

The *Starduster* Magazine

October 1999

Special Issue:
Stardusters Around The World



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The *Starduster* Magazine

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President's Message

Les Homan, President, Stolp Starduster Corp.

Hope this finds your building and flying working as you want. This summer has been strange in regards to weather which in turn has affected flying and in some cases building. We are working on addressing several issues here at Starduster. Things are finally coming together for some major advances. Starting in October, we will be adding to our work force and increasing stock in all materials used for Starduster aircraft. This will allow us to build up and keep in stock all "standard" Starduster components. Another thing happening in October is the expansion of our plant. We will be more than doubling our production area. We have been working on this for well over a year. It has not happened as soon as we planned, but we are finally here.

"STANDARD" Starduster parts are those that fit the plans and are fabricated from our jigs and fixtures. I highlight the word "STANDARD" because we constantly get orders for, as an example, engine mounts with hole spacings from airframe to mount that do not match plans. This makes it necessary to build up this part after the order is received. Other problems are engine mounts for various Lycoming engines. We can stock one for the O-360-AIA series, but with many different series of engines available from Lycoming it becomes necessary to allow for intake tube placement on one model, for exhaust tubing on another model, accessory case housing accessories on still another model. It is not possible to keep in stock non-standard items. We will be stocking most used items, but it will still be necessary to build some items after order.

We are working with the FAA to acquire 51% kit evaluation for the STARLET. We have had a lot of interest in the STARLET from around the world. We have at least five countries with people interested in becoming dealers. Under construction

in our plant is a STARLET and a V-STAR. They are being built to plans, so we can evaluate performance. We will then make improvements as required and get the kit evaluation. We are starting with the STARLET to provide an inexpensive, simple flying machine with the Starduster look. We will be selling kits only, no more plans. Kits available will be the fuselage, wings, tail group and power. If the entire kit is purchased at once there will be a savings. The full kit will include everything required to finish and fly your Starlet. Everything includes the engine, props, covering, paint, VFR instruments, engine instruments, a builder's manual—everything. Now if you do not have a shop or tools you can order the deluxe kit. It includes tools, painting equipment, tables, and all other required equipment to start from scratch with an empty garage.

We will be developing the fuselage for STARLET and V-STAR into the same unit. Other items which will be made common will be the tail groups, landing gear, and as much as we can in order to hold down production costs. Wings, cabanes and engine mounts will be different for the two models. By the way, the STARLET is a high wing parasol and the V-STAR is a biplane. We will be offering a side by side model of the STARLET which will fit into the two-place Ultralite training category.

A problem we have been looking for a way around is shipping covering supplies. All conventional materials have to be shipped as hazardous materials. This results in \$100 dollars worth of paint costing \$40 to ship. We have found the solution. The material is non-hazardous and can be shipped by UPS or normal means. It uses Ceconite fabric for covering and builds from there. More on that elsewhere in the magazine.

Les Homan,

Editorial

Glen Olsen, Editor

I personally want to thank Clay for the many, many long hours he has spent in our behalf in putting the Starduster Magazine together. It is a monumental task and he does it so well. I'm sure all of you feel the same way.

Clay and I like working together on the Magazine and we hope everyone enjoys reading it. I personally have Starduster magazines dating back to 1987, and have read them many times. This is definitely my favorite reading material.

For our special issue this time we have had a lot of correspondence from people from out of the country. This is the reason for us calling this special issue, Stardusters Around the World.

Currently we are sending out Starduster Magazines to every state in the USA, except, Montana, Rhode Island and West Virginia. We are corresponding with and sending out Starduster Magazines to France, Canada, England, Israel, Italy, Australia and South Africa. We are so grateful for the special bonding we have with all of you Starduster friends from all over the world. We appreciate your articles you have either written or e-mailed to us. Without your experiences and pictures we wouldn't have a magazine to print, so keep up the good work and send us any information and pictures you have so everyone can enjoy what you are doing. These airplanes are such a pleasure to fly, and of course the Starduster look just can't be beat. We do want to give all the personnel at Stolp Starduster and especially Les Homan a big "THANK YOU" for all they do for us along with all the information and supplies needed so that we can build our airplanes. Thanks you guys!!!

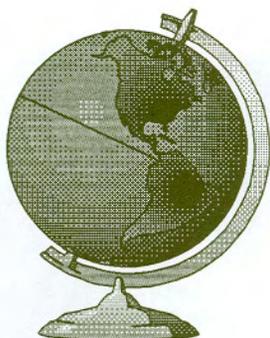
I did want to touch a little bit on Oshkosh. I know there will be other articles written so I will be short. There were four Stardusters, Clay and I included, who left SLC and flew to Wautoma together. Included in our group was the Utah State Aeronautical Director, Robert Barrett. Bob flew in the yellow Starduster with Don Mortensen. Flying back to Wautoma and attending Oshkosh was very enjoyable. Our attendance was low with our

Stardusters this year, but we still had a great time. They have a new motel in Wautoma, and also are trying to get a used car lot to rent out cars for us next year. This is not a sure thing but they are working on it. So, Starduster pilots, now that you have a place to stay and possibly a car to travel in, we hope to see you there next year.

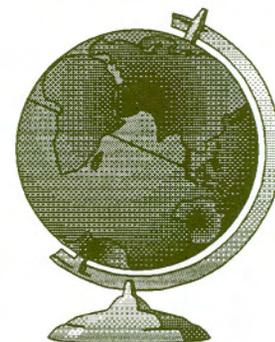
Chuck Krabbenhoft called me from Sabin, MN, the other day and he was telling me about his new Starduster he had purchased. He also wanted to share a few ideas with me about how we can add a few things at Oshkosh to make it a little more fun and entertaining. I thought I would share these ideas with you and see if you can give me a response back. In our last issue Jack Mullenmaster arranged with the FAA for an aerobatic box over the airport for those who desire to do aerobatics. Chuck thought it would be great next year to have a little fun competition. A trophy or some award would be given out for three categories— Intermediate, Sportsman and Advanced. The time slot for your performance would be five minutes. I will fly my airplane last because if it looks like everyone is going to outclass me, I will just stay on the ground. I'm only kidding.

Another suggestion was to invite the Skybolt and Acrosport people to attend our fly-in at Wautoma. Of course we would welcome any other biplanes, too. So, if I have stirred up any enthusiasm or questions, please let me know. We want to hear from you.

It is always a pleasure when the Starduster people will stop in Salt Lake City when they have a chance. Dan Benkert, from Rapid City, SD, is in town doing aerial mapping in the area. I have enjoyed visiting with him. We have a couple of things in common. Dan owns a Starduster II, and also has an Acroduster project going. I also do aerial mapping, so we have a lot to talk about. Dan also came to our EAA chapter meeting the other night and thought it was excellent. The program was presented by Danny Sorenson on weight and balance and designing your own airplane from scratch. Again, enjoy your airplanes and fulfill your dreams . . .



STARDUSTERS AROUND THE WORLD



Hi

I received my magazine today, Great as usual. I have the only Starduster in South Africa and look forward to reading about other people who fly Stardusters as no one here really understands until I take them for a ride. I'm not sure when my subscription ends but please renew it automatically when due .

Regards

Doug Reeve, Johannesburg, South Africa

Ken,

3 April, 1999

With reference to Stolp SA300 Starduster Too registration G-BUPB, can anyone help me find address of owner as while we were taking a hot air balloon flight past Popham airfield last Sunday 28th of March my colleague managed to get a wonderful close up shot of one of the magnificent looking aircraft as it circled us for photographic chances!! Please reply if poss.

Richard JR Cardy, Hampshire, England

(See SA300 G-BUPB on Front cover)

Dear Ken

8 April, 1999

Many thanks for your reply. As soon as we can we will endeavour to either e-mail a copy or send you a copy of this wonderful little biplane!! We are Balloonist's deep down but this fly past by a Starduster Too SA300 was a big talking point at a meeting we attended last night here in Romsey Hants England. Stay in touch!

Regards

Richard JR Cardy (C.R.A.B.S.)

And if you're wondering what it stands for it's "Campaign for Real Ale And Ballooning Stories!"

Hi,

7 May, 1999

I am the owner of Starduster SA300 Reg:

G-BOBT in UK. I wonder if you might help with the answer to the following question. I have had to remove the wing tank to repair a leak. Please can you advise if the aircraft is OK to fly with the wing tank removed, or does it form part of the structure of the upper wing? Thanks in anticipation of your help.

Simon Lever, Portsmouth, England

PS: If you are interested, attached is a picture of the aircraft inverted over "the Needles" which are cliffs on the west coast of the Isle of Wight on the south coast of England.

(See Photo, back cover)

Dear Sir,

29 June, 1999

I have just become the 'Trustee' of a Starduster Group based in the UK, specifically—Starduster SA300, Constr no: RH 100 Regn: G-BUPB. I would be very grateful if you could supply me with any e-mail (or postal) addresses of any Starduster Clubs or web sites.

Many thanks,

John R. Edwards, England

Hi ,

August 16, 1999

My name is Doug Reeve and I live in South Africa. I'm a 40-year-old aeromodler that also operated a Micolite flex wing aircraft (Trike). All my model interests were 1st WW biplanes. When I saw my Starduster all I wanted was to build a scale model of it as it was the best looking biplane I had ever seen, the more I looked the more I wanted it. After a lot of drooling I came up with the money and then owned the only Starduster in South Africa. Now I had a problem. I couldn't fly fixed wing aircraft and didn't have a pilot's licence. I found an instructor that had flown my Duster before and started lessons. All went well until it was time for landing lessons. I couldn't see

the runway and all my flying instincts from the Microlite were opposite controls—i.e., push right pedal to go left, move the control bar forward for the landing flair. All control inputs on a flexwing Trike are opposite to fixed wing aircraft. Now in a 300 hp Starduster things can get interesting when you push the stick forward just before touch down. I think I scared the wits out of my instructor. After a while I became despondent and gave up. I then tried to sell my Starduster but most people here are not too keen on 300 hp tail draggers. I still loved my plane and kept it clean and shiny. I would sit in it and imagine flying it. Three months went by and I met an older RAF type instructor who sat me down and explained that my Duster was not the best aircraft to start on and suggested I start again on his Tiger Moth. This went well. I could see the runway and landed at 50 mph. I did about 12 hours on the Tiger Moth and then went back to the Duster. After about 15 hours I went solo on the Duster. It was one of the best moments in my life! I have just completed my aerobatic rating and now fly my Duster two to three times a week. It's still the best looking biplane I have seen. My Starduster has a 300 hp Lyc. engine, 3-blade C/S prop, inverted oil and fuel systems with a potent smoke system. The cockpit is VFR only. Home built aircraft are not allowed to fly at night or IFR in South Africa. The aircraft was built in the USA during the '70s but I don't know much of its history as the USA log books are missing. Maybe someone in the States could fill me in. In South Africa we have open sky with very little control over home built aircraft. All that is required is an annual inspection by an EAA approved person and 3rd party insurance. Home built aircraft may not carry paying passengers or be hired out for money.

Regards,

Doug Reeve, Johannesburg, South Africa

(See photo, page 21)

Hi everybody, 28 April, 1999

What a trip!!! The fuselage had successively known his slower and his faster cruise speed ever—the first one in this*✂⊗ of a truck, giving a noisy 50 mph with tail wind, and the second in the 747 at 600 kts (tail wind also!)



Finally the fuselage arrived at home in a better shape than mine. Enclosed are pictures of Les Homan and myself with the factory-welded fuselage of our SA750 at the start of the slow end and the fast end of our journey to France.

Sincerely,

Vincent Pesche, Neuilly sur Marne, France

Dear Mr. Gorton, 23 August, 1999

Please find enclosed notes and pictures which I hope may be of interest to you.

My pal John Rosser visited the U.S. in 1987 with the view to purchase the Starduster Two, an aeroplane we both admired, but because of our jobs, he a computer engineer working in Africa and Saudi Arabia and myself in the Marine Offshore Industry, we didn't have the time together to build one.

We saw various Dusters in the States but the one that really caught our eye was the beautiful all yellow N523H owned by Dr. David Crane of Wisconsin. After spending a few days with David in Oshkosh, we agreed to purchase the N523H, which David agreed to strip down and containerize.

After the usual delays the container carrying N523H eventually arrived at my local airport, unfortunately our joy was spoiled when on opening the container the aircraft was found be damaged (it appears the container had been dropped during transit), the right hand cabane strut was damaged, as was the left wing fuselage and wheel pants.

This was soon repaired by a local company, and given it's new British registration number G-MATI, from then on it was "pure fun." I had many happy hours flying the Duster from lovely spring days to blinding snowstorms, and as a keen aerobatic pilot, made the most of the Duster's inverted fuel and oil systems.

In 1995 my partner John after retiring from his world travels, decided to settle in Florida, and we agreed it would be nice to have the Starduster in a climate where one could fly in shorts and tee-shirts, so in October of 1995 the Starduster returned to the U.S. to be based at Kissimmee where John and his wife are now living.

Since settling in Kissimmee, John and his wife, Linda, have been fitly occupied setting up a business, so unfortunately the Starduster has been placed on the "Back Burner."

During John's ten years in Saudi, he was unable to do any private flying in that country, but I am happy to say he is now harnessing his old skills again, and we should soon see the Starduster flying

again in the sunny Florida sky, under it's new identity N469H.

