Starduster

MAGAZINE

Dedicated to the
ACTIVE Homebuilders

JULY **1993**

July 93

RAMBLINGS FROM "BC PREZ"

WANT TO THANK EVERYONE FOR PARTICIPATING AND MAKING THE "13"TH OPENHOUSE ANOTHER SUCCESSFUL EVENT AT STARDUSTER.THO-I DID'NT GET THE OPPORTUNITY TO FLY WITH ANYONE.OR SPEND AS MUCH TIME WITH EVERYONE.AS I WOULD HAVE LIKED TO IT WAS THE MOST ENJOYABLE OPEN HOUSE FOR YOURS TRULY. WHO SAYS "13" IS BAD LUCK?
TIS ALWAYS A PLEASURE SEEING THE REGULARS SHOW UP AND GREETING NEW COMMERS- THE "SCOTT'S FROM RENO,FIST TIMERS AT FLABOB,BOTH HAD FINE AIRCRAFT- N23JV-STARDUSTER TOO-AND A 1930 STEARMAN-BOTH IMPECCABLE SHOW QUALITY AIRPLANES.
GOTTA GIVE THANKS AND CREDIT TO DAVE BAXTER FOR ORGANIZING,AND AIRPLANE OWNERS/PARTICIPANTS,THE GET TOGETHER THAT RESULTED IN GETTING A GREAT PHOTO SHOT OF ALL THE AIRCRAFT THAT WERE HERE FOR OPEN HOUSE. YOU WILL ALL GET TO SEE THE RESULTS OF THEIR EFFORTS SOON. POSSIBLE COVER FOR NEW CATALOG. CHECK WITH DAVE IF YOU WANT COPIES.
AGAIN "THANKS" TO ALL FOR YOUR SUPPORT AND CONTINUED CONFIDENCE IN STARDUSTER AND ME.

SEE YOU ALL AT WATOMA/OSHKOSH DURING EAA CONVENTION WEEK

R.C
"BC"

THE MESS ABOVE IS BECAUSE I DID IT
[TYPING ON COMPUTER]

BRENDA BECK-, SSC/TRES, IS IN FLORIDA BECAUSE OF ILLNESS IN HER FAMILY - HER RETURN DATE IS UNKNOWN AT THIS TIME- SHE IS SORELY MISSED. OUR PRAYERS ARE WITH HER & HER FAMILY

SUBSCRIPTION POLICY CHANGE

Due to printing and mailing costs we can no longer mail issues to subscribers whose subscriptions have expired. We will now be sending post cards advising you of the fact that your subscription has expired. Renewal dates are still on January 1st of each year. We hope you understand.

B.C. & D.C.B.

JULY 1993

THIS MAGAZINE USES MATERIAL SUBMITTED BY IT'S READERS. SOME ARTICLES OR STATEMENTS MAY NOT BE IN AGREEMENT WITH STOLP STARDUSTER CORPORATION OR IT'S EDITOR. INFORMATION AND ARTICLES USED ARE AT THE READERS RISK AND STARDUSTER MAGAZINE ASSUMES NO LIABILITY.

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We would like to thank all of this issues contributers and respond to one and all for some interesting information and photos.

FRONT COVER - N31DW owned and built by Weldon Glines, 1835 Dimple Del Rd., Sandy, Utah. Picture taken at the Starduster Open House May 1993.

BACK COVER - Starduster Open House, circle of the wagons, clockwise top N34LG, N78DW, N31DW, N711MH, N2HC, N300AD, N530LR, N81582, N4341G, N8331A, N73866, N23VJ, N490B, N4226Y, and N96576, spectacular photo.

SUBSCRIBE TO STARDUSTER MAGAZINE. PUBLISHED FOR PEOPLE BUILDING OUR AIRPLANES. TECHNICAL INFORMATION, NEWS & PICTURES. PUBLISHED FOUR TIME A YEAR. SUBSCRIPTION RATE IS $12.00 PER YEAR, $16.00 PER YEAR OVERSEAS MAILING (EXLUDING CANADA).

THE EDITOR IS ALWAYS LOOKING FOR TECHNICAL AND EDITORIAL CONTRIBUTIONS TO THIS MAGAZINE. WHICH IS DEDICATED TO THE HOME BUILDER AND SPORT AIRCRAFT ENTHUSIAST. PLEASE INCLUDE YOUR NAME, ADDRESS, TELEPHONE NUMBER AND YOUR "N" NUMBER ALONG WITH THE ARTICLE SUBMITTED.

NOTE: For information requests regarding Starduster aircraft please include postage.

ODDS & ENDS FROM YOUR EDITOR

Well we are half way through 1993 and as always I am still receiving letters and phone calls regarding all aspects of the Starduster line of aircraft, and as usual, behind in answering them.

The interest in buying, selling, building and flying is still strong and is very much alive.

I cannot believe how much some of these airplanes are bought and sold, traveling back and forth across the country. While others fly only a few hours a year, if at all. If you are buying or selling a Starduster, please make sure that all log entries are current; ADs and such. Make sure the title is clear. Get a third party A & P to do a pre-purchase inspection. Compare price, overall condition, total time on the engine, airframe, avionics, and most of all dye-check or magna flux the landing gear for cracks. These items should be in the best interest of both the buyer and the seller.

My Starduster Too N96576 now has over 700 hours in four years, and I'm certainly not the greatest pilot, so if I can do it so can you. Please take time to fly your airplane, take some one for a ride, go somewhere. Use your airplane, thats what its for. I want to see you at Arlington, Watoma, or Oshkosh. Fly Safe.

Regulations, Money and Politics

Your editor over the last ten years has written numerous letters on behalf of aviation. From the big airspace grab 88-2, to reasonable product liability limits, pilot responsibility, and the ever increasing costs by some new proposed legislation.

It should be of no secret to any of you (unless you've been hiding under a rock), that the Clinton administration is currently considering federal aircraft registration with some pretty hefty amounts. This would be in addition to our state and local registration fees which we already pay. If this wasn't bad enough, they are also proposing a substantial fuel tax increase. All of this is touted to help reduce the defict and make us pay our own way and for us, to pay for what we use. On the following page is a copy of a (guest editorial), as well as a letter that accuratley reflects my feelings about these subjects. I hate to use someone elses letter. But is says what I think, and I could not have said it any better. So please whenever there is a problem involving aircraft or airports, get involved, voice your right to fly.

D.C.B. Editor

The time is now for general aviation to begin effecting change

By BRIAN M. JACOBSON

WHITE LAKE, Michigan — As a young aircraft salesman for a Piper dealer and then a Cessna dealer, I could not find enough new airplanes to go around back in the glory days of the 1970s. And the people who were buying were individuals. Some of them had a need for airplanes in their business, but most were buying for pleasure. They wanted to fly on weekends, after work, on vacations and whenever the fancy struck.

In 1972 the average Cessna 172 sold for less than $20,000 and many buyers that year planned to turn them over for newer models in 1975 or 1976. How things have changed.

GUEST EDITORIAL

If someone had told me back then that by 1987 there would be no more Cessna 172s, I would have laughed at them. If someone had told me back then that in the 1990s there would be no more flying jobs, that thousands of pilots would be out of work and looking in other industries for employment, that the number of active pilots would be in a decline and that general aviation as we knew it then would be in danger of extinction, I would have laughed.

Maybe that is why we have the problems we have now. Perhaps too many of us laughed back then instead of keeping our eyes open for the signs of dark clouds brewing in our future. After all, the FAA was telling us that general aviation would continue to grow; the aircraft manufacturers were selling everything they produced, good or bad; and the GI Bill was propping up our flight schools. But the winds were changing, and we did not even see the storm approaching.

FAA officials backed off the TCAs for a while because of all the criticism, but they came in the back door later on when we failed to make as much noise. They got what they wanted, and we got more regulation.

How did it happen? The manufacturers will not admit it, but it started with them. Some of the engineering and design work they turned out was done for the sake of profit instead of safety. Accidents and incidents, followed by AD notes and Service Bulletins, left them open to greedy lawyers and sympathetic juries who awarded settlements to survivors and those who were injured.

Then it snowballed. Other lawyers — let's call them sophisticated ambulance chasers — went after deep pockets whether the accident warranted it or not.

Juries, not knowing anything about aviation, felt those left behind should be compensated. As time went by, the levels of awards increased dramatically. In a decade the industry was suffering, but it was not yet mortally wounded. Now it is dying.

To be sure, there were other reasons for the downfall of general aviation. Increased regulation did its share of damage. In the metropolitan centers where the highest number of aircraft were concentrated, it became almost impossible to fly.

New equipment had to be purchased. General aviation was relegated to small bits of the sky underneath that reserved for the airlines. It became dangerous to fly VFR in places such as New York City because there were too many airplanes in too little airspace.

The airlines were allowed to proliferate, causing more problems for general aviation. They invaded airports that had long been abandoned by passenger carriers and left for us to support. We were happy to do that, but they took over when they returned; they chased us away or made it hard for us to use what we previously enjoyed.

In looking over the past at everything that has happened to cause our problems, there is one thing in my mind that sticks out that we could have done differently.

With the exception of 1978, following the mid-air over San Diego involving the Boeing 727 that ran down a Cessna 172, we have not been vocal enough.

After that accident and the FAA's decision that TCAs were the answer to the mid-air crisis we faced, we all wrote letters. The FAA received a staggering amount of criticism and backed off. Sure, FAA officials eventually got what they wanted, but that was our fault also.

Now we have a new presidential administration that is going to take us back to the tax-and-spend days of the late 1970s. That means the government has to come up with new sources of funds — and general aviation is one of the targets.

In President Clinton's economic package is a proposal to increase registration fees on aircraft from the current $5 whenever an airplane changes hands to an immediate $90 per year, with that figure increasing annually until it becomes $270 per year in 1997. On top of that will be the effect of the new energy taxes that are being proposed that some say will amount to seven cents a gallon on avgas. That is the death knell for general aviation.

Obviously our message in the past has not been strong enough or clear enough. From here on we cannot accept compromise as a way of life. The entire general aviation industry — its jobs, the good it does for our country and our freedom to fly whenever we want — is at stake.

Remember 1978.

FAA officials backed off the TCAs for a while because of all the criticism, but they came in the back door later on when we failed to make as much noise. They got what they wanted, and we got more regulation.

There are slightly fewer than 700,000 pilots in this country, a formidable group to be sure. With numbers like that we should be able to effect the changes we want.

But we haven't.

