

THE

Starduster

OCTOBER 1976

MAGAZINE

DEDICATED TO THE ACTIVE HOMEBUILDER



PAGE ONE



TO JUMP OR NOT TO JUMP - THAT IS THE QUESTION - Whether tis nobler to suffer the slings and arrows of outrageous fortune, and risk dire emergency forcing a maiden jump; or whether tis smarter to prepare for possible catastrophe by going thru a parachute jump school, and making at least one controlled jump under supervision.

Opinion is divided on this. On the one side is the argument that preparation is the soul of safety. That anyone who flies, and in particular, anyone who flies experimental sport aircraft, may, sooner or later, need to make an emergency parachute jump. It is better, so this argument goes, to prepare for such an eventuality, by taking training, and making at least one practice jump.

On the other side are those pragmatists, including the U.S. Air Force, who say, "Why practice something which has to be done right the first time." They point out the danger of injury, even after training, in a sport jump, and say this risk negates any advantage which might be gained.

When the very first Acroduster 1 was being finished, I was faced with this question. I was determined to make the first test flight in my new baby. But I wasn't a very good pilot. My transition trainer between a Cessna 150 and the Acroduster 1 was a Cessna 140. And here I was facing a fast, sensitive, very highpowered beast of completely unknown vagaries and temperament. My calculations, (and educated guesses) indicated it would be easy and delightful to fly. But still, the proof of the bird is in the flying. And it was entirely possible that I might get something off the ground, and not be able to get it back on.

Our Starduster assistant foreman is Bill Clouse. He is a Master parachute rigger and jumper with over a thousands jumps to his credit. I went with him, one Sunday, to Perris Valley Airport, and went thru 4 hours of ground school. Bill was the instructor. The course covered all aspects of parachute jumping, including the following: (1) How to put on, and adjust the parachute. (2) How to exit the plane. (3) How to assume a stable free fall position. (4) How to pull a ripcord. (5) The various parachute malfunctions which can occur, and what to do about them. (6) How to land, with the least possibility of injury. (7) How to land in water, trees, or power lines.

After the theoretical instructions, we practiced hanging from a harness, deploying a reserve chute, and cutting away from the main chute. We jumped off low tables and tumbled, front, sideways, and backwards. Then we jumped off higher tables.

During the suiting up, what had been a happy jocular group of four first time students, grew strangely quiet. As the plane took off and gained altitude, the faces of my fellow students grew grim with a look of intense concentration. (or fear, I couldn't be sure.) Soon enough, the power was cut and the first student went out the barn door opening. Two more students went and then I was sitting in the opening, my feet hanging over the side, and looking at the ground 3000' below. Bill touched my shoulder and shouted go. My inward panic escalated into sheer terror. Determination overcame common sense, and I vaulted out into the slipstream, facing into the wind, and flattening out into a stable arch. I fell and fell and fell. For about two weeks, I would estimate. Then the gentle

CONT. ON PAGE 5

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

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On our cover this month is the Beautiful ACRODUSTER TOO, Built by Ron Powers, of Burnsville, Minnesota. Ron had this bird at Osh Kosh and kept occupied by giving rides to many interested homebuilders.

On our Back Cover is the Original Acroduster Too, now owned by Lt Alan Campbell, of Jacksonville, Florida. He has been flying airshows with it and reports that it is doing very well.

In order to do our bit to fight Inflation, we have instituted the following policies.

1. We give 3-5# of short lengths of 4130 tubing free, with each substantial tubing order. All you have to do is ask for it. This tubing is primarily suitable for welding practice. No size selections will be made.
2. A 10% discount will be given on tubing sold directly off the short lengths rack. No cutting. Self service.

FLYING TIGER NEWS

The following two letters were published in "THE TIGER RAG", official publication of the original Flying Tigers. We feel the letters are self explanatory, are of great human interest, and perhaps presage a better future for mankind. (Apologies to womens lib.)

25-14, 2-Chome
Kitashinagawa, Shinagawa-ku
Tokyo

July 26, 1976

Dear Mr. Robert Prescott,

This is my first letter to you. I am Chairman of the Comrade's Club which consists of 150 members who are the survivor of the Hayabusa Air Forces. Hayabusa means a Falcon.

I hope my sister, Michiko Mango called you about our story from San Francisco the other day. As she told you, we fought you in central China, Southern China, and French Indo-China many times. We had a base at Hankao, and you were under the command of General Chennault.

Whenever I recall those days, I cannot help admiring at your brilliant pieces of tactics and your wonderful aggressive spirit. My fellow soldiers and I think you were the best Air Force in the World, and respect you very much.

We lost 113 friends through that unhappy and abhorrent War. Every year in May we come together in Tokyo to give our prayer to those who were killed at the War. In Tokyo there is a shrine called Yasukuni which is sacred to the spirits of those who laid down their lives for their country.

When we gather at this shrine we talk about those hard and unhappy days and also about how each member is getting along. Some years ago, one of the members said, "Perhaps those American Soldiers who fought with us have a Comrades Club like us. I hope we could know them and become friends.", and all of us said, "I have long been thinking of that too."

Some thirty years has passed since the War ended. Those friends who passed away hoping the coming of the peaceful days must be very glad to see both America and Japan are very good friends now. We also feel satisfaction at doing our best for the country in our young twenties. And we will be much happier if we shall be able to see you, shake hands, talk of those past days, and become good friends forever. I think both your friends and ours who were killed in the War be comforted their minds too.

We have been seeking you since two years ago. And at last we could know you and some of the members are in Los Angeles. So my sister called you and I am writing to you now.

Of course I do not know you at all. But I quite forget that you are an unknown person to me when I am writing to you now. I don't know why, But I believe it will be the familiarity that we fought at the same battles at the risk of our lives that makes me feel that you are one of my old pals. I even feel like flying to you at once.

Both P-51, your plane, and Hayabusa are dear sweet ones of long time ago. P-51 must be your sweetheart, and so is our Hayabusa. I sometimes dream that P-51 and Hayabusa could fly over the Pacific in a formation. And we do hope that we could meet you in Los Angeles or in Tokyo some day.

I shall be very happy if I may hear from you. We are eager to know you and your friends very much.

Paying our sincere respect to you, members of the brave Air Forces more than 30 years ago, and praying our earnest prayers for your unhappy friends.

Sincerely yours,

Masaaki Inoue

Masaaki Inoue

THE **FLYING TIGER LINE** INC.

ROBERT W. PRESCOTT
PRESIDENT AND
CHIEF EXECUTIVE OFFICER

August 19, 1976

Mr. Masaaki Inoue
25-14, 2-chome
Kitashinagawa, Shinagawa-ku,
Tokyo

Dear Mr. Inoue:

I was very pleased to receive your letter of July 26. I was glad when your sister phoned and told me you were planning to write to me.

We do have a group of our former members of the Flying Tigers who meet every year for a small reunion. I know it will be of very great interest to our people to know of your organization, and I hope that in some way we can establish communications with you. We certainly agree with you that we are happy that such unpleasantness as we had in the war is past and we can now be friends with the Japanese that we formerly opposed.

We had great respect for the skill and bravery of your pilots during our experience with them, and I know that we will be more than happy to continue our contact with you. I note that you have a meeting each May. Our meetings are generally around the first week of July and I think we should manage to have one or two of our members meet with yours and perhaps a couple of your members meet with us. I will discuss this with other members and you will be hearing from us.

Best wishes,

Robert W. Prescott

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(CONT. FROM PAGE 1)

shock of the opening chute. A large giant swing, and I stabilized under a beautiful large canopy. I checked it with a quick look, and the grabbed the steering toggles. Why, this thing maneuvers like a glider. Pull right, turn right. Pull left, turn left. Head for the bulls eye on the ground. It is coming up fast. Turn into the wind. Hands over head. Legs together. Look straight ahead. KA-THUMP. I hit on ground as hard as concrete. Shook up, but no injuries. Without the training I had, it might have been a different story.

To jump or not to jump - That is a question every pilot must decide for himself. I think the self confidence acquired is worth the cost and trouble. If I ever have to leave a plane under emergency conditions, I am sure I will be better prepared, and more likely to make a successful jump. And besides, your first parachute jump is as big a thrill as flying your new airplane for the first time.

Happy Landings,

Jim Osborne

RUDDER TRIM SYSTEM

BY DEAN HALL

There are many ways to skin a cat; and there are more ways to trim the rudder. This is submitted as a novel method which may offer some advantages.

