

OCTOBER 1981

Cashkosh "82" is only nine months away, it is our goal and intentions to have the first Starduster meet at the same time. We are working all along with our progress with FAA concerning the Starduster.

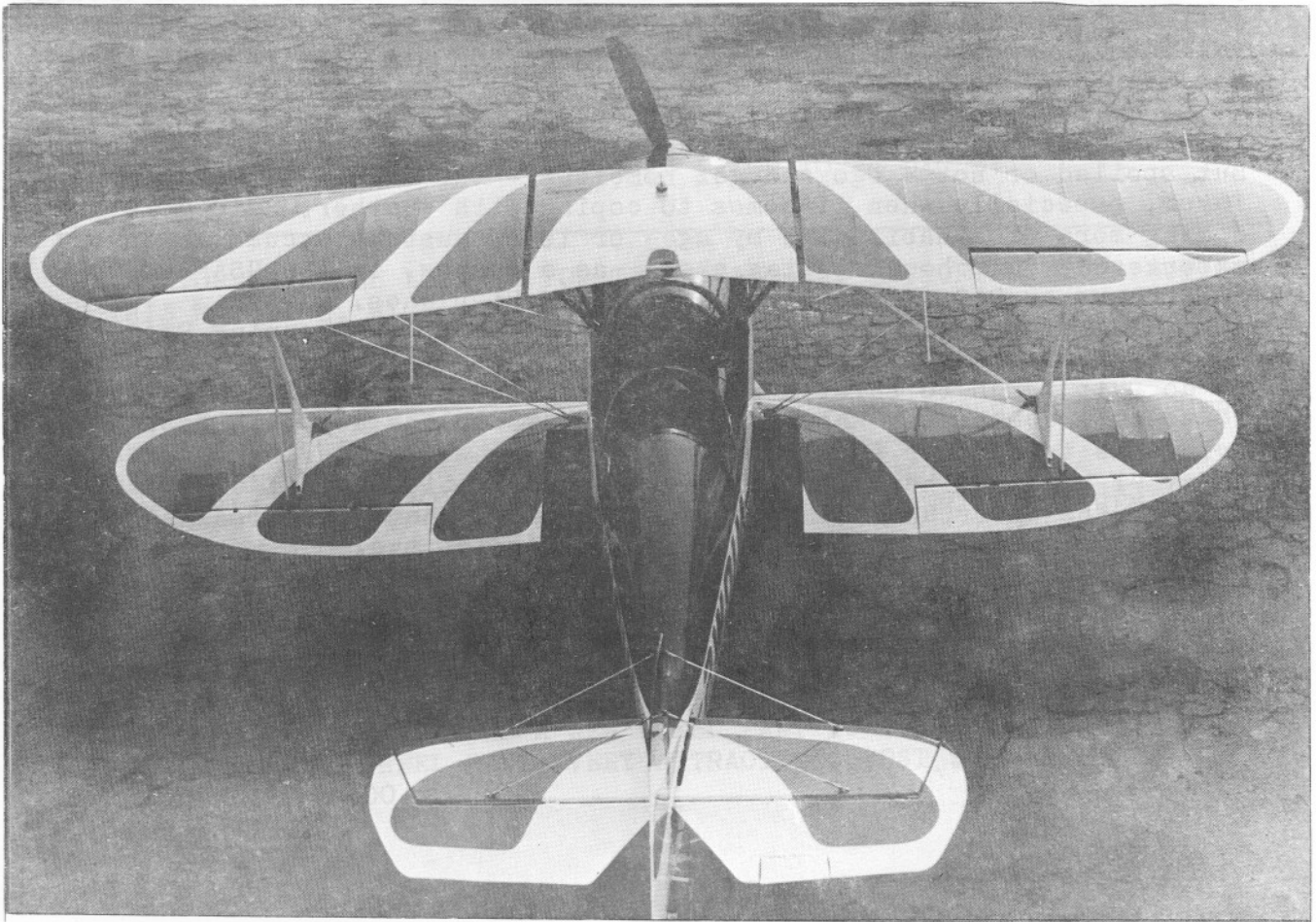
THE

Starduster

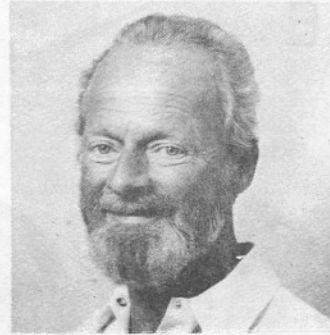
OCTOBER 1981

MAGAZINE

DEDICATED TO THE ACTIVE HOMEBUILDER



PAGE 1



Well back from OSHKOSH and back to work. It was a real pleasant experience to see you all again and meet some for the first time. Want to thank all of you that helped me through the forum and at the booth. Maybe next year will be able to spend some more time with you on the line and maybe even do some flying.

Hope Mother Nature is a little easier on us next year, no complaints about the weather during the convention, a lot of us had trouble getting home. I had to leave the Goldduster in Buffalo and return to California Commercial, Was October before schedules and weather let her see Santa Paula again.

I am one who refuses to fly a Bi-plane, without instruments, in marginal weather - spoiled by the weather of the southwest I guess. But spoiled or not - ego and get home itus - the odds will be in my favor, especially when it comes to coping with weather. Safety is becoming more of a habit with my age- or is it just an accumulation of experience? 7000 hours of tag along, as a gunner, in the USAF- only 500+ hours as PIC , and over half that in Bi-planes.

General Maxwell Taylor once said "Proper Prior Planning Prevents Poor Performance". I try to operate with those principles, as most of us do - it lends to safety. We have all heard that knowledge is the route to success, but knowledge without discipline is worthless. Which brings me to another quote from another famous man, General Curtis LeMay "I have neither the time nor the inclination to differentiate between the unfortunate and the inefficient". That bred discipline and professionalism. Think about it. Nuff said, bye.

Bill Clouse

Bill Clouse

OCTOBER 1981

Oshkosh "82" is only nine months away, it is our goal and intentions to have the first Starduster meet at the same time. We will keep you all informed with our progress with EAA, concerning, facilities, programs, and accomodations.

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COVER PICTURE--AN ACRODUSTER TOO BUILT BY WALLY SPARK, OF FOUNTAIN VALLEY CALIF., BEAUTIFUL BLUE, WHITE,& ORANGE. WILL FLY SOON.

REAR COVER SHOT IS OF A BEAUTIFUL STARLET BEING DONATED TO THE EAA MUSEUM

STARDUSTER IS HAVING A FALL SALE! 10% OFF ON ALL CATALOG ITEMS. ALL ORDERS MUST BE PREPAID, AND RECIEVED PRIOR TO 24 DEC 81.

THE EDITOR IS STILL LOOKING FOR TECHNICAL, AND EDITORIAL CONTRIBUTIONS TO THIS MAGAZINE, WICH IS DEDICATED TO THE HOMEBUILDER AND SPORT AIR-CRAFT ENTHUISTS.

TOM AND KAREN MORRIS HAVE VOLUNTEERED THEIR TALENT TO HEAD THE ENTERTAINMENT COMMITTEE AT OSHKOSH 82. THEIR ADDRESS:
26156 VIA DEL TOLEDO SAN JUAN CAPISTRANO, CA. 92675
ANY ONE WANTING TO CONTRIBUTE IN THIS AREA PLEASE WRITE TO THEM.

THIS MAGAZINE IS NOT COPYRIGHTED, EXCEPT AS NOTED. IT MAY BE REPRODUCED IN WHOLE OR IN PART, FOR THE BENEFIT OF SPORT AVIATION. PLEASE GIVE CREDIT TO STARDUSTER MAGAZINE.

STARDUSTER NOW HAS AVAILABLE A NEW WHEEL PANT TO HOUSE THE "LAMB" TIRE A DOWN SIZED 500X5 WHEEL PANT. VERY ATTRACTIVE. COST \$85.00. IN LIGHT WEIGHT TEVLAR \$100.00.

liable. It is against FAA policy to list aircraft designs under popular name designs. In every case, the designer is listed as manufacturer and as the manufacturer the builder is responsible for the design, engineering, stress analysis, aerodynamic concept type engine installed.

OCTOBER 1981

In 1972, a check of FAA records in Washington showed 57 cases of a Pitts "going in" for unknown reasons. The number now may be over 70. This does not include cases where a pilot misjudges and hits the ground. This is only cases of suspected structural failure. In most cases the airplane "goes in" rolling.

These accidents are all caused by a lack of rear flying wires. When the rear flying wires are left off of a positive stagger biplane, high loads are imposed on the drag wires inside of the bottom wing. These loads are so high that the drag wires will pull through the spar.

The root of the problem is an AN970-3 washer versus an AN960-3 washer. The original Pitts drawings called out the big washer. When the drawings were redrawn, it was changed to the little AN960-3 washer. After a number of fatal accidents, builders were notified to use the large washer. (This is proof of the problem.)

When the drag wires pull through the spar, both wings wash out and the ribs in the top wing break. There are no stops on the aileron bell crank inside the bottom wing of the homebuilt model and as the wing moves aft, the bell crank goes over center.

The drag wires should be good quality with machine cut threads. (Mac White wires are not rolled, they are machine cut.) If the wires have hand cut threads, the failure will be on one side at high load and the airplane goes in rolling. If a wire doesn't break and each side pulls through the spar together then the airplane goes in flat as the one in Dodge City did.