It is time for each of us to write our elected representatives, the FAA and the alphabet groups that claim to represent us. The message must be prominent and clear: *No more compromise.*

Speak up loud and clear. We must fight for that which we have a right. If we do not, the expanding government bureaucracy will eat us alive and have our airplanes for desert.

LETTER

Given the enormity of the national debt, it probably comes as no surprise to anyone that general aviation user fees are again raising their ugly head. The stated rational, as usual, is to make general aviation operators pay "our fair share" of the costs regulating us.

The biggest cost is the cost of maintaining and operating the ATC system. In my observation, the ATC system is designed primarily for air-carrier and other turbine-powered aircraft. Many if not most general aviation operations could get along just fine without any ATC services. We do use much of it out of convenience or courtesy, but we really should not pay for what we really don't need.

All ATC facitily construction and staffing decisions are driven by numbers: numbers of operations provided ATC services. How do we show the FAA how much of their ATC system general aviation really needs? Easy: Don't use what you don't really need.

Each of us can start right now to reduce the costs of ATC system by reducing our personal demands for its services. How? When safety and FAR compliance permit:

1.) Go VFR instead of IFR.
2.) Do not file VFR flight plan; instead, leave a chart of your planned route and schedule with or friends, then call them on arrival of if your plans change or you are delayed.
3.) Do not request VFR flight following.
4.) Remain below FL 180 and circumnavigate or overfly TCAs, ARSAs and CZs without establishing radio contact.
5.) Use uncontrolled airports instead of tower-controlled airports (especially for training or proficiency flights involving multiple takeoffs and landings).
6.) Use private enterprise weather sources instead of FSS.
7.) In flight, don't call FSS unless you really need to, then outline your request before making the call so that you don't have to call them twice when one call would suffice.
8.) Don't request a flight test with an FAA inspector, if you can use a designated examiner in the private sector.
9.) Don't call on the services of FAA airworthiness inspectors or engineering staff if designated representatives or others in the private sector can perform the task.

You can probably think of others to add to this list. Each of us should think, before using any FAA service: Do I really need this? Then, if you don't need it, don't use it.

The federal government's figures attribute 26% off the FAA's budget to general aviation. By reducing our demand on the system, we reduce that number and reduce justification for charging us for services we don't really need. It's a start.

J. Scott Hamilton
Louisville, Colorado

MODEL #: O-360 SERIES
TYPE CERT #: 286

	59-10-07	A303/8	CYLINDER BAFFLE CLAMPS 07/01/59
	64-16-05	A303/8	TO PRECLUDE THE POSSIBILITY OF ENGINE OIL BEING DRAINED OVERBOARD AS A RESULT OF OIL SEAL FAILURE, CONTD. 07/10/64
	66-20-04	A303/8	TO PREVENT FURTHER FAILURES OF OIL FILTER ADAPTER GASKET, P/N 74904 08/27/66
	73-23-01	A303/8	TO PREVENT PISTON PIN FAILURES RESULTING FROM GRINDING CRACKS WHICH OCCURRED DURING MANUFACTURE 01/13/77

* INDICATES POSSIBLE RECURRING INSPECTIONS

[redacted] B02 [redacted]

FACTURER	AD NUMBER	FICHE/ROW	DESCRIPTION	EFFECTIVE DATE
RON LYCOMING				
Continued from page 16)				
	75-08-09	A303/8	TO PREVENT OIL PUMP FAILURES	08/18/77
	79-10-03 R2	A303/8	TO PREVENT LOSS OF INTEGRITY OF THE ENGINE TO AIRCRAFT MOUNTING BRACKET ATTACHING BOLTS, CONTD.	07/01/80
	79-15-02	A303/8	TO PREVENT INFLIGHT POWER LOSS DUE TO LOOSENING OF THE INTERNAL ECONOMIZER CHANNEL PLUG, CONTD.*	07/20/79
	*80-04-03 R2	A303/8	TO PREVENT HAZARDS IN FLIGHT ASSOCIATED WITH BENT PUSH RODS ON MODEL O-320-H SERIES ENGINES	04/25/88
	80-14-07	A303/8	TO PREVENT FAILURE OF VALVES DUE TO INSTALLATION OF IMPROPERLY HARDENED UPPER EXHAUST VALVE SPRING SEATS	07/07/80
	81-18-04 R2	A303/8	TO PREVENT FAILURE OF ENGINE OIL PUMPS	06/07/82
	87-10-06 R1	A303/8	TO PREVENT POSSIBLE ROCKER ARM FAILURE AND LOSS OF ENGINE POWER	09/01/89
	*91-14-22	A303/8	TO PREVENT LOOSENING OR FAILURE OF THE CRANKSHAFT GEAR RETAINING BOLT, WHICH MAY CAUSE SUDDEN ENGINE FAILURE	08/19/91
	92-12-05	A303/8	TO PREVENT PISTON PIN FAILURE, OR PISTON RELEASE, AND ENGINE FAILURE	07/10/92
	92-20-07 P	A303/9	TO PREVENT DISRUPTION OF FUEL FLOW TO THE ENGINE, WHICH CAN RESULT IN A LOSS OF ENGINE POWER	09/14/92

*ODEL #: HO-360 SERIES
TYPE CERT #: 286

TECHNICAL TIPS

Pilot Operators Handbook

One of the several items that are sadly lacking in homebuilt aircraft is an operators handbook, and in most cases is difficult to come by. Some of the reasons are: differences between aircraft of the same Make, due to engine, prop, and individual builder preferences.

So with this in mind I have printed a copy of my P.O.H. It was taken from a C-172 manual and adapted to my airplane. You of course can either copy mine or substitue your own numbers and make your own.

Also as you builders finish your airplanes and start into your 25 to 40 hour test flight period, accurate performance numbers should be recorded, so that you can build your own P.O.H. If there is enough interest I can have some printed up for those of you who would like one. I'm not sure what the cost would be, but like I said only if there is enough interest.

The numbers listed are for a 180 HP Lycoming, installed in a Starduster Too. If you have a 540 Lycoming or other engine, your numbers will of course be different, and if you do have an airplane with a big engine, please send me a copy of your numbers.

The following is a reasonably accurate description of a "plans" built Starduster Too. I hope it will be of value to you.

D.C.B. Editor

SKY OF DREAMS

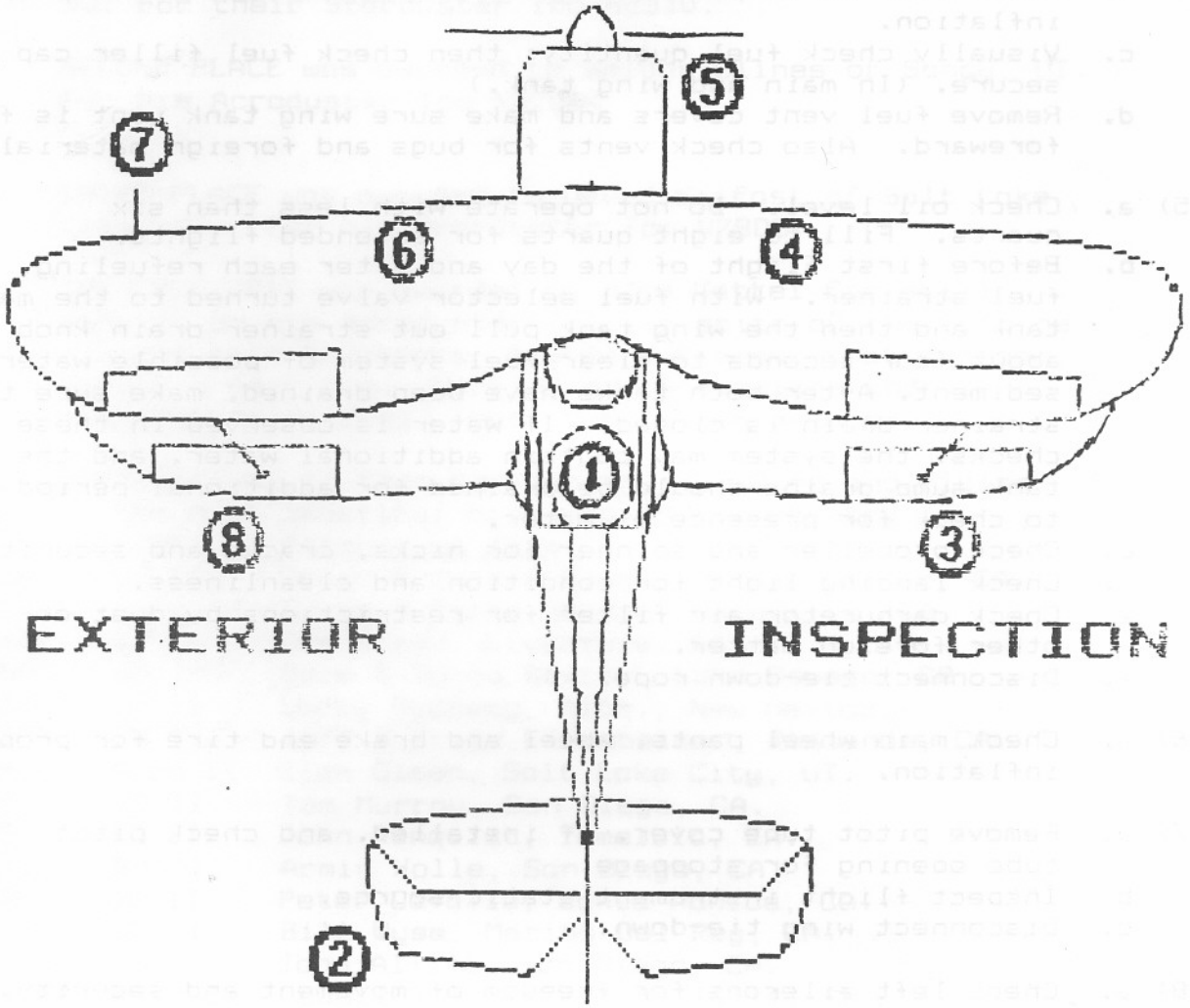
Living the dream of flight

"If you fly it, they will come."

"Is this heaven? No, it's barnstorming."

Barnstormer pilots frequently make allusions to the film *Field of Dreams* when trying to explain the appeal of a biplane to modern-day Americans. "The film was about baseball, but they could have been talking about barnstorming," says barnstorming pilot Stuart Sandy MacPherson. In fact, he believes that a simple paraphrase of one of the film's closing soliloquies explains better than anything else why barnstorming still works.