Yours sincerely,

Matt Clark, East Herrington, Sunderland, England
(See photo, page 22)

Dear Clay, 8 September, 1999

I hope I am not late for the October issue. I write that mail as a Starduster aircraft owner who is living in France. In fact, I do not own a Starduster but an Acroduster Too.

The first time I have heard speaking about an Acroduster (I only knew at this moment that it looked like a Pitts, now I know it is more beautiful . . .), was only a couple of days before I bought mine. This happened in February 1997, when I was looking for a Bucker Jungmann that I never found (in Europe, Bucker are too expensive even powered by a 125 hp Tigre engine). Anyway, I do not regret my choice and do enjoy each flight I made during these two years.

About this Acroduster (serial number 359 and registration marks F-PYPF), it was built twice by Claude P., a former P47 pilot in the Armee de l'air (French Air Force) and Air France Captain. The first construction was completed in 1983 and was the first (and only one) Acroduster Too built and flown in France. A new owner destroyed it in a crash landing in may 1986. The pilot was not injured, but all the aircraft was broken except the upper wing. Claude bought the wing and re-built the whole Acroduster, with an improvement: a constant speed propeller (he only spent 3000 hours to achieve the project against 5000 hours the first time). The second "first flight" was performed in June 1994. Once again it was the only one French Acroduster. Since that date, several Acrodusters have been built and/or flown in France. Here, the Acroduster is not well-known and people are always amazed when seeing such a beautiful biplane "Qu'est ce que c'est cet avion?" ("What kind of aircraft is it?").

In France an organization equivalent to the EAA (but not so big, I believe) exists. It is the "Reseau du sport de l'air" (RSA). Most of the

French private builders belong to it. You can get more information on the web site of the RSA (sorry, I do not remember the address but can find it back if desired).

If you need more precisions, let me know.

Sincerely,

Francois Hebrard, France (See photo, page 22)

Dear Clay, 8 September, 1999

My first encounter with a Starduster was ten years ago at Moose Jaw, Saskatchewan air show. Al Pietsch from Minot, ND performed at this show. I was amazed at how graceful and smooth he flew this airplane. Something else that caught my attention was the shape of the wings and the large tail—this definitely was NOT a Pitts.

Later that day I had the priviledge of talking with Al. He told me that his plane was a home built Starduster, built in 1967. Being a car restorer, this thing got me very excited— maybe I could build something. One of Al's sons suggested I come to Minot where I could learn aerobatics in a Pitts S2. I thought I would give it a try. It was two years before I finally got to Minot where I had my first flight in a Pitts. WOW! I was hooked!

In the Pietsch hangar I discovered a black and orange Acroduster that belonged to a guy from Southern Saskatchewan. Al thought it might be for sale. After a couple of phone calls the owner said he would consider my offer to purchase, but I did not buy the plane. Over the next year I kept shopping for an airplane. Then a friend suggested I put a want ad for a started project in COPA (Canadian Owners and Pilots Association) magazine. Word has it that there are lots of projects that builders give up on, then sell at discount prices. It wasn't long before I got a call from Scarbrough, Ontario. The guy has a single seat Pitts S1 project for sale. After examining the pictures and making a few phone calls the project was in my shop.

Right away I begin studying the plans, purchasing books, and videotapes on homebuilding. I also joined EAA Chapter 154. One of the EAA members told me a person in Stockholm, Sask. had a IO-360 engine for sale. I contacted him and drove up to look at it. In his shop I found parts and

materials for an airplane. In the corner, under a cover, there was a fuselage on gear. I was told it was an Acroduster II project he and his son had started working on until his son's death. I bought the engine and offered to buy the project also. By Christmas of 1993 the Acroduster was in my shop and the Pitts was on hold. With the support of my family and friends I finished building my plane in August of this year. I will be getting some dual instruction in a Pitts and then I will fly my Acroduster.

In Canada, Transport Canada no longer inspects Home built airplanes. The inspections are now done by RAA-Recreational Aircraft Association. To become an inspector a person has to successfully build an airplane and take some inspection training. Homebuilders check out homebuilders. I still have my Pitts projects on hold as well as have another Acroduster started. The fuselage of this plane is tack welded. I have the tail feathers, gear and the material for the wings. I also have an O-540 engine for this bird. I may consider selling one of these projects. You can see a picture of my Acroduster, as it is featured on page 19, in the April 1999 Starduster.

Leonard Sebulsky, Sheho Saskatchewan, Canada

Dear Clay, 9 September, 1999

My father and I were delighted to receive your request re building our Starduster. I had sent away for the plans back in around 1975. After reviewing them for several months I acquired all the tubing necessary to do the main portion of the fuselage and set to work immediately. My father was not involved in the early stages as we lived some 500 miles apart. I found the plans to be very well laid out and had no problem interpreting them. The layout for the main longhorns went OK and I was soon tacking them into place. I did find it helpful to pre cut and fit many of the pieces prior to tacking them into place. After several months of this I was becoming bored with the constant fitting and grinding so decided to order up several sheets of plywood and get started on the wings. I found this to be a wise decision as it gave me the opportunity to

cut and grind or cut and glue depending on my mood.

Then my first challenge arose. I had an opportunity to move to eastern Canada and take up a Bush flying job. This would put my project on hold for some 15 years. I had my father store the fuselage and the left lower wing at his farm in Saskatchewan. At this time I had the 4 main longhorns and inter bracing tacked into place. I had several cans of LPS 3 so I emptied them, covering both the inside and the outside of the tubing.

After finishing a 15 year stint flying for the Ontario Govt., I had the opportunity to move back to Western Canada and take a job flying for a regional carrier here. My folks had retired from Saskatchewan and had settled here on the west coast as well. My Father had completed about 85% of an SE5A Scout. With both of us on it we finished it off and had it in the air two years later. Unfortunately this aircraft is only a single place. My father having suffered a heart attack some ten years prior was not able to enjoy the fruits of his labor. I flew the aircraft and he watched.

I guess it was at this point we decided to get the fuselage from Saskatchewan and get started on the job of finishing the Starduster Too. After reviewing the plans for some time and realizing it was the middle of winter in Saskatchewan I knew we would have to wait for spring to get started. In the mean time we began acquiring bits and pieces.

With the arrival of spring my father and I returned to Saskatchewan to pick up the fuselage and lower left wing. They had been well preserved and very well covered. Amazingly enough they made the trip with no damage.

As I mentioned earlier I had tacked most of the fuselage so now it was time to check it for square and start welding. I did all the welding and dad started on the lower right wing. Actually he started on the three remaining wings. It is much faster to cut all the ribs, put them on the spar and sand them as a group. Then space them out and glue into place. This is also a great way to stay out of each others way.

The work progressed well and we found both Starduster and Aircraft Spruce good suppliers for

the odds and ends we couldn't find. I think we assembled, disassembled and reassembled the plane a million times. We finally got to a point where it was looking like an airplane and I hated to take it apart. At least this time it would be our last as we were ready to start covering.

Now this is what I call a family event. I had taught dad how to tie a rib stitch knot, so he and mom started on the wings. I had daughter #1 and myself start the fuselage. Daughter #2 was putting together some paint schemes and Daughter #3 interfered with all of us. I was sure with all this activity we would be up and ready in no time. Our summer came and went so I was now looking at a fall completion.

All in all things went well and all the required inspections (three in total) went great. Now it was finally time to make our move to the airport. It was the month of October and our west coast weather isn't always suited for open cockpit, but you know when you have spent a lifetime building an airplane somehow being cold isn't important.

We had looked at many engine types from aircraft to auto and finally settled on an O-360 A4A. It had been 0 timed so I felt great about it's reliability. We ran the engine on the ground for a total of about 3 hrs prior to moving out to the airport. It purred like a kitten.

Once assembled and the final inspection completed, all paper work done, all that was left was a few taxi tests and the flight test. As I mentioned earlier our fall weather can be cool. However, on Nov 3rd it was a balmy 45 degrees overcast and a 15 knot wind. Perfect for our first flight. I had decided to use our long runway and opt for a cross wind takeoff. I felt if anything went wrong I had some 10,000 feet to get her stopped. The runup went fine, called to take-off clearance and lined her up on the runway. With about half power I raised the tail and let her go down the runway. Every thing was in the green so I added another 500 rpm. This brought me to about 2000 rpm and we were indicating about 80 mph. I felt the main's break free. Holding 80-85 mph and about 5 ft of altitude again everything was in the green and the controls felt good. I could see I still had plenty of room to

land but with everything running well I pushed the power all the way up and started a climb.

Indicating 80 mph I thought the nose seemed too high so I decided to climb out at 100 mph. I have to admit from this point on everything seems a bit fuzzy. I had my eyes glued to the engine gauges watching for any unfavorable changes. The first flight lasted some 45 minutes and came off without a hitch. I made several more flights that week and as I started to settle down I found the plane was simply a dream to fly. There are not many Starduster's in Canada and every flight brought curious onlookers. I had to fly off 25 hrs. and complete a climb test on paper before I would be able to take on any passengers. With my dad standing in the side line we completed this requirement as soon as possible.

I did find a big difference with a passenger up front. The airplane does feel much heavier and you can't see a damn thing on final approach. All it takes is a bit of practice, patience and the willingness to put your ego in your pocket for a while. I must admit it has taken me a while to get on to having some one sit in front of you but when it's your dad I wouldn't change it for the world.

I can't think of a nicer biplane to build nor one that is as responsive as the Starduster Too.
Clyde Murray - Abbotsford, B.C., Canada

(See photo, page 23)

Dear Clay

11 September, 1999

My Starduster I, N4OD, was originally built in Texas by Oren Cooley in 1974. I think he sold it

in about 1978/79 to Bill Kizer in the Houston area. I bought it from Bill in 1989 when it had about 215 hours on the airframe. Bill had modified the undercarriage and done some other work including changing the engine. I have done work on it myself, mainly replacing worn out or failed items, like mixture and carb. Heat controls, tail wheel unit, etc.

On the last annual inspection, a weld was found to have failed on one of the reserve fuel tank strap retaining lugs. This is quite close to the fuselage fabric, but we managed to weld it in place without setting the machine on fire. Even though the only original fabric on the airframe is on the fuselage, it seems in good shape and I am not ready to replace it yet.

First flight after the annual was interesting, as, even though the pre take-off power checks were normal, the engine lost power on take off. So I stayed over the airfield, flying a left hand circuit, radioed my intention to land, found a gap in the traffic and popped it down and cleared the runway at the first available taxiway.

Later found that the right hand magneto had failed completely and even though the engine is 160 hp, the loss of one magneto was very noticeable. Also the tower didn't hear my transmissions so now I have a new handheld radio. There is no electrical system and starting is by hand. The magneto has been repaired (Bendix,) and the aircraft has performed satisfactorily since and of course, it is still fun.

Harry Mackintosh, Wimbledon, England

(See photo, page 23)



The propeller is just a big fan in the front of the plane to keep the pilot cool.
Want proof? Make it stop; then watch the pilot break out into a sweat.

Correspondence

Clay, 29 June, 1999

Actually I am a subscriber and continue to receive the magazine and love it. I assume that someone actually took a picture of 3242R while I was at the Open House??

42R is based at RHV, built by Robert Brown in 1985. My AI said that 42R was the cleanest, best assembled Starduster he has ever worked on. Prior to the annual he warned me that Stardusters were a real pain to annual. After seeing 42R he has changed his opinion. TT is 350 hours. It has a full IFR panel and I have flown it IFR on 2 occasions. The engine is an 0-360 with a CS prop. It slips along at 115 knots at 75% power, and is better at aerobatics than I am. I look forward to the July issue and our trip to OSH.

Thanks

Mike Gustafson, Menlo Park, CA

Ken, 10 July, 1999

I have just bought a Starlet SA500. It has flown about 50 hrs, but I have a little work to do before I can fly it here in Utah.

Richard L. Bean, Salt Lake City, UT

Hi Les, 22 July, 1999

I guess I am a little (or I should say a whole lot) behind the curve on my e-mail correspondence. However I do keep up to your doings by reading about you and "Starduster" in various publications, especially The Starduster Magazine. Hope everything is going OK and you and the family are in good health.

My wife's sister who lives in Plantation, Florida was to undergo brain surgery for cancer, so my wife and myself went to Florida to give practical help and moral support. The wife's sister is doing OK but has a long way to go. The point of this is that while I was in Florida I took a few days off and picked up Pat Golden and proceeded to Lakeland and spent a few days at "Fun-In-Sun." It was OK but I was hoping to see you there. I met Bill Clause there and spent some quality time with him. I imagine you will be getting ready for "Reno." Unfortunately I won't be able to make Reno this year due to unexpected trip to Florida. But as the

saying goes, "wait till next year." Say Hello to Mary and Mike for me.

Till then—fly low- fly fast- turn left.

Charlie "Fritz" Eisenbeiser, Plantsville, CT

Hi Ken, 27 July, 1999

Went to the Arlington fly-in with Wayne and Ray. Had a good time and received an award for N377JB, "Fabric Butterfly." The category was Classic, 20 years old or more, and I received Champion. So all those hours and money rebuilding must have paid off. We all had many lookers, we were parked together. Talk to Wayne and Ray and see if they got anything because they probably did, good for the magazine you know. I'll be going to Oshkosh and will talk to Les, c u later.

Dave Mercer, Klammath Falls, OR

Dear Ken: 3 August, 1999

Received a short invite to your Starduster Website from you, upon an invite from my Son, Mark.

Just thought I'd take a minute and tell ya . . .

