

THIS MAGAZINE LIES MATERIAL SUBMITTED BY IT'S READERS.
SOME ARTICLES OR STATEMENTS MAY NOT BE IN AGREEMENT
WITH STAFF'S OPINION OR THE EDITOR.

Starduster

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Dedicated to the
ACTIVE Homebuilders

APRIL **83**

THE EDITOR IS STILL LOOKING FOR TECHNICAL AND EDITORIAL CONTRIBUTIONS TO THIS
MAGAZINE WHICH IS DEDICATED TO THE HOME BUILDER AND SPORT AIRCRAFT AIRCRAFT
ENTHUSIAST.

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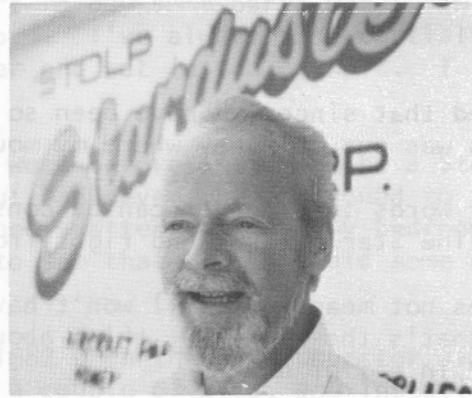
WE WOULD LIKE TO THANK ALL OF THIS ISSUES CONTRIBUTORS AND RESPOND TO ONE AND ALL FOR SOME INTERESTING INFORMATION AND PHOTOS.

FRONT COVER - RECOGNIZE THIS AIRPLANE? THE PROUD OWNER OF THIS BEAUTIFUL RADIAL ENGINE STARDUSTER TOO IS NONE OTHER THAN DICK "CRASH" MCPHERSON HIMSELF. N3263 HAS A COLOR SCHEME OF ORANGE/RED WITH BLUE ACCENT. MORE FROM DICK MCPHERSON ON PAGE 2.

BACK COVER - OUR BACK COVER THIS MONTH FEATURES TOM ROBBINS' EYE CATCHING ACRODUSTER TOO. THE UNUSUAL PAINT SCHEME HAS A TAN BASE ACCENTED WITH BROWN AND GOLD. VERY NICE. MORE FROM TOM ROBBINS ON PAGE 3.

SUBSCRIBE TO THE "STARDUSTER" MAGAZINE. PUBLISHED FOR PEOPLE BUILDING OUR AIRPLANES. TECHNICAL INFORMATION, NEWS, AND PICTURES. PUBLISHED FOUR TIMES A YEAR. SUBSCRIPTION RATE IS \$8.00 PER YEAR. \$14.00 PER YEAR FOR OVERSEAS MAILING (EXCLUDING CANADA)

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We can tell Spring is here, and OSHKOSH is rushing upon us, with orders for finalizing Stardusters and Acrodusters.

We have two very important TECH articles for owners of Acrodusters and Stardusters equipped with the aluminum gear. There have been three cases of damage to the lower longerons and one case of severe damage to the total gear structure on an Acroduster. After investigation and analysis by two engineers, it was determined that the present design by theory was adequate, however, after three cases it was concluded that the damage was occurring because of braking and steering action. We have designed a solution to this problem and we strongly recommend all owners with the aluminum gear to inspect frequently and modify their aircraft as soon as possible.

The other item is the cabane roll braces on the Acrodusters, which are still giving some owners a problem. I beleive a flying wire will solve this problem by enabling sufficient tension to be applied to the structure.

Now the good news. We have been receiving many calls about the new Super Starduster and I am happy to announce that N191DG is only waiting for FAA sign off before it's maiden flight. Needless to say, the editor is like an anxious father awaiting his first born.

See you all at OSHKOSH '83,

Bill Clouse
President

P.S. Next issue, a report of the Starduster Too that flew at Sun and Fun. Owned by Joe Hamilton and piloted by John Helton. Odd initials the same.

B.C.

Dear Bill,

I decided that since you have been so kind to me in the "Starduster" the least I could do was put my money where my mouth was!

In other words this letter can be considered the first lesson in building a Radial Engine Starduster. And right from the secret files of the ole' Chicken!

This does not mean you (all) won't have to do a little thinking on your own, but then that's the wonderful thing about sport aviation. It brings out the "designer" in all of us!

The best part is, tho, you won't have to start from scratch. We have a perfect airplane to start with. Really! You younger builders don't know how lucky you are to have a ship like the Starduster Too with which you can make changes, improvements and have the experience of hundreds of co-builders, all with the same idea in mind. And a sensibly sized airplane to work with. Also an unlimited parts supply house through brother Bill and staff. Plus this swell magazine to keep you all updated on the latest ideas, etc. You couldn't beat that combination with a stick!

Cripes! When Bill and the Chicken started flying, the bi-planes were mostly "Clunks." The only way we could get any performance out of them was to double the power. Then they vibrated so darn bad the tail looked a foot thick in a dive. And they were slow on controls. Mostly ailerons. And the airplanes were too big to get into a reasonably sized hangar. (Think of that penny pinchers!)

When I look back on some of the junk we used to fly I realize how much the state of the art has gone (or come) on bi-planes. I can talk about these old ships because about all of them are out of production now, so lets take a few minutes and re-cap a few lest we forget what we want in our ship.

Stearman you say. Nuts! I wouldn't trade my Starduster for five of 'em! Any one who would give thirty grand for one must have holes in his head! (I'll hear about this, Bill.) Remember, though, the "Ole Crash Chicken" built the first one in the country with a 450 Wasp engine back in '46. She would climb 2700 ft the first minute. Skywrite at 20,000 ft. Immelman turn from take off. But it was heavy as lead on controls. 2 1/2 snaps was it. 240 mph dive followed by a 7 1/2 "G" pull-up to vertical and she's all done after one sloppy roll. How far do you think you'll get in modern competition with that sort of stuff? You might scare 'em to death with the tremendous prop noise at 3300 rpm's but that's all. (9 foot prop!) My Jacobs powered Starduster will out perform it on half the horsepower. Of course I do not strain my airplane like that, but the point is, she is lighter and quicker on all controls, better looking. Love it! And is not 40 years old like WW-11 crates. Also I get both the L-5 and the bi-plane in the same 30' x 40' hangar. Try that with your big antique bi-plane. I am not against antiques, I am merely trying to compare "fly-able" qualities of the old ships with the new breed, (from Stolp!) Also, men, lets do the "stiff" aerobatics with the right airplane. Bill has a new one that is just the ticket to competition championships. Let's save the "Too" for "sport" flying and not get out there with our "new" radial engine Stardusters and try flexing your muscles. Ok? To continue, heres a nutshell synopsis of how the popular older bi-planes stack up. I do not include any I have not owned and or flown.

Flying N11TR

November of 1976 I drove into Flabob Airport to buy some parts and I saw an Acroduster II sitting in front of Starduster Corp. . I've always been partial to bi-planes and I walked over to it, looked it over and sat in the cockpit. I left that evening with a set of plans and a wing kit.

Impetuous? You might call me that, just a week before I had bought a Stephens Akro. I owned plans for several aircraft, but had never gotten around to buying any materials before. Comments about airplanes scattered around my bedroom or apartment only re-inforced my determination to see that N111TR would some day some way be completed.

That great day finally arrived October 22, 1982 when the FAA inspector signed N11TR off cleared to fly. After working off a couple of gigs, and installing the fairings it was ready for the first test flight on a clear Saturday afternoon at Flabob Airport. Friends, acquaintances, passersby, and various strap hangars gathered to watch Bill Clouse take her up for the first test flight. Bill got through the test flight with only a few comments, criticisms, and personal harrassments from us on the ground. The flight was well documented with cameras and video tapes then into the air again for some aerial photos.

After some minor adjustments to the rigging I got a chance to fly my machine at long last. Although I've owned and flown other aircraft such as PT 22, Cessna 120, Stephens Akro, Great Lakes and Decathalon I didn't get to fly them much. Also my recent experience (in airplanes) was about two hours in a Skyhawk in the last two years.

I was cured of being overconfident long ago and realized I needed a check-out. Bill was ready willing and able, so with Bill in the front seat, I taxied out and did the run-up on my 200 hp Lycoming with a constant speed Hartzell prop. Bill made the frist take-off as I followed through on the controls. Up to altitude to get the feel of the machine. I don't know how fast she climbed, I don't have a VSI and didn't time it, but it didn't take long to get to 3500 feet. I took the controls and did some turns left and right, steeper and with increasing roll rate. A couple of stalls and an acelerated stall. The control touch is light with a very positive response. I've been flying helicopters so I am used to that kind of feel, but anyone that's been flying heavier airplanes may consider it very sensitive. Bill did a roll then I did a roll and let the nose get low. I over controlled trying to get the nose back up and popped about 2 negative "G's". Large control surfaces don't take much. Enough for now, back to the traffic pattern for some take-offs and landings. Again Bill did the first one with me watching and trying to learn. My turn now, taxi onto the runway, line her up, open the throttle full and full forward on the stick. The tail comes right up and now you can see. We lifted off at about 100 mph and climbed out at 120 mph. The traffic pattern and final I flew at 120 mph, over the fence at 100 mph then hold her off until touchdown. I don't know what speed we touched down at, I was to busy to look. I was nervous and tense, overcontrolling and behind the aircraft. Typical student.