"People will come. They'll come to fly for reasons they can't even fathom. They'll drive to the airport, not even sure why they're doing it. They'll walk up to the biplane, as innocent as children, longing to fly. 'Of course, we'd love to take you up,' I say. 'It's only $25 per passenger.' They'll pass over the money without even thinking about it. For it is money they have and freedom that eludes them. They'll climb into the cockpit and lift into the sky on a perfect afternoon. And they'll find what it is they've been searching for. They'll see the earth for the first time, looking down on the farms and the towns, the clouds, and the coastlines like they remember from their dreams as children. They'll wheel and soar and dive and touch the sky, and it will be as if they dipped themselves in magic waters. Their freedom and their joy will be so thick, they'll have to brush it away from their faces. And they'll really live that dream of flight, which, until this moment, had always been denied them. It will remind them of other dreams and other desires, dismissed casually or grudgingly over the years, and rekindle their wonder once again."



* NOTE *: Visually check aircraft for general condition during walk-around inspection. In cold weather, remove even small accumulations of frost, ice or snow from wing, tail and control surfaces. also, make sure that control surfaces contain no internal accumulations of ice or debris. If night flight is planned, check operation of all lights, and make sure a flashlight is available.

1) a. Remove control lock.
   b. Check ignition switch OFF.
   c. Turn on master switch and check fuel quantity indicators; then turn off master switch.
   d. Check fuel selector valve handle on main tank.

2) a. Remove rudder gust lock, if installed.
   b. Disconnect tail tie-down.
   c. Check control surfaces for freedom of movement and security.
   d. Check trim control rod for security.
   e. Check rudder and tail wheel and tire pressure.

3) a. Check right ailerons for freedom of movement and security.
   b. Check aileron push-pull and interconnect rods and tubes.
   c. Check flying and landing wires.

4) a. Disconnect wing tie-down.
   b. Check main wheel pants, wheel and brake and tire for proper inflation.
   c. Visually check fuel quantity; then check fuel filler cap secure. (In main and wing tank.)
   d. Remove fuel vent covers and make sure wing tank vent is facing foreward. Also check vents for bugs and foreign materials.

5) a. Check oil level. Do not operate with less than six quarts. Fill to eight quarts for extended flights.
   b. Before first flight of the day and after each refueling, drain fuel strainer. With fuel selector valve turned to the main tank and then the wing tank pull out strainer drain knob for about four seconds to clear fuel system of possible water and sediment. After both tanks have been drained, make sure that strainer drain is closed. If water is observed in these checks, the system may contain additional water, and the fuel tank sump drains should be drained for additional period of time to check for presence of water.
   c. Check propeller and spinner for nicks, cracks and security.
   d. Check landing light for condition and cleanliness.
   e. Check carburetor air filter for restrictions by dust or other foreign matter.
   f. Disconnect tie-down rope.

6) a. Check main wheel pants, wheel and brake and tire for proper inflation.

7) a. Remove pitot tube cover, if installed, and check pitot tube opening for stoppage.
   b. Inspect flight instrument static source.
   c. Disconnect wing tie-down.

8) a. Check left ailerons for freedom of movement and security.
   b. Check aileron push-pull tube and interconnect.
   c. Check flying and landing wires.

BEFORE STARTING THE ENGINE.

(1) Seats, Seat Belts and Shoulder Harnesses -- Adjust and lock -- Front stowed when solo.
(2) Fuel Selector Valve -- Main.
(3) Radios and Electrical Equipment -- OFF.

STARTING THE ENGINE.

(1) Master switch -- ON.
(2) Carburetor Heat -- Cold.
(3) Primer -- 2-6 strokes as required (none if engine is warm) Close and lock primer.
(4) Throttle -- Open 1/8" to 1/2 ". Boost pump on pressure up to 14 psi.
(5) Propeller Area -- Clear.

(6) Ignition Switch on left mag button-- START (release when engine starts) and select both mags.
(7) Mixture -- To rich while cranking when engine fires.
(8) Oil Pressure -- Check.

BEFORE TAKE-OFF.

(1) Flight Controls -- Check for free and correct movement.
(2) Fuel Selector Valve -- Main.
(3) Elevator Trim Control -- TAKE-OFF setting.
(4) Throttle setting -- 1700 RPM.
(5) Engine Instruments -- Check.
(6) Magnetos -- Check (RPM drop should not exceed 125 RPM on either magneto or 50 RPM differential between magnetos).
(7) Carburetor Heat -- Check operation.
(8) Flight Instruments and radios -- Set.
(9) Boost pump on for take off and landing.
(10) Set clock time off.

TAKE-OFF - Pilots should not operate off of airports of less than 2000' in length, unless they are proficient with this type of airplane.

(1) Carburetor Heat -- Cold.
(2) Power -- Full throttle, stick forward
(3) Normal take-off distance ground roll is 500'-700', 0-wind, hard surface, gross weight.
(4) Elevator Control -- Lift nose at 60 MPH.
(5) Climb Speed -- 75 to 85 knots.

ENROUTE CLIMB.

(1) Airspeed -- to 90 knots.
(2) Power -- Full throttle.
(3) Mixture -- Full rich (mixture may be leaned above 5000 feet).
(4) Boost pump on for switching tanks.

CRUISING.

(1) Power Normal cruise 2,450 rpm at 8.5 gallons per hour.
(2) Elevator Trim Control -- Adjust.
(3) Mixture -- Lean for maximum RPM.
(4) Cross-country cruise altitude are selected by the lowest safe altitude due to outside air temperature for comfort, with winds aloft a consideration. These airplanes do not do well above 8,000' and with high temperatures and high altitude generally fly tail low.
(5) Due to short wing span and two wings the aircraft handles turbulance better than other aircraft.
(6) (Stalls power on and power off) are some what disconcerting to new pilots as they expect a stall warning or a shutter and an abrupt break. This does not happen with the Starduster due to the difference in incidense between the two wings with another factor being the M-6 airfoil. It maintains a constant center of lift which helps make the stalls more solid and predictable.

After stall occurs a high sink rate is the result, power on stalls are much the same except the nose is much higher.

* NOTE *: Maximum Cruise Speed 130 knots.
Maximum Structural Speed 160 knots.

LET-DOWN.

(1) Mixture -- Rich.
(2) Power -- As desired (generally below 2000 RPM).
(3) Carburetor Heat - As required to prevent carburetor icing.

BEFORE LANDING.

(1) Fuel Selector Valve -- Main.
(2) Mixture -- Rich. Boost pump on.
(3) Carburetor Heat - Apply full heat before closing throttle.
(4) Airspeed -- 70 to 80 knots.

BALKED LANDING (GO-AROUND).

(1) Power -- Full throttle.
(2) Carburetor Heat -- Cold.

NORMAL LANDING - Pilots should not attempt landings on airports with runways shorter than 2,000' until proficient.

(1) Touchdown -- Main wheels and tail wheel (3 point).
(2) Landing Roll -- Straight using rudder as necessary. Landing roll is from 500' to 1,000' depending on whether light or heavy braking is used, along with current wind conditions.
(3) Braking -- Minimum required.

CROSSWIND LANDING.

(1) Landings of 10 knots or less during crosswind conditions should only be considered either at 45 or 90 degrees.
(2) If crosswinds of more than 10 knots are encountered a different airport should be considered.
(3) If fuel or other factors warrent no other choice and a landing must be made during a significant crosswind, wheel landings are the best consideration.
(4) The best approach speeds for wheel landings are between 80 and 90 knots. Some nose down trim will assist with wheel landing by releasing the back pressure after touch down. Power reduction after touch down coupled with alert rudder, aileron and braking as necessary.

* NOTE *: Crosswinds from left are generally more dangerous than ones from the right and down crosswind landings should be avoided if at all possible.

AFTER LANDING.

(1) Clear Active runway.
(2) Carburetor Heat -- Cold.

SECURING AIRCRAFT.

(1) Radios and Electrical Equipment -- OFF.
(2) Mixture -- Idle cut-off (pulled full out).
(3) Ignition and Master Switch -- OFF.
(4) Install pitot and fuel vent covers.
(5) Check ELT 121.5, especially after hard landings.

FORCED LANDINGS.

Precautionary Landing With Engine Power.

Before attempting an "off airport" landing, one should drag the landing area at a safe but low altitude to inspect the terrain for obstructions and surface conditions, proceeding as follows:

(1) Drag over selected field with about 80 knots of airspeed, noting the preferred area for touchdown for next landing aproach.
(2) On downwind leg, turn off all switches except the ignition and master switches.
(3) Make landing approach as low and slow as possible, with speed control essential.
(4) Before touchdown, turn off ignition and master switches.
(5) Land in a low tail attitude.
(6) With NO POWER, a glide of 80 to 90 knots maintaining forward speed is important. Glide speeds of 70 or lower will result in the sink rate over coming the forward speed, due to drag of extra wing and fling wires. Slips can be of great help in this situation.

FIRES.

Engine Fire During Start On Ground.

Improper starting procedures such as pumping the throttle during a difficult cold weather start can cause a backfire which could ignite fuel that has accumulated in the intake duct. In this event, proceed as follows:

(1) Continue cranking in an attempt to get a start which would suck the flames and accumulated fuel through the carburetor and into the engine.
(2) If the start is successful, run the engine at 1700 RPM for a few minutes before shutting it down to inspect damage.
(3) If engine start is unsuccessful, continue cranking for two to three minutes with throttle full open while ground attendants obtain fire extinguishers.
(4) When ready to extinguish fire, release the starter switch and turn off master switch, ignition switch, and fuel selector valve handle.
(5) Smother flames with fire extinguisher, seat cushion, wool blanket, or loose dirt. If practical try to remove carburetor air filter if it is ablaze.
(6) Make a thorough inspection of fire damage, and repair or replace damaged components before conducting another flight.

(7) It can also cause damage to the starter.
(8) Operation at temperatures below freezing should require engine preheat. This will help the starting procedure emensly.

Engine Fire In Flight.

Although engine fires are extremely rare in flight, the following steps should be taken if it is encountered:

(1) Pull mixture control to idle cut-off.
(2) Turn off fuel selector valve handle.
(3) Turn off master switch.
(4) Establish a 120 MPH glide.
(5) Close cabin heat control.
(6) Select a field suitable for forced landing.
(7) If fire is not extinguished, increase glide speed in an attempt to find an airspeed that will provide an incombustible mixture.
(8) Execute a forced landing as described in paragraph Emergency Landing Without Engine Power. Do not attempt to restart the engine.
(9) Slipping the aircraft to keep fire away from the occupants is also a consideration.

Electrical Fire In Flight.

