS20470AD4-4 RIVET

STA. 31 (REF)

3 BUSHING (2)

WELD

1/8

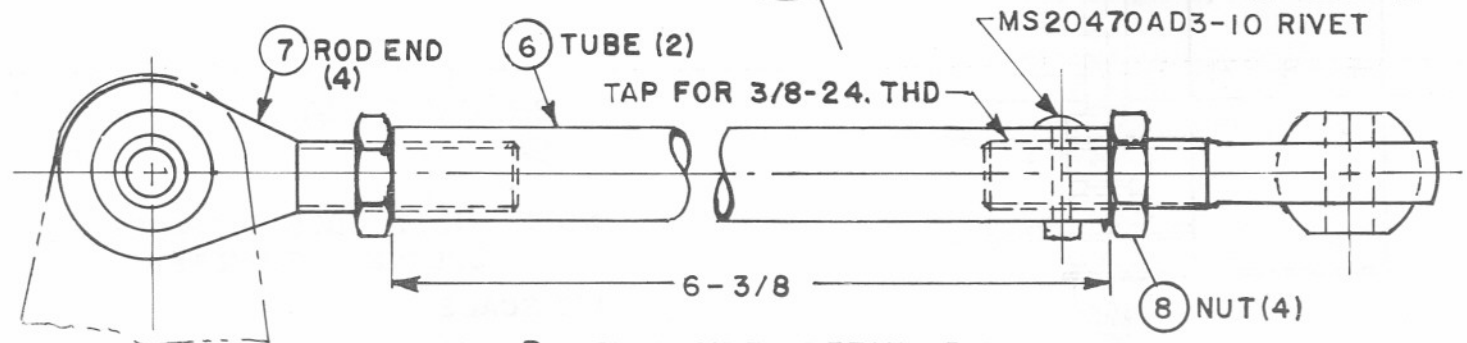
AN5-33 BOLT
 AN960-516 WASHER
 AN310-5 NUT
 AN381-2-3 COTTER PIN
 2 PLACES