The pilot did a "triple snap" going south. He then climbed inverted and did a half loop. At this point the pilot found that he could not keep it in the air. He leveled the wings, closed the throttle, and traveled north a quarter mile, hit flat, bounced, and hit a second time. This airplane did not hit as part of a manoeuvre. This airplane went down because of structural yielding, which allowed both wings to wash out.

The pilot never knew what went wrong. He only knew the airplane was failing to respond. That is why he closed the throttle.

Another factor: the Pitts Company says, "These failures are caused by the failure of the homebuilder to use a hard wood block on the back side of the spar versus a soft wood block." It's poor engineering to leave off the rear flying wires and have peoples lives depend on the hardness of a block and the diameter of a washer.

Aileron flutter: A Pitts can be flown at high speed and found free of aileron flutter. But, after one snap roll, it's a different airplane. The crushing of the rear spar can turn the structure loose to flutter.

In this accident the pilot may have closed the throttle in attempting to land due to catastrophic aileron flutter. And all of this is due to a lack of rear flying wires. Rear flying wires are now required on a Pitts in Canada. They had several cases of every rib being broken in the top wing due to structural deflection, and the airplane landed successfully. The Canadian DOT figured out that the ribs broke in the top wing due to a lack of rear flying wires.

NEXT PROBLEM: The I strut between the wings is installed with a bolt drilled vertically through the spar. This bolt destroys 1/3 of the bending strength at the most critical spot on the entire airplane.

The spar can deteriorate in the area of this bolt hole. Reinforcing blocks are glued to the spar and the bolt should be located through a block and not in the spar. The block does not need to carry bending loads, only the compression of the strut. There have been many cases of the wings breaking off of a Pitts at this bolt hole. However, most of these cases were probably as a result of flutter.

A case in point, Sherman Cooper, May 3rd, 1971, Merced, California the I struts of his airplane fell clear. This is Russian Roulette with peoples lives.

NEXT PROBLEM: The only flying wires on a Pitts are attached to the forward landing gear fitting. These fittings are hammered into shape while hot, at unknown temperature, while welding. They can be cracked from bending. If cold air blows on them and they cool too rapidly, or if the amature welder puts a wet rag on the hot fittings, they become hard as glass.

The 4130 steel material starts at 70,000 PSI, with normal welding and slow cooling it will become 125,000 PSI. Which is the same as A N hardware and a desirable heat treat. But, a wet rag can put the fitting to 210,000 PSI.

Everytime the airplane lands a fatigue crack can be spreading in the fitting. This fitting is so critical, it should be normalized and cooled in a lime pit. The rear flying wires can be attached to a fitting independent of land gear fatigue loads. This is more Russian Roulette with peoples lives.

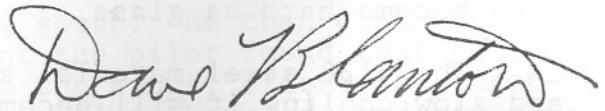
The Pitts can be fixed if we can get people to face up to the problems. But, how do we accomplish anything, when the Southern Region of FAA has certified these unacceptable concepts. Nobody wants to criticize the Pitts. We just want the structural deficiency fixed. Several other designs are now flying that are similar to the Pitts with the rear flying wires left off. This is playing Russian Roulette with peoples lives.

But, the designer of a homebuilt popular design cannot be held liable. It is against FAA policy to list homebuilt designs under popular name designs. In every case, the builder is listed as the manufacturer and as the manufacturer, the builder is responsible for the design, engineering, stress analysis, aerodynamic concept, and the type engine installed.

You can go to FAA in Oklahoma City and buy a listing of every certified airplane that is still registered. For example, you can buy a list of 1948 Cessna 170's or all Piper PA-22's. But, you can't buy a list of homebuilt Tailwinds, because there is no such list. The builder is listed as the manufacturer and he is not allowed to register his creation as a Tailwind. Because there is no statement of conformity on file as with a certified airplane.

There can be no statement of conformity on a homebuilt airplane, because there are no FAA approved drawings on file to conform to. The builder/manufacturer of the airplane is 100% responsible for his creation. He may use a popular name after his own name as he registers the airplane to enhance the resale value. But, that is all it amounts to. It is his creation. He is the manufacturer. He is the only one responsible for the airplane that bears the N number issued to him. It should be noted, that FAA will not accept drawings on a homebuilt airplane if you try and give them. It's against FAA policy to have the drawings on hand unless you apply for a "type certificate".

In regard to this accident, it is speculation as to whether structural deflection or flutter was a factor in the pilot closing the throttle before impact. But while investigating this accident, several spectators stated, "They did not see the final manoeuvre of the airplane, because it was too low." This is another case of an aerobatic pilot hitting the ground while doing aerobatics behind the hanger. A 300 foot floor is not only good sense for safety, but it allows the spectators to see what he is doing. Even the announcer on the PA system didn't see the airplane hit because of the rolling ground. This is called "sub-soil" aerobatics.



David D. Blanton
Vice-President NASAD
Box 18486
Wichita, Kansas 67218

Would you believe I had a guy ask me if I knew anyone who would hire him as a millionaire? In all seriousness he said he had the best of qualifications, expensive tastes in cars, clothes, wine and women. He would even accept a part time position, to allow him to travel around the world and enjoy his job as a millionaire. I said "Go back to work Leo."

AN EXCITING EXPERIENCE

A plans built Starduster Too, 200 HP W/ Constant speed propeller.

Sunday March 81. N 99 BB Owner, pilot John A. Kruger

Passenger George Bruggeman and I were executing a roll at 4700 MSL, entry at 160 MPH indicated. Nose up to 15 degrees, roll left with rudder application to keep nose on point ahead, at inverted position horizon about 2" below nose. Applied additional forward stick achieving about 4" above horizon-some rudder input was still in I recall. Aircraft stalled and snapped into a flat spin inverted to the left. Neutralized controls and idled power. Applied aft stick and opposite rudder to no avail. No control response-no resistance to any air load. Spin accelerated to a blur. Six turns were counted- applied aileron to the right as I recall and spins slowed and reversed to right two turns- very close to ground now. Could see furrows in fields. When spin reversed I thought we were dead. I tried aileron again and right wing started to float upward. I applied full right rudder and wing started down and I applied full forward stick. Aircraft rolled very slowly to nose low and airspeed picked up slightly and aircraft mushed out with high rate of sink. Applied fuel boost and pumped throttle open and engine caught. Estimated we rolled out at less than 70 feet AGL.

Returned to airport, Jack Hawkins and Bob Filkins observed and timed sequence from a Cardinal at about 5000 FT. Jack counted six seconds from spin rotation to recovery. Entry 4700 MSL, recovery approximately 1700 MSL. Forward fuel tank full, front passenger approximately 185#, clear day, approximately 65 degrees. Practice area near Hemet, Calif.

Parachuting did not appear practical at high rotation speed and very rapid altitude loss-----

John A. Kruger

THE FIRST 63 HOURS
WITH THE "GOLDDUSTER"

by Jim McKeehan

Jim Osborne loves first flights. And who am I to deprive a man from enjoying himself?

I had spent 21 months building my first homebuilt airplane. 363J is a Stolp Acroduster II, completely plans-built, with the exception of the modified aluminum spring gear kit, newly introduced to Starduster Builders.

Jim flew the mother ship, 750X, to Santa Paula and wedged himself into 363J, ready to climb into the wild blue.

I stood beside the runway and watched Jim take my plane to the end of the black asphalt. Run up seemed to take centuries. Then, he turned out on the center line, paused for a moment, and started the roll. Jim broke ground right in front of me. He climbed toward the afternoon sun. Twenty-one months of anticipation released in a flood of emotion.

I cried like a baby. Tears rolled down my cheeks as I sobbed. "She flies!"

After a bare 10 minutes of gentle turns and stalls, Jim brought the Goldduster in for a textbook landing.

She topped at 220° on temperature and flew right wing heavy.

Jim suggested one more short flight this day with me in the aft cockpit.

I wasted no time strapping myself in.

"Cigar," I mumbled, checking controls, instruments, gas, etc., and taxied to the line. Throttle forward, lift the tail. After breaking ground, I tried to find the J3 ahead by leaning my head out the left side of the open cockpit. I almost lost my glasses. I had left my goggles sitting on top of my head. Dumb! Fly the plane, grab the glasses, down with the goggles....

What a beautiful day! Climb to 2,000...shallow turns. Gentle stalls. Listen to the wind in the wires. After 10 or 15 minutes, the oil temperature had climbed to 228°. Time to head for the shed.

Now it was time to work out the problems. An Aileron trim tab solved the heavy right wing for the moment. I could re-rig the plane later.

The biggie was the oil temperature. With numbers above 220° on a cool day, what would happen when working the plane hard on a hot day?

I added a second oil cooler. No help. Still hitting 220° in gentle maneuvers. Check the oil temperature gauge. Right on the money. How about a restriction in flow through the cooler hoses? Nope. Good flow. Change the connection on the back of the accessory panel. Maybe the banjo fitting is the problem. No...now what?

It was July 21. Time to leave for Oshkosh. OK. Check the oil pressure relief valve, then fly it again. 178°! The relief valve was faulty. A new engine with six hours logged. I would have to contact Lycoming after my return from Wisconsin.