The initial indication of an electrical fire is the odor of burning insulation. The immediate response should be to turn off the master switch. Then close off ventilating air as much as practicable to reduce the chances of a sustained fire.

If electrical power is indispensable for the flight. an attempt may be made to identify and cut off the defective circuit as follows:

(1) Master Switch -- OFF.
(2) All other switches (except ignition switch) -- OFF.
(3) Check condition of circuit breakers to identify faulty circuit if possible. Leave faulty circuit deactivated.
(4) Master Switch -- ON.
(5) Select switches ON successively, permitting a short time delay to elapse after each switch is turned on until the short circuit is localized.
(6) Make sure fire is completely extinguished before opening ventilators.

MANEUVERS - UTILITY AEROBATICS CATEGORY.

This airplane is not designed for purely aerobatic flight. However, in the acquisition of various certificates such as commercial pilot, instrument pilot and flight instructor, certain maneuvers are required by the FAA. All of these maneuvers are permitted in this airplane when operated in the utility aerobatics category. In connection with the utility aerobatic category, the following gross weight and flight load factors apply, with maximum entry speeds for maneuvers as shown:

Gross Weight . . . . . 1706 lbs.
Flight Load Factor . . . . . +6 -6

In the utility aerobatics category, the baggage compartment must be empty.
No aerobatic maneuvers are approved except those listed below:

MANEUVER	RECOMMENDED ENTRY SPEED
Chandelles	120 MPH (104 knots)
Lazy Eights	120 MPH (104 knots)
Steep Turns	112 MPH (87 knots)
Spins	Slow Deceleration
Stalls (Except Whip Stalls)	Slow Deceleration
Slow Rolls	120 to 160 MPH
Loops	155 MPH

* NOTE *: Aerobatics require lots of altitude.

*Abrupt use of controls is prohibited above 95 knots.

Aerobatics that may impose high loads should not be attempted. The important thing to bear in mind in flight maneuvers is that the aircraft increase speed quickly with the nose down. Proper speed control is an essential requirement for execution of any maneuver, and care should always be exercised to avoid excessive speed which in turn can impose excessive loads. In the execution of all maneuvers, avoid abrupt use of controls.

AIRSPEED LIMITATIONS KTS IAS

Never Exceed Speed (glide or dive, smooth air) . . . 180 knots
Maximum Structural Crusing Speed . . . . . 160 knots
Maximum Speed. . . . . 130 knots
*Maneuvering Speed. . . . . .95 knots

*The maximum speed at which you may use abrupt control travel.

AIRSPEED INDICATOR MARKINGS.

Never Exceed (glide or dive, smooth air).. 180 knots (red line)
Caution Range. . . . . 160-180 knots (yellow arc)
Normal Operating Range . . . . . 56-160 knots (green arc)

ENGINE OPERATION LIMITATIONS.

Power and Speed. . . . . .180 BHP at 2700 RPM
Engine Lycoming O360-A2A.

ENGINE INSTRUMENT MARKINGS.

Oil Temperature Gage.
  Normal Operating Range . . . . . .Green Arc
  Maximum Allowable. . . . . 245>F=F (red line)

Oil Pressure Gage.
  Minimum Idling . . . . . .25 psi (red line)
  Mormal Operating Range . . . . . .60-90 psi (green arc)
  Maximum. . . . . 100 psi (red line)

Fuel Quantity Indicator (Main Tank and Wing Tank).
  Empty. . . . . E (red line)
  Main Tank : 30 gallons - 28 useable with inverted sump in use.
  Wing Tank : 16 gallons - 15 useable. 96 octane minimum.

Tachometer.
  Normal Operating Range:
    At sea level. . . . . .2350-2500 RPM (inner green arc)
    At 5000 feet. . . . . 2350-2600 RPM (middle green arc)
    At sea level. . . . . .2350-2700 RPM (outer green arc)
  Maximum Allowable. . . . . .2700 RPM (red line)

 ** AVOID CONTINOUS OPERATION BETWEEN 2150 AND 2350 RPM ** (red arc)
      ** DUE TO PROPELLER RESTRICTIONS **

Carburetor Air Temperature Gage (OPT).
  Icing Range. . . . . -15 to 5>F=C (yellow arc)

OPERATING LIMITIONS AT GROSS WEIGHT.

  Stall Power OFF. . . . . 56 knots IAS
  Stall Power ON . . . . . 50 knots IAS
  VY Best Rate . . . . . 90 knots IAS
  VX Best Angle. . . . . 70 knots IAS
  Best Glide . . . . . 80 knots IAS
  VA Maneuvering Speed . . . . . 95 knots IAS
  VNE Red Line . . . . . .180 knots IAS

RATE OF CLIMB.

Gross weight at sea level.
  70 knots indicated.....1,500' per min.
  80 knots indicated.....1,000' per min.
  90 knots indicated.....500' per min.

AFTER WINTER PRE-FLIGHT

Empennage
ELT & Battery
Lights
Tailwheel
Trim Tab

Wing
Fuel Vents
Rigging Flying Wires
Ailerons

Battery
Recharge at
1.5 amps
Leaks & Cracks

Cockpits
Seatbelts
Instuments
Controls
Placards
Circuit Breakers
Fire Extinguisher

Landing Gear
Wheels & Brakes Tires
Shock Cords
Wheel Covers
Gear Fairings
Hydraulic Fluid
Master Cylinder

Engine
Engine Mounts
Fuel Lines
Cracks Nips & Chips
In Prop Spinner
Filter
Hoses

IN AIRCRAFT

A - Airworthiness Certificate
R - Registration For Aircraft
R - Radio License for Aircraft
O - Operating Limitations
W - Weight & Balance

IN PILOTS POSSESSION

P - Pilots License
M - Medical Current
R - Radio License

Also required, accurate log book enteries, recent currency pilot, and appropriate enteries for all work done on aircraft, and engine.

NOTE : For long Cross-Country flights water and survival equipment should be included.

May 29, 1993
2941 N. Rio Verde Dr.
Tucson, AZ 85715-3544

Dave Baxter
5725 S.W. McEwan Rd.
Lake Oswego, OR 97035

Dear Dave,

I was looking through my pile of Starduster Too photos and came across one that got my attention. It was sent to me by the owner/builder who I believe you've met.

The fuel selector/shutoff valve is mounted on the engine side of the firewall. In the event of an engine compartment fire, should the top or bottom, non-firesleeved supply lines to the valve burn through, there would be no way to shut off the fuel and starve the fire. I'm amazed the FAA inspector didn't catch this on certification unless, of course, I'm wrong about the whole thing.

If I am correct, you may want to publish the photo in the magazine since there may be more than one out there like that. I'm not even crazy about mounting the valve to the aft side of the firewall. I also believe the AN 832 bulkhead fitting many builders use to carry the fuel supply line through the firewall should be steel; most I've seen are aluminum. Overkill? Guess that depends on what gives you bad dreams.

Let me know what you think about this. Also, any thoughts on my throttle quad proposition?

Sincerely,

Bob

Bob Dwyer
N28LJ (someday)

COMMENTS REGARDING
Fuel Selector Valve Placement

On sheet 16 of the early Starduster Too drawings, (9-3-66) a gascolater and shut-off valve are shown For installation purposes and in this drawing, it is not clear, as to just where they should be mounted. This could be a confusing problem. I agree with Bob Dwyer's observation, that it is a good practice to mount it behind the firewall, and bolted to a piece of 4130 plate that is welded to the fuselage. Careful thought should be given to the possibility of engine compartment fires as well as in the event of a force landing. A look at a certified aircraft can be of great help.

I wrote an article for the October 1991 issue about fuel system installation which may be of some help to builders currently working on this problem.

Also along with the picture of the fuel selector valve (top arrow) the (bottom arrow) indicates the correct way to install the front lower positive flying wire attach link. It should be between the motor mount and the fuselage, not on the back end of the nut inside the fuselage. I only point this out as I have a good picture of both items.

D.C.B. Editor

NOTE:

It has also been brought to our attention that some of the marine plywood currently available to aircraft homebuilders is of poor quality, and is being sold as aircraft grade. The builder should determine whether it is suitable for aircraft. (IE 5 ply with waterproof glue). So make sure what you buy is what you get.

B.C.

STARDUSTER HISTORY

Starduster Corporations N750X
Acroduster Too

When Jim Osborne aquired Stolp Starduster Corporation in the early 1970's, Morgan "Bud" Schrack and Lou Stolp had already been collaborating on an aerobatic version of the Starduster Too. That airplane was N5464. (See Starduster History in the July 1991 issue of Starduster Magazine).

After N5464's completion and many hours of flight testing, Jim redrew the plans, making changes and including all the things he felt would make the airplane more competetive. The successful results of his effort are described in the following text.

N750X was to be all the things that N5464 embodied as well as a lot more. The first thing of course was more horsepower. That being an IO540-N 260 HP Lycoming. The airplane encompasses a wide range of performance and information, with a cruise speed of around 160 MPH, and the stall speed of 60 MPH, plus a 2,500 FPM rate of climb made the Acrodusters performance range very acceptable.

During this time, Jim Osborne went from a low time aerobatic pilot and aircraft designer to a very skilled acro pilot. I rememeber seeing this airplane for the first time at a Starduster Open House in 1984. I also remember it being flown by a very competent pilot whose name escapes me, and that he would do wheel landings followed by power and brakes, bringing the aircraft to a full stop, with the tail still in mid air. Very impressive for an Acroduster Too. I also remember Lowell Slatter's N300AD and N750X, making low high speed passes and pull ups together at Fla-Bob during the Open Hose which was also very impressive. Eric Schilling who was employed by Starduster Corporation, also did much of the aerobatic demonstration rides. He is a story all by himself. A former Flying Tiger (The real ones), and CIA/Air America pilot. His colorful past and proffessional ability was a great asset to the Starduster Corporation and contributed to the popularity of the airplane.

But the real promoter of the airplane was John Helton, a former airforce fighter pilot, a current airline pilot (United) and probably one of the most profficient competition and airshow aerobatic pilots of his day.

During the late 1970's, John campaigned N750X in numerous aerobatics contests. Delano, Mojave, Borrego, Hot Springs and of course Fond Du Lac. He competed in the intermediate class and won first place at most of them. He also flew it in numerous airshows around the country, including Oshkosh.

The original airfoil was a modified 23012 called the Osborne A-1. John called it a Lear Jet airfoil, as it had a very sharp leading edge. This did three things. One, it made it very fast for a biplane, much faster than the numbers mentioned above, and another thing it did was make it able to do unbelievable snap rolls and multiple snap rolls. But it also made the landing speed much higher, and with this airfoil it made it a much more demanding airplane to compete in, as this was the configuration it was in during John's acro time.