SMOOTH ALL EDGES

STA. 3

4 BE

VIEW A
 FULL SIZE - USE FOR TEMPLATE



7 ROD END (4)

6 TUBE (2)

TAP FOR 3/8-24. THD

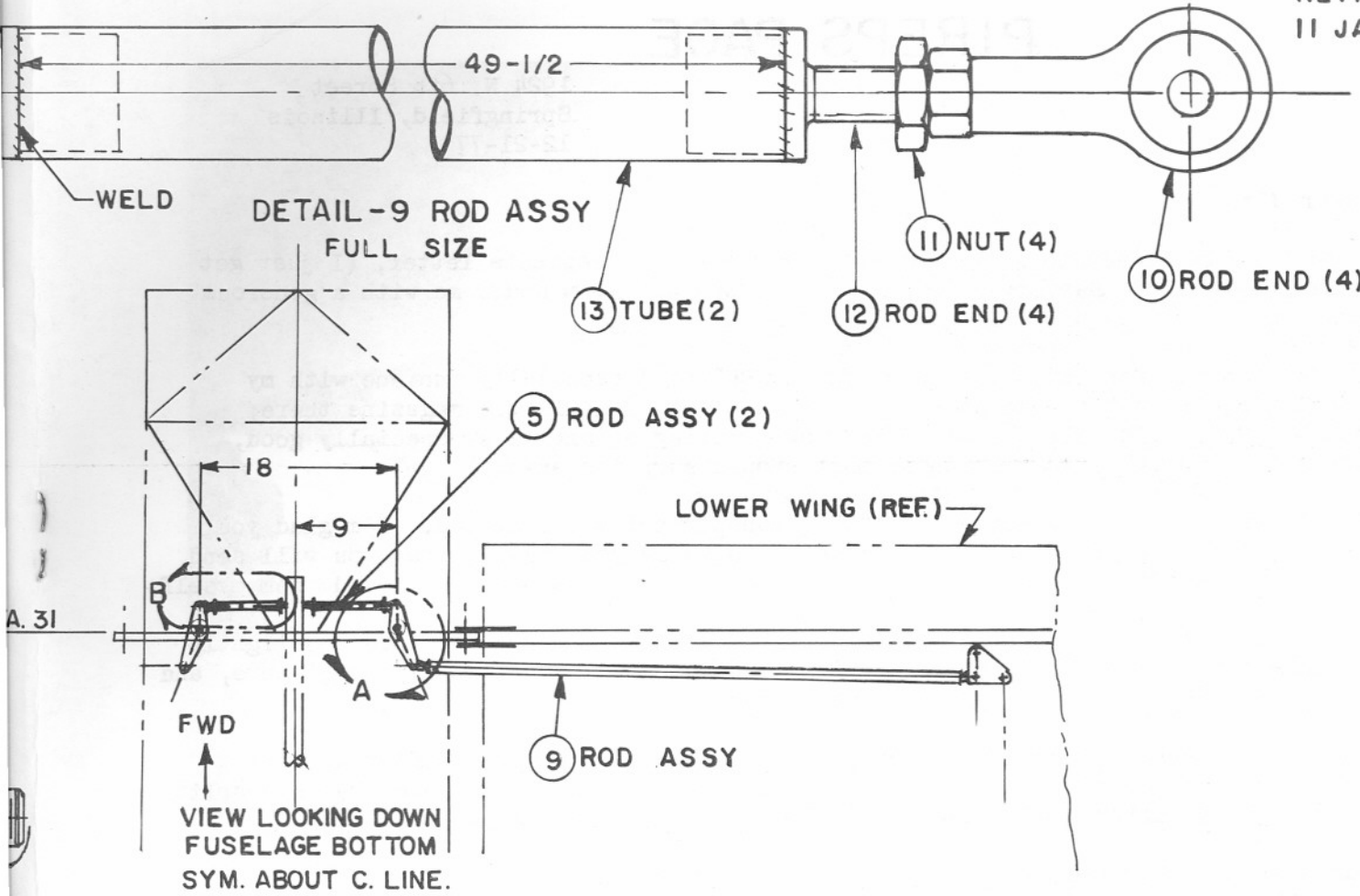
MS20470AD3-10 RIVET

6-3/8

8 NUT (4)

VIEW B - FULL SIZE - DETAIL - 5 ROD ASSY

△ S
 NO



1 INSTALLATION
SCALE: 1/16

BEARING (4)

COPYRIGHT 1974

13	2	TUBE	3/4x.049(4130)	SA750-38-13
12	4	ROD END	AN490-HTIIP	-38-12
11	4	NUT	AN316-5	-38-11
10	4	ROD END	RE4F5	-38-10
9	2	ROD ASSY		-38-9
8	4	NUT	AN316-6	-38-8
7	4	ROD END	HEIM MJ2V	-38-7
6	2	TUBE	1/2x.095(4130)	-38-6
5	2	ROD ASSY.		-38-5
4	4	BEARING		-38-4
3	2	BUSHING	7/16x.058(4130)	-38-3
2	4	PLATE	2024-T3x.071	-38-2
1	1	INSTALLATION		SA750-38-1
REQ'		NAME	MATERIAL	NUMBER

LIST OF MATERIAL

SCALE: NOTED	AILERON CONTROLS INSTALLATION SA750	
DATE: 4-29-74		
DRAWN: <i>J. Osborne</i>		
STRESS: <i>J.O.</i>		
CHECKED: <i>J.O.</i>	STOLP STARDUSTER CORPORATION	SHEET NO. 38

STARDUSTER BELLCRANK BEARING, 5/16
NOTE:

PIREPS PAGE

1924 N. 6th Street
Springfield, Illinois
12-21-77

Dear Jim,

Just when I'm ready to write you another scathing cheapskate letter, (I just got your \$6.87 C.O.D. Battery), you kick the props out from under me with a generous gesture.

Thanks so much for the copies of "STARDUSTER", and especially the one with my undying prose in the Lead story. You have a very fine little magazine there; STARDUSTER quality all the way. Your own writing efforts are especially good, I think, although I don't suppose that should surprise anyone.

I also got your acknowledgement of the transparencies I sent you. I'm glad you can use them, and I hope, without meaning to hurry you unduly, that you will send them back immediately after you've finished with them, since I borrowed them myself.

One reason I'm writing is to tell you that your record of my zip code is slightly scrambled. It's 62702, not 67202. The magazines took three weeks to get here, and I wouldn't want that to happen to the pictures.

The weather here has been cold and nasty, so I haven't had the V-Star out for a while. I also gotta build a new windshield. This is the second one that has split in the hangar after gas dropped on it from the upper tank gage.

Can't wait to try the new battery. It sure looks neat.

Thanks again my friend. I won't be able to make Lakeland, but I'll drop you a line once in awhile, and see you at Oshkosh 78.