The trip was fantastic. 130 indicated, 8½ gallons per hour. Viewing the countryside through the blue, yellow and orange-stripped

3-3-3

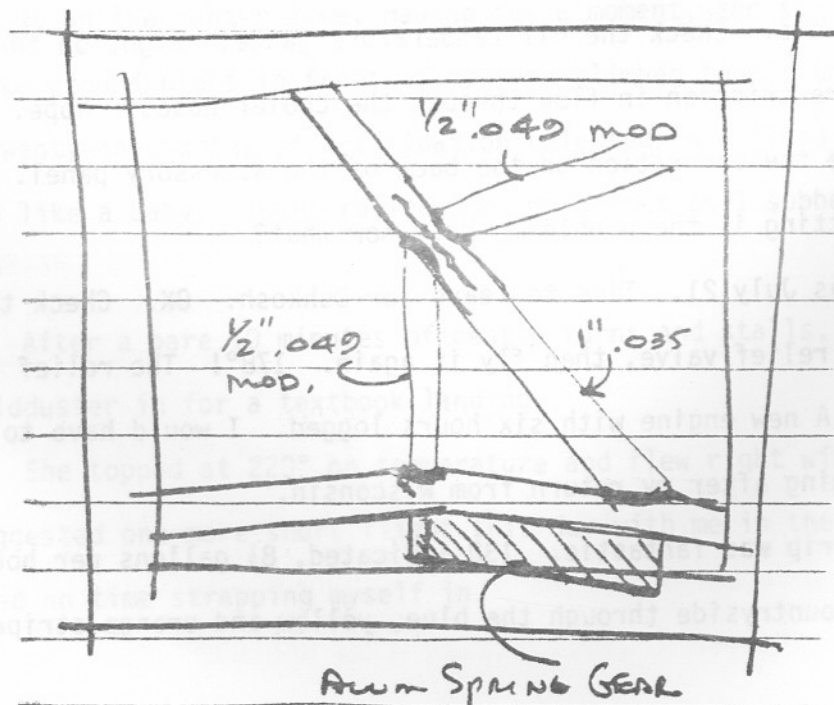
wings of the Goldduster was a spectacle beyond words. And joining in on the flyby each day, circling in front of the thousands of people, with the other planes and pilots, was worth the price of admission.

Trouble!...

The main tank was leaking. Fuel was dripping from the right tank brace angle. It could not be a fitting. Apparently, a seam had opened in the tank. It turned out to be a good thing.

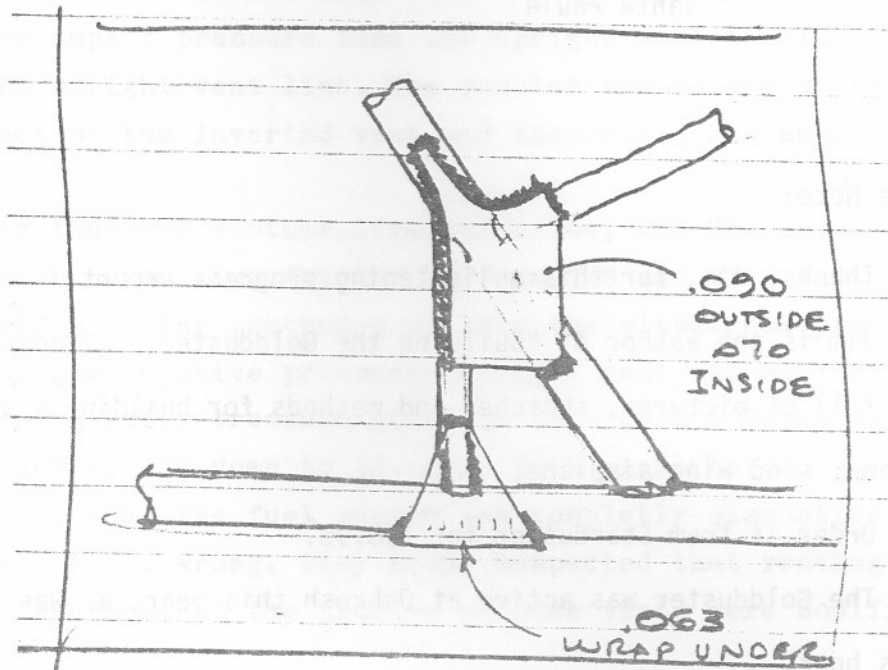
After getting the Goldduster home, I started pulling the fuselage skins off so I could reWELD the tank. That is when I found a bigger problem.

The spring gear modification required the addition of $\frac{1}{2}$ " .049 tubing in the fuselage above the gear. This tubing, after 63 hours, had pounded a 1" .035 tube flat, cracking it on both sides.



I call Bill Clouse. After reviewing the situation, a fix was worked out. First, the 1" tube was reshaped to its approximate original state and the cracks were welded shut.

Then a series of 4130 gussets were welded to the fuselage on both sides.



The plates would carry upward forces from the spring gear, through the lower longeron and through the .035 brace to the clusters at the upper longeron.

Then the other problem was found. The left cabane brace bracket had broken loose from the fire wall station. There was a mod on this brace in the _____ Starduster. I suggest that anyone building an acroduster pay attention to the change. The old method of attachment WILL FAIL, sooner or later.

363J is going together again. I am checking all of the attach

points, fuel lines, wear points and such, carefully.

Hope to fly next weekend.

Good luck with your project, and let Bill know how you are doing after the first 50 hours. We may all benefit from the experience and improve the state of the art.

Jim McKeehan
Santa Paula

Editor's Note:

Thanks, Jim, for this enlightening progress report.

Jim is the author of "Building the Goldduster." A comprehensive manual, full of pictures, sketches and methods for building a steel tube frame, wood wing airplane.

Order it from Starduster for \$18.95.

The Goldduster was active at Oshkosh this year, as was the sale of Jim's book.

By the way, the Goldduster earned second place Starduster Designer award for appearance, workmanship and innovative extras. I'm sure we will hear more from Jim in the future.

Bill Clouse

FOR SALE

1 Each propeller Sensenich 76 EM8S5-60, fresh out of prop shop. The prop has been reduced in diameter to 74", Would be a very nice prop for Lyc. 130 or 200. If anyone is interested it can be had for 600.00-cash, check, M.O., or stamps.

AGAIN FUEL SYSTEMS

In the last two months we have had reports of four, repeat FOUR, incidences of fuel supply problems, three of which are of a serious nature. In three of the cases there was engine power loss severe enough to prevent level flight, and one where engine stoppage occurred.

Case number one was an Acroduster Too, 200 HP. There was three gallons of fuel per hour being pumped overboard-on this aircraft the inverted vent was run up the cabane and bent forward-the upright vent went down and exited out the area of the bottom cowl vent. Being that the inverted vent was supplying more impact pressure than the upright vent the fuel was being pumped out the upright vent line. The problem was solved by reducing the angle of impact on the inverted vent and increasing the angle on the upright vent.

Case number two- was another Acroduster Too, 260 HP- inverted vent was extended through upper wing fairing between C/S and wing root rib. Seven inches of nylaflo tubing protruded up into the slipstream, probably tilting back and causing a negative pressure- upright vent exited firewall at cowl vent. (Again a negative pressure area) In this case a large drop in fuel pressure was noted, 18# down to 5#. Even with electric boost pump on fuel starvation continued. The fuel system was completely dismantled and checked and nothing was found wrong. They never suspected that venting could be the culprit. We discussed the problem and the vents were modified and so far so good.

Case number three- Starduster Too 260 HP- inverted vent exited upper wing fairing like a pitot tube, upright vent, again, bottom cowl vent. Whenever the aircraft was at a steep climb angle, heavy right slip, or vertical, fuel pressure would drop and power loss occurred.

Case number four- Starduster Too 260 HP- inverted vent up the cabane and facing forward, upright vent went down gear leg and exited by the wheel pant. Aircraft suffered power loss in most all airbatic maneuvers.

It is imperative that tank (upper tank and sump tank) pressures be equal. If there is any difference the upright vent should be favored for higher pressure, it is easy to understand that if the pressure is great enough in the sump to pump fuel overboard via the upright vent- it may be enough to prevent fuel from flowing into the sump.

We are in the process of building a plexi-glass tank so that we can visually check fuel flow with artificial pressures applied to the vent systems.