The problem was to develop an in-flight rudder trim system that is clean, meaning essentially hidden, and is capable of being adjusted precisely. This system appears to meet those criteria.

First, the trimable rudder tab was ruled out as being unnecessary and too complicated for the typical aerobatic light plane. The decision was to implement the basic system of creating a differential tension on the two rudder cables so that slipstream pressures on the vertical tail would be neutralized.

I had been to Oshkosh two years ago and was told by a fellow Skybolt builder that his right foot got awfully tired on cross country. However, even with all the looking and asking, I couldn't find a system that met the above requirements. The idea for this system germinated with George Evans' system for keeping the rudder cables tight. He uses a coil spring (which incidentally is available through Stolp Starduster) around the rudder mounting tube. One end of the spring is attached to a fixed point and the other end is either hooked around the rudder pedestal or it can be fitted into a tab on the rudder mounting tube. In the latter case, the tabs are put on the bottom of the tube so that they are less obtrusive. The same system is used on both rudder pedals and is set so as to give equal tensions on the two rudder cables.

Now comes the punch line. If the fixed end of the spring on one side is made to rotate---through a limited arc---then the tension is made unequal between the two sides, and presto the rudder is trimmed. Ok, adjacent to the rudder tube on the mounting shaft a second rotatable tube is inserted and it has a flange arm. The "fixed" end of the spring is then attached to this flange. A vernier cable is then attached to the end of the flange. The adjustment of the flange then provides a variable tension to one rudder cable and this adjustment is as precise as only verniers can be.

As it happens, if the system described above is applied to the left rudder pedal, then when the vernier knob is turned to the right, the trim affect is to the right, and vice-versa, so there is no paradoxial motion with which to contend. I would suggest that the length of the arm on the rotating cuff be roughly equal to the movement range on the vernier. For example, if the vernier travel is 2½ inches, then make the arm 2½ inches long, and the result will be rotation through a 60 degree arch. A slightly greater arch would be produced with a shorter arm.

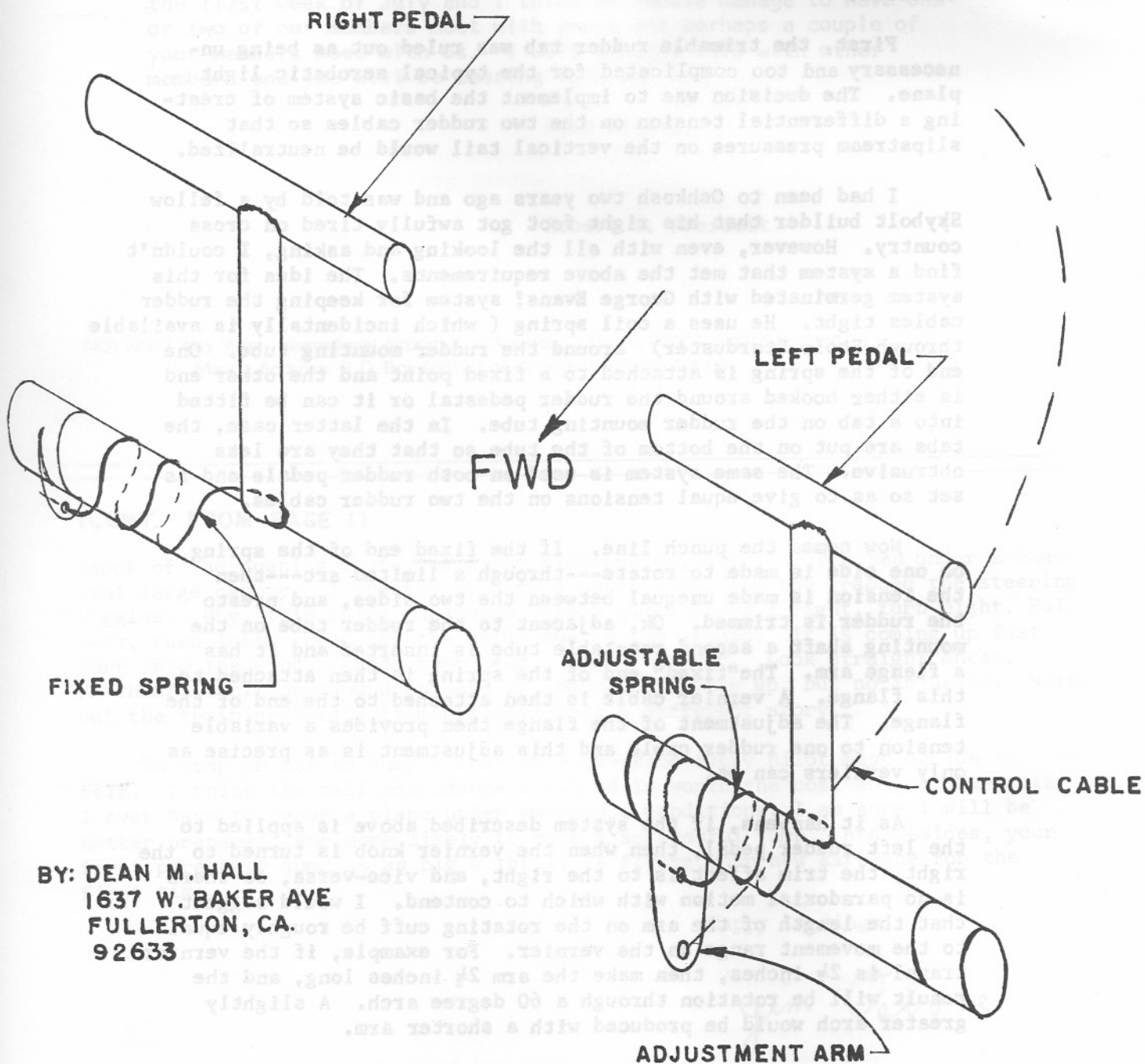
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RUDDER TRIM SYSTEM

In any event, the spring tensions should be equal in the center or vertical positions.

In my system, the vernier handle is placed low on the left post of the back of the front seat. The cable then goes under the front seat and under the frame to its attachment under the left rudder pedal. It is completely hidden except for the vernier handle.

Dean M. Hall



BY: DEAN M. HALL
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92633

BAA BAA BLACKSHEEP-A CRITIQUE

BY: Eric Shilling

I am not a movie critic. I have no intention of criticizing the TV series "BAA BAA BLACK SHEEP" regarding its entertainment value. However, as a former FLYING TIGER Fighter Pilot, I strongly object to Greg Boyington's inference that General Chennault was a ridiculous disciplinarian, a dead beat, and an unfair Commander. As a matter of fact, he was quite the opposite, in all respects.

I appreciate the opportunity to set the record straight, for those who may take the time to read this. I will point by point present those areas where I have the greatest disagreement, and why. Boyington harbored an extreme dislike for the General after he was given a dishonorable discharge from the FLYING TIGERS. In my opinion, it was well deserved.

The opening scene of the TV series showed Greg "Pappy" Boyington in the Hospital. We are led to believe that the injuries were sustained by trying to save a P-40, and he crash landed. Apparently the engine had failed due to poor maintenance, causing a malfunctioning carburetor, and he was forced to land. The actual reason for the crash was that he ground looped on take off, still suffering from the effects of too much alcohol the previous night. Chennault was angry because he had cracked up a badly needed P-40, and told him why. After all, thousands of Chinese lives, the airbases, and the men on the ground all depended upon us on alert status. Not only had Boyington screwed up, but he had ruined an irreplaceable airplane.

Chennault didn't give a damn how much a person drank. His only concern was whether or not the person could perform his assigned task. In this matter, he had repeatedly warned Greg of his excessive drinking, and this was the final straw.

Actually, Boyington's injuries were so minor that he was back in the club that evening, not on crutches, engaging in his favorite pastime. The club was situated on the very top of a small hill overlooking the airfield. About 9:00 that evening the Air Raid warning sounded, so we all ran outside for the slit trenches. Greg jumped into what he mistook for a slit trench. It turned out to be the side of a hill, which he tumbled down. He came to a stop 15 feet below, landing on the road leading up to the Club house.