I was happy I was not solo on that first flight for sure, however three or four landings on each of the three or flights with Bill Clouse and Hank Schmel I began to relax and things began to smooth out. One Sunday morning I was sent out on my own, the only problem I had was the density of the traffic flying at 40 or 50 mph while I was trying to hold 120 mph. I got dizzy doing 360 degree turns for spacing. I got some good training though and come monday morning traffic was no problem. I did take-off and landings until I was to tired to do anymore. I then left the traffic pattern to go up stairs and play a while. By now there's about five hours on the machine and I,m beginning to feel comfortable in it. (Not that

Dear Bill,

Double Sliding Canopy Drawings

Heres the drawings you asked for. I certainly hope they make sense. I have also included a few snapshots of the canopy and they may help clarify a few points.

First I would like to make it clear that I don't have a rear instrument panel. I grouped the instruments in the corners and so far am more than satisfied with being able to see them. My reasons behind this are no. 1, easier entry and exit from both cockpits and no. 2, less weight and expense. A rear panel could be installed and the crossover curved to go over it, but cockpit sides would still have to open to the longerons.

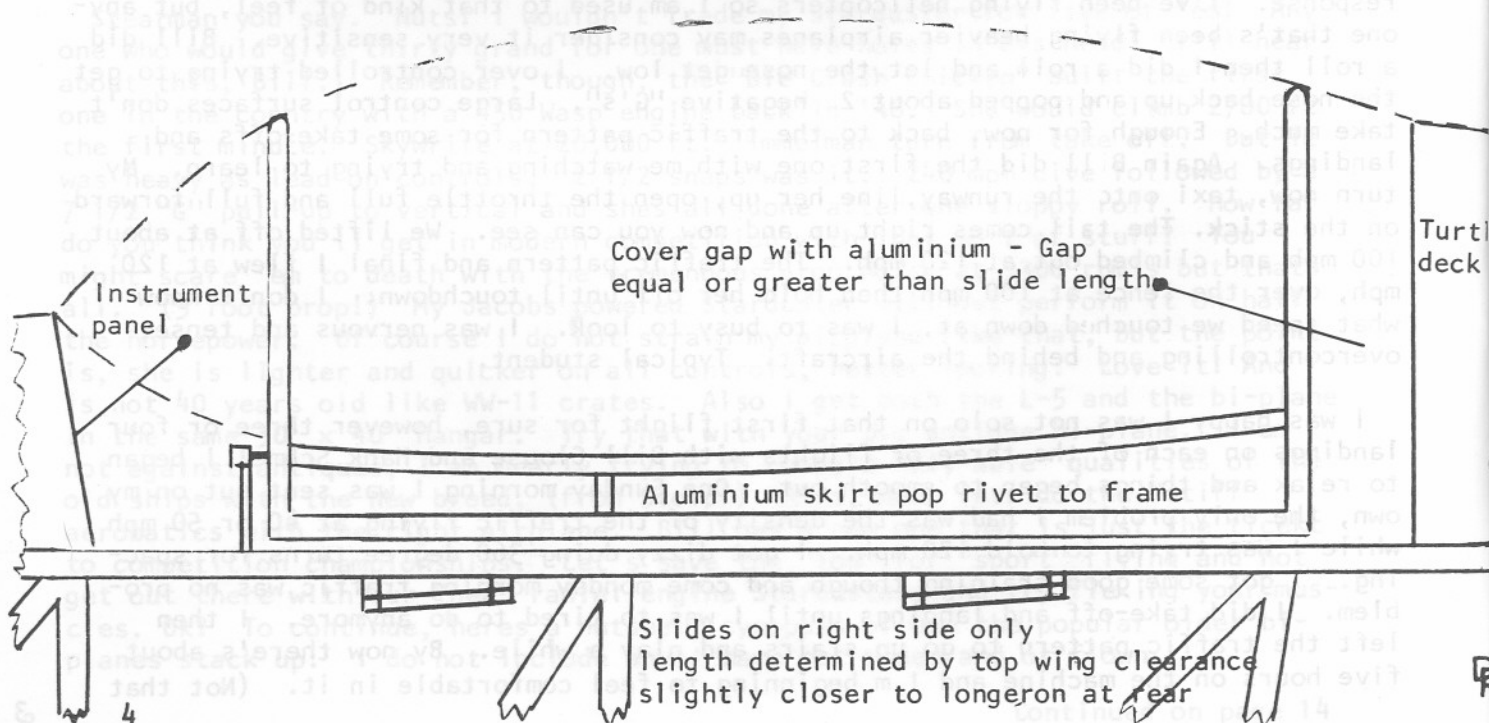
The slides are tubing slid through bushings welded to standoffs. I then used 1/2" nylon tubing over that for wear and anti friction. A 1/2" long 5/8" o.d. .035 welded to the end of the hinge slid back and forth on the nylon. It is not a tight fit but due to the slight slope in the slides it locks on in the open position. A small nylon wheel riding on top of the left longeron keeps the frame moving smoothly back and forth.

The canopy is not overly wind sensitive in the open position. In fact it seems to be quite stable. I have taxied with it open although I keep my hand on it. Much to my embarassment I have also flown the airplane with the canopy off I forgot to latch it before take off and just after lift off it slid back, opened and blew off in a very short period of time. It jsut missed my shoulder as it went off, and completely missed the front seat occupant. I feel from this that an intentional emergency jettison of the canopy would be easily and safely accomplished.

Continued on page 16.

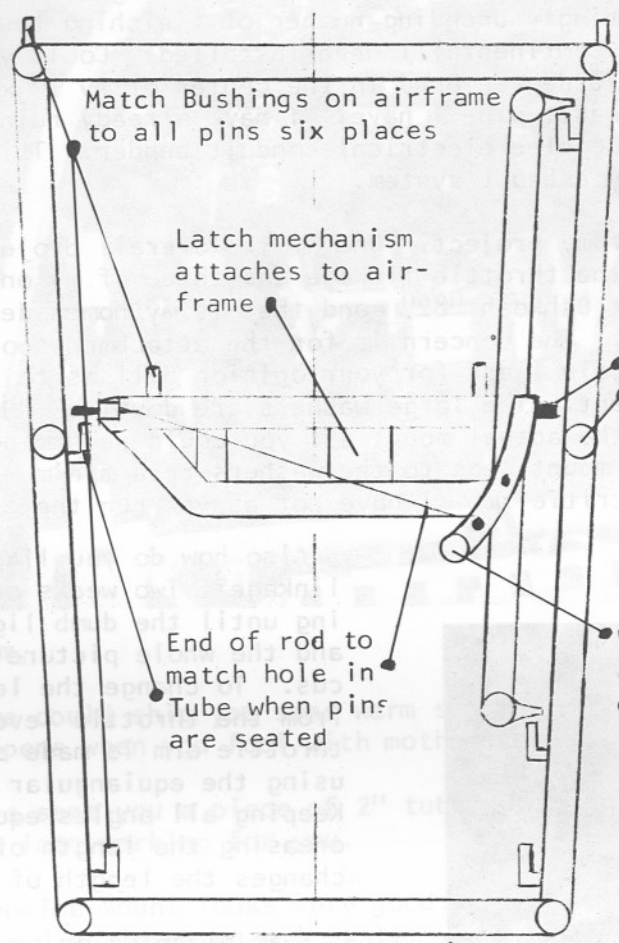
CANOPY FRAME side view

Not necessarily actual hinge geometrie - depends on location of slide to longeron and position of canopy frame



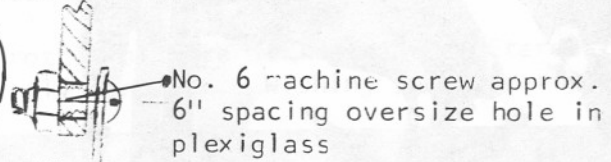
Continued on page 16

Top view CANOPY FRAME and HINGE MECHANISM



When handle is pushed outward canopy is free to move aft off of hinge mechanism and airframe.