FASTEN TO FIREWALL

NOTE: FULL SIZE PIE PLATES; FOR CLEARANCE
IN FIRE WALL FOR MAGS., IF YOU USE
THE SIX (6) CYLINDER LYCOMING ENGINE
TWO (2) ARE NEEDED. SA-750

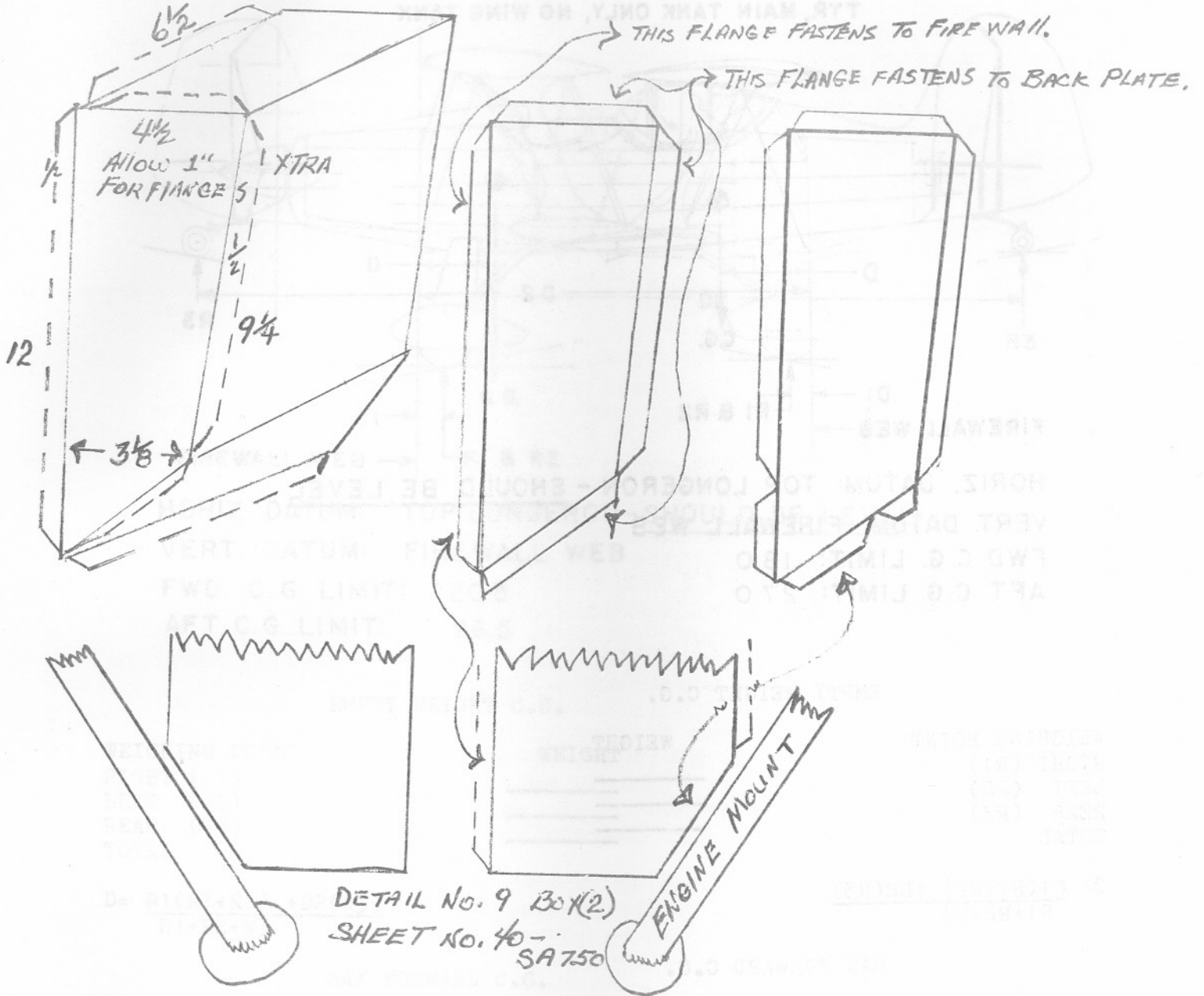
THIS DRAWING IS FULL SIZE AND I HOPE
IT WILL BE OF HELP, IT WORKS VERY
WELL FOR ME. I PREFER STAINLESS
STEEL OVER GALVANIZED. ITS WEIGHT IS
LESS AND LOOKS MUCH BETTER, BUT COSTS
MORE. ITS WORTH IT!

Bill Barnett

FASTEN TO FIREWALL

FASTEN TO FIREWALL

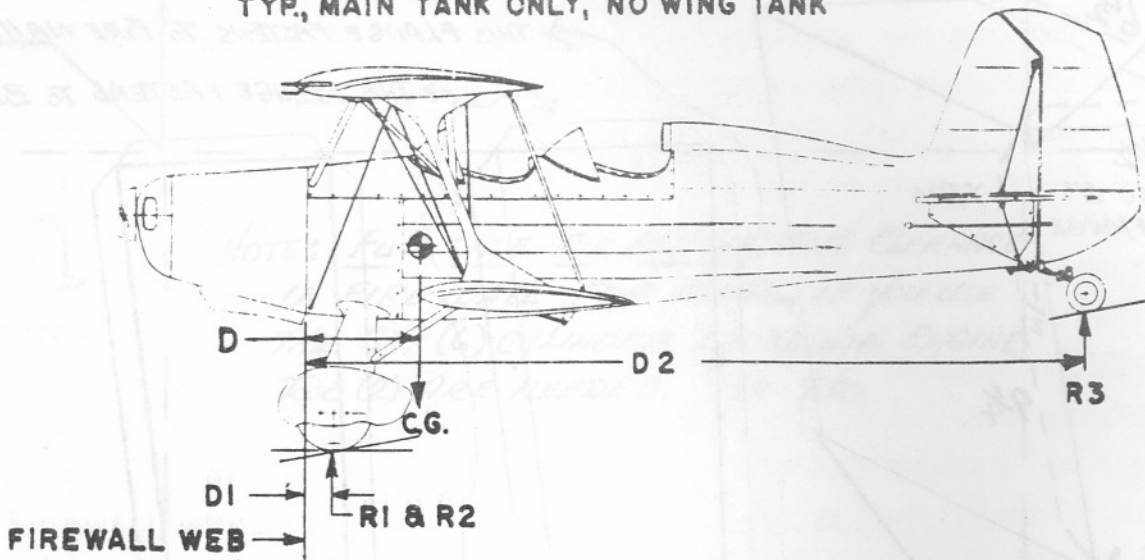
SA 750 0032 1007 TRESTURBANCE
WEIGHT & BALANCE



NOTE: THESE BOXES ARE LARGER THAN THOSE SHOWN ON SHEET No: 40 FOR SA 750, THEY ALLOW FOR MORE DEPTH & LENGTH. SPECIAL CARE SHOULD BE TAKEN WHEN BENDING THE FLANGES FOR THE FRONT AND BACK, BECAUSE THEY BEND OPPOSITE TO EACH OTHER. NOTE CLEARANCE FOR ENGINE MOUNT, IT IS A MUST. THE SIDES ARE CUT DIFFERENT FOR THAT REASON. 1/2" SEAMS TO BE GOOD ON ALL FLANGES, NOTHING LESS.

Bill Barnett

**STARDUSTER TOO SA300
WEIGHT & BALANCE
TYP., MAIN TANK ONLY, NO WING TANK**



HORIZ. DATUM: TOP LONGERON - SHOULD BE LEVEL
 VERT. DATUM: FIREWALL WEB
 FWD C.G. LIMIT: 18.0
 AFT C.G. LIMIT: 27.0

EMPTY WEIGHT C.G.

WEIGHING POINT	WEIGHT
RIGHT (R1)	_____
LEFT (R2)	_____
REAR (R3)	_____
TOTAL	_____

$$D = \frac{D1(R1+R2) + D2(R3)}{R1+R2+R3}$$

MAX FORWARD C.G.

AIRCRAFT EMPTY WEIGHT	WEIGHT	ARM	MOMENT
PILOT	_____	_____	_____
FUEL	_____	_____	_____
FUEL	_____	_____	_____

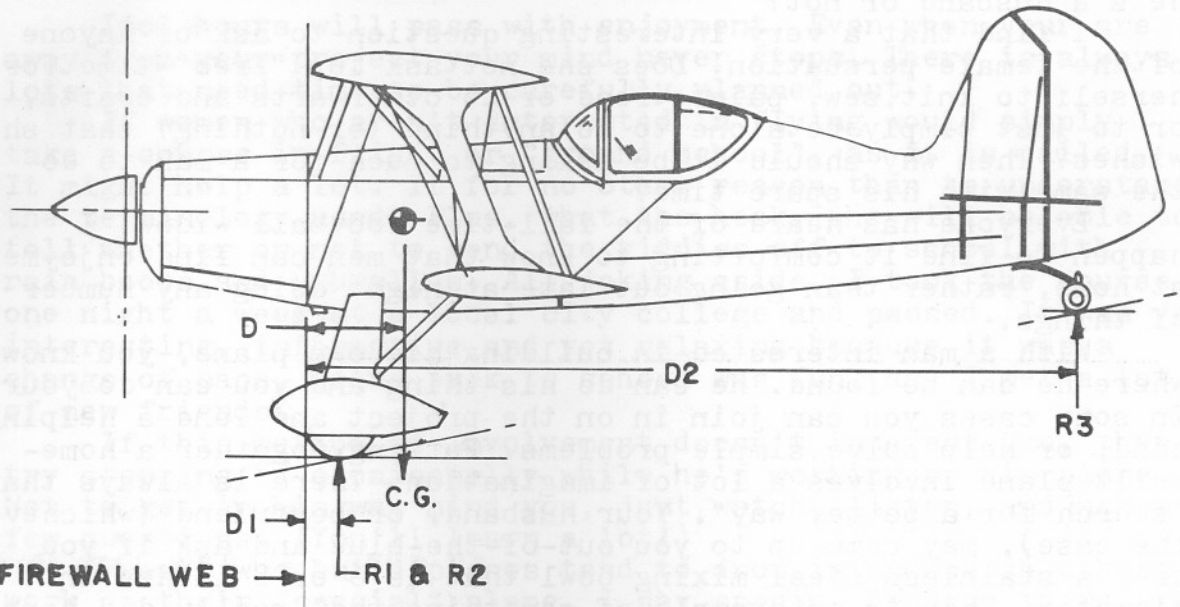
TOTAL MOMENT =
 TOTAL WEIGHT

MAX AFT C.G.