Although the Japanese bombed the Airfield, little damage was inflicted on any of the airplanes on the ground. After the all clear sounded, we all returned to the club. Greg had to be helped in, his clothes in tatters, and bloody from his fall. Doc Richards was there, and made Greg lie down while he dressed his wounds. While his cuts and abrasions were being swabbed with iodine, Greg was yelling, and Doc was cussing, saying it wouldn't have happened if Greg hadn't drank so much.

To my knowledge, no one in Boyington's outfit has ever shown any appreciation towards Chennault for the invaluable training given to Greg, and indirectly, to his squadron. Not even Greg himself, who should have been aware of it. This brings up another impression left to the viewer of the series which I wish to correct. Boyington was NOT a tactician or a student of Japanese psychology. Nor had he had the opportunity, as did Chennault, to obtain such information first hand.

Before the War, during our training at Toungoo, Burma, Chennault gave morning classes consisting of all possible aspects of the Japanese pilots, their equipment, and the possible tactics to expect. The General had obtained this information by flying a fighter airplane as an observer, earlier, when the Japanese had been bombing such cities as Hankow, Nanking, etc. Many of us were convinced that he had actually been engaged in combat against the Japanese, because of the very vivid descriptions he gave during his lectures. On several occasions, when asked about this, he denied it, but I didn't think he was too convincing.

He gave us, with complete accuracy, aircraft speeds, number and size of guns, locations of guns, rates of fire, the enemies blind spots, and other advantages and disadvantages, as well as what to expect. We were aware of the pitfalls of the turning combat, and knew how best to utilize the P-40's advantages. We were also given lectures in the Fighter tactics that we used so successfully. I would like to point out that it was over these same successful tactics that Chennault and the Army Brass had had their differences. These differences, and his outspoken thoughts on the subject were the reasons for Chennault's early retirement from the Army Air Corps.

Watching "BAA BAA BLACK SHEEP", you are led to believe that Chennault was a strict Military disciplinarian. I'll tell you of my first encounter with the General. It occurred after my buzzing the baseball diamond at Toungoo. I was returning from Rangoon, ferrying a newly assembled P-40. As I approached the base at 10,000 feet, I decided to give the fellows a Buzz Job. I dove down from 10,000 feet and crossed the ball field at 50 feet, indicating 460 M.P.H., which was red line speed. I horsed back on the stick until vertical and did two rolls straight up before leveling off at 5000 feet. Dropping the gear, I landed and taxied to the maintenance area and parked. George Bailey, one of the mechanics, jumped on the wing and shouted that "the OLD MAN" had arrived the previous evening. Hurriedly, I climbed on my bike, and pedaled to the Barracks. On the way I contemplated what the eventual outcome might be. I knew for certain I would be lucky if it only ended in a "Butt Chewing". Beyond that I didn't dare to think.

As I neared the baseball field, which was on the way to the Barracks, I saw the men playing softball, with Chennault pitching. I stopped and waited for the inevitable. After the General struck the third man out, he walked slowly over to me. I braced myself for the worst. In what I learned later to be his usual brusque manner, although belieing his actual nature, he said, "Nice roll, Shilling", and walked off.

Now, as to the confrontation between Chennault and Boyington, where Greg was demanding his money; the American Volunteer Group, later known as the Flying Tigers, were never paid by Chennault. We were under a cover contract to Central Aircraft Manufacturing Co., usually referred to, by us, as CAMCO.

All the men in the Flying Tigers had been in one of the branches of the Armed Forces at the time of our joining up to go to China. We had to be on active duty to be accepted by the American Volunteer Group. Although a state of emergency had been declared by President Roosevelt, we were allowed to resign from the Armed Forces, for this assignment only. It was with the blessing of the State Department and the War Department, as well as the President of the United States. Therefore, never, at any time had any of us any doubt or question as to who was actually paying us. It was the United States Government, thru Lend/Lease arrangement with China.

Boyington's final departure from China was on a Chinese Airline by the name of CHINA NATIONAL AVIATION CORPORATION. He did not fly out in a P-40, as shown on TV. The chinese airline was owned jointly, 51% owned by Pan American Airways, and 49% by the Chinese Government. It was this airline that 16 of us flew for after the Flying Tigers were disbanded in July, 1942.

As a final footnote, i would like to add that I have always personally liked Greg Boyington, although I have never approved of his attitude toward the "OLD MAN", especially when he is no longer here to defend himself

GAS TANK PRESSURIZATION

For years, it has been a common practice amog airplane builders to put gas tank vents facing into the wind. I have always done it as a matter of routine. Since last February, however, I have had second thoughts about this matter. Here is why.

Last December, we put a seat back gas tank on my Acroduster I, N181J. We flew it to Florida and back in January, and everything worked well. After my return from Florida, Eric Shilling noticed that in high speed Aerobatics the seat back tank would acquire a noticeable bulge. He attributed this to the internal air pressure built up by the positive pressure air vents.

Without giving the matter too much thought or consideration, we experimented by reversing the vents, so that they now had a suction, in place of a pressure.

On our very first test flight, with an empty tank, the tank collapsed inward from the suction, in a high speed test dive.

We rebuilt the tank, and did some calculations on the internal pressure of a gas tank, due to venting. The pressures worked out to be astonishingly high, both positive and negative.

I am now of the opinion that gas tank vents should be set at a slight angle to the slipstream, so as to give a small positive pressure. I believe that a vent heading directly into the wind is inviting gas tank problems. I have known of several tanks which developed leaks. I am now convinced that they were due to overpressurization. One builder had gas spray out around the gas cap, whenever he went inverted. Positioning the vents so as to reduce the internal pressure cured the problem.

If you has been having any problems of this kind, you are invited to benefit by our experience. We do not advocate negative pressure on any main tank. If you feel impelled to try negative pressure, please be sure it is an aux. tank. Negative pressure may lead to engine stoppage. What works best for us is a small positive angle with the slipstream.

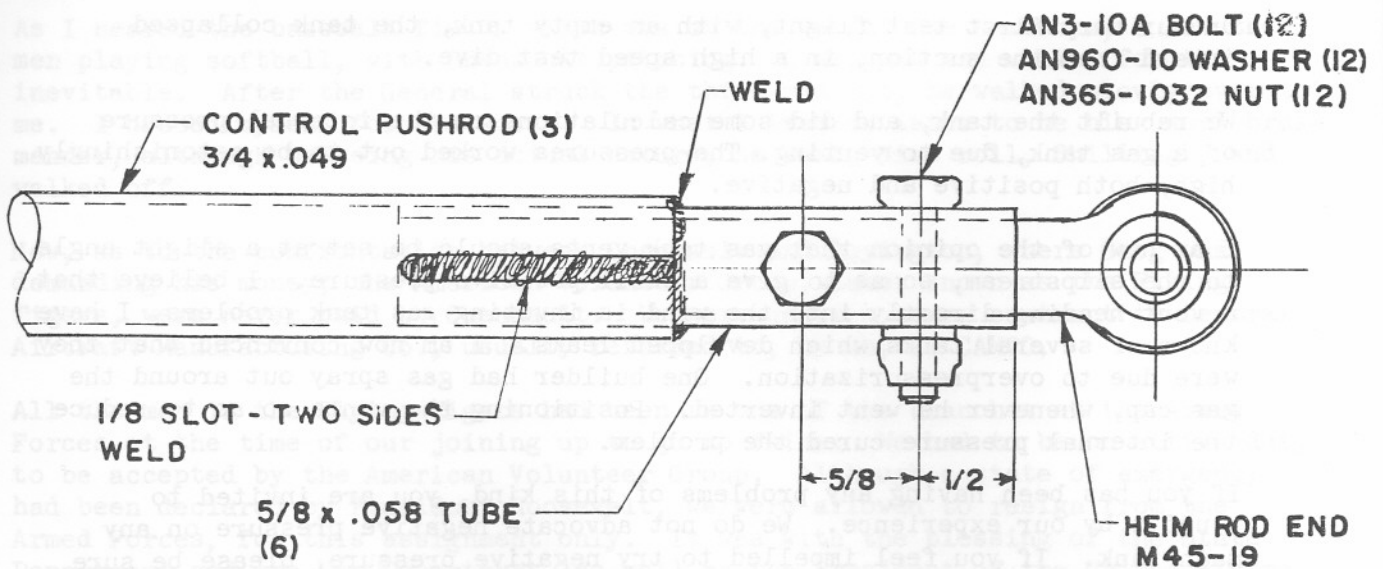
We invite your comments on this matter.