HINGE DETAIL



Flatten ends of tubing and drill to match pins in frame

Hinge rests against longeron in open position

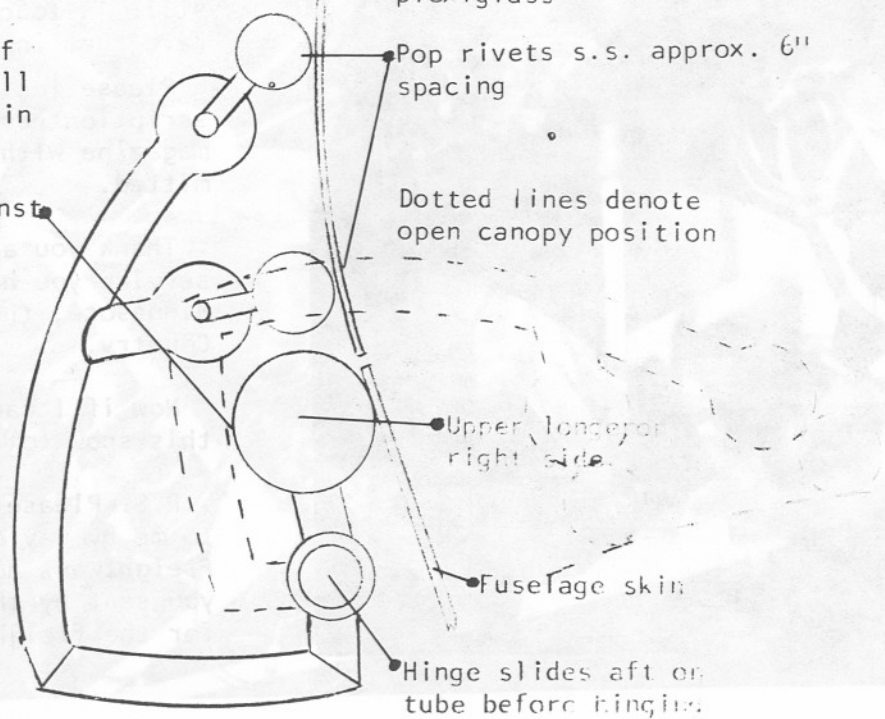
Pop rivets s.s. approx. 6" spacing

Dotted lines denote open canopy position

Upper longeron right side

Fuselage skin

Hinge slides aft on tube before hinging



I am taking advantage of this day off we have here due to the blizzard with 15 plus inches of snow we are now experiencing in St. Paul, to send you this letter. Everything and everyone here is snowed in.

The order I am including with this letter is for the finishing touches on my Starduster Too . Among the seemingly unending number of finishing touches is my exhaust tail pipe on the O-470 A continental I have installed. Could you tell me if you can, or who could bend a 70 degree bend in the center of my 2" x .035 x 36" long 321 welded stainless exhaust pipe I have? I have already ruined a 36" piece trying to bend it with a Greenlee electrical conduit bender. This is the final piece I need to complete my exhaust system.

Also included are six photos of my project. One of the overall project and one of my rear panel layout, one of the throttle linkage and three of my only concern, of which I talked to you about at Oshkosh '82" and that is my homemade engine mount for the O-470 A continental. The concern is for the attachment points at the firewall ala' Piper aircraft. Again I ask for your opinion Bill as to the strength of this type of attachment. The large washers are doubled .090 4130 steel. You said without seeing the actual mount all you could recommend was that 30% of the actual welding of the mount legs to the washers be a minimum. I would appreciate your comments and or criticism. I have not as yet run the engine on this mount.

Also how do you like my throttle linkage? Two weeks of brain wracking until the dumb light came on and the whole picture came into focus. To change the length of throw from the throttle lever to the carb throttle arm is made simple by using the equiangular triangle. Keeping all angles equal and increasing the length of one arm changes the length of throw. SIMPLE!!

I am planning on sending a larger set of pictures to my new found freind Hank Henderson. I met Hank at OSHKOSH '82. So if you would like to see more photos, and are still in touch with Hank, he should have them in a couple of weeks.

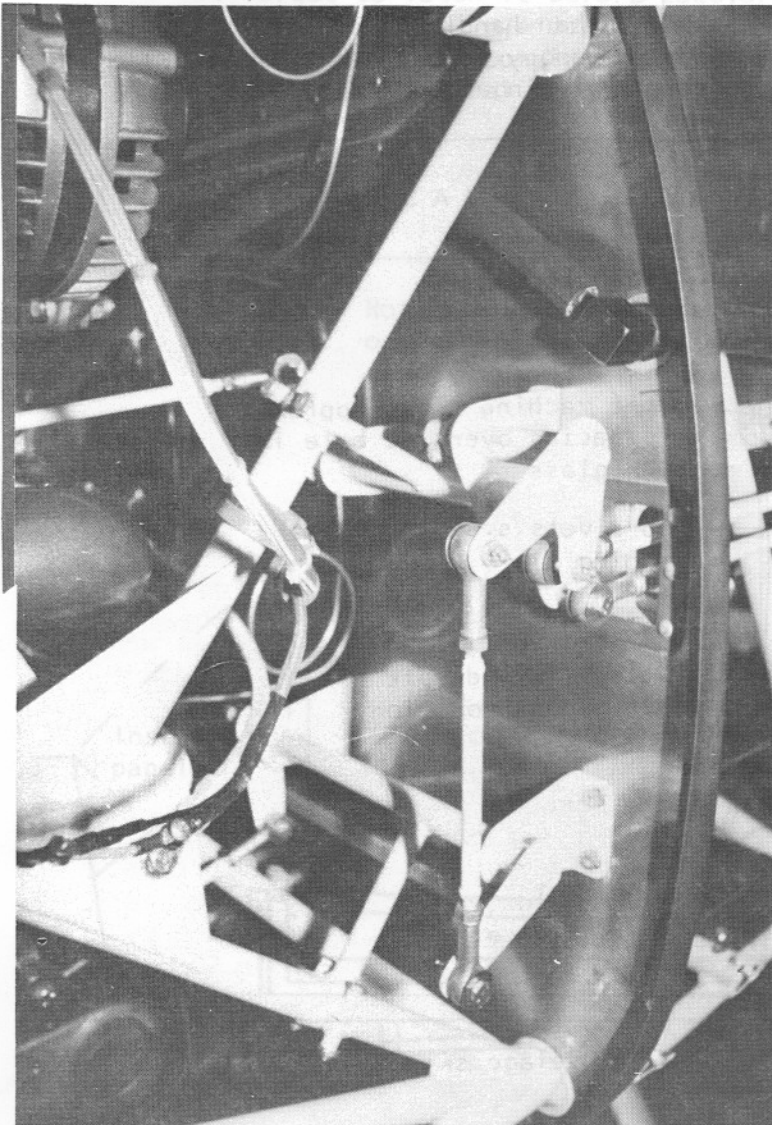
Please include the cost of my subscription renewal to "Starduster" magazine with the order I have submitted.

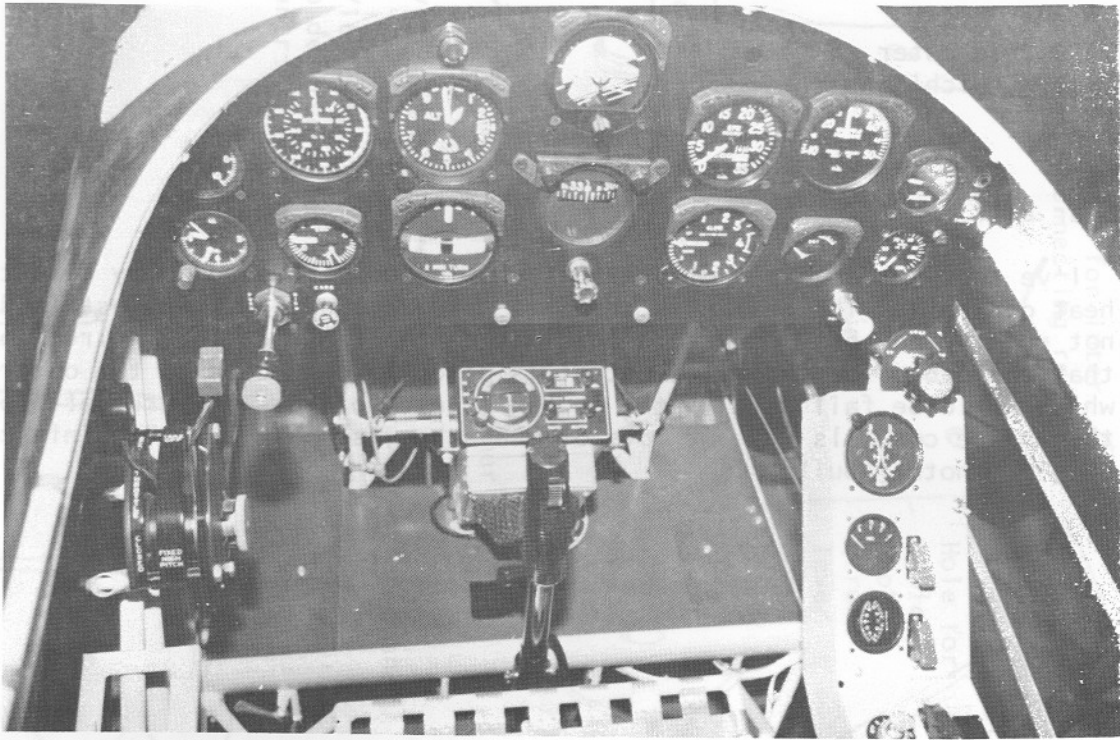
Thank you all for the excellent service you have given us here in Minnesota, the icebox of the North Country.

Now if I can just make it through this snow to the mail box

P.S. Please do not send anything to me by way of Consolidated Freightways again. The last order you sent by them cost twice as much for the freight as the item cost.