N750X at Fla-Bob, 1984

N750X at Oshkosh 1978

N750X at Fla-Bob 1984.

One of the interesting things that John told me was that the airplane was equipped with nitrous oxide, and was capable of three verticle rolls with the button pushed. It was very dangerous stuff as he can attest to, when the tank blew up. Fortunately it was on the ground when this happened. Because, if it would have happened in the air, injuries could have been incurred as well as a high concentration of laughing gas sent into the cockpit as the airplane had a canopy and the nitrous oxide bottle was mounted in the baggage compartment.

During an IAC meet at Delano, California, John had given a demo ride the day before and the pilot in the back had left the master switch on, resulting in a dead battery the next day. This required hand proping, it was a hot day, and you guessed it the airplane caught on fire. But it was running and John did not know what was going on. As people were running towards him waving and shouting, meanwhile he was wondering why his feet were getting warm. The people who were running around were not trying to help him, but were moving their airplanes away from his. The person who saved the airplane, and John from serious injury was his friend Herb Ross, who remained cool headed, found a big fire extinguisher, and motioned to John to keep it running while he put the fire out. All of the IAC guys worked on N750X all night, so that John could compete the next day. Incidently John took first place at that meet.

But one of the most interesting things that happened to N750X was that Janet Helton, John's daughter, soloed this airplane on her 16th birthday, along with 36 other airplanes on June 29, 1978. This record still stands. She also did a three turn spin, a loop, a cuban eight, two complete rolls, and returned to the airport, making a perfect landing. So any of you guys having trouble with your Starduster, keep this in mind.

Several other interesting things about Janet and the Acroduster Too were that she was featured in the television program Raz Mataz, and also in 1978, the airplane was on the cover of Time magazine. Both the TV show and the Time magazine article were about Janet and the Acroduster Too N750X.

This airplane had a very unusual and gaudy paint job. Yellow, maroon and orange scalloped sunburst, with shark teeth and an original Flying Tiger painted below the left handside of the cockpit. Janet called it her yellow butterfly.

John told me that once he and Janet had stopped in New Mexico for fuel while heading east. This one time they let the gas boy top off the tanks, and after cruising at altitude on the top center section tank, Janet wanted to fly and with a big grin decended to just above the ground, it was at this point the engine quit. Both of their hands met at the fuel selector, and fuel boot pump on, all at the same time trading their high airspeed for more altitude. The silence was very loud until the engine was running again.

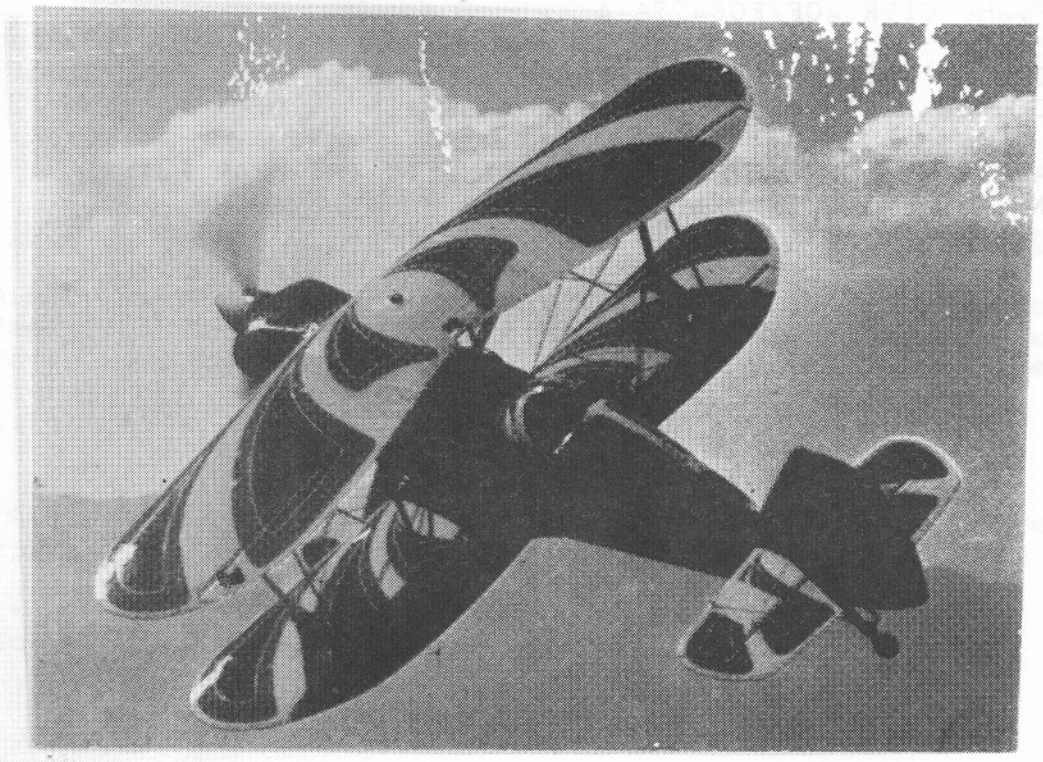
These were only a few of the stories John told me about his association with N750X. He told me he had just seen the airplane at the Sun & Fun Florida Fly-in, and was boring his companion to death with all the times and places that he an the airplane had shared together.

John had well over 500 hrs in the airplane of which 300 were practicing, competing, or flying airshow aerobatics. I sincerely appreciate the information that he passed on to me regarding the airplane.

I had another friend, Earl Biter, from Florida who is building an Acroduster Too, and our conversation included N750X. He said that when he saw the airplane, that it looked pretty rough and tired. So now I think he would understand why, as the airplane is almost 16 years old.

Jim Osborne owned the airplane up until the mid 1980's. It was sold and then went to Texas, and I think its current owner has it up for sale.

D.C.B. Starduster History



MAY 13, 1993

MR. DAVID BAXTER:

PER. OUR TELEPHONE CONVERSATION ON MAY 12, I AM ENCLOSING THE PICTURES OF THE FACTORY ACRO AS SEEN AT THE 1993 SUN N FUN FLY IN. I HOPE THERE IS SOMETHING THERE YOU CAN USE. ALSO THE FOLLOWING IS THE DATA ON MY PROJECT.

ACRO DUSTER 2- SN. 325
ENG. LYCOMING IO_540N1A5 260 HP.
PROP. HC C2YR 4CF/FC8477A-4

PURCHASED FROM FRANCIS BURKHARDT, FORMERLY FROM MONUMENT, COLO. NOW RESIDING IN FLA. PURCHASED IN 1989.

DAVE I AM SURE WE WILL BE TALKING IN THE NEAR FUTURE, THANK YOU FOR YOUR HELP.

Earl Biter

EARL BITER

April 15, 1993

Dear Dave,

I received the aluminum floorboard recesses this afternoon. Thank you very much for both taking the time and for the quality of workmanship. I really wish I could weld better. I've enclosed a check for your efforts and I think they're a bargain.

Laura is doing fine. As of December 6, she's a licensed private pilot! She started lessons (T-41 aka C-172) at the Davis-Monthan AFB Aero Club in August and passed her check flight in Dec. She has about 90 hours to date and flies pretty well. I got checked out in the club's T-34A which is a ball to fly and, at $55/hr., is a real good deal since almost nobody will turn you loose in their T-34. I flew the T-34B as a primary trainer in Pensacola so it was like meeting an old friend.

N28LJ is coming along sometimes quickly and other times very slowly. Fuselage is on the gear, center section rigged to the cabanes, controls in, tailfeathers rigged to fuselage, lower wings done, upper wing parts ready for assembly, etc,etc. Once I get the two upper panels done, I'll have an essentially complete airframe, firewall aft. May 1st, it'll be three years since I started. I'm switching mounts as I've finally decided to go with an O-540. They're rough on gas but solve many other problems and are definitely not "thumpers" like the 360's can be. Rationalize much? The IO-540C4B5 in my old Starduster (Peter Cavallo's) is still running strong after 10 years and Peter competes in sportsman and intermediate aerobatics with it!

We'll definitely be at the fly-in. We will arrive Thursday evening and stay 'till noon Sunday. I almost "live" for this each year. Wish I lived closer to FlaBob. I'll bring my photo log along.

I'm the only one in Tucson currently building a Starduster. There are two in town, Tom Macario's and a nice O-360 powered one at Avra Valley Airport built over 15 years by Fred Abdalla (sp?). Nice guy, and nice workmanship.

Gots to go. See you in two weeks!

Sincerely.

Bob Dwyer

P.S. My FlyBuddy LORAN arrived today from A/C Spruce. I ordered the basic (internal DB only) and they sent me a FlyBuddy Plus but without a data card. Know anybody who has an old western regional datacard? Maybe the "Plus" is all they ship and the only difference is whether or not you get the card? Whatever, it cost $200 less!

May 12, 1993

Dear Dave,

Here are the pictures I told you about when you phoned. I've included a few others I took while wandering around. I enjoyed our short flight. That was the first time I've been in a small plane since I graduated from Pensacola in 1947. I flew multi-engine (P2V's) so it brought back long forgotten memories of flying SNJ's.

Was it just my imagination or was that fellow a bit rough and un-coordinated? Whatever it was fun.

The aerial shot I had enlarged is the one with a wing tip showing. It came out pretty good, sharper than I thought it would be. I had it cropped a bit tighter so only a little of the wing and none of the hagars showed.

If anybody up there is interested, an 8x10 should run about $10.00. That will cover my processing costs, mailing, and leave enough to buy a roll of film or two.

I hope you will be able to use some of the shots in your magazine.