AIRCRAFT EMPTY WEIGHT	WEIGHT	ARM	MOMENT
PILOT	_____	_____	_____
PASSENGER	_____	_____	_____
BAGGAGE	_____	_____	_____

$\frac{TM}{TW} =$

SA 750 WEIGHT & BALANCE



HORIZ. DATUM: TOP LONGERON—SHOULD BE LEVEL
 VERT. DATUM: FIREWALL WEB
 FWD. C.G. LIMIT: 20.5
 AFT C.G. LIMIT: 26.5

EMPTY WEIGHT C.G.

WEIGHING POINT	WEIGHT
RIGHT (R1)	_____
LEFT (R2)	_____
REAR (R3)	_____
TOTAL	_____

$$D = \frac{D1(R1+R2) + D2(R3)}{R1+R2+R3}$$

MAX FORWARD C.G.

AIRCRAFT EMPTY WEIGHT	WEIGHT	ARM	MOMENT
PILOT	_____	_____	_____
FUEL	_____	_____	_____
FUEL	_____	_____	_____

$$\frac{\text{TOTAL MOMENT}}{\text{TOTAL WEIGHT}} =$$

MAX AFT C.G.

AIRCRAFT EMPTY WEIGHT	WEIGHT	ARM	MOMENT
PILOT	_____	_____	_____
PASSENGER	_____	_____	_____
BAGGAGE	_____	_____	_____

$$\frac{TM}{TW} =$$

Why does a woman feel the need to harp at her man, whether he's a husband or not?

I find that a very interesting question to ask of anyone of the female persuasion. Does she not ask for "free" time for herself to knit, sew, paint, read or do other arts and crafts, or to just simply be alone to do anything (or nothing) that she wishes? Then why should it be asking to much for a man to do the same with his spare time?

Everyone has heard of the fall-time football widow. I happen to find it comforting to know that men can find enjoyment at home, rather than going out late at night doing any number of things.

With a man interested in building his own plane, you know where he can be found. He can do his thing and you can do yours. In some cases you can join in on the project and lend a helping hand, or help solve simple problems. Putting together a home-built plane involves a lot of imagination. There is always that "search for a better way". Your husband, or boyfriend (whichever the case), may come up to you out-of-the-blue and ask if you have a stainless steel mixing bowl that is 6 or 8 inches in diameter. This is an example of something that really did happen to me. Then the search was on. At every department store and grocery store we would look whenever we were out, until finally we came accross the perfect size bowl, just as he had imagined it. Another time it was the lid off of a small jar of mayonaise. Silly as it may sound, it suited it's purpose just fine. I don't recall if something came along after it or not. The chances are it was changed completely. That too is another thing about airplane builders, they may change something several times before they are completely satisfied with it.

It wouldn't surprise me if some of their better ideas aren't used by some of the airlines. After all, every man who has ever built a home-built plane is by rights, an inventor. Each special built plane is made with extra features that is to his needs and likings. Ah yes, there's another one for freedom of choice and individuality.

Women should respect a man's freedom. They have a choice of enjoying the project right along with him. After all, just think of all the trips that can be planned for, after it's finally completed, and how proud you'll both be of his accomplishments. To actually make a flying machine with his own hands. When you think about it, it's really fantastic.

My advice to women of plane builders is to enjoy. Be glad he's not under your feet bored to death, with nothing to do. Flying is just another fun sport, only it has more variety. For example: They builf the fastest, the biggest, the smallest, the prettiest, the most authentic. Men paint them with wild paint schemes, or make them the delux expensive type with every thing imaginable. Some own the bare minimum (maybe this model is just no more than a motorized hang-glider).

You can spend a lot on this hobby, if you wish to call it that, or a little. It's no different looking through plane wrecking and salvage yards for treasures, than a woman hunting' from garage sale to garage sale. People in all walks of life enjoy these things and why not?

Building an airplane is an excellent form of relaxation, for working people and retired. It can give a retired person a feeling of purpose and great accomplishment.

Idol hours will pass with enjoyment. Even when your are away from your project your mind never stops. There is always lots that need time to be carefully planned out.

If women who aren't interested in flying would simply take a course in flight or "ground school", as it is called. It might help a lot. If for no other reason than to understand the terminology used. Plus, what the heck, she will be able to tell whether or not to send the kiddies off to school with rain boots and umbrellas. All joking aside, I took the course one night a week at a local city college and passed. It was very interesting, informative and yet relaxing because it was a change of pace. Going back to school was fun, and I met a lot of new friends.

If this method of involvement doesn't interest you, then try stopping by occaisionally while he's working on his plane. Not to get in his way mind you, just watch, listen, and ask a few questions. (You'll learn a lot!)

People who build planes tend to drop in and watch others work on their "special" plane. I say special because there are so many kinds. Well anyway, some people he may know personally, others will be total strangers. (Some days you get more done than others, depending on the company flow and stopping to visit). Soon you'll learn to know his friends as "airport regulars" and they will be your friends too. A lot can happen then. My airport friends all get together occaisionally for a barbeque or a fun game of baseball.

Visiting with these people can really enrich your life. Why? Well, because your friends will bring along their friends, and they just could be here for a short stay from who-knows-where. I've met a native Austrailian from Sidney. A lovely man, charming to listen to. He told of his country and some of it's history. He even showed us all his countrys' currency. It's very colorful, and each bill tells some of their country's history on both sides.

Then I've learned a lot about Japan from another good friend. He is real willing to answer any of my questions about his country and their customs.

All "airport people" show their concern for the safety of each other by suggesting to a plane builder important safety features to think about while they work.

You don't have to take my advice and do all these things. Just ask yourself if getting upset over how your man likes to spend "his" time is really worth squeeking about. I really hope your relationship is worth more than that.

Lately I hear rumors about building a home-built plane that will go non-stop around the world. Well folks, the race is on! They've done everything else with the world of flight-now this. I only hope that the man who flies this one is not a chain smoker, because it undoubtedly will be a flying gas tank. What will they think of next?

Linda Ames

Editor in Chief

LEST YE FORGET

As the telephone operator who giveth out the wrong number, so is he who extolleth his exploits in the air.

He shall enlarge upon the dangers of his adventures, but in my sleeve shall be heard the tinkling of silvery laughter.

Let not thy familiarity with airplanes breed contempt, lest thou become exceedingly careless at a time when great care is necessary to thy well being.

My son, obey the law and observe prudence, spin thou not lower than fifteen hundred cubits and stunt not above thine own dwelling. For the law of the land is the FAA and it reacheth far and wide

He who maketh right hand patterns shall be cast into the outer darkness.

Let not thy prowess in the air persuade thee others cannot do even as thou doest, for he that showeth off in public places is an abomination unto his fellow pilots.

More praiseworthy is he who takes care to avoideth a student than he who loopeth and reelith until some damsel stareth in amazement at his daring.

He who breaketh an undercarrige in a forced landing may in time be forgiven, but he who taxieth into onother plane will be despised forever.

Beware of the man who taketh off and looketh not, for there is not health in him. Verily I say unto you, his days are numbered.

Forsooth, he who neglecteth his checklist shalt oneday know the fires of hell while still on or into this earth.

Heed instructions and be wise. Refuse them not. Thus wilt thou fly safely, thou shalt thus enjoy longer days and a life of peace shall be added unto thee.

Verily I say unto thee, rejoice and knoweth well, the only bird who talketh a lot is the parrot. And he doth not flyeth too good.

The author of the above sage words is unknown. Can it be said that, you can find no fault in a taildragging Bi-plane pilot?

PROFESSIONALISM

A pro golfer was invited to fly over to a famous golf course and play it. The pro said he had a hell of a hang-over and did'nt feel up to his game. It was suggested that they just play for fun. The pro replied that if you're to play with the best you always play like a pro - you never play when you're not up to doing your best or else you become satisfied with mediocre performance. Just substitute "fly" for "play" and you've got it.

wrecking the salvage yards for treasures they were getting from garage sale to garage sale. People in all walks of life enjoy these things and why not? Building an airplane is an excellent form of relaxation for working people and retired. It can give a retired person a feeling of purpose and great accomplishment.

EDITORIAL: THE BUSINESS ISSUES

IT NOW DEPENDS ON US



Hooray for the tax cuts!

After decades of hoping and a final seven hour debate in the House of Representatives, the Reagan Administration finally got its tax cut—the biggest in history.

This is great.

Individuals and business will get long-needed relief from a growth-slowing tax burden. Over three years the nation's tax load will be lightened by \$150 billion.

In addition, business will get faster tax write-offs and investment credits. And those who invest in business will get new tax breaks on their savings and capital gains taxes.

It's hard to think of a more favorable package. The economy should be given a tremendous boost and a new direction.

But wait a minute. There is another side to this story.

At the same time the House was voting heartily for the big tax cut, the Senate was quietly clearing the budget cut side of the Reagan economic program.

Federal outlays were cut by \$140 billion over the same three-year period.

This didn't bring as many cheers as the tax cut, but this is where the rub lies for the whole Administration effort to square away the U.S. economy.