I bought a set of Lou's S/DII way back in 66/67? (I am a private pilot, have been since about that time, of course, so is my son.) Also, I worked as an A/C mechanic for a time, and all of my military life that was my speciality. I've always loved flying and airplanes—still do, particularly, those of the "late Golden Age" & WWII era . . . I grew up on 'em!

Managed to fabricate all of the upper & lower wings and ribs for the "Too," and fashioned the spars too . . . and welded up a few pieces of tubing. However, raising Mark & his two sisters, and putting them through college sort of put the 'chocks' in that project. I have relinquished the plans and parts to Mark and they're sittin' on the 'shelf' in his garage. I was fortunate enough to take a flight and actually fly a Duster Too a couple of years ago. The owner, an old school, and close friend of Mark's, it wuz FANTASTIC!!! Made me feel young agin. My heart is still with it . . . mebbe sum day . . . I kin teach my Gran'son how to finish the shelved project. TOWBARONE@aol.com {if curious of my e-mail handle}.

Well, it comes from me being one of the eighty

five or so enlisted & officer types who are charter members, plank owners of & in the first helicopter squadron in the U.S. Marine Corps, HMX-1, Quantico, Va.(and, incidently, we formed and manned the first Marine helicopter squadron, composite, we had sum L5's, Stinsons also, an' took those ol' machines into combat for the first time! VMO-6, Korea, 1950.) HMX-1 is now the home of the Presidential "white-tops." If ya care to respond, I'd be proud ta hear frum ya.
Jim Westendorf

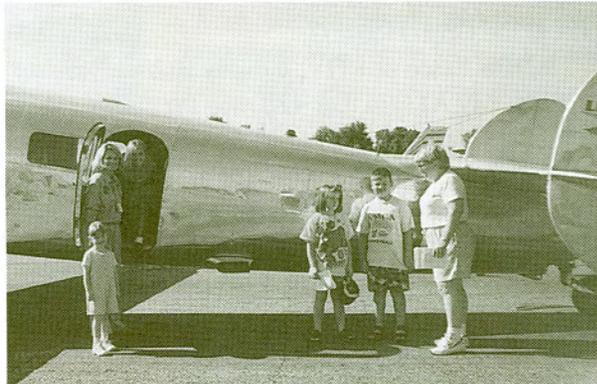
Ken, 5 August, 1999
I am in the process of building a SA500 Starlet and installing a Lycoming O-290 and hope that it will fly within the year. I would like to hear from others that have built and flown Starlets!! Are there any flying in the Southeast?
Gene Jackson (planegene@cs.com)
McDonough, Ga

Ken, 8 August, 1999
Hi—my name is Vern. My dad and I are finishing a Starlet ser. # 191 that has been under construction by various people for over 20 years!! Are there any builders out there we could e-mail/ correspond/call who can share some info with us?? THANKS!!!!
Vern Bothwell, janvern@ccrtc.com

To Clay and Glen, 11 August, 1999
We met at the Starduster Fly-in at Wautoma during the Oshkosh Airventure. I and my partner own a Starduster Too, N70JH, shown in the Jan. '99 issue of the Starduster Magazine. The main purpose of this letter is to boast our EAA Chapter in Atchison, Kansas for flying 252 kids in eight airplanes during the annual Amelia Earhart Festival.

The most important part of EAA is getting young children interested in aviation and completing the goal set forth by the people at EAA Headquarters in Oshkosh, WI. The great story of the Young Eagles day was that Linda Finch who, as you remember, flew around the world in 1997 following the same route that Amelia Earhart did not complete. Her airplane, the Lockheed Electra, also helped to fly the Young Eagles. Linda's hus-

band was the pilot, Laird Doctor, who flew approximately four trips while helping us other pilots fly the Young Eagles. As Mr. Doctor was flying the Electra, Linda Finch was on the ground conducting ground school for the kids.



As you may or may not know, Laird Doctor was the pilot who was involved in the F4U-1 Corsair accident at Oshkosh on Thursday, July 29, at the beginning of the air show. He is also the director of the Cavanaugh Flight Museum in Addison, TX. I have been there; it is an outstanding museum. I, myself, flew eight different missions for a total of 24 kids, and they all enjoyed it.
Jerry Acord, Wathena, Kansas
(See photo of Linda Finch with Young Eagles and her Lockheed Electra.)

Dear Clay, 16 August, 1999
I am sorry to not have written you sooner, but I have been a very busy man lately in catching up with all that remained undone while I was in Wautoma, WI with you. However, I did want to write and let you fellows know just how much Lynn and I enjoyed ourselves as a result of meeting you gentlemen. It was a very pleasant trip for us.

I cannot tell you how much Lynn and I enjoyed your company and friendship during our stay at Wautoma. I really enjoyed the camaraderie and the great conversations I had with you all. Also, the fact that we were included in your banquet on Sunday afternoon really made me think that your group of fellows was a very good one and I was very happy to have been included in your dealings. Both Lynn and I thank you all for your kindness

and your friendship.

Since the beginning of this letter and today, I had the chance to speak with both Glen and Don as we were concerned about you folks after the news of a tornado was received by us in Chicagoland. I was happy to learn that none of you were harmed, though many dollars of damage was done to property.

You might be pleased to know that the burn I received while in Wisconsin has now almost completely healed, though it will leave a scar. It turned out to be a 2nd degree burn (3rd at the center) which seemed to take forever to heal. However, it is now healed and all things are OK with both of us. Also, as I had indicated, we had a rather large Airshow at our field (ARR - Aurora Municipal) as well as a very large contingent of antique and various competition automobiles. We generated several thousand people for this effort and met some wonderful people in the doing. Of course, our Stearman was a part of the show. It seemed to be the hit of the show. We had a Mig-21, the Grand National Champion P51-D, several AT-6's, P40's and the B-25 Mitchell as well as several other aircraft in the show. All were flying, then on a static display after the show, as was our aircraft. This was in conjunction with the several static displays such as our F4 Phantom, the A7E, the HUIE's and the other aircraft from our museum.

I hope this letter finds all of you well and doing OK. I really did enjoy meeting you folks and look forward to meeting you again. I hope to hear from you in between as I really do think of you all as new and valued friends. Take care and *keep 'em flying!*

Your friend,

Randy L. Cordray, Naperville, IL

Starduster Corp.

2 September, 1999

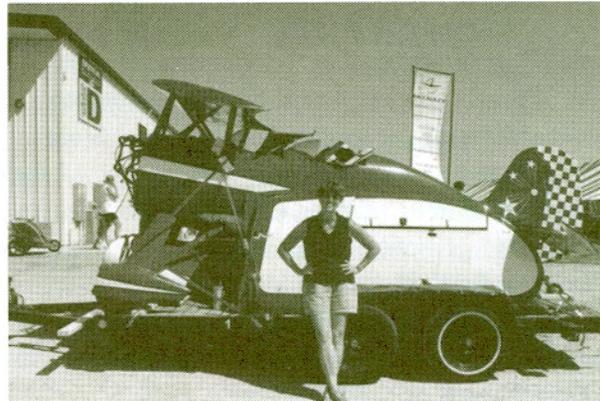
Yes indeed, N11DM flew 9/1/99 @ Akron NY, everything normal. If there were any out of trims I never noticed them, maybe later when I get more critical. Never even touched the elev trim and it was faired to elev! 150 O-320 w/ hart CS. Film at 11. Best,

Dave Millikan, Akron, Ohio

Dear Clay

6 September, 1999

Do you remember meeting me at Wautoma? I bought the prototype Acroduster II wreck. I thought you might like to see what we've done with it in the first 25 days since we dragged it home from Oshkosh. I've attached a few photos taken between Aug 1st and Aug 13th, so you can see what was done.



As soon as we got it home, we stripped the fuselage down to steel tube. I sand-blasted the tubing, so we could inspect all the welds and remove all corrosion. Gary then primed and painted it Pontiac Red. Then while I cleaned up, stripped and painted small parts, Gary started putting stuff



back on. The fuselage was in excellent condition: no tweaks, bends, cracks or breaks, and with a fresh coat of paint, it looks brand new.

Gary has been working daily to get it all back together, and it's paid off. He even replaced the old

galvanized firewall with a new one of stainless steel. Altho I don't have pictures of it yet, he covered it last week and painted it this weekend. I should get pictures tomorrow, and I'll e-mail them to you. I'm in California, working for the Air Force. I'm a reservist, and I work pretty much full time. I've been out here since the 14th of Aug, and won't get home until about the 29th of Sept. But once back in Minnesota, I'll be able to stay home for more than a month before I have to go back, and I'll get most or all of the wing repairs done.

When I came out here, I brought the broken gear and the engine mount. They are up at Stolp in Oroville to be repaired. So far, I've stripped all the fabric off all four wings, and disassembled the two broken wings—one upper, and one lower. Thank goodness for that! At least I have good wings to look at and compare while building the new ones. I have to replace three spars and virtually all the ribs. Only one or two are reusable. Eight nose ribs are good, and two bay ribs. I'm anxious to get home and get started. Work comes first, though. I have to pay for this somehow!! I just got back from Haiti, and an airshow in Rochester NY, where my airplane (a C-5, I'm a loadmaster) broke for seven days with hydraulic problems. Wednesday evening, I'm heading for Puerto Rico, Bolivia, and several other places in South America. Too

many projects, too little time. The story of my life. I love it!

Anyway, I'll stay in touch, and if you want hard copies of these pictures, let me know, and I'll have copies made and sent to you.

Chris DeBaun, Minnesota

Dear Glen,

30 August, 1999

We sure were glad to see everyone at the Oshkosh/Wautoma fly-in. We had a great time and really enjoyed the ride in your Acro. I know after a dozen rides, the pilot gets pretty tired.

Hope all of you made it home OK. We were grounded one day due to weather on the way back, but the rest of the flights were VFR with some clouds. Our new GPS takes a lot of the guesswork out of cross-country flying. We enjoyed playing with it and wouldn't think of flying without it now.

The tornado that hit Salt Lake City had come through Klammath Falls as a wind and rainstorm the previous day. We've never seen so much rain in a short period of time and we had some local flooding. We count our blessing it was not a tornado.

Once again, we were glad to see everyone at Wautoma and are looking forward to next year's Oroville fly-in.

Sincerely,

Dave Mercer, Klammath Falls, Oregon

First Flight For Lloyd Lambert's Too

by Oscar Bayer

On 15 July, Lloyd Lambert flew his Red Star-duster Too, N56LU, on its first flight out of the San Luis Obispo, CA airport. Lloyd reported no particular problems found on the first flight,

and has put another five hours in it at this writing. He is looking forward to flying off the restrictions so he can get away from the coast and see what the rest of the country looks like from an open cockpit.

Starlet Pilot Report

by John A. Russell San Antonio, Texas

In the past few weeks, I have received several calls from builder-restorers about my Starlet. These seem to encompass a wide range of experience in both building and flying. While talking to Ken Nowell about other stuff, he suggested I jot down some of the more pertinent facts which may be of value to these and other folks. So here goes.

A Brief History

My Stolp Starlet, SA-500, N73KG was built in 1973 by Keith Greendale (whence the 73KG) in Gerber, CA. She was acquired by Lee and Tom Morris in 1988 who did extensive flight testing at Schellville, CA, and then sold her to Gene Newman of Decatur, GA. Gene ferried her to Decatur in October 1988, flew her for about a year, then sold her to Captain Dan McGrew (a retired airline pilot) in 1989. Dan flew her to Tucson-Ryan, put a bunch of nice, new stuff on (stainless exhaust, Warnke prop, etc.) then sold her back to Gene in 1992. She then seems to have become a "hangar queen" until I bought her in 1997. I put Cleveland's and wheel pants on her, and have been operating her out of Zuehl Airport (5smSE of Randolph AFB) ever since. She now has 230 hours TTAF and 1,100 hours engine time SMOH.

Aircraft Description

Lycoming O-235-C1 (115HP @ 2,750 rpm-red line), Warnke 74x44 prop, Spring Steel Gear, Cleveland 500x5 brakes, Empty weight 807 lbs, Gross weight 1,175, Fuel capacity: 12 gal wing, 17 gal fuselage.

Performance

Takeoff: 800 feet (594 msl, 90 deg F) Landing: Perfect 3-point, 700 feet; usual 1-bounce, 800 feet; (2 bounces and above not measured - nor discussed). Vy: 80 mph IAS, Vne: 160 mph, Initial R/C: 1100 fpm, decreases to 800 fpm 4000-6000 msl. Fuel consumption, gph 6.5 (est.) Straight and Level: 2750 rpm, 115 mph; 2600 rpm, 112 mph; 2,500 rpm, 105 mph; 2,400 rpm, 100 mph.

Cruise (GPS reciprocal passes): 118 mph @ 2,600 rpm (all data at 5,500' msl; 80 deg. F) With these figures, I estimate a conservative 400 sm range, but have only been on a few 150-200 mile cross-countries.

Operating Characteristics

Before we start-up, a word about one of my personal heroes: Art Scholl. Dr. Scholl wrote a kind of "stream-of-consciousness" flight test report for Lou Stolp some years ago. It's available from Starduster headquarters. Get it. Memorize it. It has become my Bible. Everything (that I've had the guts to try) is as reported. Many thanks, Art, wherever you are.

Taxi

Boy are you gonna love this part! VIZ-O-BILL-A-TEE! Except over the nose. Tricycle drivers learn—and employ—S-turns (frequently). Conventional gear jocks who haven't yet taxied into something (all three of you), continue to remain alert.