Thank you all,
Thomas F. Tschida





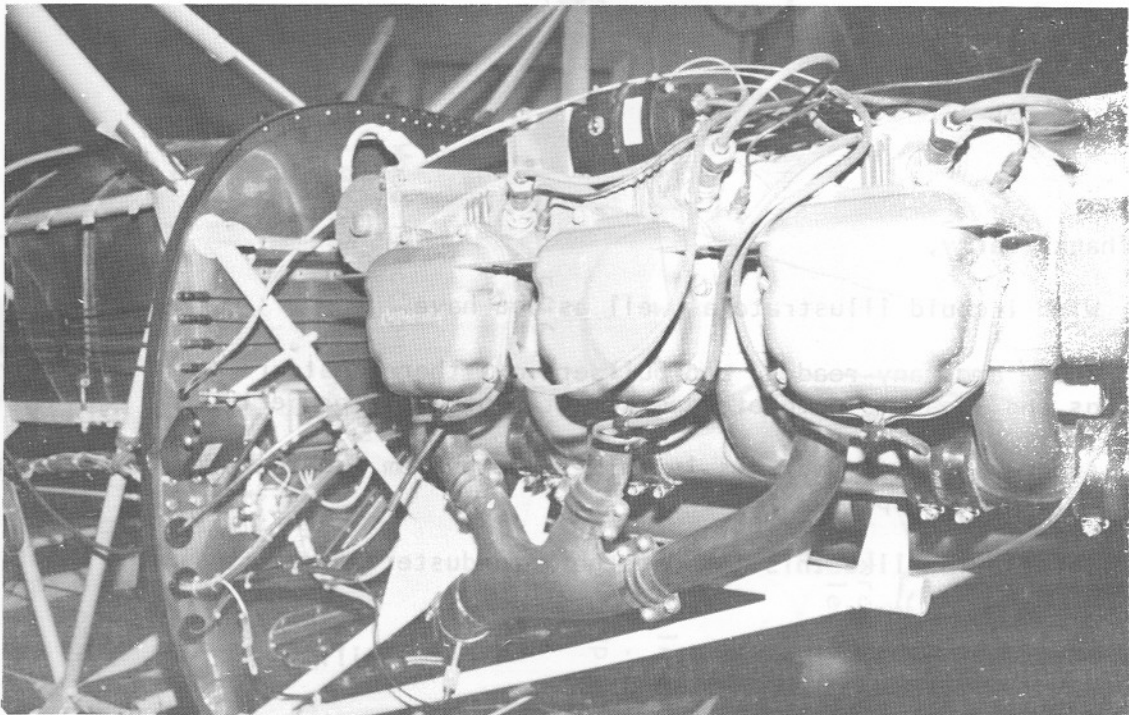
Hello Tom,

Wish we could ship you some warm sunshine along with your orders. But you know what happens when you fool with mother nature.

We have sent you a piece of 2" tubing for your exhaust that hopefully you can engineer into working for you.

Your engine mount looks very good. Don't see where we could improve it. Have you devised an inverted oil system yet?

Your bell crank system for throttle mixture will make the "Starduster" to help others solve the problem. Expertly done Tom. Wishing you an early thaw.



7530 Chichester
Canton, Michigan
48187

Dear Bill,

I've sent you a couple of sketches showing how I hooked up my throttle and carb heat controls. The design is cheap to make, looks good when installed and does not require any bell cranks to obtain the proper cable travel direction. Note that the cable for throttle control is directly connected to the outer lever which would be fail safe if the mechanism ever broke. The area of hooking up the engine controls gave me lots of headaches, so possibly this info could be of help to another builder.

Your Freind,
Larry MCDonald

Throttle cable driven
directly from outer
lever to be fail safe

Inter connect rods 5/16 x .035 4130
with weld in type fork ends. (Bend
to fit around structure if req'd)

Cable to carb heat or prop
Driven from slave lever.

Front Levers

Rear Levers

Thanks Larry,

Wish I could illustrate as well as you have.

There are many readers and builders out there that are going to use your drawings and ideas to complete another step of their project.

Another area of controls in this issue by Tom Tschida of Minnesota, makes for complete hook ups.

Information like this is what the "Starduster" magazine is all about.

Thanks again,
Bill

Slave lever
Follows rotation
of inner lever.

Outer Lever

Hole for inter
connecting rod.

Hole for
cable
hook-up
(front
lever only)

5/16 Washer

Springwave washer

Wood friction washer.

Weld this side.

3/32 Spring Pin

5/16 Locknut - Tighten
to desired friction to
control lever movement.

Pivot only - 1/2" dia. x
airframe tube - make from
1.50 dia. x .100 dia.
welded to 5/16" ID bushing
stock.

Screw on knob

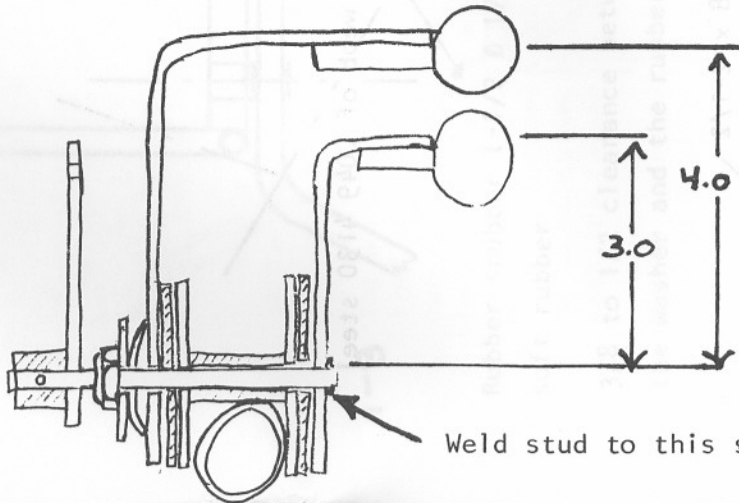
Weld threaded stud
to handle.

3/32 Hole

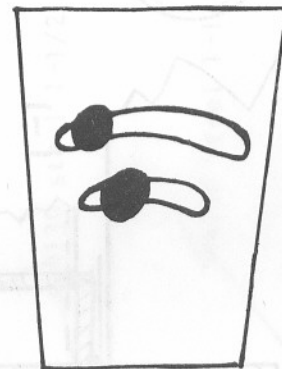
5/16 Stud

Inner lever
.070 - .090
4130 Typical

Wood friction washer
1 1/2" dia. (I used
1/16" Birch plywood)



Weld stud to this side of lever.



Thin aluminum
cover panel.