Now, the tax cut will stand up because everybody in the country wants it.

But we can't be sure the cost cuts will hold up because there are going to

be a lot of pressures to get money from the government over and above what the budget-cutting bill lays out.

After all, we are still talking about a spending budget that has a lot of hope built into it—as any government auditor, corporate accountant, or head of the family knows about any budget.

But year after year, despite the hopes and intentions of the government to keep its costs and outlays down, the Federal budget deficit has run billions and billions of dollars more than expected.

So, it could be that the Senate budget-cutting action, overshadowed by the big tax program victory in the House, may have more to do with the success of the Reagan program.

The meaning of this, then, should be clear enough.

If the Reagan economic program is to be seen as a success three years from now, it will take a lot of pitching in by all Americans:

—Government officials must not only be vigilant but strong enough to resist the many pleas for funds from special interest groups;

—Business must make the most of its tax incentives to renew plants and increase productivity;

—And people themselves must use their new found tax money prudently.

So, will the promise of the biggest tax-cut bill in history be fulfilled? Only if the biggest cost-cutting program is fulfilled.

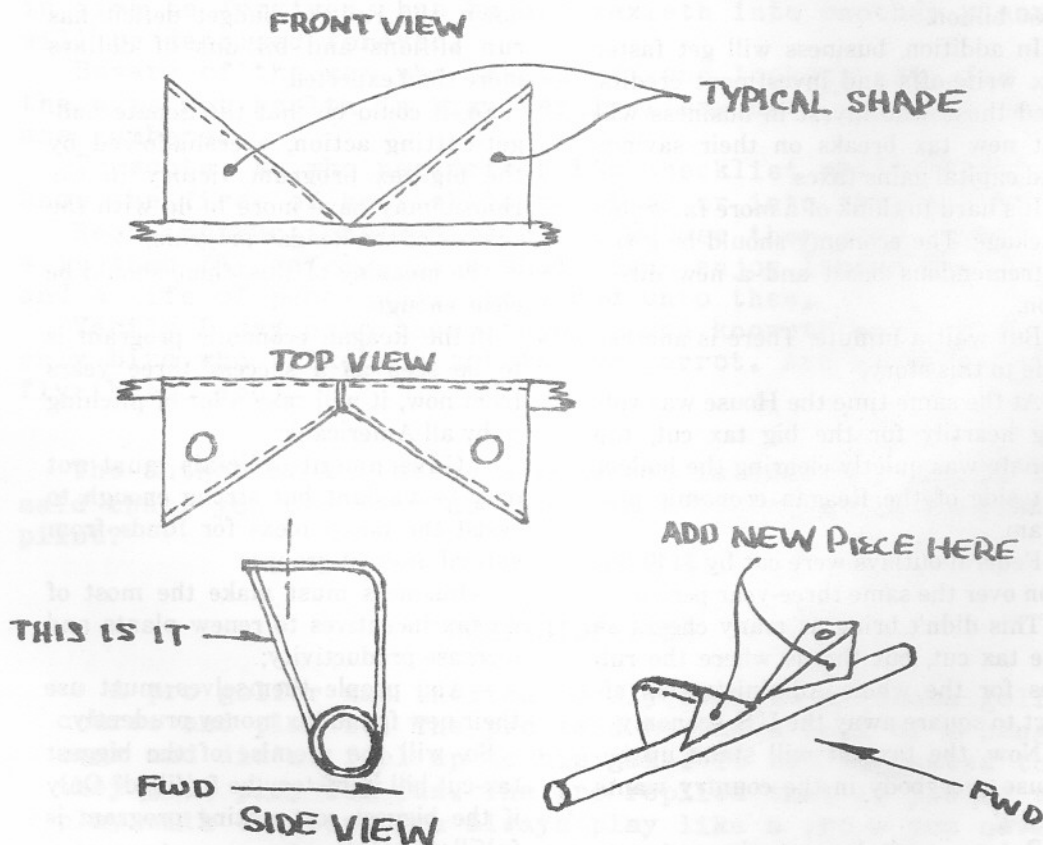
And this is up to all of us.

Gene Beaudet

Editor-in-Chief

SA 750 CABANE INSPECTION

We are still receiving reports of problems with the Acroduster Too cabanes. The attach plate at firewall center cracks out at the bolt holes. The problem seems to be the difficulty in attaining the correct tension in the roll strut, then vibration fatigue cracks out the fitting. The first indication to look for, or be suspicious of, is when the strut vibrates-inspection and adjustment is necessary. A modification to the design of the attach plate, 6-17-80, increased plate thickness to .125. Recommended re-enforcement of original clip is to weld .090 plate on back side of each clip, as illustrated below. At the present time am re-evaluating the design for possible improvements to preclude these annoying problems.



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August 31, 1981

To All TRW Hartzell Propeller Customers:

Beginning with shipments on October 1, 1981, TRW Hartzell Propeller will increase prices on all of its product lines. Most items will show increases between 12% and 17%, however some may fall outside of this range due to special situations.

Price catalogs will be available prior to October 1, 1981.

Thank you for your continued interest in TRW Hartzell Propeller.

Yours truly,

TRW Hartzell Propeller

Arthur R. Disbrow
President

ARD:kls

As the above letter was read with dismay, I suppose it was inevitable. The price sheets arrived and a C/S propeller, spinner and govenor now lists for \$3230.00. Our usual 20% discount for prepaid orders results in a price of \$2584.00

A student parachutist made a jump one sunny day and his chute failed to open, as he was falling he looked toward the ground and noticed a man coming up. As they passed the jumper asked " Do you know anything about parachutes?" The ascending man answered " No, do you know anything about Coleman stoves?"

Received a letter from an Acroduster Too builder, in Europe, asking if it was possible to use a radial engine to power his project. The primary reason being the cost difference. The radial a W 697, ex tank for approximately \$1000 versus a Lycoming rebuilt at a cost of 4 to 6K. I personally like the looks of a round engine on a bi-plane, there are several Starduster Too's flying with them. We as homebuilders know that anything is possible, especially here in the good old U.S. of A., where the FAA lets us EXPERIMENT(AL). The rest of the free world is not, when it comes to homebuilders.

Whenever we want to alter a designers plan, we must weigh both the possibilities and practicalities. In this case I feel a round engine on a Acroduster Too is impractical, primarily because of the design performance of the ACRO II would be severely degraded.

Another opinion , letter dated 10/23/81

Dear Bill;

Hello to you and all the members of the Starduster Corp! Also, best of luck to you in your new venture.

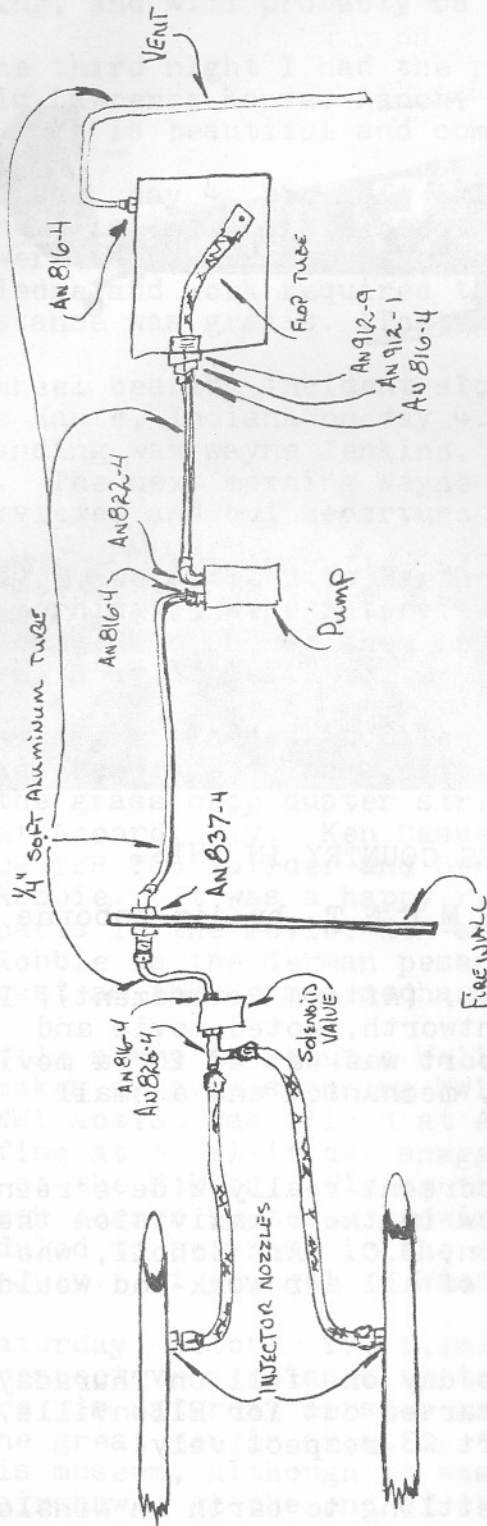
Enclosed, is an Aug. 81 picture of my "TOO". The purpose is to show it no longer has a round engine on it; much too heavy. I hung the 180 LYC back on it.

Bill, I will be spending some money with you again this winter on refining my "TOO", but I need a little information that I hope to receive from you wonderful people.