Run up

Brakes. Stick Back. Goggles down. Check trim and fuel selector switch as appropriate. Controls for aileron reversal, freedom of movement (very intimate cockpit). 1,800 rpm, carb heat/magnetos, flight and engine instruments, controls again (and again and again). Swivel the bird around to check traffic (again, you're gonna love parasol visibility).

Takeoff

Simultaneous smooth full throttle, stick full forward. Tail comes up in 2-3 seconds, visibility even better. If you don't find directional control in a Starlet among its nicer characteristics, check wheel alignment, tire pressure, weight and balance, etc. Establish slight tail-down attitude and let her fly off (70-75 in my bird, I weigh 155.) No need to force it.

Climb-out

Trim for 80 mph IAS (See above for performance

figures) and rubberneck like crazy. The Starlet's almost unrestricted visibility is—quite possibly—its greatest safety asset. The first few flights, I think you'll find her very light and sensitive in pitch and yaw at 80 or so, but not frighteningly so.

Level-off/cruise

You'll find her quite sensitive to power/speed changes and consequent pitch trim. Just a question of familiarity. Once cruise is established, I recommend a couple 360's left and right, (too much back pressure, and she'll introduce you to the high-speed stall . . . a good thing to know) followed by my personal proficiency shaper-upper—the Lazy 8. Try these shallow at first, then steeper a few flights later (unless you're bloody Smilin' Jack, in which case, happy landings . . . or whatever).

Stalls

The Stolp wing is a thing of beauty, but one of them usually tends to drop off rather abruptly at the break. Remain alert, relax the back pressure, maintain directional control with rudder, and all is well. Power-on stalls, just relax the back pressure to nose down; power-off, ditto, nose below the horizon, smooth power application (no rush) and fly out of it. This is a fairly docile little bird, but, it ain't a J-3. If you are inattentive, rough, arrogant, etc., see immediately below.

Spins

She will. Depend on it. But . . . a clean-breaking spin requires positive stick-back and simultaneous full rudder for a nice, sharp entry. Otherwise, she'll kind of waller around and seems to ask "Do you intend to spin me, or are you just fooling around?" If the latter, simply relax the stick and apply (gentle but positive) opposite rudder, taking care not to get in a secondary spin. She will.

Spin recovery is conventional and quite nice. Granted, it's a little nicer in a 1-turn to the right, as compared to a 3-turn to the left. As Art says, she wraps up kind of tight after 2 or 3 to the right, and really wraps up after 1 or 2 to the left. No real problem, just make sure you have plenty of air underneath when you start. Recovering, lead 1-turns by about 1/4 revolution, and 2-turns and up

by about 1/2 revolution.

Aerobatics

This is one sweet airplane. It only has 115 HP, so you can't loop it out of cruise, and vertical penetration in a hammerhead is measured in hundreds of feet (at least mine are). But I believe you will find this little bird to have the nicest feel/touch/response of any in its class. I do all the Sportsman category maneuvers at 3,000' to 5,000', and have had no problems with any of them. I'm not a show pilot, I don't even compete. But I have flown Acro for a number of decades in military and civilian aircraft. I deem this bird safe for an experienced, WELL-TRAINED, aerobatic pilot. She requires a gentle hand . . . do your rough stuff in T-34's, -28's, S-2's, etc. I just gotta say this: **DO NOT ATTEMPT TO TEACH YOURSELF AEROBATICS IN THIS (or any other) AIRPLANE.**

My approach to aerobatic familiarization in N73KG has been:

1. Read Art Scholl's article.
2. Go try it.
3. Try it again.
4. Repeat 1 - 3 as necessary.

Rolling maneuvers are lovely. Aileron, and especially rudder response is light, quick, and positive. Looping maneuvers are equally responsive, but put in 3 to 3 1/2g on the front half or she'll get plumb hard to get along with at the top. If she pays off, just relax back pressure, nose down (probably already there) and roll upright. Power on or off as required. Entry airspeeds for slow and barrel rolls around 120 IAS seem to be best, and 140 for loops and Cubans; 150 for Immelmans (with very positive rollout). Snaps and Split S around 80 - 90; Hammerhead 120-130 (push push push with considerable opposite aileron, or you'll do a beautiful cloverleaf).

Please don't mistake me for an aerobatic instructor, or the above for anything more than what I've found to be adequate/necessary in my Starlet. Handled properly, she does all of the above very nicely. Air speeds are what works for me. Yours may vary.

Landing(s)

“Oh, yeah? YOU ever try to land one of these things?” Memorize this. Use it sparingly, depending on the size of the critic. My Starlet has SPRING steel gear, an apt description. I come down final at 80 IAS, flare one inch above the runway, and all 3 wheels begin to roll simultaneously. I have to rock my wings to be sure I’m on the ground. Any questions?

Now to the truth. If you come in, oh, about 5-10 mph above stall and flare 1-2 feet high she’s gonna bounce to pattern altitude. If you get in a porpoise mode . . . ADD FULL POWER and GO AROUND. It ain’t gonna improve with time. Subvert your ego, and try again. The good news is that directional control in landing is about as good as any conventional gear airplane I’ve ever bounced, er, landed. In addition, she is almost immediately responsive to power application, so . . . if you need it, use it. She’ll fly right off, just don’t do anything abrupt until you have airspeed and altitude.

Because of the light stick feel noted in Art’s writings, I get better results by trimming nose down on downwind leg, and then leaving trim alone. Not sure this is an intelligent practice, but it does provide more back pressure at the flare.

Every now and then I shoot THE PERFECT LANDING. In the Starlet, it’s a truly religious feeling, even though I have absolutely no idea what I did right. Oh, yeah. Guess who’s watching when I do. That’s right. Nobody, that’s who.

Conclusions

Aloft in a Starlet is a truly marvelous place to be. Most fun airplane I’ve ever flown. Of course, I’ve never flown a Starduster Too, so who knows? Maybe one day . . . But seriously, folks, if you wanna talk Starlet, call me at (210) 826-0045. Bear in mind that I’m a pilot, not a builder. I wouldn’t even taxi anything I built.

Lou, Keith, Art, you done good. Many, many thanks.

In The Winner’s Circle

Arlington, WA Fly-in, July 7-10, 1999

Stardusters did well at the Arlington ‘99 Fly-in, capturing awards in two categories. In the Custom-Built Plans category Donald Fauth, Port Townsend, Washington, was awarded Reserve Grand Champion for his Starduster Too, N147DA. (Don’s plane is featured in *Sport Aviation*, Sept.

‘99, p. 60.) Champion awards for their Dusters were given to Ray Siefker, Albany OR, for N1YW, and Vern Reynolds, Mt. Vernon, WA, for N1923S. Dave Mercer, Klamath Falls, OR, received a Champion award in the Custom Built Classics category for his Starduster Too, N377JB.

Oshkosh/Wautoma Fly-in, July 30-Aug. 1, 1999

Again Glen Olsen walked away with the Grand Champion Award for his Acroduster Too, N34LG. First prize went to Chuck Crabbenhoft, Sabin, MN, for his Starduster Too, N860SG, powered by an IO-540 engine. Second prize was awarded to Don Mortensen, Salt Lake City, UT, for his Starduster Too, N23UT, and the third prize was garnered by Bob McConnell, Naperville, IL for his Starduster Too, N42LD.

The Starlet SA500

Richard Bean

Dear fellow building enthusiasts, my name is Richard L. Bean and I have been asked to write a short report about an airplane that I just bought and am in the process of bringing back to life.

In the beginning God created heaven and earth and sailplanes, and for many years—about 25—that's all that I cared about. However, having spent many wonderful hours of building time (Cherokee II, BG12A, BG12B, BG12/16) and owning a Kestral 17 fiberglass sailplane, it came time to sell all and start my own business. Of course the flying time went right down the tubes, but I always knew that some day I would get back to it. The only thing that I did not know was that propellers and power and gas gauges and things would also become important. About this time the Internet was the thing to have so I logged on and found the Starduster web page and along with the web page I found the most beautiful little airplane, called the Starlet SA500, and at this point I was sure that I had to have one. About two weeks later one night

just before bed I logged on to get my e-mail and just for the hell of it I logged on to our favorite web page and lo and behold there was a Starlet for sale, at a price that I used to pay for 02 regulators (maybe a little bit more), but at any rate it was more than affordable.

You know that you are very lucky when you find out that you live about three miles from Glen Olsen of Starduster fame, and he is willing to come and look at your messy garage and the project that you have just brought home. Glen was very supportive and most importantly, liked what he saw!! It has an O-235 engine and by the looks of the welds we are sure that it is a factory fuselage. I have stripped all the fabric off and am now in the process of getting the fuselage ready for a good powder coat. The wings will be next and there is a little work to be done with them before covering.

I am really looking forward to not only flying my little jewel, but meeting all you people who have built and flown your beautiful and classic airplanes.



The Saga of 4226Y Continues

Les Homan

With more than 140 hours of flight time on the Chevy V-6 and the trip to Oshkosh/ Wautoma behind me I am very impressed with this concept. Before leaving for Oshkosh engine baffles were modified to separate exhaust piping and baffling. It sure made a difference in cooling. I made a prop pitch change in O'Neil, Nebraska and picked up 10 mph indicated. I flew in some 105-degree heat, climbed from 4,500 to 10,500 at 100 degrees and had no cooling problems. Temperatures went up about 10 degrees and just stayed there. The baffling is still not sealed as good as the final product. The prop pitch change also helped climb, it will out-climb the old 200 Lycoming without question. Speed is still not the same but I believe it is a result of fairings, nose bowl and final adjustments to prop.

The only adventure, unplanned, was when a spark plug wire came out of its mounting, touched the exhaust pipe and quit delivering spark. I was told the engine would work on five cylinders and I am now a believer. I was at about 1,500 AGL and flew 12 miles to the nearest airport. Power was pulled back to 3,200 rpm. I have had four-cylinder Lycomings run rougher with one of 8 plugs not working.

I am still working on leaning, believe less fuel can be used. At 3,600 engine rpm I am averaging about 10 gallons per hour.

We are now working on a new exhaust system, narrow, to allow the nose bowl to be brought in

about 12" to 14" in width. We will then make a new nose bowl specifically for the Starduster V-6, which will also fit the 350 V-8. The engine mount will be remade using a bed-type mount. Once this is finalized, by year's end we will be selling engine mounts for the 4.3 V-6 and 350 V-8. Nose bowls, cowlings and exhaust system for the V-6 will also be available. We will supply a parts list of all components so you can procure them on your own, or early next year we will offer a firewall forward package. This will include everything—firewall, engine mount, radiator, engine, engine instruments, prop, nose bowl, drive, wiring and plumbing. This unit will be run tested and ready to plug into wiring harness, fuel system, throttle and mixture assembly.

We have not worked out pricing yet but will let you know as soon as we get them out.

Recommendations for installation will include pilot lights on fuel and ignition switches placed where pilot cannot help but to see them. If the master is on and the switches for the fuel pump or ignition are off there should be a red light, and if the unit is on there should be a green light. Saves time in the quiet and sometimes embarrassing moments.

If you are working on a V-6 or V-8 installation on a Starduster product please let me know. I would like to get feedback and exchange ideas.

Les Homan

E-mail stardstr@pacbell.net or write Starduster.

(See photo, page 24)



If you push the stick forward, the houses get bigger, if you pull the stick back they get smaller. (Unless you keep pulling the stick back—then they get bigger again.)

Smiley Creek, Idaho

by Glen and Loretta Olsen, Salt Lake City, Utah

In late June of this year a few pilots spear-headed by Kent Bond, at Bountiful Skypark Airport, thought it would be fun to have a fly-in into a remote area. Smiley Creek, Idaho was chosen as the best place to go because some of the pilots had already been there and knew what a beautiful place it was, nestled in a big green valley surrounded by mountains and lakes. Loretta and I got excited about going and decided to leave on Friday, July 9th, in our Acroduster. Prior to leaving we called the Smiley Creek Lodge to see what accommodations they had. Most of the pilots take tents and sleep out. We wanted a room in the lodge but the only thing available was the Teepee Hilton #1, and the Teepee Hilton #2. These are regular type Indian teepee's only with wood floors, nice beds, and especially nice is the electric blankets. This gives you a clue to the temperature at night. The temperature is warm and nice in the day time but drops way down to the 20's and 30's at night.

We departed Skypark Airport at 6:45 am, about 15 minutes after Kent and Laura Bond had left in their RV4. Kent was a prior owner of a Starduster. He also had a Acroduster II project he had been working on, but later sold.

Our flight took us from Skypark airport, below the class B airspace, to Twin Falls, Idaho, and then direct to Sun Valley (Haley) airport. Loretta had never been to Sun Valley so we landed there and got fuel. The airport was filled with 23 Grumman Gulf Streams and various other jets, totaling 48. It was a sight to see all of those big corporations jets lined up on both sides of the runway. The man who fueled our airplane told us that this was a Billion

aire Convention and planes were from all over the world. Our biplane looked pretty small coming in for a landing among all those big jets.

We departed Sun Valley 30 minutes later and got our heading for Smiley Creek from the tower. Approximately 20 minutes later Smiley Creek was in sight. We flew over the summit and went into the valley. It was such a beautiful sight with the Sawtooth Mountains and the headwaters of the Middle Fork of the Salmon in the foreground. The landing strip is approximately 7100 feet above sea level, and 4900 feet long, with a grass strip that was freshly mowed. The runway is slightly up hill so we made our landing toward the south.