Sincerely,

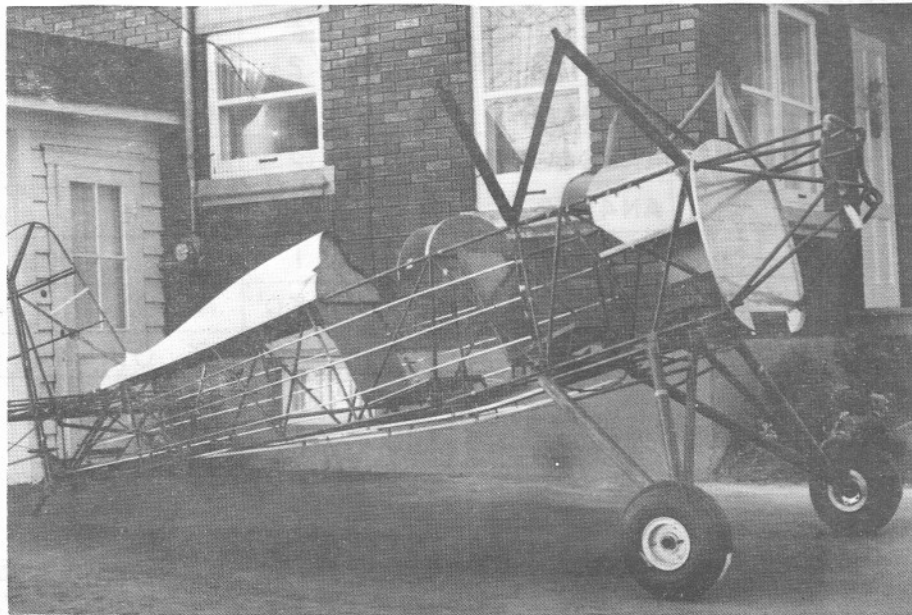
LARRY WEISHAAR

STARDUSTER TOO, by

JEAN G. PELLETIER
MONT ST. GREGOIRE
QUEBEC, CANADA

200 HP LYCOMING

WINGS $\frac{1}{2}$ DONE





Dear Jim,

Enclosed are a few pictures of my STARDUSTER TOO.

I lifted it off the ground on June 7th. All went very well. With trim at "0" degrees for the complete test hop, it set down wonderful. I now have 30 hours on it, and am experiencing more fun flying it. It has been at Kenosha airport for the summer, and I just brought it onto my farm for the winter. It took me about three years overall, with one year off to build a hangar on the farm.

The FAA was wonderful. The inspector couldn't find one thing wrong on the final inspection.

As you know, I have the Lycoming IO 360-A1A engine with a hartzell constant speed prop. Gear is moved back 4 inches, and 2" longer on the engine mount. I have the S shaped tailwheel spring, and Maule small tail wheel. Tail weight on the ground is just right. Hi-speed ground performance just fine, with no nose up tendencies.

It is my pride and joy. Enclosed is a list of things I would like you to send me.

EDWIN DANIELS
RFD 1, BOX 60
DARIEN, WISCONSIN
53114

October 12, 1977

Mr. Jim Osborne
Stolp Starduster Corp.
4301 Twining
Riverside Calif. 92509

Dear Jim,

After reading your article, "A Dopey Experience" in the July issue of Starduster magazine, I decided to pass on a similar experience.

I had used Stits process thru Poly Silver when I heard by the rumor mill, that butyrate dope would work over the poly silver and give a smoother, and slicker finish. Not true!

After about twelve coats of white butyrate on the center section and ailerons, I went to open a drain hole in an aileron and discovered I could peel the butyrate off in sheets. (See picture I'm enclosing.) No adhesion whatsoever between the butyrate and the poly silver.

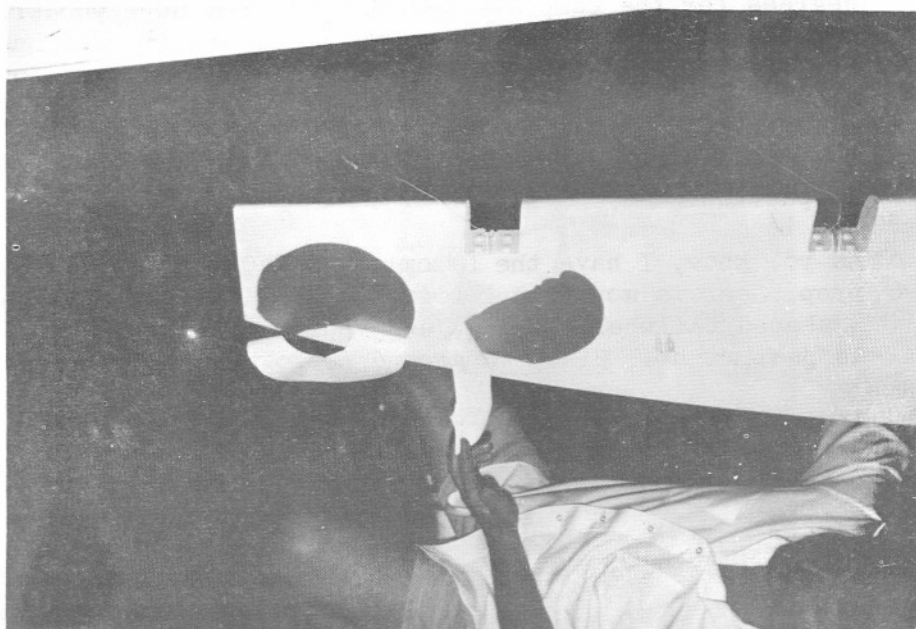
To make a long story short, I peeled the ailerons and the center section and decided to use Aerothane. I agree with you, if you are going to use Stits, use it all the way. I'm happy with the covering job and the ease in using Stits fabric. Hope the final paint turns out.