Engineering change

Drawing

Change tubing to 1 x .049

1-8

Add webb of .049 4130 steel

4130 steel 9/16 x .058 x 2-1/2

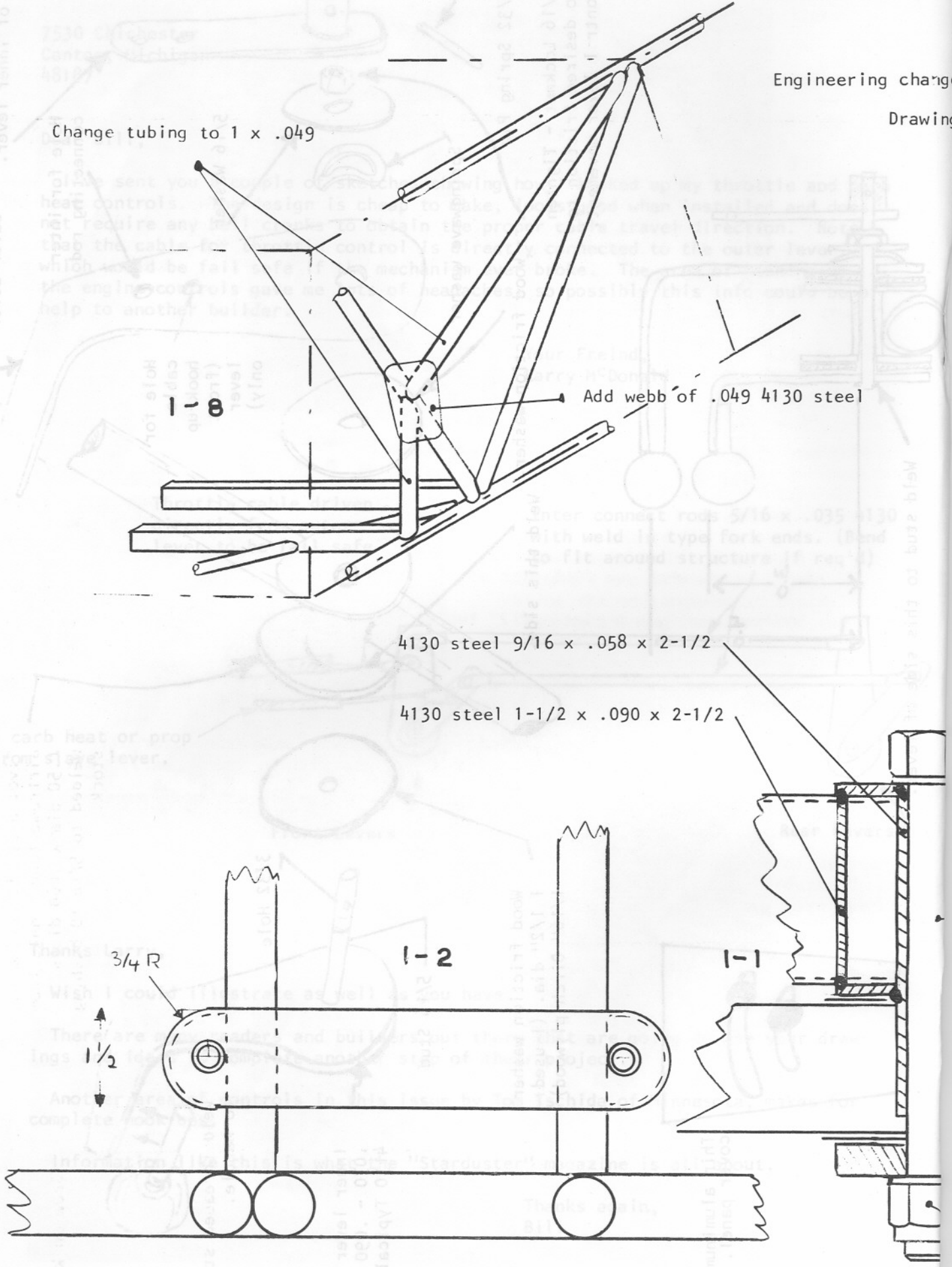
4130 steel 1-1/2 x .090 x 2-1/2

1-2

1-1

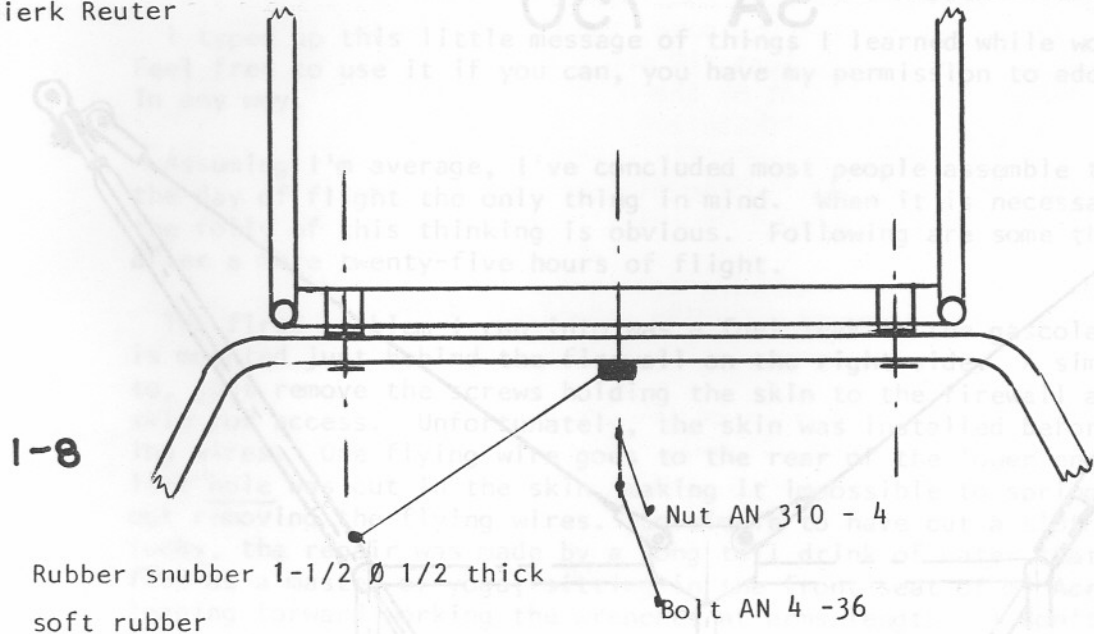
3/4 R

1/2

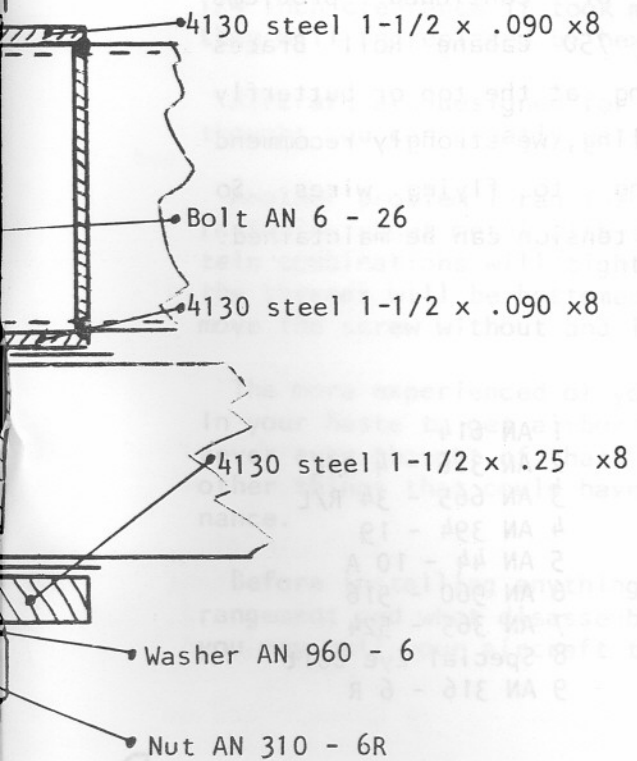


by Bill Clouse and Dierk Reuter

by Dierk Reuter



3/8 to 1/2 clearance between the washer and the rubber



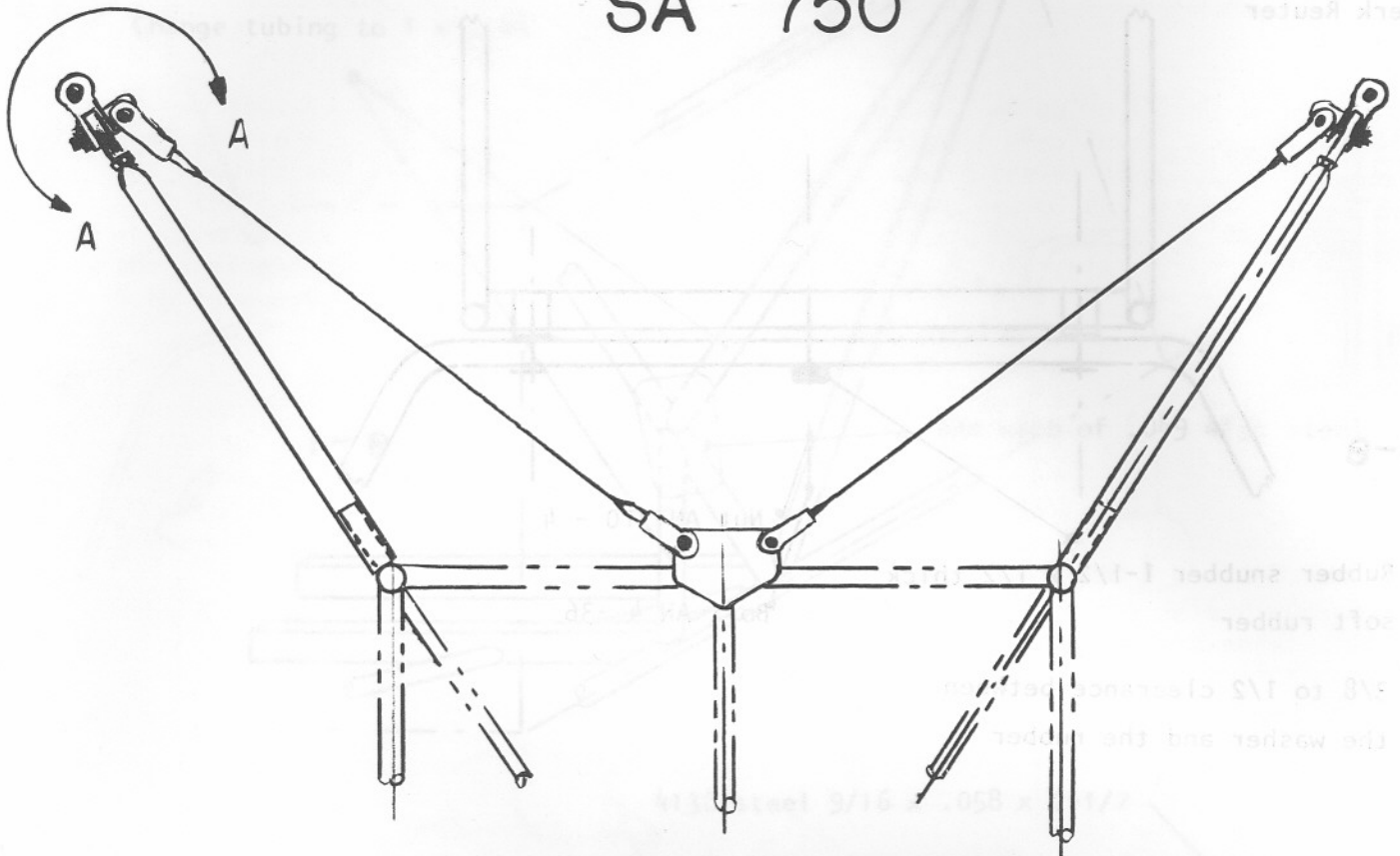
Acroduster II aluminium spring gear

There is a problem with bending of the main tubing supporting the gear attach. These deformations are probably not caused by high landing touch down shocks, but more by shocks caused by run- and taxiways. They are continuously working like a hammer on the tubing.