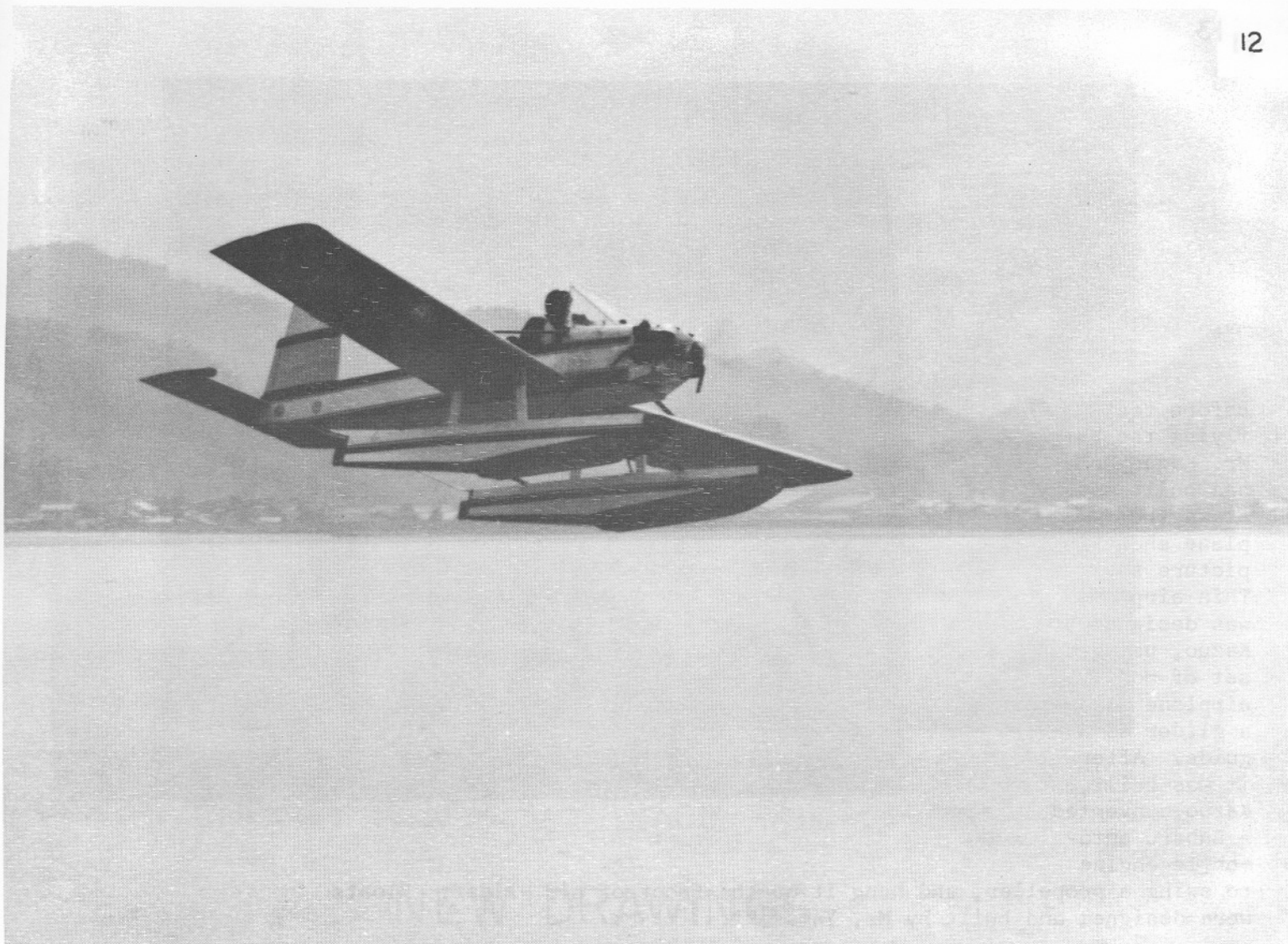
NEW PUSHROD ENDS - SA300

During the life of an airplane, many items become difficult, or impossible to obtain. Such is now true of the FAFNIR RE4H6 Rod Ends that are called out on sheet 13, SA300, for use on the three elevator control push rods.

These Rod Ends are now in short supply. We would have to pay an excessive amount to obtain them, and pass the cost on to the customer at the time of sale.

We have located some similar Rod Ends made by Heim, #M45-19. We have been fortunate in obtaining a good supply at a reasonable price. We can sell them for only \$3.95 each. Therefore, we have redesigned our control pushrods on the SA300 to accommodate these bearings. The redesigned pushrod end is below.





HOME BUILDING IN JAPAN

One day, about one month ago, we had the pleasure of a visit by two gentlemen from Japan. They were avid aviation enthusiasts, EAA members, and homebuilders.

What made their visit especially interesting to me, was their experiences in building and flying their airplane.

The above picture is of a VP-1. This airplane was built, in Japan by Mr. Yamasaki. It is covered with Manchurian cotton, as dacron was not available. Mr. Yamasaki also designed and built the floats.

Not being a pilot, Mr. Yamasaki arranged for Mr. Kazuo Ochi to make the first flight. Kazuo is a licensed pilot with 300 hrs flight time. After the plane was test flown Mr. Yamasaki learned to fly by taxiing fast, and then faster, and then making short hops. No dual instruction at all. Then Mr. Yamasaki's friend, Akio Mizobuchi, learned to fly the same way. Shades of the wright brothers. As of August 75, the little VP seaplane had 12 hrs on it. Bud Evans must have designed a very safe airplane, since the airplane itself has taught two people to fly. Performance figures on the VP float plane are:

rate of climb -----	300'/min.
cruising speed -----	65 MPH.
stall speed -----	40 MPH.

The airplane was built in the short time of only 6 months.

NEW PUSHROD ENDS - SA300

Before test flying the VW, Mr. Kazuo Ochi had built and flown the floatplane shown in picture #2. This airplane was designed by Kazuo, using a set of model airplane plans for a glider as a guide. After it was built, Kazuo converted a Subaru automobile engine to swing a propeller, and hung it on the front of his glider. Floats were designed and built by Mr. Yamasaki.



The 1400cc Subaru engine runs direct drive. It turns 4500 on takeoff, and cruises at 4000. Rate of climb 6s 300 FPM. Cruising speed is 60 MPH. Stall is 35 MPH.

Considering the lack of suitable aircraft materials, we feel that the gentlemen involved in building and flying these two airplanes deserve a great deal of credit.

While at Oshkosh in '76, it was my pleasure to meet with Mr. Munetoshi Akita and Mr. Katsuo Mori. Mr. Akita was a flight instructor and Zero pilot in WW 2. Today he teaches Aircraft Mechanics in High School, in Fukuoka.

In the final picture on next page, Mr. Akita is shown with a recent graduating class. All the students shown are now working in aircraft plants, or have gone into the Defense Air Force.

The gyro in the picture, designed by mr. Akita, and built by his students, is powered by a Subaru 1400cc auto engine. The first test flight was made by student Tokunaga on may 5, 1976.

It is an interesting commentary on the Japanese FAA, that autogyros can be built and flown by amateur builders much easier than can airplanes. And, apparently, seaplane are not subject to the same restrictions as land-planes.

In spite of our occasional bitches, we undoubtedly have the most lenient aviation laws, and the most cooperative regulatory body in the world. Sometimes we should look around, & count our blessings.