Sincerely

Richard F. Chapple





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QTY.	AN NUMBER/MFR.	DESCRIPTION
1	STARDUSTER	TANK
1	STARDUSTER	FLOP TUBE ASSY.
1	STARDUSTER	PUMP
1	STARDUSTER	Solenoid VALVE
2	STARDUSTER	NOZZLES
4	AEROQUIP 816-4	HOSE FITTINGS
1	AN 912-1D	BUSHING
4	AN 816-4D	NIPPLE
1	AN 822-4D	TEE
1	AN 837-4D	BULKHD. 415°(OPT)
1	AN 822-4D	90° NIPPLE
9'	1/4"	SOFT ALUM. TUBE
4'	601-4	TEFLON-BRAIDED HOSE



SIX THOUSAND MILES CROSS COUNTRY IN THIS.

S O T H I S I S R E T I R E M E N T by jim osborne

Around the first of September 1981 A.R., (After Retirement), I received a phone call from Chuck Wentworth, noted movie and air show pilot, saying that my Nieuport was wanted for a movie, and I could go along as ferry pilot, mechanic, and a small amount of movie flying.

The picture was to be shot in wide screen, really wide screen, for the Smithsonian Institute to show in their maxivision theatre in the aerospace museum in Washington, D.C. Art Scholl, who needs no introduction, was to be in charge of all air work and would do most of the Nieuport flying.

I didn't play at all hard to get, so day one fell on Thursday, September 24, and Wentworth and I started out for Ellenville, N.Y., flying a Fokker Triplane and Nieuport 28 respectively.

The end of the first day found us settling to earth in Winslow, Az. Chuck shut the Fokker down at some distance from the Hangar. He had a pin hole gas leak, and the gas was pouring out. The leak was on the back side about half way up, and had developed on his final approach to Winslow. We secured a bucket and drained the gas until it was below the leak. Chuck then fixed it in about 20 minutes. He took an awl and enlarged the hole. A gasket was cut out of gasket material, round and about 1/2" in diameter. This was punched with a sheet metal screw and screw and gasket were liberally doused with silicone cement. The screw was then inserted and tightened in the enlarged hole, and the silicone doused gasket

washer made sure that no fuel would leak. This repair is still holding, and will probably be good for the life of the machine.

On the third night I had the pleasure of staying with Gene Burnette on his Lawrence Kansas Ranch, and enjoyed his bountiful hospitality. His Ranch is beautiful and comfortable and Gene is even a good cook.

On Sunday, day 4, the left axle bushing siezed up on landing at Greeneville, Illinois. Fortunately, EAA member Terry O'Neil and son were there and furnished a hangar, tools and most of the knowledge and work required to fix the little mother. And this assistance was gratis. (That means no pay, Junior.)

The wheel bearing incident slowed us down, but we still made Terre Haute, Indiana on day 4. One of the interested bystanders on landing was Wayne Jenkins, Assisntand News Director of TV Station WTHI. The next morning Wayne had his news team there and we were interviewed and out departure was recorded for the evening news.

On day 5, we settled to Earth at Harrisburg, Pa. On takeoff the next morning we were interviewed and photographed by three TV newsteams, and one of them rented a chase plane and got air to air shots as we left.

On day six we landed at Ellenville, N.Y. and stayed there for the next eleven days. The airfield we actually used for film work was the grass crop duster strip operated by Alden (Robbie) Robinson at Accord, N.y. Ken Cassens, crop duster, ex-airline pilot, STARDUSTER TOO builder and Owner, and old friend of mine worked for Robbie. It was a happy reunion. Both Ken and Robbie had bit parts in the movie, Ken as the mechanic who starts the Nieuport, and Robbie as the German pesant watching me start the Fokker. (I was cast as the German mechanic.)

The film story is about a WW11 pilot who becomes a film director and makes a movie spanning WW1, the 20's and 30's, and WW11. All the WW1 action was filmed at Accord N.Y. Scenes include trench strafing at 5' altitude, snagging a clothes line with the landing gear of the Fokker, flying thru a barn,(Nieuport), and flying under an arch formed by trees growing on the banks of a River. It is scheduled to be shown in the Aerospace museum theatre starting next July. If you get to Washington, don't miss it.

On Saturday, October 17, filming was finished, so Chuck and I flew our respective airplanes in to see Cole Palen. We got there just before his Saturday airshow and received a warm welcome from one of the great men in aviation today. Cole arranged for a free tour of his museum, although it was closed at the time, and we enjoyed his airshow. At the end of the show we left and did a mini dog fight act in which I again shot down the Fokker. We kept on going to Allentown Municipal airport where I landed and Chuck headed west. He wanted to go straight home and I wanted to enjoy myself. I was directed by ground control to the FBO there, and sat in my plane waiting to talk to someone about hangar space. No one came out although I could see people looking out a plate glass window. I taxied around to the side of the building where I could see an open hangar door. It was shut as I approached it. I taxied back to the front and asked a passerby to go inside and inquire about

hangar space for the night. He returned with the statement that they were not interested. I left and went to Queen City airport where I received a hangar and courteous treatment. So, any small plane drivers who are in the vicinity of Allentown would be well advised to steer clear of the municipal airport. The FBO there only wants the heavy twin class airplanes. I am sorry now that I didn't turn tail to the plate glass window and turn the smoke on before I left. It would have been a fair return for the treatment I received.

Bad weather grounded me at Allentown so I went to N.Y. City for two days. On Tuesday, day 27, I landed at Hyde Field, Md. very near the Smithsonian's storage and maintenance facility at Silver Hills. I had been invited to visit by Walter Boyne, Assistant Director for Resource management and Operations, of the Smithsonian. He had arranged for me to be given a one-on-one tour of every phase of the Silver Hills Facility. It was a highlight experience. My guide was Mike Lyons, a most highly experienced and knowledgeable gentleman. I then visited Walter at the Smithsonian, and received an autographed copy of his book, Messerschmitt ME 262. The book was very interesting reading on the remaining nights of my trip.

Friday, October 23, was perhaps my most interesting day. I flew in to Langley Air Force Base, Virginia at the invitation of Col. TOM BARBER, commanding officer of the 94th Tactical Fighter Squadron. His Squadron traces its heritage back to Rickenbacker and the original 94th. Since my Nieuport is a copy of Rickenbacker's they were most anxious for it to visit them, and threw quite a party when I arrived. The local press and TV news casters were there, and gave good coverage to the event. My Nieuport had its picture taken sitting nose to nose with some F-15's. And most members of the squadron had their pictures taken sitting in my little WW1 fighter. I was given a tour of the F-15. I sat in the cockpit and was briefed on it by Col. Tom himself. I was also given a wall plaque, a squadron scarf, a lapel pin of the hat-in-ring insignia, and some patches. All in all, it was a memorable occasion for this old country boy.

On Saturday, day 31, I flew under lowering skies to Shelby, N.C. and got there just before the rains started. I spent the next three days visiting friends in nearby Lawndale, where I grew up, and staying with boyhood pal Dr. and Mrs. Dwight Hord.

After the weather cleared I proceeded on to California via Atlanta, Dallas, El Paso, Phoenix, and my last stop, Blythe California.

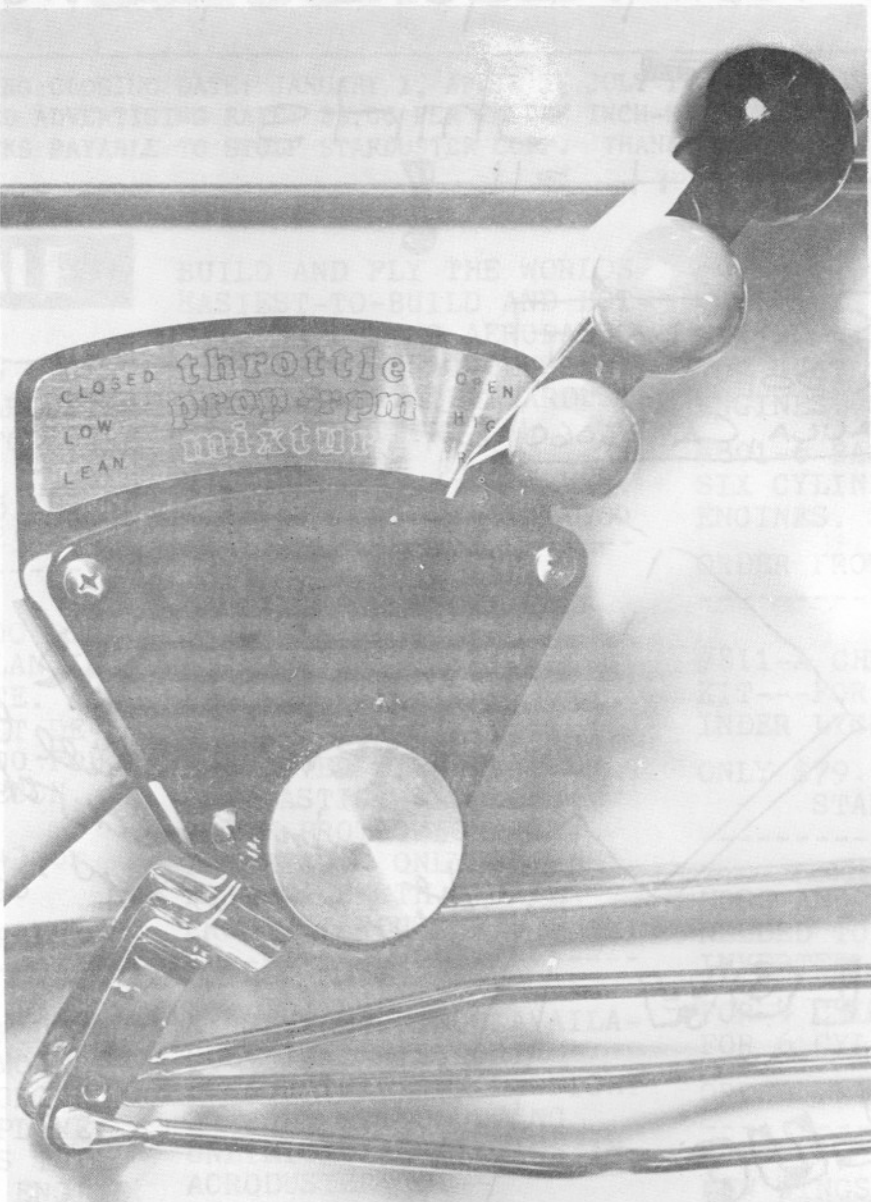
Over 100 hours was put on a 1917 airplane with a 1936 engine in it on this trip. I had been mentally prepared for trouble that would necessitate folding the wings and bringing it home on a trailer. But the old Warner never missed a lick, and aside, from the wheel bearing problem, the trip was trouble free. Aside from the one mentioned exception, everyone I met on the trip was most courteous and friendly and this enhanced the pleasure of the trip. It was a once in a lifetime time type of thing, but if I am lucky, maybe a few more such high lights will come my way.