To improve the performance of the gear, it is necessary to soften the spring.

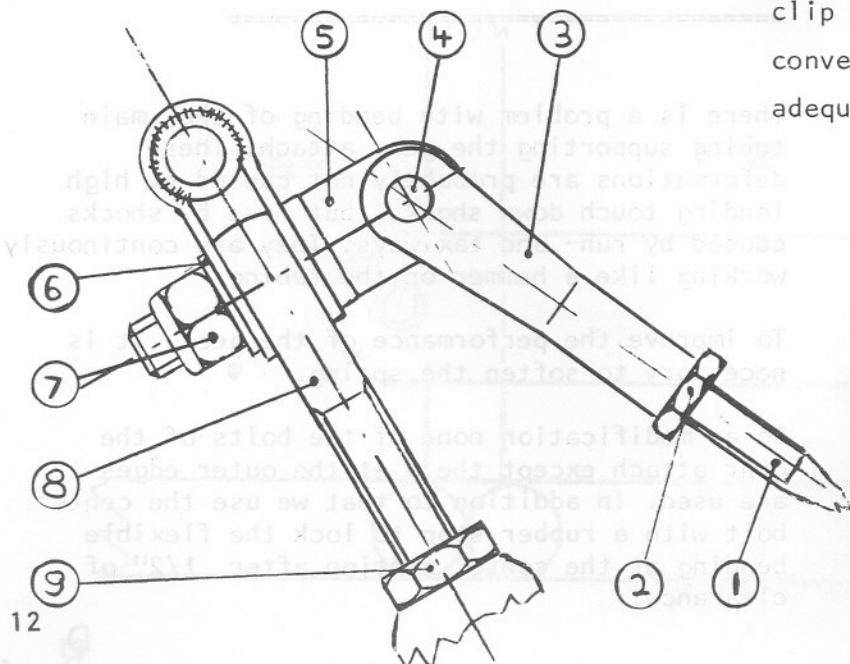
So as modification none of the bolts of the gear attach except the 4 at the outer edges are used. In addition to that we use the center bolt with a rubber stop to lock the flexible bending at the center section after 1/2" of clearance.

CABANE STRUT SA 750



SECTION A-A

Because of continued problems with SA 750 Cabane Roll Braces fracturing at the top or butterfly clip failing, we strongly recommend converting to flying wires. So adequate tension can be maintained.



- 1 AN 614
- 2 AN 316 - 4 R/L
- 3 AN 665 - 34 R/L
- 4 AN 394 - 19
- 5 AN 44 - 10 A
- 6 AN 960 - 516
- 7 AN 365 - 524
- 8 Special Eye Bolt
- 9 AN 316 - 6 R

Thinking Ahead

Bill,

I typed up this little message of things I learned while working on my plane. Feel free to use it if you can, you have my permission to add, delete, or edit in any way.

Assuming I'm average, I've concluded most people assemble their aircraft with the day of flight the only thing in mind. When it is necessary to make repairs the folly of this thinking is obvious. Following are some things I learned after a mere twenty-five hours of flight.

The first problem I ran into was a fuel leak in the gascolator. My gascolator is mounted just behind the firewall on the right side. A simple matter to get to, just remove the screws holding the skin to the firewall and spring out the skin for access. Unfortunately, the skin was installed before the wings or flying wires. One flying wire goes to the rear of the lower engine mount. A relief hole was cut in the skin, making it impossible to spring out the skin without removing the flying wires. So simple to have cut a slot instead. I was lucky, the repair was made by a long tall drink of water that certainly qualifies as a master of yoga, sitting in the front seat of my Acroduster Too, and leaning forward working the wrenches at arms length. I don't think he'll want to do it again, and those capable of such a feat are few, so you may want to keep the lesson in mind.

Many things are installed when they're easily accessible. If you have the access to a skinny midget to hold a back up wrench you can save a couple of dollars. If you don't, think ahead to the finished product and if you'll ever need to remove a part, you may want to use nut plates.

A major problem popped up and it became necessary to unskin the fuselage forward of the front cockpit. All went relatively well until I got to the fourteen (seven on each side) screws between the fuselage and the wing root. With 1/4 to 1/4 inch clearance it took me a good three hours to remove them. Rest assured they will be replaced by hex head screws.

Aircraft are designed for performance, not maintenance, but with a little forethought you can greatly ease the process when repairs come necessary.

Another problem I ran into was a breach of basic mechanical practice. When fastening sheet metal with screws, make sure the grip length is correct. Certain combinations will tighten enough to hold the skins together firm enough, but the threads will be bottomed out of the screw shank, making it impossible to remove the screw without an impact screw driver or a drill bit.

The more experienced of you will think "Well of course, everyone knows that." In your haste to get airborne it's easy to overlook things. "Well I'll be, I never even thought of that." I'm sure as I use my plane more I will discover other things that could have been done better and toward more convenient maintenance.

Before installing anything, think about the finished product, imagine the arrangement and what disassembly will entail. You can save yourself and whomever you may sell your aircraft to many headaches.

Tom Robbins

1928 Alliance Argo - 110 hp Hess Warrior, 7 cyl radial. First commercial ship to outside loop. Two place, narrow fuselage, knuckle busting clunker with negative stability in a dive, (i.e.) the faster you dove, the more it tucked under. It got tail heavy at slow speeds, weak tail, lost 110 mph cruise when we installed a 220 continental to carry "Bat Man" Red Grant on the wing for a 1952 movie "A Star is Born." Argo flying qualities, 5 on a 10 scale.

Avro Avion - 85 hp Wright Gypsy powered two place. 85 mph, easy, safe, "Butter Fly." 5 on a 10 scale.

Bird "Saftey Plane" - 226 sq. ft. of wing area and a USA B-40 thick airfoil gave srall proof. 100 ft. take off and landing capabilities to this 85 mph ship. 7 on a 10 scale.

Fleet 2 and 16B - 1929 and '41 versions of the 90mph narrow chord trainer, 100 hp to 125 hp Kinner engines. Mild aerobatics with flat spin on early versions. Brick like glide. Sloppy ailerons on lower wing, push pull set up. Solo front seat. 6 on a 10 scale.

Curtis Wright Speed Wing - 250 Wright, thin winged 120 mph cruise, three place aerobatic, full cowled, sharp looking, 8 "g's", rare, good, 8 on scale, called "Os Prey."

Command Aire - Large three place, OX-5 and Curtis Challenger, 165 hp passenger hopping bi-plane. Slow, crop duster type load lifter. 5 on scale.

Boeing P-12 - 650 hp P&W powered, Army 1932 fighter with metal controls, used for noise and smoke act on National Air Shows. Heavy on controls, 300 plus mph didn't hurt it, but no snaps. Weak tail. 7 on scale.

Curtis SOC-3 - WW-11 Scout, 450 P&W. Two place hatch, slots for slow speed and catapult take off. 155 Km. Reliable, rare. 8 on scale.

Columbia Duck - Loening's WW-11 version of 1924 Amphib with 900 hp cyclone. 160 mph cruise. Smooth, heavy feel. Bitch on landings. Big airplane, has hauled up to ten guys. 7 on scale.

Driggs Skylark - Two place pre-war. Narrow fuselage, 75 hp, Rover 4 cyl inverted in line. Metal ribs like Great Lakes and Fleet. Slow, underpowered, doggy controls, ailerons on lower wing push pull set up. 5 on scale.

Laird Swallow - OX-5 powered three place, full sized early 30's passenger hopper. 4 on scale.

Knight Twister - A big model airplane that should have been radio controled! some had 90 hp Lamberts (radials) and very small plywood covered tapered wings. Very bad history. Stay away! not on scale. Newer versions may be improved over pre-war's. Haven't flown but one and that was enough!

Moth - 1928 versions were like Avros. 85 mph, safe, loops only, 85 hp Wright Gypsy. Like Bird, no brakes, rudder bar not pedals, tail skid, L.E. slots, tight string for trailing edge. Folding wings. 22" x 10" "do-nut" tires. 5 on scale.

Myers OTW and K - C.P.T. program metal fuselage trainer with 125 - 175 hp. Warner or Kinner with Jewish inverted system. (check valve behind carb.) Good on loops, dog on rolls, no snaps. Safe, easy, reliable "Butterfly" 7 on scale.

New Standard - 5 place open bi-plane. Curved dihedral in upper wing. Very large, slow, safe. Wright J6-7 or 9, I forget, rare today. 6 on scale.

N3N - WW-II Navy built, 235 hp, front exhaust, Wright, all aluminum structure fabric covered wings and one side of fuselage. Built like a brick. Smooth, heavy feel - all manueveres if your strong enough. Navy answer to Stearman. 8 on scale.