Sincerely yours,



Tom Kilkelly

PICTURE SHOWING
BUTYRATE DOPE
PEELING OFF AFTER
BEING APPLIED
OVER STITS PROCESS





Stolp Starduster Corp.
4301 Twining Flabob Airport
Riverside, California 92509

November 23, 1977

Attn: Jim Osborne

I am enclosing \$5.00 to renew my subscription to the
Starduster.

My Starduster SA100 was completed and test flown Aug.30.
It is an excellent performer and I am very pleased with it.
It is equiped with an O-290-11 engine, is fully electric
and has an empty weight of 847#. It cruises at about 130
with 24" manifold pressure. Two photos are enclosed.

C.E. Richbourg
C.E. Richbourg

OWEN J. COWLISHAW
 20 Davidson Street
 Newmarket, Brisbane 4051
 Queensland, Australia

Dear Jim,

I received the July Issue of "STARDUSTER" today, and I was very interested to see that you had commented on Molt Taylor's article on test flying. I read both articles before test flying my Cassutt, and stuck by Eric Shillings advice. Mine was the 7th homebuilt aircraft to fly in Queensland. Number 8 was a Taylor monoplane, and the owner tried lifting it off and then putting it back on. He put it on, alright, but damaged the undercarriage due to putting it on so hard. As your article suggested, I don't think I have done a landing much better than that first one. I also noted that Burt Rutan took Molt Taylor to task over his article on propeller pitch. It seems that some of the experts can at times be rather misleading.

I'm still considering starting an Acroduster Too, but the time is not yet ripe.

Cheers,
 OWEN

P.S. The Fairchild shown on page 18, was rebuilt by Jim Williams of Victoria, not Bill B.

Jim,

I thought you might be interested in knowing that I won the NATIONALS again this year with my STARDUSTER TOO.

My new address is: Lt. Col. John Mossissey, box 213, Tea, S.D., 57064.
 Tel: (605) 743-5138

The ship is still for sale at \$17,500.