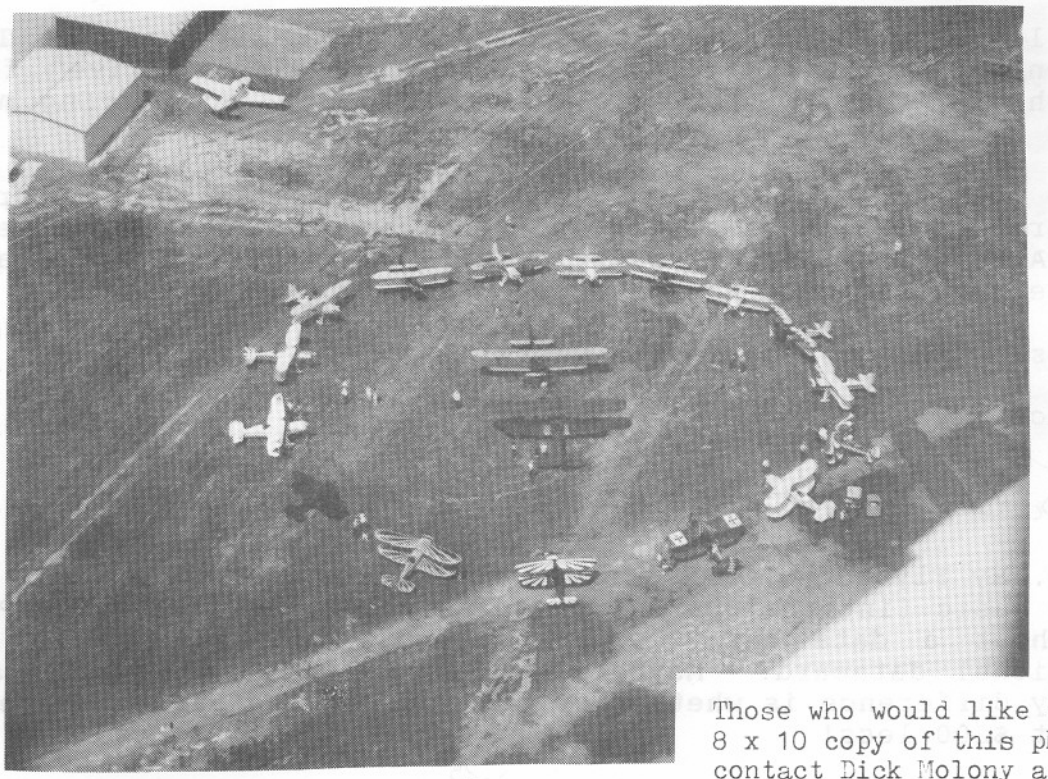
Sincerely,

Dick

Dick Molony

1169 E. 33rd Street
San Bernardino, CA. 92404

(909) 8828046



Those who would like to obtain a 8 x 10 copy of this photo, should contact Dick Molony at the above address.

STARDUSTER OPEN HOUSE

Fla-Bob May 1993

Well for our annual trip south, the weather in Oregon as well as in other parts of the country did not cooperate. Instead of heading straight south as we usually do, (also a day later than we would have liked) it was out thru the Columbia Gorge, right turn at the Dalles, stop at Redmond and Kalamath Falls for fuel, down past Mt. Shasta and onto Chico Ranchero to overtnight with our good friends Dennis & Pam Mayhew.

The bad places were the Columbia Gorge with conditions being: down to 900 ft and 3 miles for a mile or two. The other really bad spot was near Mt. Shasta and Dunsmier. I did not think you could go through any lower than 5,500 feet in this area. But discovered it can be done at 4,700 feet. I do not normally do this, but there was good visibility over the highway and good VFR from the lake, south.

After dinner and friendship, the conversation turned to Dennis Mayhew's old Starduster Too N6075. Due to business concerns, Dennis was forced to sell his airplane. I was really sorry to see him do this, as he and his wife Pam are the perfect example of what Starduster owners are like.

It was very sad to hear that since the airplane was sold to someone in San Diego, CA it has not been flown, and is in a hangar at Orland, in northern California. Why people do this I do not understand.

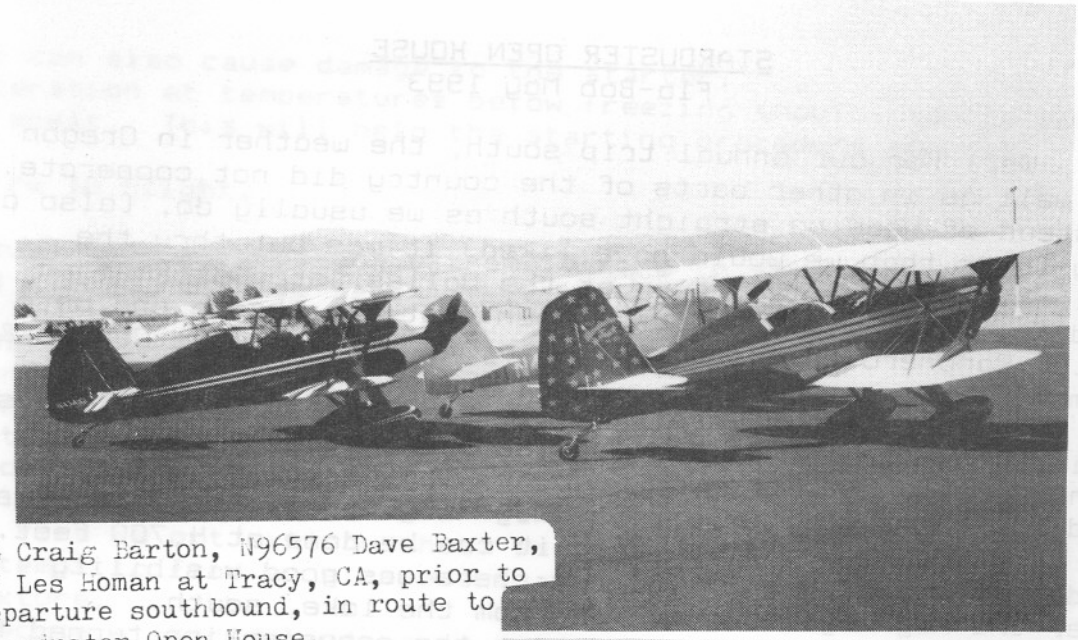
Dennis has been flying an Ag Cat for Butte Dusters, and has recovered from poor income on his former business to be thinking of at least buying a good Starduster Too project. We certainly wish him well in this endeavour.

The next day, Sunday, Flight Service said no problem, and we were off to my daughter Debbie's house to see our grandson Matt. Our flight was direct to Nut Tree, over Travis AFB, squak and ident, Mt.Diablo. I was going to call Livermore tower for an over flight, but the weather was so good after all that rain, that everybody was in the air, and talking to LVK, I couldn't have called them even if I wanted to. From there it was on to San Carlos to spend several days with our daughter in Red Wood City.

Thursday, once again at Livermore. I took my son Dan over first, returning for my wife Donna, and boy was Mike Matti happy to see her, as he was babysitting his twin girls and trying to work on his Acroduster at the same time.

Friday morning April 30th, found us at Tracy, California, awaiting the arrival of other Stardusters to head south with us. But as usual most of the people who said they would come were unable to. Some of them of course had good reasons (no landing gear).

So it turned out to be Les Holman in N4226Y, Craig Barton with his lovely wife Donna in N4341G an Acroduster Too, and my wife Donna and me in N96576 our Starduster Too. My son Dan rode with Les, and Mike & Jess in the Citabra. Route of flight was Tracy to Porterville, fuel & food, then south to the Techatchipies, Palmdale, Lancaster, right turn just before Heperia, down the Cajon pass over Rialto and on into Fla-Bob. It was a great flight, with one yellow, blue and red biplane.



N4341G Craig Barton, N96576 Dave Baxter, N4226Y Les Homan at Tracy, CA, prior to our departure southbound, in route to the Stardust Open House.

N4341G over Lancaster, CA, high desert.

Left to right: N490? Oscar Bayer, N96576 Dave Baxter, N4226Y Les Homan, [illegible] Craig Barton.

Fla-Bob is and has always been an interesting place. It has changed little in the last 25 years. Some of the early arrivals were already there. The usual greetings, pictures and questions.

Not to long after we landed Larry Rydberg from Albq.,NM landed followed by Ben & Kelly Scott. Ben in the Stearman 4E and Kelly in N27JV a Starduster Too. Both had been following Larry all the way from Arizona. By only a few miles and not knowing that the other was there.

Motel, food & rest was quickly taken care of, with another trip to Pinicle Peak, a western style steak house. But we only had 40 or so people as opposed to the 60 we had last year. Bill Clouse let us use his vehicle for transportation.

Saturday morning found us at Fla-Bob waiting for the rest of the Starduster bunch to arrive. We were not dissapointed when Stardusters from all over started arriving. Shortly before noon the north wind started to blow and got stronger and gusty. The Salt Lake bunch arrived as the wind was changing. One by one they touched down in a direct 90 degree cross wind that was gusting 15 to 25 MPH, making for some actual demonstrated maximum cross wind landings. Followed by the San Diego bunch, landing in the opposite direction as the wind had gotten around to the other runway.

I had for some time thought about an unusual picture opportunity. My idea was to circle the wagons so to speak, that is, put all the airplanes in a big circle with noses pointed in. It was a very hot day and the pilot/owners were very helpful in moving their airplanes around for this once in a lifetime picture.

About this time another Stearman Speed Mail landed, it was flown by Addison Pemberton of San Diego, CA so we put those to big Stearmans together in the middle of the circle and formed all the Starduster Toos, Acro Toos,and Starduster One around them. As it turned out we could not have had a more spectacular picture. The wind was still blowing pretty good and several Starduster Toos made passes but did not land, which was probably a good decision by their pilots.

We were also able to get some air ground shots and due to the fact that more than one camera was used, some reasonably good pictures were taken. In the picture there were 12 Starduster Toos, 4 Acroduster Toos, 1 single place Starduster and 2 Stearman 4E Speed Mails, which brought the total number of aircraft in the picture to 18. Several airplanes that came late were not included, and when you count the three airplanes that made a passes but did not land, brought the grand total of attendees to 25 airplanes.

This was also the perfect way to judge the airplanes. As the afternoon wore on, the wind quit blowing, the smog returned and things returned to normal.

Hank Schmeal and his help did the wonderful job that only they can do with BBQ chicken, beans, salad and cake. They served over 90 people Saturday evening.

1st Place: N23JV Ben & Kelly Scott, from Reno, Nevada.

2nd Place: N31DA Weldon Clines, from Sandy, Utah.

3rd Place: N78DS David Gilfast, from Salt Lake City, Utah.

The awards were beautiful carved wooden Starduster Toos with 3 axis ink pen holder control sticks.

FIRST PLACE was awarded to Ben & Kelly Scott of Reno, NV. For their Starduster Too N23JV.

SECOND PLACE was awarded to Weldon Glines of Sandy, UT. For his Acroduster Too N31DW.

THIRD PLACE was awarded to David Silfast of Salt Lake City, UT. For his Starduster Too N78DS.

THE TRUE GRIT was awarded to Mike Mattei for still working on his Acroduster Too, in spite of the fact he now has twin daughters, Amanda & Breann, that are now almost a year old. Working on an airplane and babysitting is easy, "Not" but it can be done.

Congratulations to them for owning, building and flying some of the most beautiful biplanes in the country.