Pitts 450 P&W - One of a kind built in '49 for Jess Bristow. Compact, safe, strong. 300 mph dives, several bad landing gears, but F-2 Waco gear worked ok. Stainless wires, blind landings, full cowling. Wheel pants off my 1929 A-W Cessna, "I" Struts, 165 cruise, 4500 FPM climb. Constant speed prop, Washed out on landing, hit another airplane on runway, after many National Air Show acts. Great ship. 10 on scale.

Rose parakeet - 40 hp to 85 hp. Pre war design. Small aerobatic single palce. Great ship for it's time. 8 on scale.

Spartan - Large Wright powered pre war 3 place, later 2 place trainer. No stagger to wings, heavy feel, smooth. 7 on scale.

Travelair - OX-5. Warner 110, Wright, 220 continental (duster versions), mild aerobatics 8 g's. 1928-29 style 3 place, well liked, several versions wings and ailerons. Thin cambered airfoil, good general history. 7 on scale.

Continued on page 17

Flying N11TR

Cont. from pg. 3

I have it master, just comfortable.)

I could do a roll from straight and level cruise flight at an indicated 140 mph. I would dive to 180 mph to do a loop. I'm not experienced enough to know if that is the optimum speed or not, but it works. My Acroduster Too is a great pleasure to fly, positive response to the controls and recovery from blown manuevers is as per textbook. I've found no odd quirks in its flight characteristics. I attempted a hammerhead and got a little on my back and a little late on the rudder and I'm wallowing around on my back. Just get the nose down and some aileron and the next thing your right side up.

I think I made a good choice in that spur of the moment decision to build an Acroduster II. For a beginner at aerobatics it's a machine you can practice and grow with and not out grow it for a long time if ever. Being a two place you can share the joy of flying with someone else.

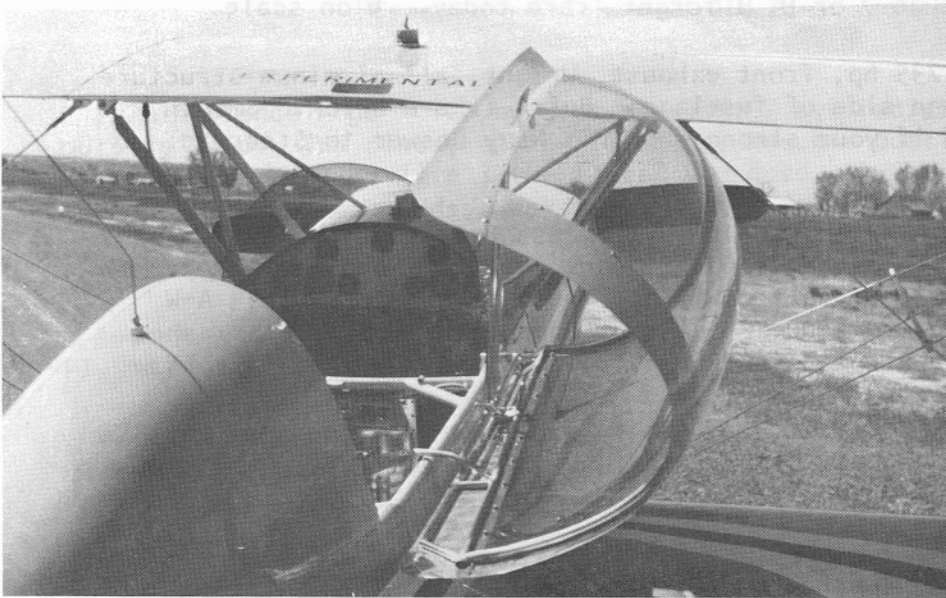
I'm looking forward to making the summer fly-ins this year. I am more than just satisfied with my aircraft. Yes, that first flight is quite an experience but the others will be even more enjoyable as I learn more about the aircraft.

Well Tom,

Tom Robbins
Anchorage, Alaska

Thanks for the good story. It would take a special kind of poet or author to express in words the emotions we enjoy when we fly our creations for the first time. Tom's Acroduster II is a very nice machine with a unique paint design by Ron Lewis of Flabob.

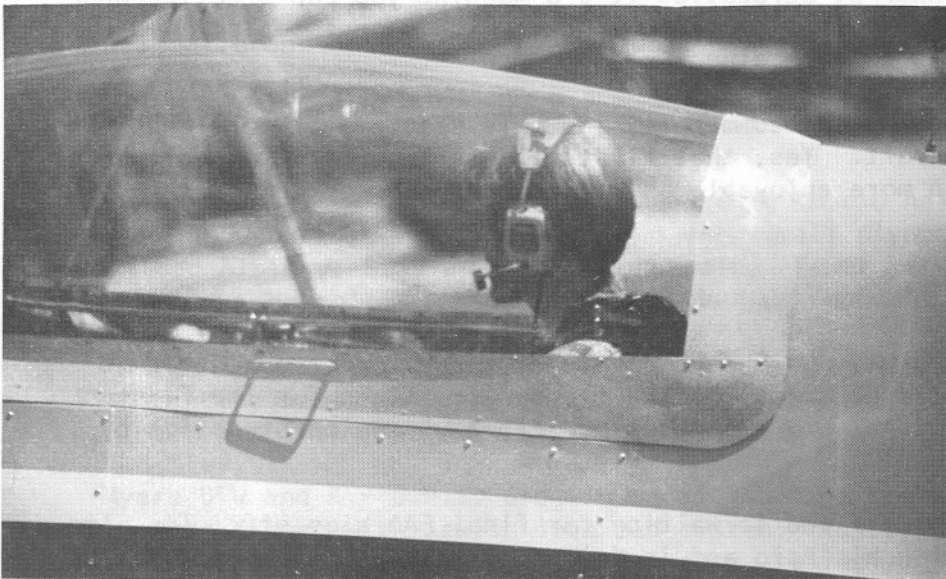
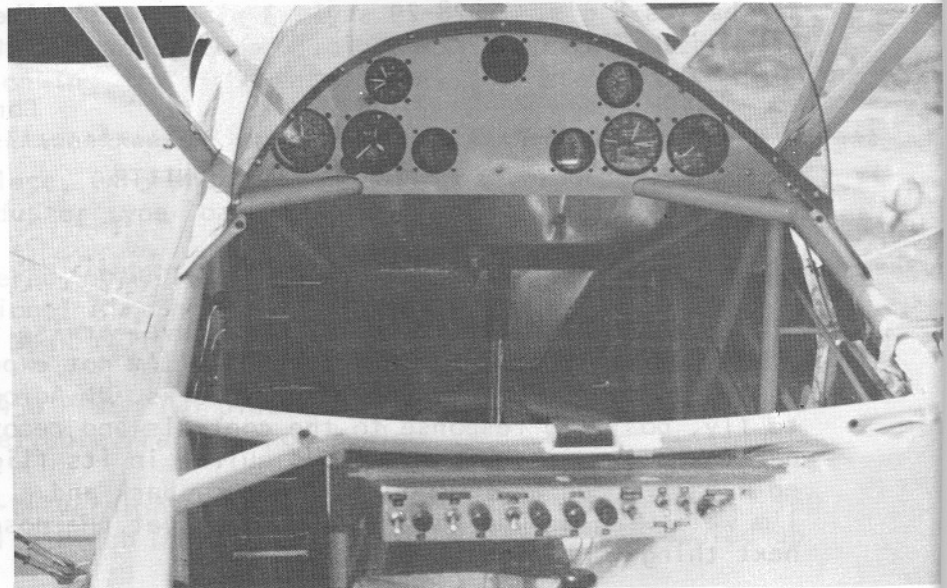
Tom now has the time flown off and is waiting for final FAA sign off. Tom also has become very familiar with his Acro and is doing very good. Aerobatically, he says N111TR and himself get along very well.



One draw back to the latching system is that it is impossible from the outside. Someone smarter than I might come up with something on that order. A separate lock would be easy and probably in order.

I would like to say that my airplane has exceeded most of my expectations and is a real joy to fly. I believe it is the only Acroduster Too flying with 300 hp. At 5000' it will indicate 185 at 25 inches and 2500 rpm. A three "G" pull from 200 indicated with two people and the before mentioned power gives a 1200' vertical at 2200 rpm and at 23" it will indicate 155-160 and up to 10000' and burn about 12.5 gph. I have been told it will out roll a two place Pitts.

Sincerely,
Lowel Slatter
Filer, Idaho



Thanks Lowel for the pictures and drawings. We redrew them for printing. A picture is worth a thousand hours of labor sometimes. Am sure many Acroduster and Starduster owners and builders will be happy to see these.

Sounds like you have a really high performance machine and you must be enjoying the pleasures of a task well done.

Thanks again,
Bill

Continued from page 15.

Verville A-T - Eight built at Wayne Michigan. Like large Fleet. Aluminum N struts and ribs. Would have been standard primary trainer if it had been set up for production. Push pull ailerons on lower wings, narrow chord, long fuselage, outrigger landing gear. 165 Continental 7 cyl. radial. 1400 pounds empty weight gave sparkling climb. Heavy controls, 110 mph cruise. Same size as Stearman. 7 on scale.