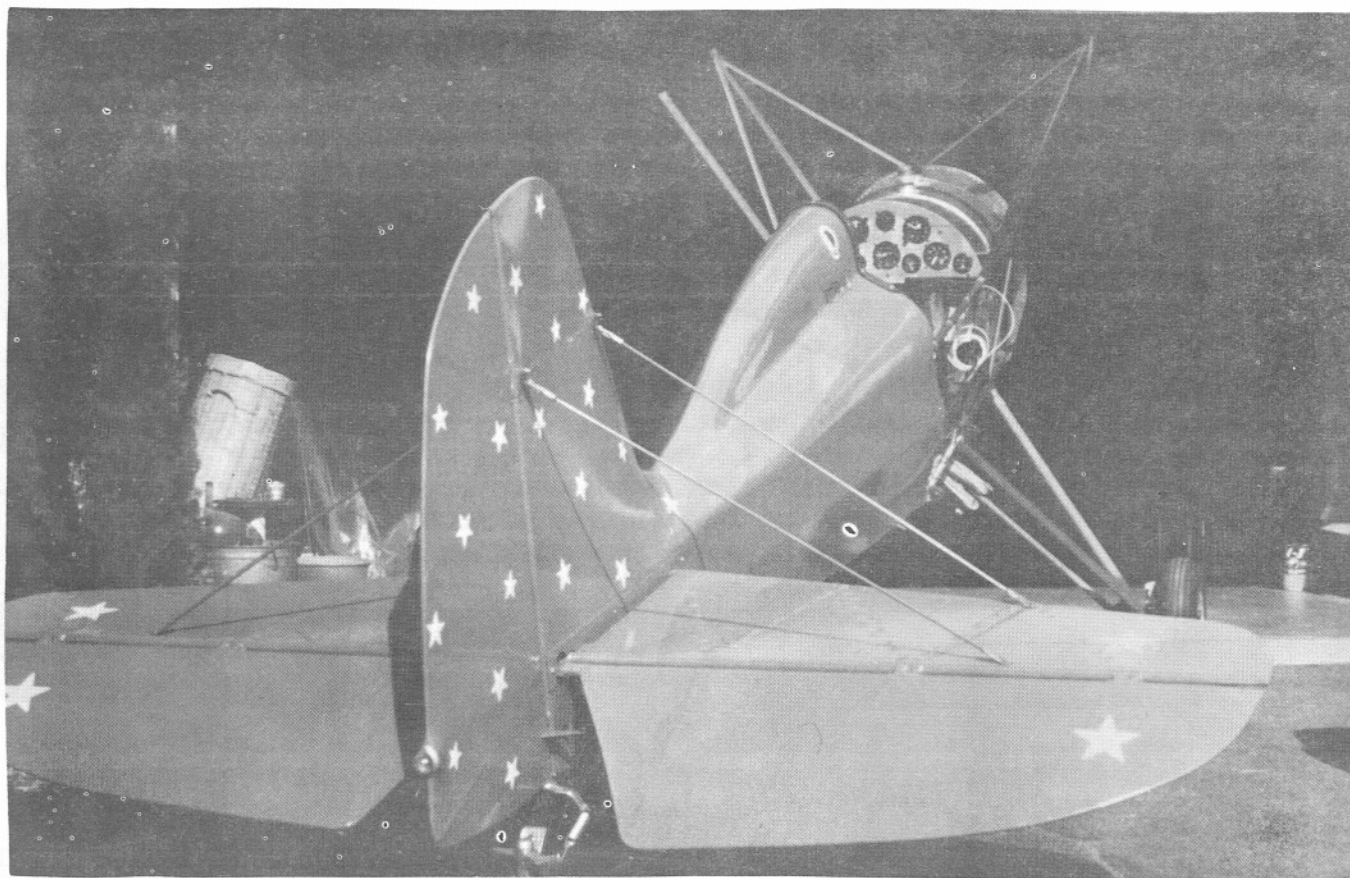
JOHN MORRISSEY

SEEN AT OSHKOSH
 THIS BEAUTIFUL
 STARDUSTER TOO, BY
 DR. F. J. PSOTA
 ARLINGTON HEIGHTS
 ILLIONIS





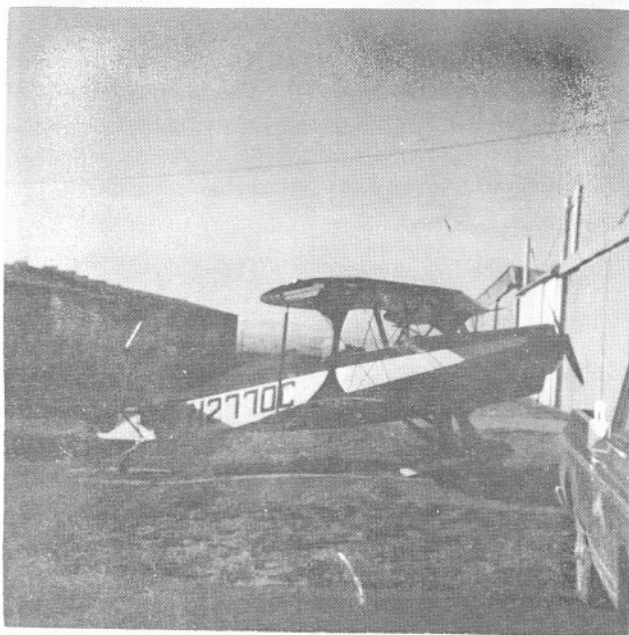
A BEAUTIFUL STARDUSTER TOO BY MR. ROBERT AUSTIN, OF HUNTSVILLE, ALABAMA
POWERED BY 180 H.P. LYCOMING



A TOP QUALITY V-STAR BEING CONSTRUCTED BY DANNY SANDERS, OF CANOGA PARK, CALIF.



ELDON PEARSON AND HIS BEAUTIFUL NEW STARDUSTER TOO. HAS O-435-1 LYCOMING ENGINE WITH WOOD PROP. ELDON AND WIFE FERN ARE FROM CHENEY, WASHINGTON.



A BEAUTIFUL STARDUSTER TOO BY RICHARD CHAPPLE, OF BILLINGS, MONTANA



A STARDUSTER TOO UNDER CONSTRUCTION BY AL BROWN, OF GALES FERRY, CT. LOOKS LIKE A KINNER ENGINE

Rte 2, Box 42A
Hernando, Mississippi

Mr. Osborne:

I'm writing in regards to the article in the August issue of "SPORT AVIATION" in which was an article about the NIEUPORT 28.

Towards the end of the article was mention of the fact that while plans were not then available, this could change in the event some interest was shown by prospective builders.