After tying the airplane down, we walked to the lodge which is a short distance from the airport. We wanted to check out our Teepee Hilton #1. We met the owner of the lodge and asked him if he had anything else available. He did have a cabin if

we wanted it. We did!! The cabin was very nice and clean with a furnace and bathroom with warm showers nearby. Loretta was a happy camper now.

Between Friday and Saturday morning, approximately 25 airplanes had arrived from Skypark and one from Ogden. The rest of Saturday was spent enjoying each other's company, and watching the wildlife on the mountain. We sat around the campfire that evening talking and laughing and talking some more.

Saturday morning the temperature was 19 degrees. The sky was clear so when the sun came up it was nice and warm. We had breakfast in the lodge with oatmeal and toast. Loretta ruined her oatmeal by putting raisins on it. It was a breakfast

Cont. on page 25



SA300 ZC-WCU, Doug Reeve, Johannesburg, South Africa

SA100 C-GJCK, Charlie Leake, McBride, B.C. Canada





SA300 G-MATI, Matt Clark, East Harrington, Sunderland, England

SA750 F-PYPF, Francois Hebrard, Levallois Perret, France





SA300, Clyde Murray, Abbotsford B.C. Canada

SA100, N40D, Harry Mackintosh, Wimbledon, England





SA300 N226Y, Les Homan, Brentwood, California

SA300 N5317Q, Ron Monson, LaVerne, California



that Hap Schnase would appreciate.

More airplanes started arriving so we went out to greet them. Later at our cabin we met John and Nancy Lane from Jerome, Idaho. They are the owners of Air Power Unlimited on the Jerome airport. John meticulously restores World War II airplanes. He will be flying a P51 to Oshkosh this year.

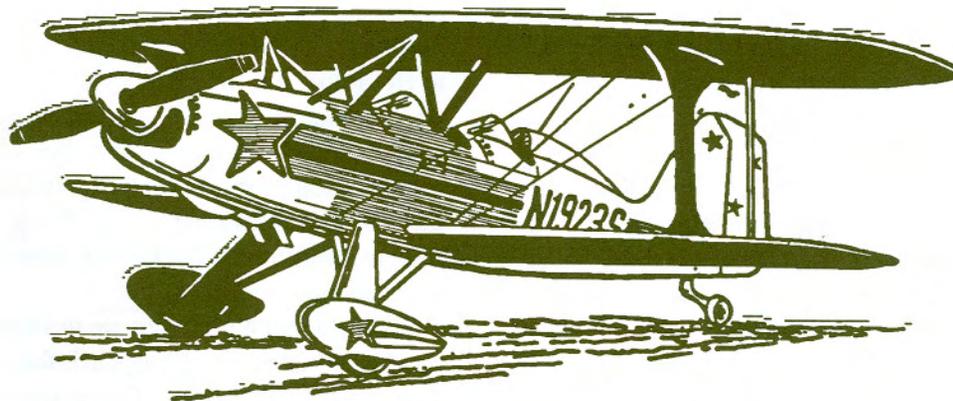
The courtesy car on the airport was already rented out, so Nancy and John offered to take us to Red Fish Lodge. Nancy explained the things we could do there at the lodge, so they dropped us and Andy and Lynne Venable off and said they would pick us up in a couple of hours while they went into Stanley airport on business. We rented a boat with a motor at \$10.00 an hour and toured the lake. It was so beautiful with the Sawtooth Mountains in the background. The water was so smooth and clear with a nice sandy beach. They had a lot of rentals. Small motor boats, wave runners, kayaks, paddle boats etc. After our boating trip we had lunch. They have a very nice restaurant or fast foods too. After lunch Loretta and Lynne waded in the water and made a sand castle while Andy and I took a short nap.

Nancy picked us up in their new 4 Runner and took us on some back country roads to see some beautiful wild flowers and some beautiful scenery. All of this and they wouldn't take any money. Thanks John and Nancy.

Back at Smiley Creek we prepared for our big

evening of BBQ ribs, salads and the whole works. It was great. We were also entertained by a singing group from Skypark. Hey, they were good. We finished off the evening around the campfire, telling some mighty good pilot stories, with lots of laughs. It got dark about 10:15 so we called it a day. They keep plenty of firewood for the tent areas. They have very nice rest rooms with flush toilets and warm showers. The whole area is just plush green grass. Sunday morning after spending a very warm and peaceful night, we got up to a temperature of 23 degrees. After our breakfast Loretta and I decided to leave early because of the 7100 elevation. Note: This is a high altitude airport and you should depart early as possible in the morning. All airplanes got off without any problems including our Acroduster. We had said our goodbyes, took off down hill toward the North, circled around and went on a scenic flight by the Sawtooth Mountains, with the pines and the beautiful lakes. We headed home and made a stop at the Jerome, Idaho airport for fuel. Bill Ahlstrom and his son were there fueling up as we arrived. We topped our tanks then flew over Burley, then over the North end of the Great Salt Lake. It was a beautiful sight. We landed at Skypark and unpacked.

It was a great trip and one we both enjoyed very much. I hear talk that they would like this to be an annual trip. It sure is fun and we highly recommend it.



Stardusters to Alaska (and back)

by Oscar Bayer, Arroyo Grande, CA

This whole adventure began a couple of years ago at a Starduster gathering when Bob Pisani spoke about the desire to fly to Alaska in his aircraft. He knew that I had made the trip in 1987 and therefore was the authority on such travels. At this meeting I told him that if he was really serious, I would be very happy to join him.

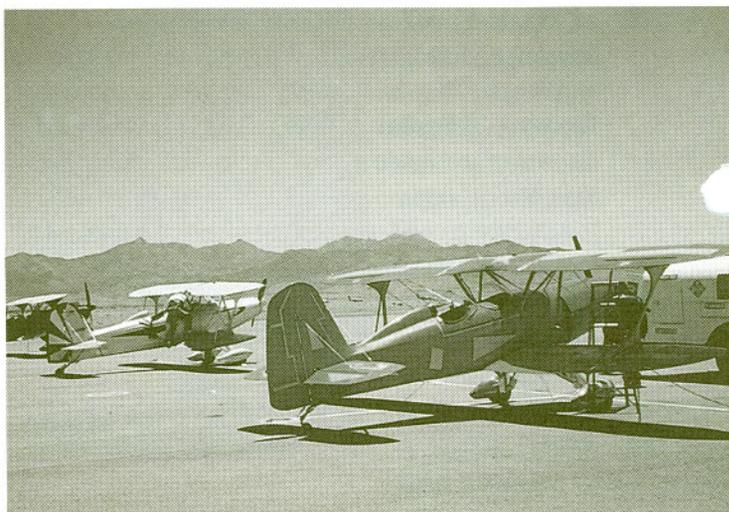
Oroville 1998—and Bob, Les Homan and I sat down to get really serious about a trip in 1999. We plotted to take a flight of four Stardusters to Bartlesville, OK to the Biplane Expo in early June and then proceed to Alaska.

By the time Oroville 1999 came around we three sat down to talk as we only had three aircraft committed to go. That was OK and we agreed to press on, leave on the 2nd of June from California, carry on with the plan to Bartlesville and then on to Alaska. I planned to take my brother Roy with me, Bob would take his son Shaun Treadway, and Les would take Mary. The serious part of planning began, obtaining the necessary approval from the Canadian DOT to fly our Experimental Aircraft in their airspace, obtaining a FCC Radio License for each aircraft, getting an endorsement to my insurance policy to fly the machine in Alaska, (my policy was good in the lower 48 States, Mexico and Canada, but not in Alaska - cost me an extra 100 bucks!) and of course obtaining the necessary survival equipment, navigational charts, etc. *The Plan—Meet at Noon on 2 June at Barstow Daggett, CA Airport.*

Roy and I were off the ground at the San Luis Obispo airport at 1135 local after waiting for some broken clouds and light rain showers to clear. Les and Bob were coming from Livermore, CA and we knew we were already late for our meeting, but we had agreed to wait until everyone arrived so weren't too concerned. We encountered better weather as we proceeded east and only had a small detour to climb over the clouds that covered the mountains near Gorman, CA. Had to climb to 8000 feet to top the ridge and the clouds. The rest of the trip was uneventful except that it was unusually cold in the California Desert—59F at Lancaster. After buying some fuel we settled down in the FBO of-

vice to wait for Bob and Les. At about 1615 hours Les called from Livermore—he was having trouble with his engine, (a new installation of a Chevrolet V-6) but that all was well and they would fly on down to Tehachapi, spend the night and meet us in Kingman, AZ the next morning. We agreed, Roy and I mounted up and flew over to Kingman where we tied the Starduster down and caught a cab to a motel for the night.

Day two found Roy and me back out at the Kingman airport at a little after 0900 to await the arrival of the two Green Machines. We figured that they would be in about 10 AM but they didn't arrive till noon as they had really cold weather at Tehachapi including some SNOW!



Anyway, we were off the ground at 1335 en route to Holbrook, AZ finally flying as a flight of three. As we proceeded into the mountains west of Flagstaff, Les said that he needed to land to check out some heating problems, and Bob had a flying wire that was a bit loose and really “flying.” At any rate, we landed at Williams, AZ where the boys tweaked their machines.

After about 45 minutes we were back in the air, flying just north of Flagstaff, then made a detour around the Meteor Crater near Winslow and on into Holbrook for some fuel and a soda. It had been very windy at Williams and was still that way

at Holbrook, gusts around 40 knots but pretty much down the runway. Anyway, we flew on east along the Interstate I-4 past Gallup, NM, down past Grants, NM where Les had an ignition problem. (The thing quit, but he got it started again) and on into the Double Eagle Airport just west of Albuquerque where we called it a day.

The next morning we spent some time locating an ignition coil for the Chevy engine on Mr. Homan's airplane. After that fix got into the air about 1130 hours. It was still pretty windy at Albuquerque which made for a bumpy ride but actually provided a bit of a tail wind at altitude. Our next stop was at Dalhart, TX where we got some lunch and some 100 low lead for the aircraft. We pressed on toward Bartlesville, landed at Woodward, OK for some gas and then on into Frank Phillips Field to join the other biplanes for the EXPO.

Saturday we participated in the activities at the Fly-in, listened to Les give his pitch on the Starduster family of aircraft and attended the banquet that night at the Convention Center in town. It was a well attended affair and other than missing the festivities on Friday, a very satisfactory time. Bob and I approached Les about his continuing on. Considering the problems he had experienced with the engine in getting to Bartlesville, we felt it would not be prudent for him to press on up the Alaskan Highway and then have to truck the machine home. He agreed and on Sunday the 6th of June Bob and I departed without Les.

Now the adventure really began, we were airborne out of Bartlesville at 1105 after waiting out a series of thunderstorms that had been rumbling through since early AM. Les got off about 15 minutes before us, fittingly a great bolt of lightning greeted his departure! Our departure was a bit more benign, the line of storms had passed and we could see bright skies off to the northwest where we were headed. By the way, Les was flying up to SE Kansas to visit with Mary's folks before going back to Oroville. Anyhow, we pressed on to the northwest past Wichita with a good tail wind and decreasing clouds and improving visibilities. We landed at Phillipsburg, KS for fuel, had to use the west grass runway due to the gusting wind. We borrowed the "airport car" and made our way to the "Chicken Inn" for some lunch. (the true name

of the place.)

After fueling the aircraft and the crew we were once more in the air toward Ainsworth, NB. As we proceeded, we found the winds coming stronger out of the northwest to the point that they approached 35K headwind. Needless to say we soon searched for an alternate and ended up landing at Ogallala, NB and quit for the day. A local motel provided a pick-up for the four of us and we soon settled in for the night. It turned out to be a great flying day over all, except for the wind

On the 7th of June we were off the ground by 0820 with still some tail wind and excellent flying conditions. We had planned about a 200 mile leg which led us to land at a small airport at Lusk, WY. The flight guide indicated that fuel was available and so after taxiing to the gas pump we shut down and waited for the "line person" to come out and provide some service. I walked over to the FBO office, found the door open and walked in. On a desk was a set of car keys and a message to please don't keep the car overnight, nothing about buying fuel. I found a phone and a book and called the local police and asked the dispatcher—how do I buy gasoline at the Lusk airport? She soon found a knowledgeable person who would appear at the airport soon.

After some 20 minutes a young fellow showed up, unlocked the fuel pump and turned it on, handed me the nozzle and said "pump away!" NOTHING! A bit later, after jiggling around with everything, looking in the tank, straightening the hose, and etc. I got a total of four gallons from the system. He gave up, I gave up, Bob gave up and we flew off to Douglas, WY where they really had some fuel.

We flew from Douglas on up along the east side of the mountains with a nice little tail wind, but finding increasing clouds, colder temperatures and light rain showers, we landed at Sheridan, WY for fuel, and then continued on to the northwest, dodging more rain and getting colder as we flew north. By now we were into higher terrain and seeing traces of snow in spots. Our next stop was Lewistown, MT where we planned to spend the night. This airport was an old World War II facility with lots of runways and an enormous old hangar where we parked our aircraft for the night due to approaching T-Storms. As it turned out,

there were no motel rooms available because of three conventions in town. The nice lady at the local FBO was able to find space for us at a local B&B about 5 miles out of town, and we spent a very pleasant night.