Waco GXE, 10, 9, etc. - OX5 V8, WW-1. Water cooled, 475 pound, 90 hp at 1400 rpm's. 80 mph pickle patch airplane. 3 place. 5 on scale.

Waco Straightwing - Several Wright powered versions, outrigger landing gears, then undercambered airfoil. Some used as Sky writers. 6 on scale.

Waco F-2 - Very good pickle patch airplane. Three place, 115 mph, 210 Cont. Radials. Like RNF and INF Wacos had brake when foot long throttle was pulled towards center of plane and desired rudder kicked. 100 ft take-offs. Very light airplane. 8 on scale.

F-5 F-6 Waco - Fulled cowled versions of cleaned up F-2. 120 mph easy. 8 on scale.

UPF-7 - C.P.T. beefed up version of F series. 1850 pounds empty and center section cut-out slowed it up. Also had no cowling. 110 cruise, 220 Cont. Three place, lockable tail wheel and large parking brake could be set for more toe braking power. 214 mph red line. Highest of all trainers. Good on everything but snaps. A light one with flat prop would Immelman on take-off.

Waco Taperwing - 1928-29. Hotter version of the Straightwing. Good snap rolls. Faster ailerons. 330 version of Joe Mackey's (later 450 P&W) would dive to 300 mph but all 'N' struts had a curve! Cruise 170. 9 on a 10 scale.

Waco 'D' Military - 380 hp P&W. 1936 fighter, few went to Columbia (I think). 175-180 mph cruise (indicated), fixed prop, full canopy, center section strut directly in pilots front view. Full 'bump' cowling, wheel pants, high mounted stabilizer, close wing ribs, large base ball bat stick. 300 mph didn't phase it. Steady as a rock and smooth vibrationless airframe. Slow on ailerons. Almost to slow to roll. Otherwise perfect. 9 on 10 scale.

Well now you have it, pilots, pick your favorite characteristic and build it into your Starduster.

You see now? Most of these old airplanes weren't all that great. So when you start thinking of selling your Starduster to get something else more exciting, just read old 'Crash the Chicken's' old bi-plane dictionary and reconsider and sit down and write Capt. Bill a nice letter, apologizing for all those bad bad thoughts you had about selling your Fla-Bob bird and place a nice big order with him for all the tubing and stuff you'll need to build that radial engine Starduster Too!

More next time if ever there is one (Bill)!

Continued on next page.

P.S. Save Chicken Fat.

Sincerely to all,
"Crash" the oldest
Flying Chicken

"Crash"

A very fine letter which contains some valuable history and an envious experience. I personally doubt that anyone could challenge his qualifications or opinions on bi-planes. I am very pleased he places his Starduster so high on his scale. Too often so many of us let our past emotions (first flight, solos, etc.) over power our evaluation of an airplanes performance or personal satisfaction of ownership.

I am looking forward to meeting the "Flying Chicken" and just talk airplanes.

Anyone planning a round power installation will have this gentleman at their disposal along with Starduster Corp. to assist you on all or any of the questions you may have.

Concidering powerplant availability and horse power requirements, what other than the continental 220 would you recommend?

Bill Clouse

P.S. What to do with all the chicken fat ?

The Repair Shop for Aircraft with Radial Engines



CAM REPLACEMENT Houston, TX. 1973

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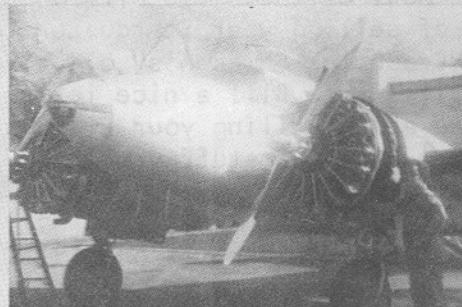
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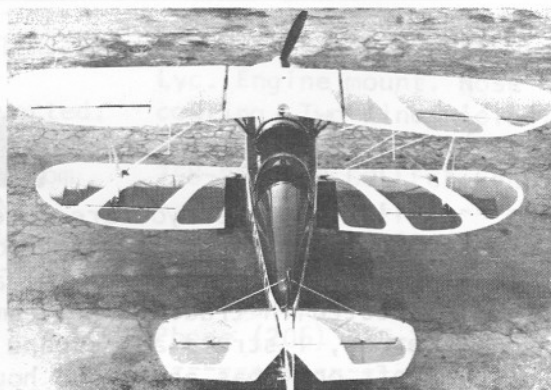
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FOR SALE

Well, I suppose you are more than familiar with the strange requests of homebuilders so here is one more. I have a Starduster Too fuselage but I lack the skills, tools, time and money to build the wings. Would you be interested in trading me a complete set of wings including center section, ailerons, I struts and cabane for my beautiful 1940 Taylorcraft BL65. My T-Craft only has about 450 hours on airframe and engine since rebuild. It has won trophies at local fly-ins and I honestly value it at \$5500.00. I would pay all of the expenses to deliver the T-Craft to you and get myself home if you would pay for getting the wings to me. I prefer the new wing but will consider the original. I would also consider a used set if good quality and if we can come to terms. If you are not interested, maybe you know of someone who would be. Please consider this because I love my T-Craft but I will not be satisfied until I have a complete Starduster Too. I look forward to some kind of deal so contact me. Don Sharp, 6304 Devonshire, Peoria, Ill. 61615. (309) 692-0964.

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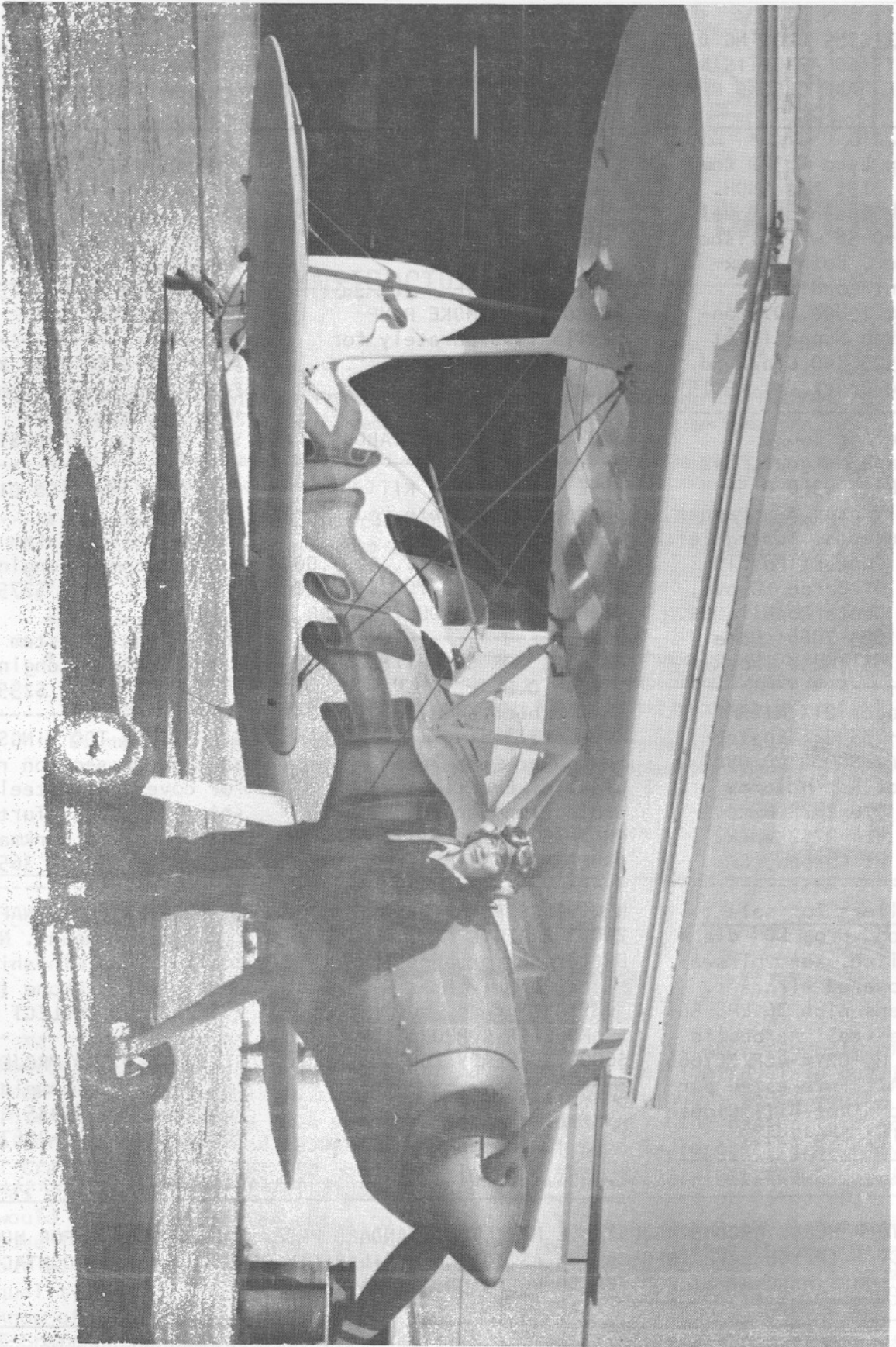
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