Having just completed an EAA BIPLANE, of which the picture is enclosed, I am more than slightly interested in starting a new project, and the NIEUPORT 28 fits in with my field of interest.

If there are others interested, and plans are to become available, I'd like to find someone who would maybe build two sets of wings while I would build two fuselages, in an effort to cut down duplication of Jigs and fixtures for the fuselage welding.

I'd appreciate your advising of your intentions or holding my name for future reference.

Incidentally, the EAA biplane is rolling on Cleveland Wheels, Brakes, and tires I bought from Stolp Starsuter.

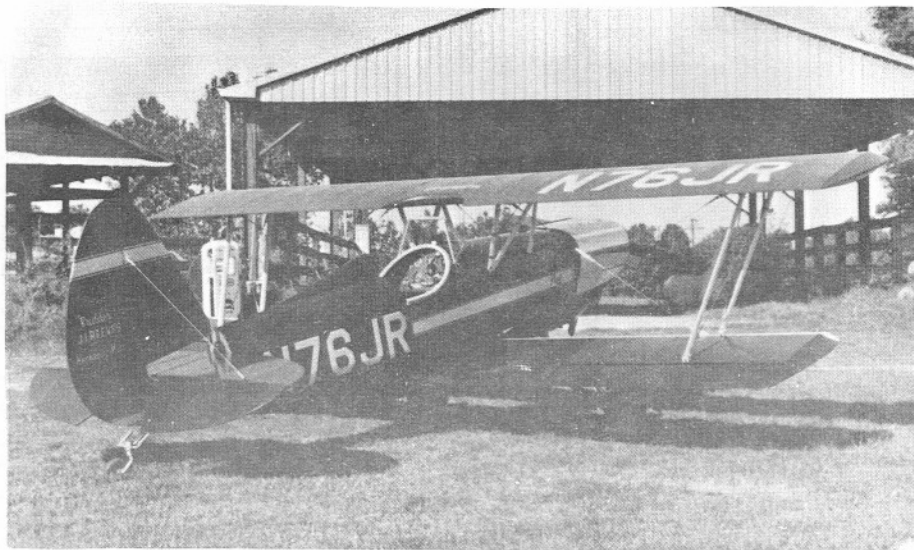
Thanks,

JIM REEVES

Editor's notes: We wish to thank Mr. Reeves and other interested parties who have written in and inquired about plans for our NIEUPORT 28. The facts are, however, that drawing up plans for an airplane is \$25-30,000 worth of work. We do not think the market for such plans is worth this much of an investment.

We suggest that interested builders contact the SMITHSONIAN and WRIGHT PATTERSON museums for plans in building old airplanes. We followed the original plans very closely, except for substituting a steel tube fuselage for the wooden one.

EAA BIPLANE
BUILT BY
JIM REEVES OF
HERNANDO, MISS.





Dear Sir,

Enclosed is a \$50.00 check for a set of V-STAR plans. Please mail me a list of V-STAR parts, and 4130 Steel Tubing.

I built and owned a STARDUSTER TOO, Serial number 107. I sold it April 1, 1976. The STARDUSTER was powered with a Cont. E-185-11 engine, and it would climb in excess of 2000 feet per minute. Enclosed is photo of plane I built.

Sincerely,

ELMO A MAURER, Tulsa, Okla.

ACRODUSTER TOO
 UNDER CONSTRUCTION
 BY
 H. L. HOLLOWAY
 OF
 WARNER ROBBINS, GA.
 8 MONTHS ALONG





STARDUSTER TOO N3LD, BUILT BY LAWRENCE DREYER, OF FORT PIERCE, FLORIDA. GO 435-C2 LYCOMING ENGINE. 260 H.P. OPEN STACKS. AEROMATIC PROP. STILL IN TEST STAGE.



THE FIRST STARDUSTER TOO TO BE BUILT IN JAPAN. PROFESSOR HISAO TAKAHASHI IS SHOWN HOLDING TROPHY WITH STUDENTS OF TOKYO METROPOLITAN COLLEGE OF AERONAUTICAL ENGINEERING WHO COMPLETED THE PLANE. FIRST FLIGHT-JULY 25, 1977. 135 H.P. LYCOMING ENGINE.

Dear Jim and Eric,
Here are some snapshots of my
SA300 as it nears completion.

I'll send some better ones
soon.

When these were taken, the
engine cowling had just
come out of the mold. And it
hadn't been trimmed..