Aircraft in Attendance Were:

N490B	SD II	Oscar & Jeanne Bayer, Arroyo Grande, CA.
N4341G	Acro II	Craig & Donna Barton, Vacaville, CA.
N4426Y	SD II	Les Homan, Livermore, CA.
N96576	SD II	Dave & Donna Baxter, Lake Oswego, OR.
N530LR	SD II	Larry Rydberg, Albq., New Mexico.
N81582	SD II	Jeff & Fritz Eisenbeiser, Redlands, CA.
N34LG	Acro II	Glen Olsen, Salt Lake City, UT.
N847JT	SD II	Tom Murray, San Diego, CA.
N8331A	SD II	John Renquist, Temelula, CA.
N711MH	SD II	Armin Holle, San Diego, CA.
N2HC	SD II	Peter Cavallo, Santa Monica, CA.
N27CG	SD II	Bill Wyse, Marina Del Rey, CA.
N73866	SD I	John Alling, San Diego, CA.
N300AD	Acro II	Lowell Slatter, Twinn Falls, ID.

As for the Stearman 4E Speed Mails owned & flown by Ben Scott & Addison Pemberton, recognition should be given to them for their wonderful effort in keeping these beautiful old biplanes in show condition and also for having the skill and comittment to fly them around the country.

Well Sunday morning found Les Homan and Larry Rydberg giving rides prior to our departure. This year we had invitations to spend time with Dick & Donna Lucas at Sedona Arizona, so after packing, fuel and saying our goodbyes, we were off. Our first stop would be Blythe, CA, and for our trip out it was Les in N4226Y, Larry in N530LR, and your editor in N96576. We skirted March AFB, and after squaking with Palm Springs landed at Blythe. This leg of the journey was uneventful, smooth and visiblity going from poor to 70 miles. From Blythe in was Northeast towards Wilkenburg, followed by Black Canyon, and then due north to Sedona.

Dick had talked to me somewhat about the airport there, and advised me to be careful as the runway is 5,000 feet above sea level and 5,000 feet long located on top of a butte. It is much like landing on an aircraft carrier, as the runway has a 1.8 degree up slope.

He further advised us to land down wind and uphill if the wind was 10 knots or less, and warned us that the winds can be pretty treacherous off either end of the runway. He also suggested that we should make high steep approaches, landing long to stay clear of the turbulent air. With all these things in mind, we did as we were told, and all of us, Les, Larry and myself made it in with no problems.

The first night was bed and breakfast with dinner at the rainbow. This country is some of the most beautiful that there is to see, and fly in, over and around.

The next day we spent sight seeing with the loan of the Lucas's car. That night Dick & Donna cooked up some fine food in his hangar. We talked about the previous days flight and the Open House. Dick suggested that next year we have the Starduster Open House at Sedona. Bill Clouse and I talked about this and agreed that it might work, so lets do some more talking about it at Watoma. Dick Lucas said he would make all the arrangments next year if we decided to do it early enough.

Monday night was spent at the Sky Ranch Motel right on the airport, it seems Dick was able to get us rooms, as he and the owner are good friends, much different than the night before when they told us they were sold out. It does pay to have friends, and the fact that they own a Starduster doesn't hurt. Our original plans after leaving Sedona, were to go north over the Grand Canyon to Page, AZ, Cedar City, UT, Tonopah, NV. and into Livermore, CA. However, the winds, temperature, and weather were not in our favor. Freezing temperatures and headwinds over the canyon, moderate to severe thunderstorms in Cedar City and heavy weather from Tonopah west over the Sierras. So we ended up going straight west from Sedona to Laughlin/Bull Head City for fuel and breakfast. It was a great inexpensive buffet at the Riverside casino. From there it was over Barstow, Fox Field, and Landcaster, over the Techatchapis, and landing at South Bakersfield. It was a long flight almost 4 hours. This was also the first time my rate of climb [VSI] was pegged on 2,000 ft per min in both directions [up & down] while over flying the Techatchapis mountain range, Wow what a ride. From there it was a fairly smooth and pleasant flight to Livermore and on to San Carlos for several more days with daughter Debbie.

Tuesday found me back at Livermore to shoot some landings with Bob Pisani, a new Starduster Too owner who had collapsed the gear after his fourth landing. We had determined that there was damage to the gear prior to his purchasing the airplane, and also determined that the previous repairs had not been made properly, as he was rolling out after his landing when the gear collapsed. Many of his airport friends had warned him not to buy the airplane. They told him that Stardusters were dangerous tail wheel airplanes. So Bob and I were off to dispell this myth. After showing him my technique and a half dozen or so landings, I think he was convinced that with the proper approach angle and air speed, a safe and uneventful landing could be made everytime. Besides if these airplanes were so dangerous, there is no way Les and I could have flown our airplanes all over the country and survived.

N96576, N4226Y, [illegible] and [illegible]
at Sedona, Arizona.

[illegible]56AM and Dick Lucas in front of his
hangar at Sedona Airport.

N4226Y north of Sedona, departing over
the Red Rocks.

The next day we departed San Carlos, heading north over Travis AFB, up I-5 and landing at Redding to stay overnight with our friends the McDermotts. Pam & Charles and all of their wonderful children. They seem to have such a fine caring family. We visited, talking about where Donna and I had been, about the Open House and all the things that they had missed. But with his job, a new baby, and problems with his airplane, they had wanted to, but were unable to attend. From there it was off to Oregon. Marginal weather, but doable. Past Mt. Shasta we had more visibility and higher clouds, and landing at Kalamath Falls for fuel we called to find out about the weather, it was again doable, or so they said, east of the mountains, as the valley, Sexton Summit, and Roseburg were IFR, with Eugene Salem and Portland being marginal VFR. After fuel we were off once again over the highway 1,500 to 1,000 feet north bound, and picking up a good tailwind. The exact opposite as what was forecast. Most of that leg was fairly good visibility, but between Sun River and Bend marginal VFR in light showers blowing across underneath us, a very weird phenomenom. We were happy to land at Redmond, OR, even though rain showers had cut visibility down to 3 miles or less and of course after we landed broken sunlight with good visibility appeared once again.

With fuel and a visit to Flight Service, it convinced me that this was as far as we were going today. A call to my friend Don Goetz and his wife Carolyn, gave us a place to stay and a tour of the Lance Aire Factory where he works. He also tried to talk me into building a Lance Aire as his 400 is coming along nicely, and I must admit it is a fine airplane.

The next mornig Donna and I departed for home. We went north over Madras, left at the Dalles by Hood River and into the Columbia Gorge, again with marginal rain showers between Cascade Locks and Troutdale OR, only down to 1,500' and five miles this time but for a longer period of time. We then landed in Hillsboro, OR our homebase. Shortly before noon, Saturday, May 8, 1993 and good ole N96576 was home, no more worse for wear, with 34.2 more hours.

D.C.B. Editor

Sun 'n Fun

EAA FLY-IN, INC.

Certificate of Award

Grand Champion

Presented To

RICHARD MILES STARDUSTER II

This Day of 1993

Chairman of Judges

President

Congratualtions to Richard Miles. Grand Champion award winner at the Sun N' Fun. BC

STARDUSTER
OSHKOSH/WATOMA

WHEN: JULY 29 THRU AUGUST 4, 1993

WHERE: WATOMA, WISCONSIN.

WHY: Are you tired of the crowds and hassle at Oshkosh, if you are, we want to fill this airport with biplanes. Stardusters, Acrodusters, Starlets, "V" Stars, or any other homebuilt, including those currently building and enthusiasts of these fine airplanes. Please make every attempt to attend.

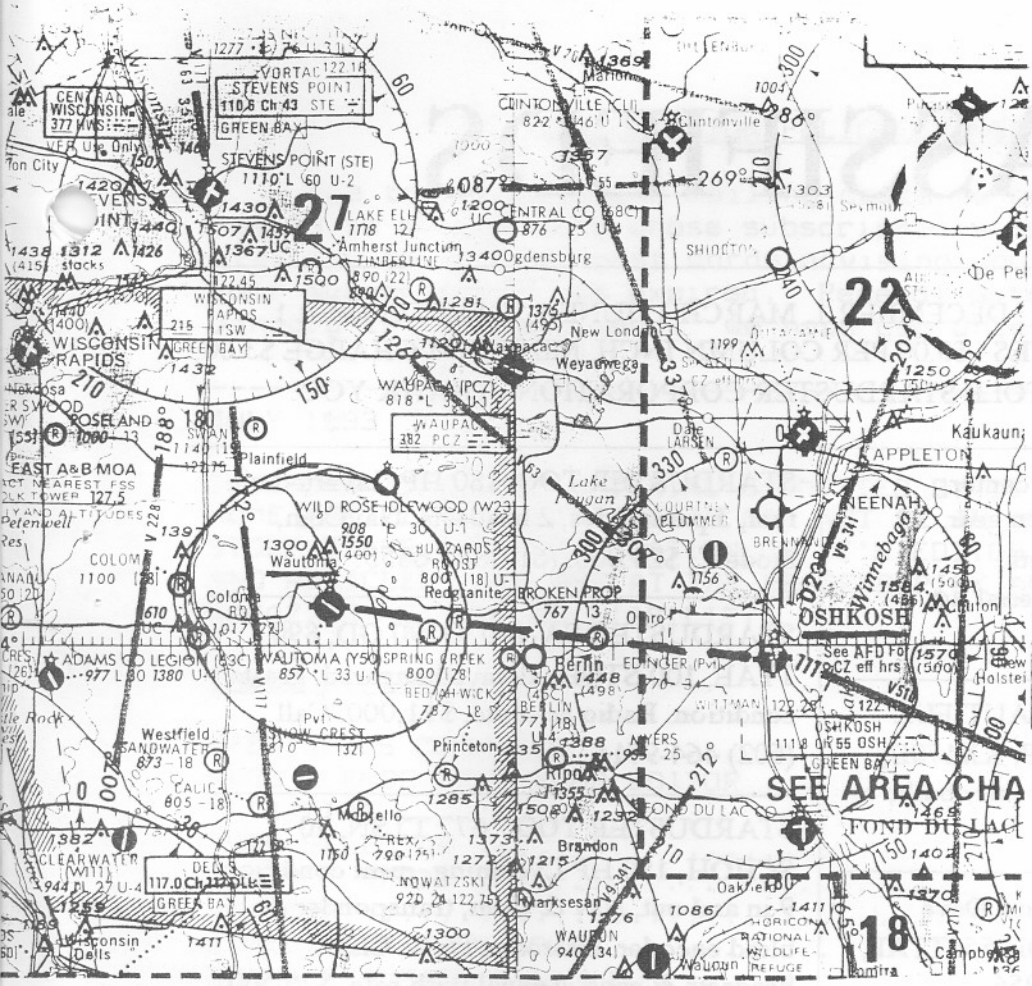
Trophies will be awarded to winning aircraft. There may be an Oshkosh fly by Saturday. We already have over 28 airplanes committed camping areas, food vendors, water, rest rooms, will be provided. There are still some motel rooms or bed and breakfast available.