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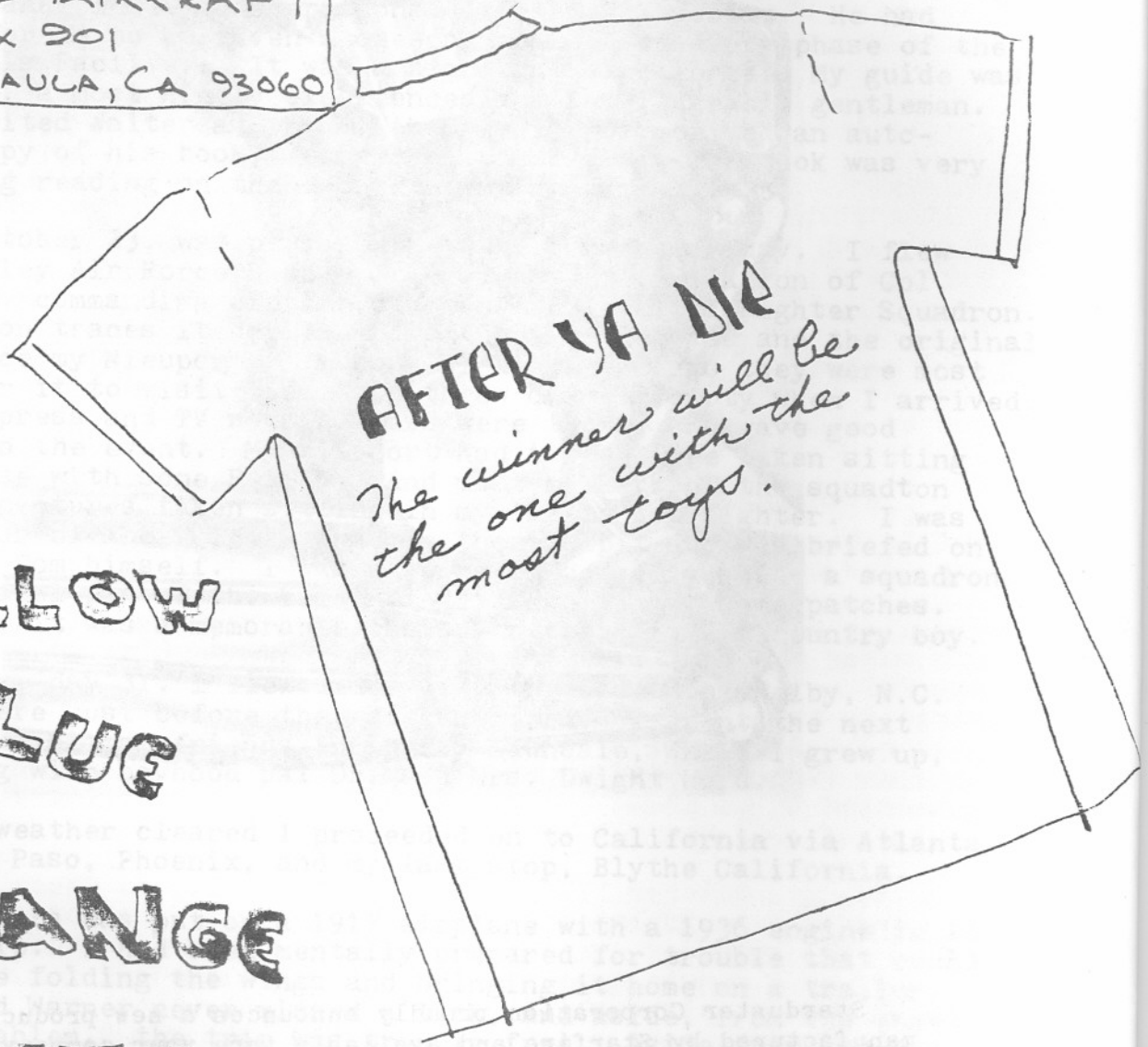
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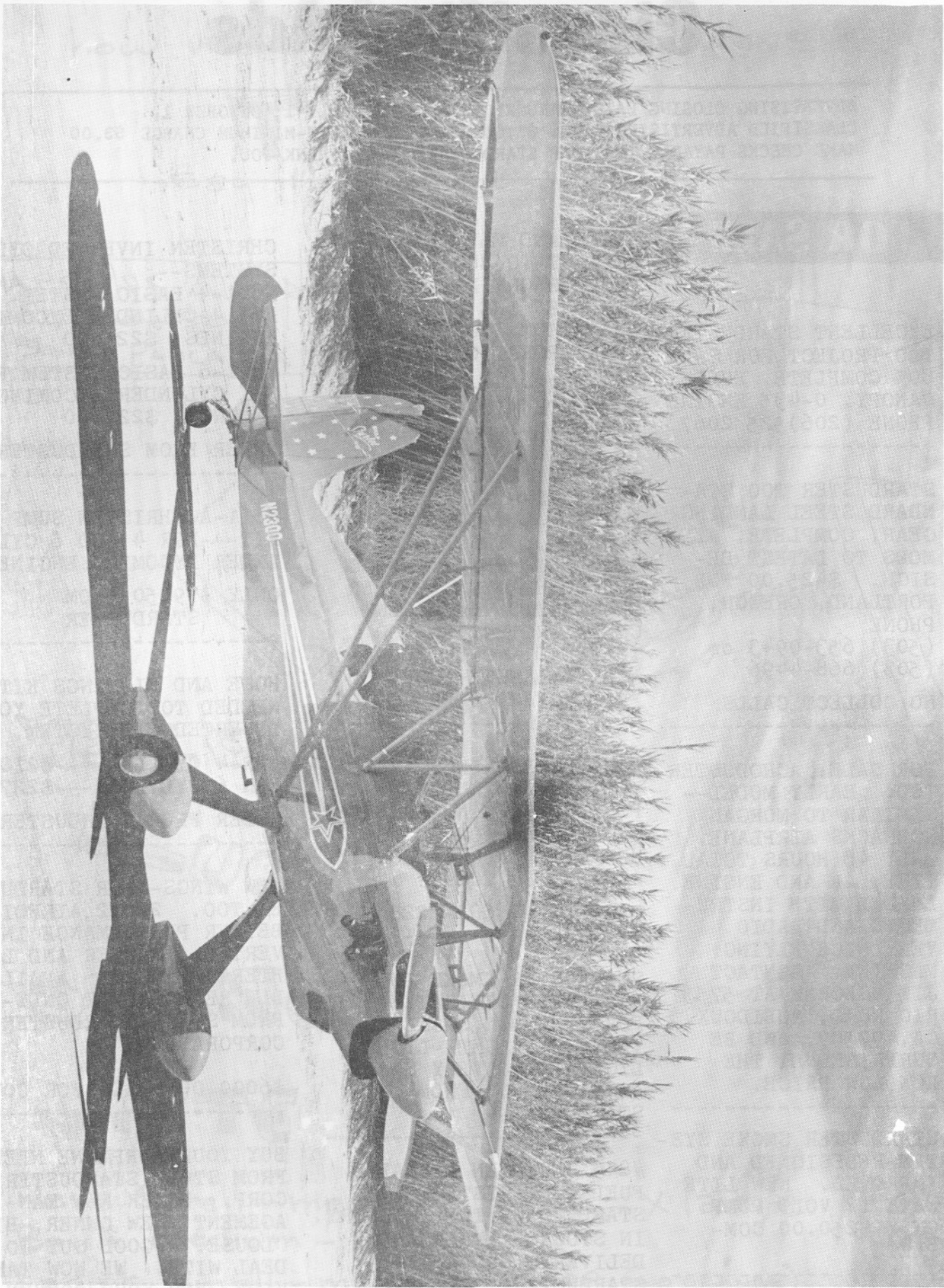
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