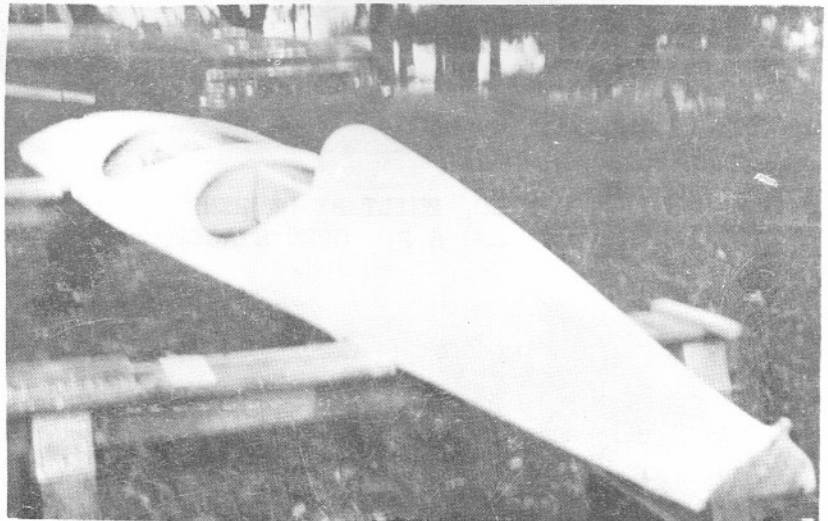
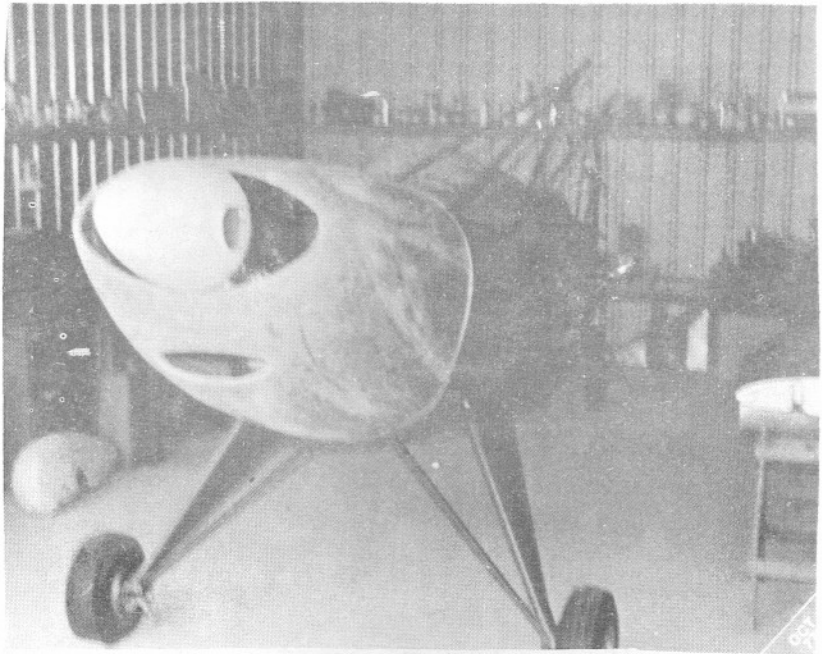
The cockpit/headrest section
is one complete molding
and is removable.

Also have the pattern com-
pleted for the wheel pant
Fairings.

Please send me one 3-port
fuel selector, $\frac{1}{4}$ NP thread
on all three ports.

Sincerely,

GENE HUDKINS
4280 PRATT RD
ANN ARBOR
MICHIGAN
48103



A "STARDUSTER" SLIDING CANOPY
INSTALLED ON A STEEN SKYBOLT.

THIS SKYBOLT WAS BUILT BY JIM
MANDLEY, AND FLOWN BY HIM IN
AIRSHOWS FOR SEVERAL YEARS.

RECENTLY IT WAS SOLD TO RICHARD
BRADFORD, WHO BROUGHT IT IN TO
OUR SHOP FOR THE CANOPY INSTALL.





A BEAUTIFUL RED AND WHITE STARDUETER TOO, OWNED BY DAVE TIERNY, OF BEAUFORT, S. C.

Dear Sir,

Please send catalog airmail plus STARDUSTER magazine for this year, and last years back issues, if you have them.

Afetr two low wing, all wood planes I built in the last five years, it is time for me to build a biplane. Something with low wing loading and two place would be better for over here on this island.

I would like to buy everything from you, if you can furnish it.

Regards, GENE WELLS, P.O. Box 101, Anahola, Kauai, Hi., 96703

P.S. Enclosed is a picture of airplane I built two years ago, over here. You sent me the windshields. You put a picture of it under construction in one of your STARDUSTER magazines.



2016 South High
 Denver, Colorado
 80210

MR. ERIC SHILLING,

We looked forward to seeing you at Oshkosh, but Jim said you got lost somewhere.