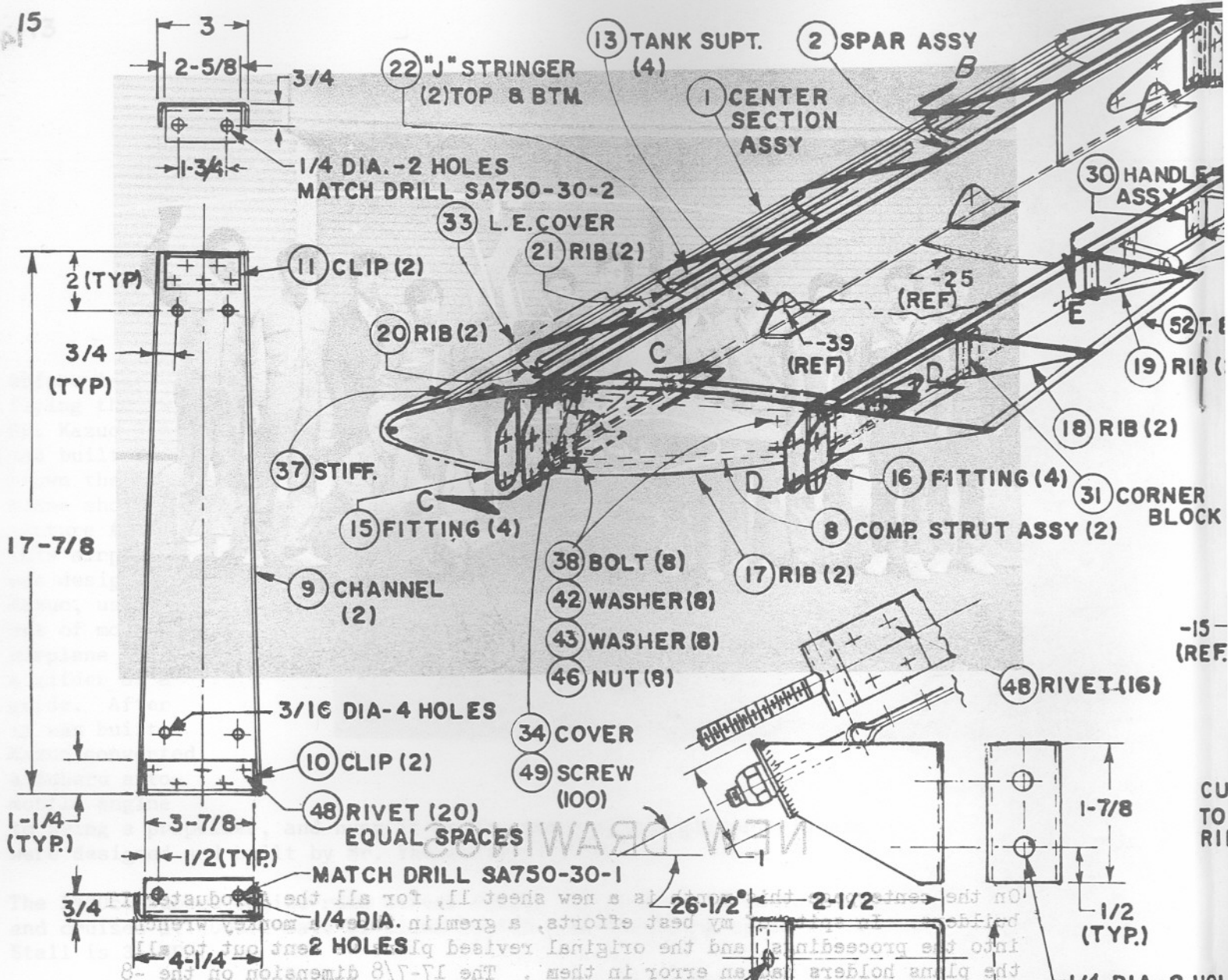
NEW DRAWINGS

On the centerpage this month is a new sheet 11, for all the Acroduster II builders. In spite of my best efforts, a gremlin threw a monkey wrench into the proceedings, and the original revised plans we sent out to all the plans holders had an error in them. The 17-7/8 dimension on the -8 Compression Struts was originally 18-3/16. The correct dimension is shown on the centerpage drawing. All builders are cautioned to make this change on their drawing. We thank Peter Gordon-Johnson, an R.A.F. Flying Officer on temporary duty in Florida, for bringing this to our attention.

In addition to sheet 11, sheets 24, 25, 26, and 30 have been revised, and mailed to plans holders. Many of these mailings have been returned to us. The addressee had moved and left no forwarding address. We request that any plans holder who did not receive a copy of the new drawings write us immediately.

For the STARDUSTER TOO, a new sheet 16 has been drawn and is being mailed out to new plans holders. No changes of any significance were incorporated in the new drawing. It was redrawn to the new 11 x 17 size. It was not mailed to Starduster too plans holders. However, copies may be obtained free, with any order, by any Starduster Too plansholder who requests it.

Two new Drawings, sheets 25 and 32, have been revised and mailed out to all V-STAR plans holders. These two revised drawings have to do with the Landing gear and the I Struts. As with the Acroduster Too drawings, many of the mailings were returned to us. We suggest that any V-Star plans holder who did not receive these revised drawings, write to us.

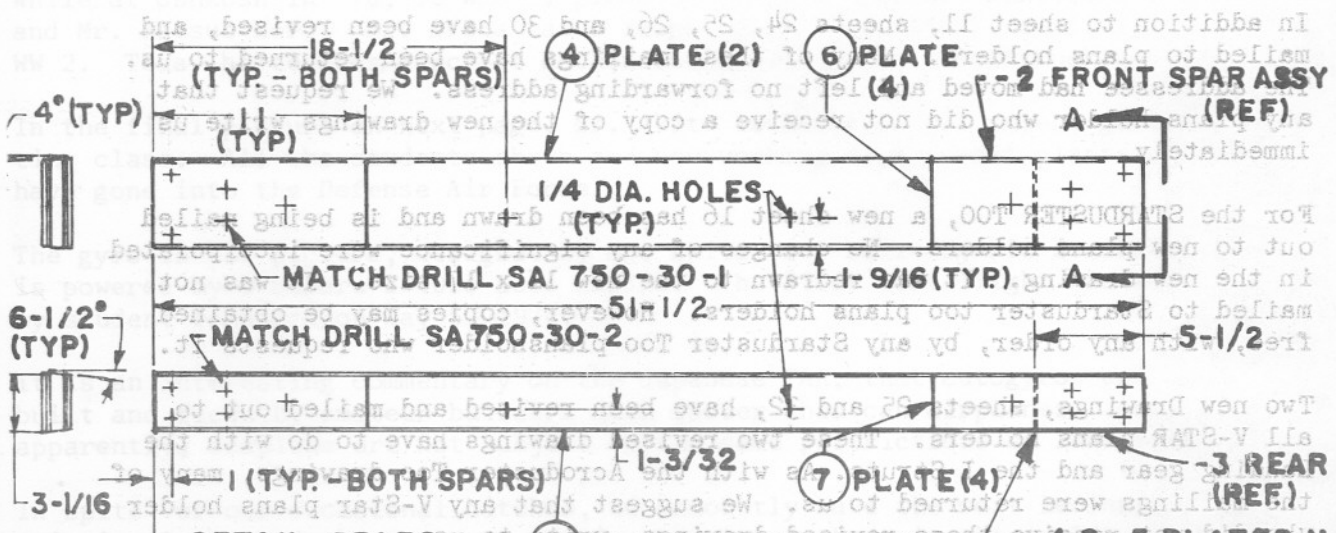


DETAIL-8 COMPRESSION STRUTS

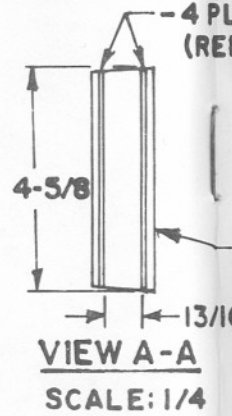
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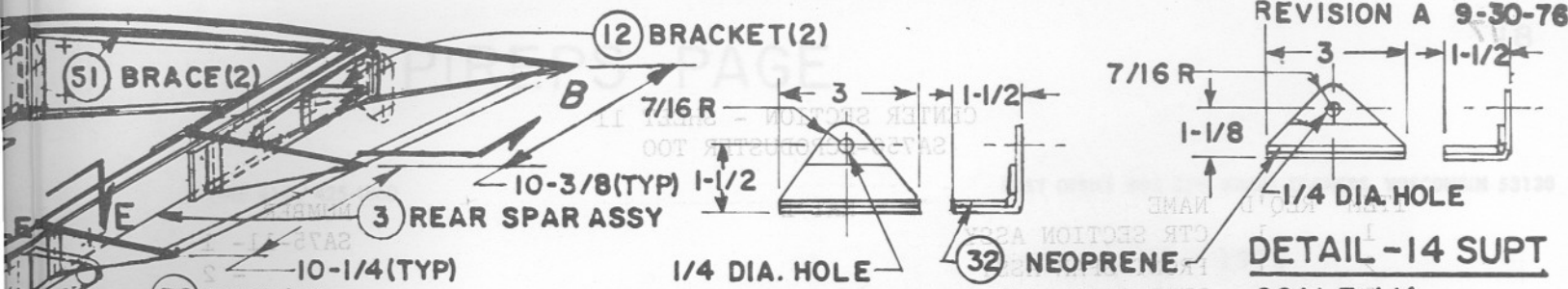
DETAIL-12 BRKT