As it turned out, the decision to hangar the aircraft was a good one. It not only rained pretty hard at the airport, it also hailed some. After a nice breakfast at the B&B the next morning (8 June) we proceeded to the airport in the "loaner" car, got a weather briefing and sat down to wait for better weather before going on. Around 1030 things were looking up so we called Canadian Customs, filed a flight plan and launched for Lethbridge, Alberta for fuel and customs. The flight out of Lewistown was through bumpy skies but good visibility and clearing clouds. We crossed the border near Cut Bank, MT checking out with Great Falls radio as requested and soon landed at Lethbridge where things went well, no problems with the officials. We noted a bit of weather approaching, so pressed on north westward toward Calgary. Had to call the tower at a local airport on the outskirts of Calgary (Springbank) and they wanted us to land so they could look at our aircraft. We settled for a low pass and continued on to Rocky Mountain House to finish off the day. We borrowed the "airport car" and put up for the night in a small motel.

The 9th of June was another day of adventure. We were off the ground at 0820 with overcast skies, light rain in the area and the temperature at 45 degrees F! We flew on to the northwest staying at 4000 to 4500 feet MSL, mostly about 1000 feet AGL. The visibility was pretty good which helped avoid the light rain but it was cold and took us 2:40 to fly 217 nautical miles into Grand Prairie.

Our next leg to Fort St. John was in about the same weather conditions but only took us an hour ten. While having lunch it began to rain and Bob and I had to scramble to cover our open cockpits before things got too wet. We now were following the Alaskan Highway as we flew on toward Fort Nelson, and noted quite a bit of snow on the ground through the area around Pink Mountain. The weather did improve as we approached Fort Nelson and it even warmed up some. We tied down for the night and caught a ride into town, had a good meal at "Dan's Pub" and got a good nights sleep.

We had vowed to get an early start on the 10th so were up at 0500, started breakfast by 0600 but still didn't get out of the motel till 0715 for various reasons, and it was not till 0840 that we got off the ground. The route from Fort Nelson follows the highway through the Rocky Mountains and is one of the most spectacular flying trips one can hope to make. You don't have to get very high, only about 6000 feet MSL to cross the pass at Summit Lake, but the snow covered mountains tower on all sides and it is comforting to have the highway under you in case of an emergency.



The Alaskan Highway has been vastly improved since 1942 when it was first built. It is mostly paved, has been straightened and widened and the trees cut back from the road by about 100 feet on each side—a 1500 mile long runway. As we approached Watson Lake in the Yukon Bob was experiencing a rough running engine so when we landed we located a couple of mechanic types working out of the big old World War II hangar and pushed Bob's machine part way in the door where he proceeded to trouble shoot, locating a bad magneto, and after a couple of hours had things fixed. By this time it was getting late so we jumped in a taxi and went to town for the night.

We were airborne by 0845 on the 11th of June, with Bob's airplane running well, the skies clear and the temperature mild!—all this in the Yukon! Our route followed the highway still thru various ranges of mountains and along the shores of glacial lakes. We stopped at Whitehorse, the Capitol of the Yukon, for fuel, filed a flight plan and then continued along the highway through the Kulane country and across the border into Alaska, landing

at Northway to clear customs and refuel. It was interesting that Bob's aircraft was known to the agent from the activities of the former owner, but that's another story!



After checking the weather we decided to spend the night as Northway had a convenient motel, restaurant, bar and grill and bar right next to the gas pump. We tied down the airplanes, checked into our rooms, and got to fix our own dinner—grilled steaks, potatoes, and corn on the cob! Not bad for \$9.25 each in the wilds of Alaska!

We had really good flying weather on up the highway toward Fairbanks, turned southwest at Tok Junction and flew down the highway toward Anchorage, stopping at Gulkana for gas, and then on into Merrill Field. We parked the machines at a local FBO to get an oil change while we had lunch, and then tied them down in the visitors parking and caught a bus to a local motel. My friend, Dana Pruhs, soon came by, checked us out in his van and took us on a tour of some of the local attractions in Anchorage, including the largest float plane base in the world—Lake Hood, which is next to the International Airport. We had a big steak dinner at Dana's that night and found our way back to the motel. On the 13th, we (Bob, Shaun, Roy and I and Dana's family) drove down to Seward where we took a sea-borne cruise on the Kenai Fjord to look at the wild life—otters, humpback whales, seals, bald eagles, etc. The trip included a salmon bake on Fox Island and a look at a big glacier. We had a great day and enjoyed a fine dinner on the way back into Anchorage. We were up and "at 'em" on the 14th, had a good breakfast, found a laundromat where we freshened our duds, then checked out of the motel, met Dana for lunch

and were airborne on the "Ship Creel" departure out of Merrill Field bound for Talkeetna about an hour northwest. Upon arrival, we refueled the aircraft and tied them down for the night, found a neat motel right at the airport called "Latitude 62," checked in and went looking for Bob's, friend Al Knabe. Al lives most of the year in Livermore, CA where Bob has his hangar, and spends the summer in Talkeetna flying Cessna 185s on wheel skis. His gig is to haul mountain climbers up onto Mt. McKinley and drop them off, also flying tourists up to look at the mountain and land on the glaciers.

Al loaded the four of us into a Cessna, and off we went for a 2.5 hour tour of our highest mountain, landing on the glacier at the base camp where the mountain climbers start and end their climb, then flew us to another glacier where we also landed. At both stops we got out and stomped around in the snow, took pictures and generally enjoyed ourselves. That experience is one I would highly recommend to anyone who ever gets into Alaska. Back at the motel/restaurant we enjoyed the evening with a group of glacier pilots, lots of beer and nachos!—a great end to a great day!

On the 15th we had breakfast with Al, loaded our stuff in the airplanes and were airborne about 1030 up the highway toward Fairbanks. We passed Denali Park and the Dew Line radar station at Clear, AK and landed at the international airport after 2.1 hours flight time. We started calling motels looking for a place for a couple of nights and found that rooms were available, but at a high price—\$150 a night at the Comfort Inn! Finally settled for a Super 8 but still payed \$126 per room! Anyway, we settled in, caught a van to the university museum to see the recommended exhibits, and spent a warm evening. The temperature was 87 degrees in Fairbanks when we landed and the sun didn't set until 12:35 AM and then rose again at 0315! Never did get dark. Our plan for the 16th was to fly up above the Arctic Circle and land, then return to Fairbanks and start home. We were out at the airport at 0730 after breakfast in the "Northernmost Denny's in the World." We checked with flight service for weather on up to Bettles which was some miles above the Arctic Circle and had fuel. The forecast was for marginal VFR in smoke and light rain showers, so after waiting for some rain to move off to the west, we



Shaun, Al, Bob, Oscar & Ray at McKinley Base Camp

decided to give it a try and leapt off into the sky. As we flew north we found the conditions getting worse, the visibility dropping and the cloud layers lowering. After a brief consultation, we agreed it wasn't worth it and turned back to Fairbanks. We fueled up, refilled to Northway and flew down the Alaskan Highway through the smoke from many fires near Delta. We landed back at Northway and called it a day, putting up in the now familiar motel for the night.

The 17th of June dawned bright and clear at Northway and we quickly filed for a border crossing into Canada with our first landing to be Whitehorse. We were off the ground before 0800 and flying down the highway again when we ran into a line of showers and clouds that soon lowered down pretty close to the highway. About the time I thought we should turn back we came upon the airport at Beaver Creek, Yukon and promptly landed. We were the only aircraft here but after parking found a small building with an office and a woman running a small flight service station. She closed our flight plan and called the local customs folks who drove over to the airport to clear us. After that formality we borrowed the lady's car and

drove into the village for a fine breakfast.

Back at the airport things were improving and after checking the weather and a NOTAM about blasting along the highway on our route of flight we pressed on. Not more than 10 miles from Beaver Creek we ran out from under the overcast and had smooth sailing on into Whitehorse. We made a quick fuel stop, filed to Watson Lake and had a spectacular flight on into that airport. We stayed the night again at the "Big Horn Motel" and restaurant where the feature on the menu was "Pizza with Jalopeño."

We had great weather out of Watson Lake through the mountains and down to Fort Nelson. Decided to press on to Fort St. John as the weather forecast was favorable and we looked to having a late lunch there and then press on to Prince George. Once again we followed the Highway past Pink Mountain but about 50 miles north of Fort St. John we encountered a line of thunderstorms just west of us. The closer we got to the airport, the closer came the line of showers and decision time. A Lear Jet landing ahead of us reported a 20 knot wind shear on final and the tower said that rain was beginning to fall and the wind was up to 35

knots now (but pretty much down the runway)—what were our intentions? (otherwise- GO AWAY!) The nearest alternate was at Dawson Creek, about 40 miles down the line of showers—not good! Anyway, we landed and made our way to a big corporate hangar where we pushed our birds inside just before it started to HAIL! Our late lunch turned into just that, and also another night in Fort St. John as the storms stayed over the airport until late that night.

We pulled our two aircraft out of the hangar the next morning, filled up with 100LL and went into the FBO to pay up. And pay up we did—they charged us \$80.00 CDN per airplane for using the hangar space! Keep Canada green, bring money. By 9 AM we were off the ground and flying thru Pine Canyon and into Prince George for a fuel stop. We filed for an airport at 100 Mile House but had to land 8 miles north (108 Mile House) due to another shower sitting over our destination airport. One more fuel stop in Canada. We filed for a border crossing and into Bellingham, WA to clear customs, flew down the Fraser River past Hope, BC and landed in good shape, back in to good old U.S.A.

A note of interest about flying in wilderness type country—as we were coming out of Pine Pass north of Prince George and monitoring the Canadian enroute frequency, we heard a Cessna asking if there was fuel available at Mackenzie, a small airport just to our north. He had flown most of the way to Watson Lake and had to turn back. Heard him call “Mayday,” out of gas! Then he said he could make it. I guess he did!

We were out of Bellingham the next morning at 0800 under dripping skies. Had a 5500 foot overcast but the visibility was a good 10 miles, so we flew down over part of Whidbey Island, down the Hood Canal past Olympia and on into Hillsboro, OR where the weather had improved to just a scattered layer. After fueling and a pit stop we continued south through the Willamette Valley past Eugene and through the mountains to Medford, OR for more fuel and lunch. We followed Interstate 5 on south past Redding, CA and then flew direct to the Starduster home port of Oroville. We had hoped to find someone around to tell us how Les had made out with his Chevy powered Starduster, but it being Fathers’ Day, no one was around. However, the Green Machine was parked at the office, so we knew he at least solved part of his problems and was able to make it home!

At Oroville we parted company with Bob and Shaun. They chose to continue on to Livermore as it was only about another hour away, and Roy and I decided to spend the night and fly on to San Luis Obispo the next day, about a 2.5 hour trip. We had already flown over 6 and a half hours this day. So, on the 21st of June Roy and I made it back to the airport, bought some gas and were in the air by 0805. It was warm and smooth at 3500 feet so we had a good flight down the valley and across the hills into our home field.

So that’s the story—some 19 days and over 75 hours of flight time. Some unbelievable sights, cold and hot weather, clear skies and rain, hail and smoke, but no heart stopping moments. We met lots of fine people and had some unique experiences—LANDING ON A GLACIER!

Stardusters to Oshkosh (and back)

by Don Mortensen, West Jordan, UT

What does a pilot say after the first hour on his first date? “Well, enough about me, let’s talk about airplanes.” There is nothing more exciting than to tell someone of a recent flight you’ve just had. I’ve been known to become a real bore about this at times. I find I am constantly trying to re-live these experiences by telling them to others. So fasten your seat belts while I tell you of my first trip to an aviator’s paradise.

For someone who has dreamed of participating in the Oshkosh experience for the past twenty years and never able to arrange it, the take-off from Salt Lake Muni 2 (U42) was a long anticipated event. But it wasn’t without some preparations and trepidations. It had been almost twenty years since I had flown any kind of aircraft and most of those were with the Air National Guard and Air Force Reserve.

It wasn’t until an old friend, Clay Gorton, whom I had known when we were both living in Ohio, cajoled me into investing in the group purchase of the Starduster N1923S (later changed to N23UT) and affectionately called the Utah Too or U2. I’ll have to admit if it wasn’t for the coaxing of my wife, I probably would have given up on the idea quickly. I hadn’t flown a tail dragger since the T-6 (Class 56M) with the Air Force, and the thought of having to earn a private license just seemed too involving.

But I found that with the help of some good people like Glen Olsen, Hal Young, Clay and others, I was soon back in the saddle again. It was not unlike staying up all night and studying for a urine test, but I soon rediscovered the fun of flying in an open cockpit and seeing the world without filters.

Anyway, here we were, climbing out from a longer than usual take-off roll due to the extra weight of the luggage and the big guy in the front cockpit, headed for a join-up with Glen and Clay in Glen’s Acroduster at the mouth of Parley’s Canyon.

On Glen’s wing was Mike Gustafson, from Menlo Park, California, who had RON’D at Skypark. By the end of our first leg we were joined by Grant Cunning and his wife, from Ogden, Utah. So, there we were, a flight of four—proud products of the Stolp Starduster Corporation.

Incidentally, the big guy in front was Robert “Bob” Barrett, who was more than excited about going along when I told him I had an empty front seat. Bob is the Director of the Utah Department of Transportation, Division of Aviation, and is currently building a Lancair.



We proceeded as a flight of four, kinda, for two more legs with an RON at O’Neal, Nebraska. Found out that the U2 had to run full throttle to keep up with the others. I kept calling for them to give me a couple of inches until it sounded like an echo. The other thing that was a bit disconcerting was the discovery of an oil leak in old U2. Had to wipe down the engine and add a quart of oil at every stop.