Super Eight (414)787-4811 Barb Diekfuss.
Travlers in Berlin, WI. (414)361-4411
Riverside also Berlin, WI. (414)361-2383
Riverside in Mt.Morris, WI. (414)787-2919
Birdsong Bed & Breakfast (414)622-3778
Silvercrest in Watoma (414)787-3367.

For additional information call Bill Clouse at Starduster Corporation 1(800)833-9102 or Jeff Plitt airport manager in Watoma, Wisconsin at (414)787-3838.

STARDUSTER OPEN HOUSE 1994

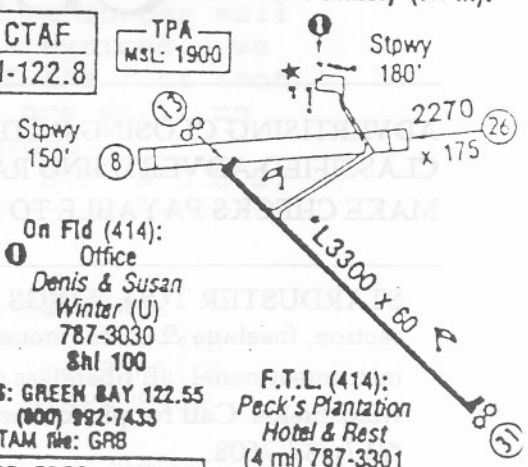
We would like to get you guys thinking about next years Starduster Open House. Dick Lucas, owner of N56AM, has suggested we hold the open house in Sedona Arizona, and has gratiously offered to make all the arrangments if we decide to do this. I certainly can tell you that it is a very beautiful place to visit. Well let Bill or myself know if your interested in doing this. We can also talk about it at the Starduster get together in Watoma, WI.



02.7'N 89°18.4'W. (414) 787-3030. Att days; ngts on req. F-100 days; ngts 566-4144. Bcn. WDUX 800 D. Rwy 8/26—no snow rmvl. Ultralgts. P-lns N. *PCL: 122.8 - 13/31 intnsty (7x hi).

CTAF
U-122.8

TPA
MSL: 1900



On Fld (414):
Office
Denis & Susan Winter (U)
787-3030
Shl 100

FSS: GREEN BAY 122.55
(800) 992-7433
NOTAM file: GRB

VOR	FREQ	RAD	NM
STE	110.6D	160°	31
OSH	111.8D	274°	33

F.T.L. (414):
Peck's Plantation Hotel & Rest
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Both Free Pickup.
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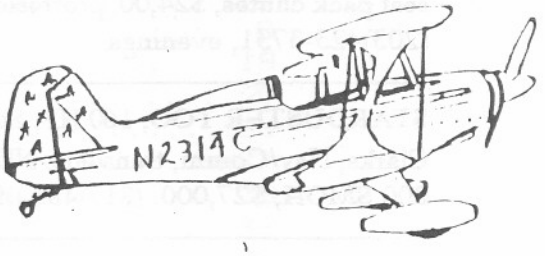

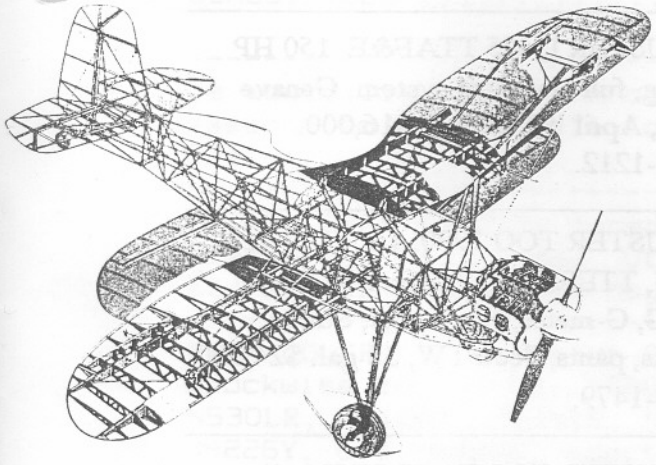

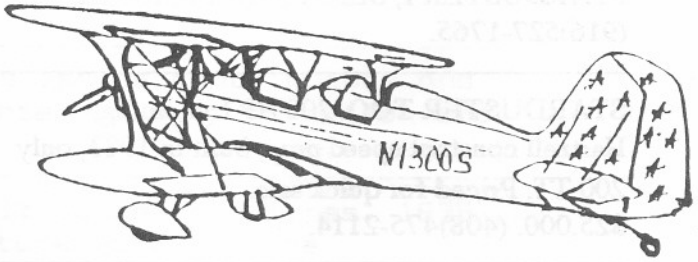

STARDUSTER CUTAWAY. Available in Black & White 18" x 24" for $5.00. Contact David C. Baxter (503) 639-8792.

PRESS RELEASE:

THE 3RD ANNUAL REUNION OF KINGMAN ARMY AIR FIELD, OCT 1-3, '93; LOOKING FOR FORMER MILITARY & CIVILIAN PERSONNEL & FAMILIES; GENERAL PUBLIC WELCOME; STATIC DISPLAYS; AIR SHOW; DINNER & DANCE; & MUCH MORE...PLEASE CONTACT US AT:

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CLASSIFIED ADVERTISING RATES : $3.00 PER COLUMN INCH, MINIMUM CHARGE $3.00.
MAKE CHECKS PAYABLE TO STOLP STARDUSTER CORPORATION. THANK YOU.

STARDUSTER TOO, WINGS & center section, fuselage & motor mount on gear, instrument panel, all fiberglass parts, windshields. Call for photo & material list. (217)787-7608.

STARDUSTER TOO 300 TT, BEAUTIFUL flying, excellent condition. 150 HP, KX170B, seat pack chutes, $24,00, proffesionally built, (203)423-3731, evenings.

STARDUSTER TOO, 160 HP, Stits, Dave Clarks, Nav/Comm, trans/enc. NDH 550TTAF, 800 SMOH, $27,000. (817)483-0956.

STARDUSTER I, SER.#3, 425 TT, 150 HP, (916)527-1765.

STARDUSTER TOO, 200 HP Lycoming, Hartzell constant speed prop, built in 1983, only 200 TT. Priced for quick sale. $25,000. (408)475-2114.

STARDUSTER TOO, 550 TTAF&E, 150 HP, Impressive condition, $24,500, Indiana, call Dennis. (219)291-7222 days, (219)784-3216 eves.

STARDUSTER TOO PROJECT, Fuse, tail, gear, Clevelands, fiberglass parts, firewall, tank, chute, hand held , some O320 parts,prop and more. Sell, Trade for ultralight, small car, flyable P-51 or will part out. (606)474-6052.

ACRODUSTER TOO - COMPLETE flying airplane. Hard landing damage. O-470J TT 1500. No prop strike. Logs. Can't find any cheaper. $8,000 OBO. (619)670-0116.

STARDUSTER TOO, 180 HP, Inverted oil, fuel, 3 parachutes, 2 headsets, NavCom, mode C, $24,000. (612)888-6853.

STARDUSTER SA-100, O290 GD, 890 TTAE, 100 STOH, always hangared, great condition. Radio & chute. $11,000. Call (602) 464-9714.

STARDUSTER TOO - 677 TTSN, 70 SCHOH, 180 HP Lycoming, mint condition, 9 in and out, Nav & Com, transponder & blind encoder. Intercom, Dave Clark headsets & caps. Annual with sale. $25,500. (214)223-4301.

STARDUSTER I, 405 TTAF&E 150 HP Lycoming, full electrical system, Genave NavCom, April '93 annual. $16,000. (602)940-1212.

STARDUSTER TOO 1990, 160 HP Lyc. TTAF 75, TTESN 100, Narco 810 Com, T&B, DG, G-meter, Nav lights, Strobe, ELT, Stits, pants, Scott TW, 38 gal. $24,500. (319)668-1479.

ACRODUSTER TOO FACTORY built TTA&E 830, 200 HP Lycoming, constant speed prop, full inverted, 2 place canopy, recovered July 1990. Ceconite, hand rubbed Butyrate finish. Too much to list, excellent. Call Shane Fleming (414)727-0993 Hm or (414)749-4244 Wk. $35,000 OBO.

ACRODUSTER TOO PROJECT, Finished, needs covering, IO-360 200 HP "0" SMOH, have paint & fabric, everything to cover. $25,000. (406)862-8138.

STARDUSTER SA-100, 930 TT, 355 SMOH, Lycoming O320, inverted fuel & oil, Softie parachute, removable canopy, hand held Comm radio, external antenna, smoke systems, August '92 annual, $13,250. (919)237-8586 home, (919)399-4630 weekdays.

1983 SA-750 ACRODUSTER TOO, 200TT, 130 prop, IO-540, inverted fuel & oil, smoke, LR fuel, KY96A, KT-76A, intercom. Nice airplane. Unlimited aerobatics. $49,900. (303)530-1162.

1975 ACRODUSTER TOO Factory built, 450 TT, engine, prop, AF, IO-360, Hartzell CS, RWB sunburst. $27,500. Trade Bonanza, C-210, etc. (414)538-4000.

ACRODUSTER I, 200 HP, Inverted system, constant speed. Beautiful shape, $23,000 make offer. (503)985-7243.

STARDUSTER SA-100, 41TT, O-290G, Escort 110, $14,500 OBO, (206)634-1963, (206)545-9309.

STARDUSTER TYPE BIPLANE PROJECT, 90% complete. Wood construction, excellent workmanship by aeronaultical engineer. $5,000 OBO or swap for ? (717) 345-4362.

STARDUSTER TOO 1978 - 280hrs TT, 270 Lycoming, 1245 TT, 650 SMOH, 3 blade Hartzell, electric trim, retractable landing lights, tip strobes, 720 Narco Comm 11A interphone, 37 gal. inverted fuel, McCauley Double Puck Brakes, Scott tailwheel, Stits cover & paint, Sports Car cruise 140 IAS at 55% on 12 GPM. Call Dave Mahre (509)966-1100 evenings, $32,000

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