SCALE: 1/2



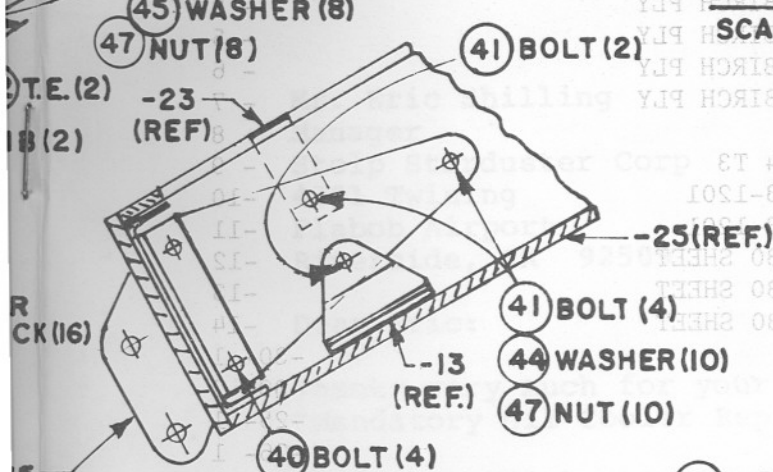
DETAIL-SPARS
SCALE: 1/10



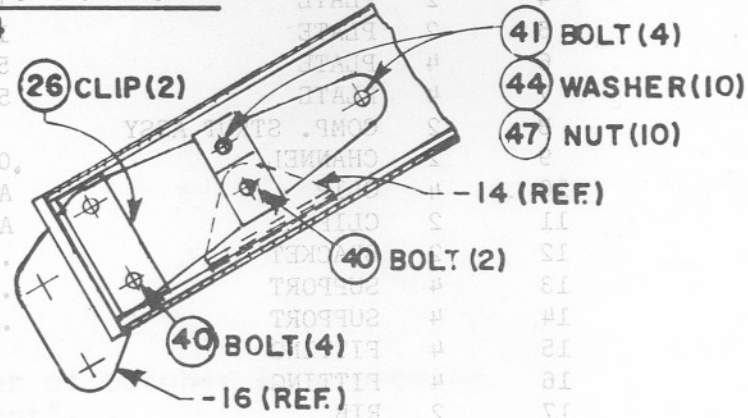


DETAIL - 13 SUPPORT
SCALE: 1/4

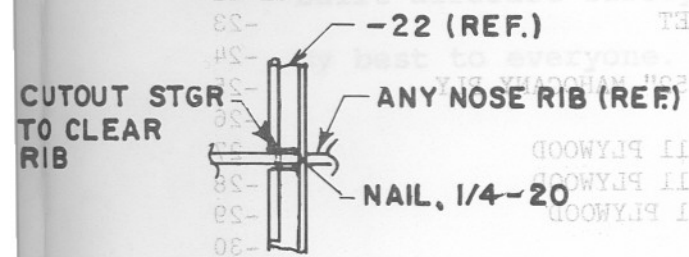
DETAIL - 14 SUPT
SCALE: 1/4



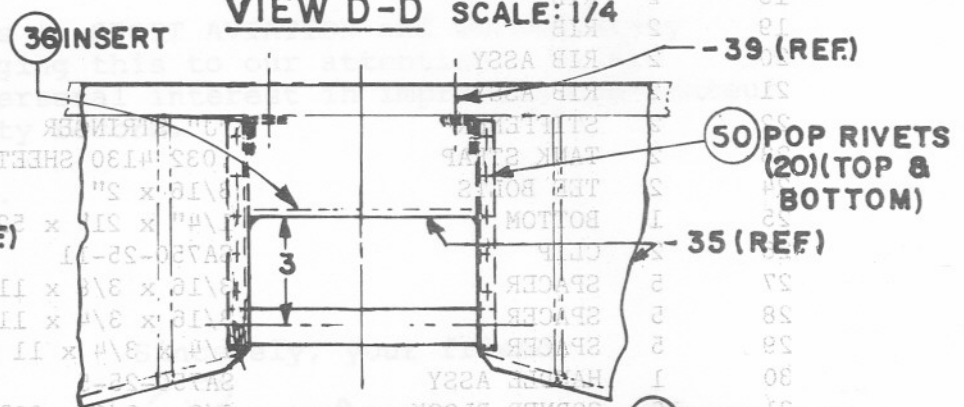
VIEW C-C
SCALE: 1/4



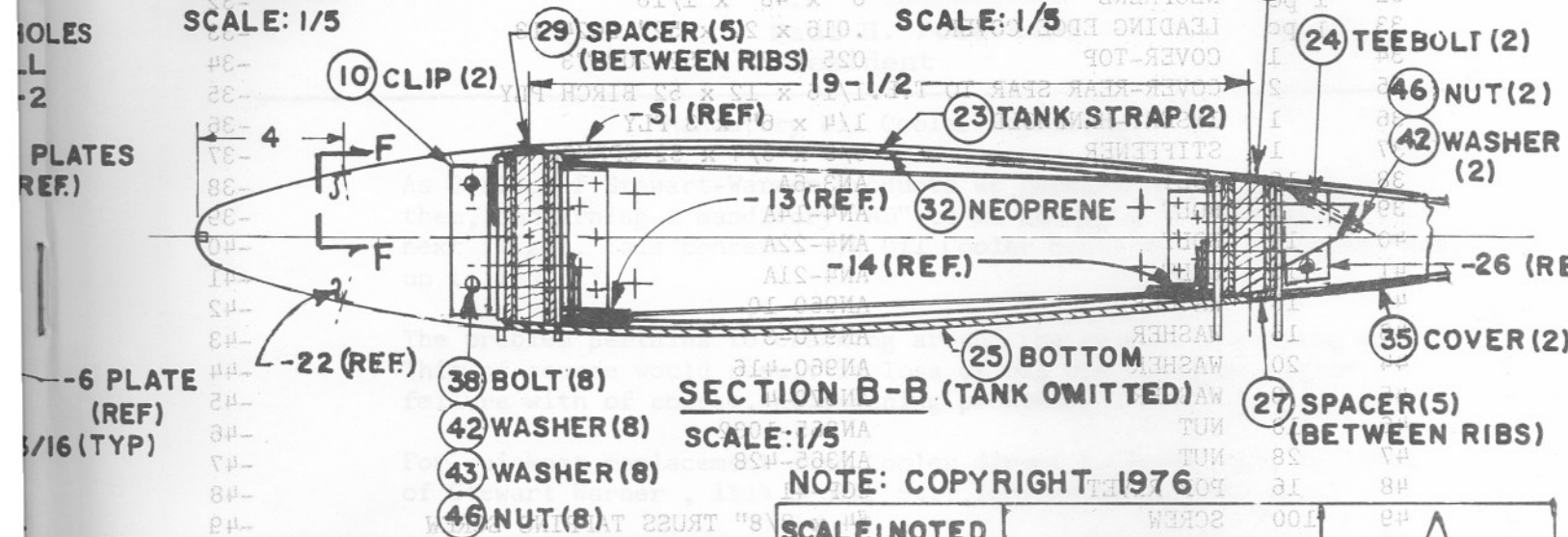
VIEW D-D SCALE: 1/4



VIEW F-F
SCALE: 1/5



VIEW E-E
SCALE: 1/5



SECTION B-B (TANK OMITTED)
SCALE: 1/5

NOTE: COPYRIGHT 1976

- 6. MIN. SCREW/RIVET EDGE DISTANCE = 2 DIA.
- 5.-49 SCREWS AT 2" SPACING THRU -34 COVER.
- 4.MT.-14 SUPPORTS OPP. -13 SUPPORTS.
- 3.USE -31 BOTH SIDES ALL SMALL RIBS.
- 2.TANK MUST BE CRADLED IN NEOPRENE
- 1.NAIL -33 AT SPAR ONLY. NAILS FURNISHED IN WING KIT.