Just returned from the Harlingen, Texas AIRSHO 77, and at Paducah, Texas, my alternator failed. The mechanic at the Texaco station there spied the Aircraft Builders Patch on my jacket, and began telling me about himself.

It seems he was iwth the "FLYING TIGERS" with you and Pappy, etc, and he says they used to have quite a problem breaking off spark plugs when changing them in over-heated engines. This necessitated pulling the jug, and drilling the plugs out from the inside.

He devised a system of pulling the other plug, and applying air pressure to the cylinder with the valves closed. Wearing a face mask, he would then drill out the broken plug right on the engine. Says they sent him all over the world, teaching this technique.

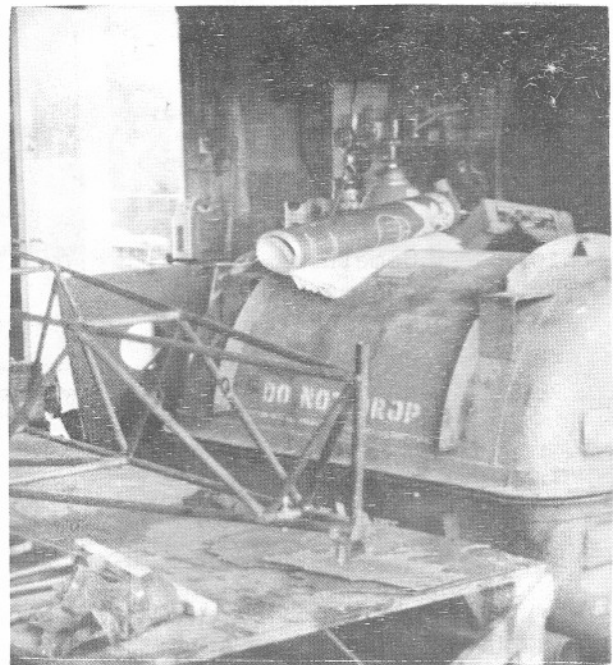
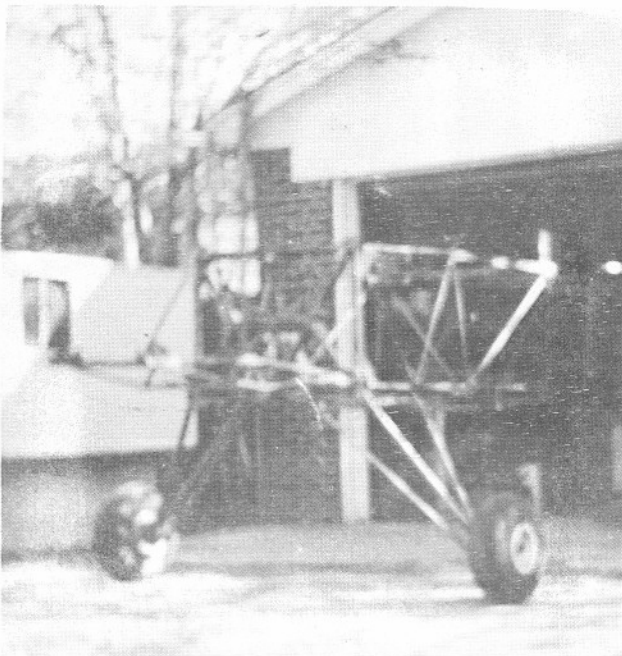
I love that red and yellow STARDUSTER of Mr. Hostetter's, from Colorado Springs, and figure on using that same color scheme on my WICHAWK.

Incidentally, I stopped to see Dave Blanton at Wichita, and he is going to draw me up some plans for using tubes in the wings, in place of drag and anti-drag wires. He knows I love your planes, and he heard a tape I made of Jim's Forum at Oshkosh regarding same.

I wrote that Paducah mechanic's name down, but naturally now I can't find it.

Sincerely, DON SAVAGE

P.S. Pappy was at Harlingen autographing and selling books like hot cakes. Also, here's a couple of lousy pictures of my WICHAWK, last Spring. Its farthur along now. The O-470-1 L-19 engine and accessories are pickled in that big drum.



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 EVER- NOTHING TO SPILL.
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 TOO, ACRODUSTER TOO, STAR-
 DUSTER 1, ACRODUSTER 1, V-
 STAR, OR STARLET. ALSO YOUR
 OWN "N" NUMBER, AND FIRST
 NAME. ONLY \$5.95

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 STICKY BACKS WILL STICK ON
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PROTECT YOUR TIRES, LEATHER,
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 SUPERCOAT LEATHER, PLASTICS,
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NEW STARDUSTER SLIDING CANOPY
 KIT. FITS ALL STARDUSTER AIR-
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