But we arrived at Wautoma on schedule the second day out. Prior to taking off on our last leg, Clay suggested our flight of four do a formation fly-by at Wautoma. With our military background, Bob and I immediately thought finger-tip formation, a diamond four, with each aircraft tucked in neatly. Though neither of us had done any real

formation flying for many years, we were confident it would come back to us with a little practice. We didn't realize that the announcement of the intention to do the fly-by also constituted our briefing. By the time we were letting down and trying to form up in some reasonable order, we were over the field. It suddenly became every man for himself. We found ourselves scrambling for position for the paved runway or the grass strip, which run perpendicular to each other. It was the Keystone Kops with wings. That was the end of our fly-over. Bob characterized it as a typical Navy formation: "Same way, same day!"

From there, we spent several glorious days at Oshkosh and Wautoma. Each place offered some special experiences that will be indelibly imprinted in my book of life.

Some highlights:

- ◆ Landing on grass at Wautoma—A unique experience for me and a personal first.



- ◆ Wandering among the warbirds, antiques, and home-builts at Oshkosh—Such an array of aircraft was both exhilarating and mind-numbing.

- ◆ Visiting the EAA Air Museum filled with artifacts of many of the innovative, early, aviation pioneers—Well worth the trip by itself.

- ◆ Flying the Young Eagles—Among the Stolp Starduster products and pilots, we introduced at least thirty youth to the Young Eagles program, with the bulk of them on Sunday morning.

One little 12 to 13-year old girl, up for her first ride talked incessantly, which I think was her

way of overcoming any anxieties. Before going up, I explained to her what we would be doing so there would be no surprises. I also asked if she wanted me to do an aileron roll. "Oh, yes," she said, "I think that would be 'ooh-keh,'" in an accent reminiscent of Lawrence Welk. We climbed out quickly to the base of a few fair-weather clouds and punched through one of them. She was excited to have flown through a cloud. After dropping the nose to get some airspeed, I sucked back on the stick producing a few 'Gs' to demonstrate the sensation and went into the aileron roll. Coming out of it, she exclaimed, "Ooh! I didn't like tha-yat. It pulled my stomach down and put too much pressure on my head." After doing a low fly-by, we landed and parked. Climbing out, she became enthusiastic again and kept saying she thought she had done pretty good for her first ride, "don't cha think? Aeh?" This girl may yet find a future in aviation.

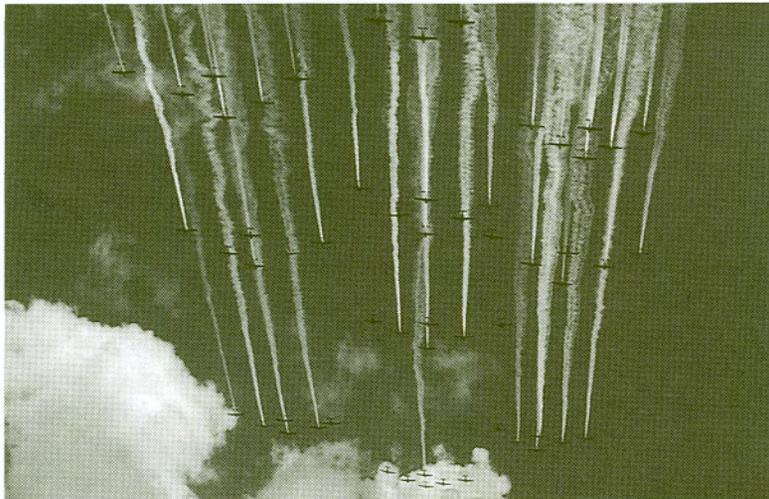
- ◆ Shopping the commercial buildings with everything and anything an aviator enthusiast would or could want—And shop talk with a variety of tech reps.

- ◆ The amazing sight of wall-to-wall aircraft parked in neat rows like cars at a sporting event—Many owners had pitched tents and camped for the duration.

- ◆ The unnerving crash of an F4U (Corsair) during the airshow on the second day—There is something lost in each of us with the loss of any rare warbird. However, I was surprised the day before by the announcer providing color for the airshow, when he said that there were more WWII aircraft flying now than there were thirty-five

years ago. Well, there was one less the next day. The pilot survived, although severely burned. By the time we left the next week, he had been upgraded from critical to serious. He may live to fly another day.

- ◆ A spectacular fly-over of sixty-four T-34 Mentors to commemorate its inaugural flight as a USAF Air Training Command primary trainer fifty years ago—Probably one of the largest collections of a single aircraft for a formation fly-over since WWII.



◆ The wonderful people—One couple from Chicago, Randy and Lynn Cordray, had just finished restoring a Stearman, but drove up to Oshkosh anyway. Because of some Starduster friends, they chose to make their headquarters at Wautoma. He had a trunk-full of tools and if one was needed, he had it. They fit right in. They were given the honorary title of “Stear-dusters,” and attended the awards banquet with the rest of us. Randy is director of Heritage Air Corps, Inc., in Naperville. He gave an open invitation to anyone in the area to come see what they are doing.

◆ The delicious Saturday night beef barbecue and the Wautoma Kiwanis Club Annual fly-in Breakfast on Saturday and Sunday morning—The barbecue was hosted by the Wautoma FBO for the people from town who wanted to join us and for anyone overnighting or camping at the airfield.

◆ The Stolp Starduster Corporation Awards Banquet, sponsored by the president and CEO, Les Homan, on Sunday evening—(Awards are listed elsewhere in this publication.)

◆ The side trip on our return RON at Alliance, Nebraska, to see the unusual and unique “Car Henge,” a copy of the famous Stonehenge of England, but built with cars instead of stone—There must be a message there somewhere.

Nothing unexpected happened on the return trip to Salt Lake, but it could hardly be described as uneventful. Weather and the seasons have many faces and nothing is ever the same, but such experiences are difficult to describe to anyone not familiar with flying.

Except for a slight diversion to avoid a thunderstorm the trip was routine. But that storm in the magnificent Wyoming Rockies pasted a masterful image in my mind’s photo album that no artist could possibly capture with either brush or camera.

The difference between commercial aviation and an open cockpit is only obvious to those of us who can truly fly with our faces to the wind.



Accident Report

By Matt Kerr, Bay City, MI

(See front-cover photo on Vol. 28, No.2, April 1998)

I blame the cause of my landing accident with my Starduster Too on July 1, 1998 on an under-inflated tail wheel tire. I can only blame myself for not adding air pressure to the tire that day.

I flew about an hour twenty minutes with one of my sons-in-law in the front cockpit. A very nice flight until on landing the airplane began to swerve left and right. It went off the runway to the right and a ground loop started. It hit the edge of the intersecting runway with the right wheel as the airplane was skidding sideways.

The right gear main leg bent about the mid point and folded under the fuselage. The airplane skidded to a stop on the right lower wing tip in the intersection of runway 18/36 and 5/23 at James Clements airport in Bay City, Michigan. The airport manager closed the field while we inspected the damage.

The engine stopped just before the gear collapsed with the propeller in a horizontal position. NO PROP STRIKE! This is hard to believe. I may have closed the throttle and mixture at the same time; I don't remember.

The lower fuselage cross-tube at the landing gear shock cord truss was bent by the right gear folding into it. The left landing gear cross tube was bent by the safety cable and the L.G. attachments on the lower longerons were twisted on both sides of the fuselage. The rear spar in the lower right wing was broken 62 inches from the wing root. Two wing ribs were broken, as well as the laminated wood wing tip bow.

The airplane was towed into my hangar by attaching a line from a tow truck boom to the engine lifting lugs after many hands helped to remove the engine cowling. The next day an inspector from F.A.A. GADO 8 at Grand Rapids, MI talked to me and inspected my bent bird. He had to call it an accident because of the damage to the wing. He told me to go ahead and repair it and list all repairs in the log, and he would not have to reinspect the airplane. Jon Staudacher of Staudacher Aerobatic Aircraft stopped in my hangar one day after the fabric was removed and the wing was resting on two saw horses. He told me that he would not hesitate to splice the spar. Jon worked a quick

moment-of-inertia equation and suggested that I put a 5/8 inch wide cap strip on top and bottom of the spar splice and use a carbon fiber and plywood doubler 11" long on both sides of the 11-inch long splice. Jon said that will be the strongest part of the airplane.

Jon milled a piece of spruce for the spar repair, gave me some plywood for new wing ribs and a roll of carbon fiber. He told me to use what I needed and return the rest in exchange for \$ 20.00. I used a doubler made of 3/32" birch plywood, 1/16" inch thick carbon fiber in the center and 3/32" birch plywood on the outside on the rear face of the wing spar for a total thickness of 1/4". The doubler on the front face of the spar is made of 3/32" thick birch plywood and 3/32" thick carbon fiber bonded with West System #105 resin and #205 hardener.

I recovered the wing with Stits 2.7-ounce Poly-Fiber and finished it through the Poly-Brush coats in my hangar. Jon Staudacher told me to bring the wing out to his aircraft shop and use his spray painting equipment at no charge when I was ready to paint Poly-Spray and #40 orange-yellow Poly-Tone.

I noticed an ad In Starduster Magazine that Dave Seaman of Sanduskey, Michigan was selling a Starduster Too landing gear. He is planning to use a spring gear on his airplane. The landing gear that I purchased from him happened to be one that I had welded for a friend twenty years ago. Paul Baker, T.K. Jones and I each built Stardusters at Baker's Yacht Service. I did the welding on all three airplanes. Paul sold his project to Dave Seaman two years before he died.

I bought a new wheel fairing from Starduster Corp. Dave Baxter and Les Homan were very helpful in sending landing gear reinforcing drawings and information. I altered the gear per their instructions. I worked all day every day for three months and flew the repaired Starduster on October 1, 1998. The wheel and landing gear leg fairings were repainted two months ago by friend Tim Buschle in exchange for a breakfast Dawn Patrol flight. Thanks to good friends, I was able to rebuild my Starduster in a short time.

Weight And Balance 101

by H. Clay Gorton

To maintain the center of gravity of an airplane within acceptable limits is essential to flight. About five years ago a light plane landed at the Skypark Bountiful airport. The plane had been purchased new and this was its first flight. The pilot and two passengers took off from Skypark on a warm afternoon with a full load of fuel and a packed baggage compartment. No checks were made of gross weight or density altitude. This omission cost the lives of three people. After taking off, the plane could not maintain altitude, plunged to the earth and crashed and burned. Whether the plane was nose heavy or over grossed is not known.

A friend of mine who worked as a radio operator for Panagra on flights to South America before the Second World War told of another serious accident related to weight and balance. A cargo DC-3 had been loaded at the Mendoza, Argentina airport, but the load master had failed to secure the cargo. When the plane took off the cargo shifted to the rear causing the plane to nose up. The pilot corrected by pushing the yoke forward. When the plane began to nose down the load shifted to the front of the cargo bay, pushing the center of gravity ahead of the forward limit of the airplane, making it impossible to recover from the dive. The plane was destroyed and all five occupants were killed.

Center of Gravity

What is the center of gravity? The c.g. is the point in any body at which all the weight appears to be concentrated. For instance, an irregularly shaped body suspended from the c.g. would be in balance regardless of its position. Conventional airplanes are considered to be in balance left to right, so the c.g. would be somewhere along a centerline from front to rear. The acceptable limits of the center of gravity for a Starduster Too are from 18 to 27 inches behind the firewall.

Moment Arm

If a uniform rod were suspended from the center and a weight were attached to one side at a given distance from the center, a corresponding weight would need to be attached to the other side

to keep the rod in balance. However, if the weight to be attached to the other side, were heavier than the first weight, balance would be achieved if the heavier weight were attached at a shorter distance from the center than that of the first weight. The force exerted by a weight at a given distance from the attach point is called the **moment**, or **torque**. As an example, a weight of three pounds attached four feet to the left of center would be balanced by a weight of three pounds attached four feet to the right of center, or by a weight of 12 pounds, attached 1 foot to the right of center. The distances to the two weights are defined as the moment arms of the weights. The torque— 3×4 ft lbs, or 12×1 ft lbs—would be the same.

Datum

The datum is an arbitrary line from which the distances to the various points of interest in weight and balance are measured. The vertical datum is usually taken as the firewall, since the manufacturer's specs for weight and balance are always given in distances from the firewall. However, in practice, distances are usually measured from the front point of the spinner, as it is easier to suspend a plumb-bob from that point to the floor, where the measurements are made.

The horizontal datum is conveniently measured along on the top aileron. To do weight and balance the airplane must be in a true horizontal position. This is achieved with a spirit level placed on the top horizontal aileron.

Weight and Balance Equation

To perform the weight and balance measurements, the weight of the aircraft under each wheel must be determined, and the distances from center of the point of contact of the wheels with the floor to the datum line must be measured. The procedure to find the center of gravity (c.g.) of the aircraft is a simple one. It comprises dividing the sum of the moments (distance from the datum to the point at which the weight is measured) by the sum of the weights.