SCALE: NOTED	CENTER SECTION MODEL SA 750	
DATE: 9-30-76		
DRAWN: J. Osborne		
STRESS: J.O.		
CHECKED: J.O.	STOLP STARDUSTER CORPORATION	SHEET NO. 11

CENTER SECTION - SHEET 11
SA750-ACRODUSTER TOO

ITEM	REQ'D	NAME	MAT'L	NUMBER
1	1	CTR SECTION ASSY		SA75-11- 1
2	1	FRONT SPAR ASSY		- 2
3	1	REAR SPAR ASSY		- 3
4	2	PLATE	1.5 mm BIRCH PLY	- 4
5	2	PLATE	1.5 mm BIRCH PLY	- 5
6	4	PLATE	5.0 mm BIRCH PLY	- 6
7	4	PLATE	5.0 mm BIRCH PLY	- 7
8	2	COMP. STRUT ASSY		- 8
9	2	CHANNEL	.032 2024 T3	- 9
10	4	CLIP	AND10133-1201	-10
11	2	CLIP	AND10133-1201	-11
12	2	BRACKET	.063-4130 SHEET	-12
13	4	SUPPORT	.063-4130 SHEET	-13
14	4	SUPPORT	.063-4130 SHEET	-14
15	4	FITTING		-30- 1
16	4	FITTING		-30- 2
17	2	RIB		-25- 1
18	2	RIB		-26- 1
19	2	RIB		-26- 2
20	2	RIB ASSY		-26- 4
21	2	RIB ASSY		-26- 3
22	2	STIFFENER	"J" STRINGER	-11-22
23	2	TANK STRAP	.032 4130 SHEET	-23
24	2	TEE BOLTS	3/16 x 2"	-24
25	1	BOTTOM	1/4" x 21" x 52" MAHOGANY PLY	-25
26	2	CLIP	SA750-25-11	-26
27	5	SPACER	3/16 x 3/8 x 11 PLYWOOD	-27
28	5	SPACER	3/16 x 3/4 x 11 PLYWOOD	-28
29	5	SPACER	1/4 x 3/4 x 11 PLYWOOD	-29
30	1	HANDLE ASSY	SA750-25-5	-30
31	16	CORNER BLOCK	3/8 x 3/8 x 90°	-31
32	1 pc	NEOPRENE	6" x 48" x 1/16	-32
33	1 pc	LEADING EDGE COVER	.016 x 22 x 52" 2024 T3	-33
34	1	COVER-TOP	025 x 22 x 52 2024T3	-34
35	2	COVER-REAR SPAR TO T.E.	1/16 x 12 x 52 BIRCH PLY	-35
36	1	INSERT-HANDHOLD	1/4 x 6" x 3 PLY	-36
37	1	STIFFENER	3/8 x 3/4 x 52 SPRUCE	-37
38	16	BOLT	AN3-6A	-38
39	8	BOLT	AN4-14A	-39
40	10	BOLT	AN4-22A	-40
41	10	BOLT	AN4-21A	-41
42	18	WASHER	AN960-10	-42
43	16	WASHER	AN970-3	-43
44	20	WASHER	AN960-416	-44
45	8	WASHER	AN970-4	-45
46	18	NUT	AN365-1032	-46
47	28	NUT	AN365-428	-47
48	16	POP RIVET	CCP-41	-48
49	100	SCREW	#4 x 3/8" TRUSS TAPPING SCREW	-49
50	50	POP RIVETS	AAP-42	-50
51	2	BRACE	1/4 x 1 22 SPRUCE	-51
52	2	TRAILING EDGE	1/8 x 1 x 21 BIRCH PLY	-52

PIREPS PAGE

18

PHONE 414 / 425-4860

POST OFFICE BOX 229, HALES CORNERS, WISCONSIN 53130

October 28, 1976

Mr. Eric Shilling
Manager
Stolp Starduster Corp
4301 Twining
Flabob Airport
Riverside, CA 92509

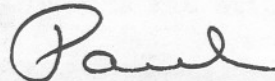
Dear Eric:

Thanks very much for your letter of October 19 regarding
"Mandatory Oil Cooler Replacement".

We will publish this in SPORT AVIATION and we certainly
appreciate you bringing this to our attention. We are
pleased with your personal interest in improving the amateur
built aircraft safety record.

My best to everyone.

Sincerely, your friend,



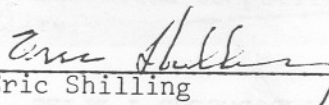
Paul H. Poberezny
President

"Mandatory Oil Cooler Replacement"

As Dealer of Stewart-Warner Products we received notice from
them, concerning a mandatory "AD" to be accomplished prior to
next flight. This concerns S/W Oil Cooler Model No. 8406J Serial Nos.
up to 1500.

The problem pertains to Cracking around the welded in Fitting Boss.
This of course would result in loss of oil and possible engine
failure with of course, accompanying problems.

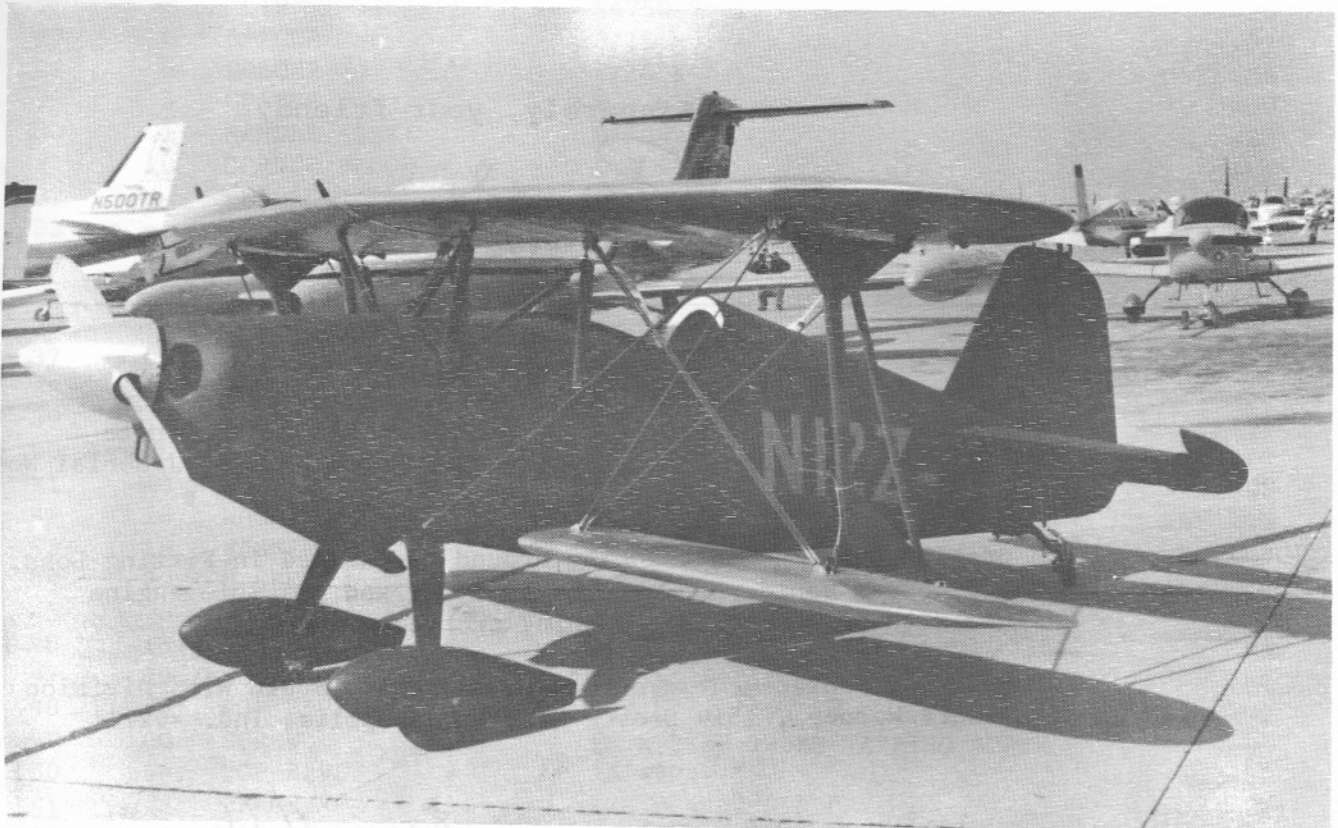
For quickest replacement send Cooler direct to South Wind Division
of Stewart Warner , 1514 Drover St., Indianapolis, Ind. 46221



Eric Shilling
Manager
Stolp Starduster Corp.