The formula is written as follows:

$$\text{c.g.} = \frac{D_L \times W_L + D_R \times W_R + D_T \times W_T}{W_L + W_R + W_T}$$

where

D_L is the distance from the datum to the center point of the left wheel,

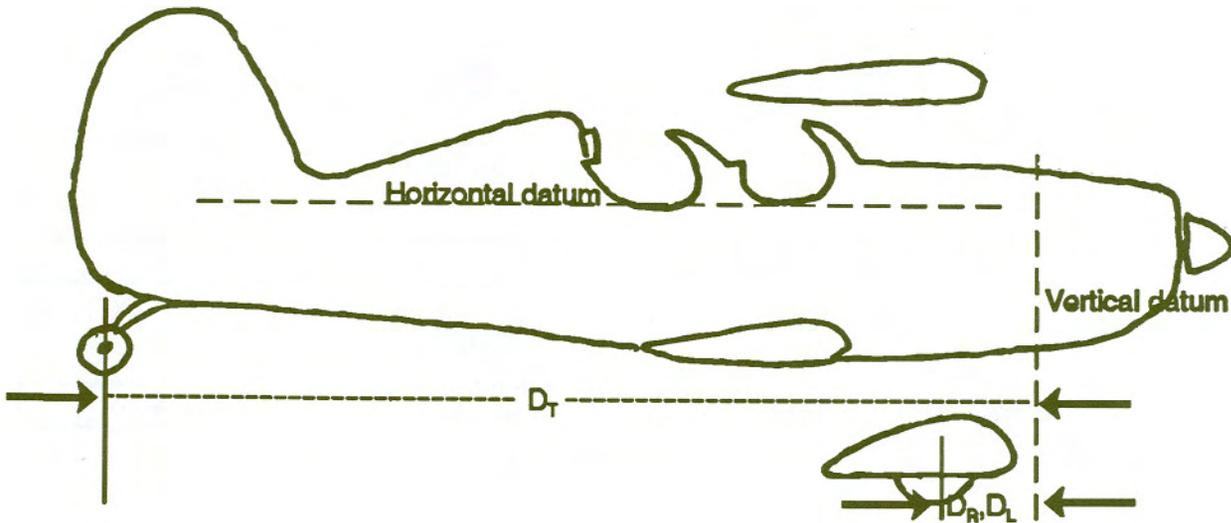
D_R is the distance from the datum to the center point of the right wheel (these two distances should be equal),

D_T is the distance from the datum to the center point of the tail wheel, and

W_L , W_R , and W_T are the weights measured under the left, right and tail wheels, respectively.

under the tail wheel (tare weight) must be subtracted from the scale readings.

Measuring the moment arm: Since the manufacturer's specs use the firewall as the datum, so shall we. The distance from the datum to the center of the point of impact of the front wheels with scales must be measured. It will be assumed that the two landing gear are properly aligned. Drop a plumb-bob from the firewall to the floor. Mark a line through the point on the floor parallel to the



Calculating Weight and Balance

Set-up: For a new aircraft the wt. & bal. measurement must be made with the aircraft completely empty—no oil and no fuel. (The FAA seems to prefer it that way.) However, if the aircraft is not new, it is more convenient to make the measurements with the oil already added, since the aircraft is never intentionally flown without oil.

The wt. & bal. calculations must be made with the aircraft in a horizontal position. First, scales must be placed under each of the three points of contact of the airplane with the ground. Next the aircraft must be brought to a horizontal position by raising the tail wheel until the top longeron is horizontal, measured by a spirit level.

Tare: Any additional weight on the scales, such as chocks under the main gear and the scaffolding

alignment of the two wheels, so that the distance from the line to each wheel is the same. This distance will be the moment arm for the weights, W_L and W_R .

Next, drop a plumb-bob from the center of the axle of the tail wheel to the floor. The distance from this point to the datum will be the moment arm for W_T . Determine the center of gravity of the empty airplane using Table 1.

The maximum forward c.g. limit is determined with the aircraft under the lightest load. (The center point of all the weights to be added except for the oil are located more than 18 inches behind the firewall, and so would increase the tail heaviness of the airplane.) So the max. forward c.g. limited would be calculated with no fuel, no baggage and one light pilot—dead stick landing! The

calculation of the max. forward c.g. limit is made using Table 2.

The max. aft. c.g. limit is determined with a fully loaded airplane. Two methods may be used to determine the c.g. of a loaded airplane. In the first method the moment arm to the center of gravity of each component must be measured. This is not always practical. For instance, where is the center of gravity of the oil in the engine, or where is the center of gravity of the pilot seated in the cockpit?

In the practical method, the airplane may be weighed with the components whose centers of

gravity are not easily determined placed in the airplane. Baggage weight must also be considered. However, rather than adding baggage to the airplane the baggage could be weighed and the moment arm of the baggage could be measured from the center of the baggage compartment and added to the calculation. The aft c.g. limit would be calculated using Table 3.

Tables 4, 5 and 6 are added as examples of the calculations for the three c.g.'s discussed above. It must be noted that the actual weights and distances will be unique to each aircraft measured.

Table 1. Empty Weight c.g. Calculations

WEIGHING POINT	WEIGHT (-Tare), W, lbs	MOMENT ARM, D, in.	MOMENT, D x W, in. lbs.
Right Main (R)			
Left Main (L)			
Tail Wheel (T)			
Total			

Table 2. Max. Forward c.g. Calculations

WEIGHING POINT	WEIGHT (-tare), lbs.	MOMENT ARM, in.	MOMENT, in. lbs.
Right Main (1)			
Left Main (2)			
Tail Wheel (3)			
Pilot			
Oil			
Total			

Table 3. Max. Aft c.g. Calculations

WEIGHING POINT	WEIGHT (-tare), lbs.	MOMENT ARM, in.	MOMENT, in. lbs.
Right Main (1)			
Left Main (2)			
Tail Wheel (3)			
Pilot			
Copilot			
Fuel, Main			
Fuel, Wing			
Baggage			
Total			

Examples—

Empty Weight c.g. Calculations

WEIGHING POINT	WEIGHT (-Tare), W, lbs	MOMENT ARM, D, in.	MOMENT, D x W, in. lbs.
Right Main (R)	610.0	7.5	4575.0
Left Main (L)	600.0	7.5	4500.0
Tail Wheel (T)	85.0	169.5	14407.5
Total	1295.0		23482.0

$$\text{c.g. (empty)} = \frac{610 \times 7.5 + 600 \times 7.5 + 85 \times 169.5}{610 + 600 + 85} = \frac{23482.5}{1295} = 18.13 \text{ in. behind firewall}$$

Note that the specified forward limit is 18 inches behind the firewall. The empty airplane is within spec.

Max. Forward c.g. Calculations

WEIGHING POINT	WEIGHT (-tare), lbs.	MOMENT ARM, in.	MOMENT, in. lbs.
Right Main (1)	610.0	7.5	4575.0
Left Main (2)	600.0	7.5	4500.0
Tail Wheel (3)	85.0	169.5	14407.5
Pilot	175.0	70.0	12250.0
Total	1470.0		35732.5

$$\text{c.g. (Max. forward)} = \frac{610 \times 7.5 + 600 \times 7.5 + 85 \times 169.5 + 175 \times 70}{610 + 600 + 85 + 175} = \frac{35732.5}{1470} = 24.3 \text{ in. behind firewall}$$

Max. Aft c.g. Calculations

WEIGHING POINT	WEIGHT (-tare), lbs.	MOMENT ARM, in.	MOMENT, in. lbs.
Right Main (1)	610.0	7.5	4575.0
Left Main (2)	600.0	7.5	4500.0
Tail Wheel (3)	85.0	169.5	14407.0
Pilot	200.0	70.0	14000.0
Copilot	175.0	40.0	7000.0
Fuel, Main	150.0	9.0	1350.0
Fuel, Wing	102.0	19.0	1938.0
Baggage	20.0	96.0	1920.0
Total	1942.0		49690.0

$$\text{c.g. (Max. aft)} = \frac{49690}{1942} = 25.58 \text{ in. behind firewall}$$

In the above example the maximum forward and aft c.g.'s of 18.13 in. and 25.58 in. are within the limits of 18 to 27 in. behind the firewall.

CLASSIFIEDS

ADVERTISING CLOSING DATES: MARCH 1, JUNE 1, SEPTEMBER 1 AND DECEMBER 1. CLASSIFIED ADVERTISING RATES \$5.00 PER COLUMN INCH, MINIMUM CHARGE \$5.00. MAKE CHECKS PAYABLE TO STOLP STARDUSTER CORPORATION. THANK YOU.

WANTED

Half share available in Starduster Too, 180 Lyc. Inverted fuel & oil, Hooker Harness. Radio & Xponder, based Kissimmee, \$10,000. Contact Matt Clark, UK 0044-191 4556892/101 5281715 or John Rossa, 407.396-7162. 994

FOR SALE

Starduster SA100, TT 330, O-290, 125 hp Lyc. 185 SMOH, new radio, transponder, elt, upholstery, prop. Cleveland brakes, strobe, nav & landing lights, elec. start, fresh annual. Spare upper & lower wings, engine case, fuselage, parachute. \$13,500 406.961-3554 after 5 pm MT. 994

Starduster TOO. Completed 1989. 455 TT, 355 SMOH on 200 HP Lyc. IO360A1A, 355 since new on Hartzell CS aerobatic prop. King KT-76A Transponder/Mode C & KLX-135A Comm-/GPS/Intercom. Cleavelands, Hooker harnesses, Scott tail wheel, ACK ELT. Always. hangared Full inverted fuel and oil. A&P built. Stitts fabric. Open cockpit. \$28,000 (Firm). 318-949-3707 or email 71612.3110@compuserve.com. 992

FROM THE STARDUSTER WEB SITE

Starlet Sa 500 Fuselage. If you have one or know of one, please contact Ben. Telephone: 208-375-1813. -- Posted: 18 Aug 1999

Starduster For Sale. 160 hp Lycoming engine, less than 200 hours on engine. Constant speed Hartzell, New King 97, Apollo Loran, Heated, Ready to Go. \$35,000 CDN (approximately \$21,000 USD) Contact Jeremy Dann. Posted 17 Aug 1999

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Starduster Too - SA300 Project Wanted!! I am looking for a project that is in need of a new home. I have the plans but would like a project that someone may have pushed to the back of their hangar. Send me the details and specifics of the project you want to get rid of and let's see if we can work something out. I would be interested in anyone that may have completed sections and parts as well. Even if you only have the wings completed, or just the fuselage only, drop me a line. Contact Dave Honaker, Dallas TX. 972-716-2527 Posted: 7/28/99

1971 Starduster Too SA300 for Sale. Right Side..Left Side.. 517 TT, 70 TT SOH O-320A2B engine. Paint and fabric new in 1986. Beautiful navy colors done by Starduster, always hangared. New tires and brakes, Cleavelands. Sigtronics intercom, nav lites, beacon, wired for Icom A-22 radio. Cover for front cockpit. Excel-lent workmanship. Annual done 7-99. Asking \$28,500.00 O.B.O. T. Somrдем located Apple Valley CA Telephone: 760-242-1117. 7/26/99

Starduster II Wanted!! Looking for one in flying condition. Send details, history, price, and pics if available. Will travel in Western U.S. to see the right plane. Mike Carter. Posted: 7/3/99

Stolp Starduster for Sale!! Aircraft has a Lyc. O-320, 160 hp engine. 145 hours total on engine and airframe. KX175B nav-com. Fresh annual. New brakes and tail wheel. Flies great. I'm restoring a Navy N3N and need the \$ to complete this project. Contact Vernon Anderson, Wisconsin. Telephone: 920-787-5357. Posted: 5/27/99

Starduster SA100 project parts for sale!! Builder's data plate and airworthiness certificate, original aircraft log, 517 hours TT. Right upper wing complete, left upper wing spars and ribs with both wing tanks, right lower wing complete, left lower wing spar broken at tip. Extra set of lower wings with ailerons. Fuselage with tail feathers and control systems, cowling, fuel tank, Bodel-Adams wheels and brake system, Ceconite 102 cover kit, windshield, set of McWhite stainless flying wires. \$3,500. O-290-G engine and prop available also. Contact Talmadge Scott, Hernando, FL. 352-637-3511. -- Posted: 5/23/99

Starduster Too Plans for Sale!! Opened but never used. \$200.00 OBO. Contact John Lansden. Posted - 4/26/99

SA100 Project for sale!! Welded fuselage, new spars, tail surface fixtures, some ribs. \$1,000.00. Contact Kevin Goehring, Lodi, CA (209)334-5064. -- Posted: 3/31/99

Starduster Too Project Wanted!! Contact Joe Antal, S.W. Ontario, Canada, 519-742-2196 (evenings). -- Posted 3/20/99

1981 Starduster Too for Sale!! 565 TT. Dual controls. O-320-G2A, 160 hp. Hartzell C/S, 131 hours SN Pistons, rings bearings, oil pump, full electrics, G Meter, 33 gallon, new KY97A, 604 Apollo. Cruise 130 mph. Always hangared. Built by AME. Enclosed roomy biplane with heat. \$42,500 CDN. Jeremy Dann, Canada. 902-538-8651. -- Posted 3/11/99

Starduster Too SA300. 1975 SA300 with O320 Lycoming. Approximately 250 hours on airframe and engine. Don't fly much in this cold climate in the winter. Vernon Anderson. -- Posted: 3/4/99

Bendix PS5C Carb Information. I have one of the first Starduster Too's built. I test flew it in August 1969 and have been enjoying it ever since! Lately I have been having problems starting it, but once warmed up no problem. I'm sure its the PS5C pressure carb and was wondering if anyone could give me a clue as to who I could contact or who would know what to adjust, etc. I wrote a Starduster Too Builder's Manual back in the 1970's. Did anyone ever see it? Contact Fred Meyer, based at Hollister Airport (35 miles south of San Jose, CA). 408-842-5418. -- Posted: 1/23/99



G-B0BT

Sivakusha Tm