A NEW ACRODUSTER TOO FLIES. OWNED AND BUILT BY GAFF MUELLER, OF BLUE JAY, CALIFORNIA. GAFF IS FLYING THE 50 HOURS OFF BEFORE APPLYING PAINT AND TRIM.



A NEW ACRODUSTER I FLIES. BUILT AND FLOWN BY HARRY BARR, OF LINCOLN, NEBRASKA. THE KIT WAS BOUGHT LAST FEBRUARY. IT FLEW EARLY IN NOVEMBER. HARRY SAYS IT IS SO EASY TO HANDLE THAT A CUB PILOT COULD PROBABLY FLY IT SUCCESSFULLY.

94 3rd Infantry Road
Fort Leavenworth, KS 66027

12 November 1976

Stolp Starduster Corporation
4301 Twining Road
Riverside, CA 92509

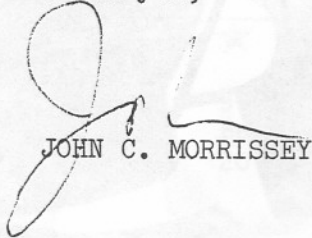
Dear Jim,

I've just completed a rather successful year in my SA-300 and thought you might be interested. The record shows five wins in six contests. Springfield, TN; Boulder, CO; Council Bluffs, IA; Kansas City (second); Sudbury, Ontario Canada (the Canadian Open); and Sherman, TX (U.S. Nationals). Thought you would be especially glad to know that a SA-300 won the Canadian Open and is National Champion (Sportsman), U.S.A.

I've given next year's plans some thought and it seems I have two realistic choices--try to make a go of intermediate in the Starduster or buy a different ship and go to unlimited. The later choice would be extremely expensive and require me to give up the two seat capability. On the other hand, my Starduster Too is not going to be competitive in the intermediate class at its present roll rate and power to weight ratio.

Jim, could you look at the "Too" from an engineering viewpoint and let me know if there is any way to improve the roll rate and also your ideas on the 200 vs 180 Lycoming in the power to weight department (is it worth it performance wise?). Lastly, could you give me your best thinking on a realistic "Q" limit speed (assuming its rib stitched correctly).

Thank you,



JOHN C. MORRISSEY

Editors Note: John is to be congratulated on his splendid performance in a biplane designed for general sport flying, and not specifically for aerobatics. However, we think John has about pushed it to its limits. We recommend that he get a two place Acroduster, if he wants to retain two seats, and would be satisfied with intermediate competition. Or, better yet, he should get a single place Acroduster for unlimited competition and keep his Starduster for its two hole capability.

September 14, 1976

Dear Jim,

Starduster Too, N141N, has had its 50 hours signed off today. It has flown a total of 59 hours. Except for raising the forward edge of the horizontal stabilizer 5/8" at 40 hours, we have had to make no adjustments, changes, etc.

N141N was GRAND CHAMPION, CUSTOM BUILT, at MidEastern Flyin, at Marion, Ohio, September 11 and 12.

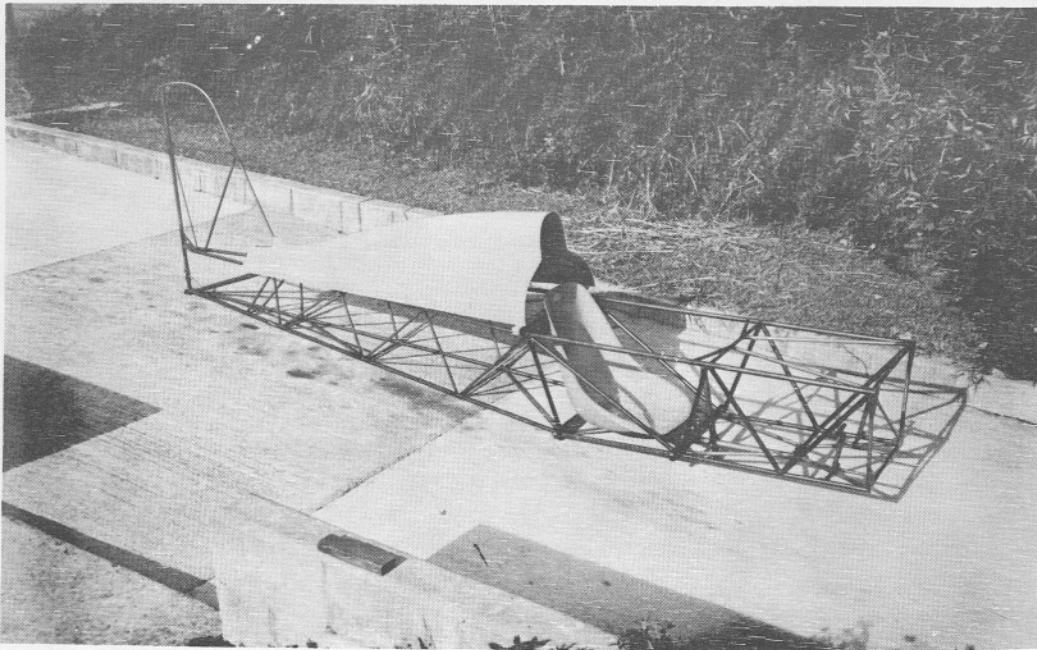
Thanks to all at Starduster Corporation for fel;; good deliveries, and good plans. I enjoyed visiting with you at Osh Kosh. Enclosed is an additional \$5.00. Please send information about the GLEN BEETS SPECIAL. Any additional information in addition to standard packet would also be appreciated. I'm trying to decide what next winters project will be.

Regards,

John A. Cheney



A BEAUTIFUL STARDUSTER TOO BY VERNON DALLMAN, P.O. BOX 9328, SOUTH LAKE TAHOE, CALIFORNIA, 95731. VERN REPORTS THAT FLYING FROM AN ALTITUDE OF 7000 FEET MAKES AN APPRECIABLE DIFFERENCE IN THE PERFORMANCE OF THE BIRD. HE HAS A 200 H.P. LYCOMING, AND SWINGS A CONSTANT SPEED PROP.



P. O. Box 5
Hikurangi
New Zealand

Dear Jim,

Just a note so that you can record the change of address.

The new job has stopped, (temporarily) work on the V-STAR. Enclosed is a photo to show I'm at least doing something. Also have tail feathers and 1000 little bits done.

Regards,

Jan Mortenson

3801-127th N.E.
Bellevue, Wa 98005
20 September 1976

Dear Sirs,

I am looking for a low time or zero since major overhaul Continental O-200 engine that you know is in good shape. Please advise the price as soon as possible. Keep up the good work on the "STARDUSTER" magazine. It is excellent.

Thanking you for your help, I remain,

Very truly yours,

John P. Foy.

EDITORS NOTE: We are unable to help Mr. Foy, as we do not normally deal in used engines. We publish his letter in the hope that it might help him obtain the engine he is looking for.



THREE BEAUTIFUL STARDUSTER TOOS FLYING IN FORMATION NEAR CORONA, CALIFORNIA. THE OWNERS ARE LEE DORRANCE, JOHN TRAVIS, AND WILL NEUBERT. MRS. DORRANCE HAPPENS TO BE THE PILOT OF THE NEAR MACHINE.



TAROP, CALIFORNIA, 25 '32. VIEW FROM AN ALTITUDE OF 1000 FEET.

RANDY MCCOY'S BEAUTIFUL ACRODUSTER TOO. THIS PLANE WAS RECENTLY SOLD TO A GENTLEMAN FROM IOWA. LOOK FOR IT IN THE MIDWEST NEXT SUMMER

PRECISION SHEARING
POWER BRAKE FORMING
PRECISION FABRICATING

GENERAL SHEET METAL
INDUSTRIAL WORK
POWER ROLLING

INGLEWOOD SHEET METAL

LICENSED CONTRACTORS AND FABRICATORS

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776-3470

776-5630

8-30-76

Jim Osborne
Stolp Starduster Corp.
4301 Twining, Flabob Airport
Riverside, Ca. 92509

Dear Jim:

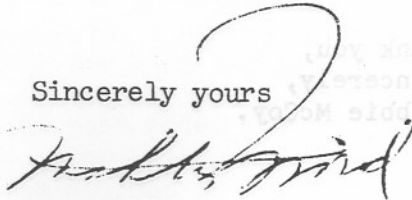
Sorry to be so late getting this slide to you but being late seems to be the story of my life lately. Many thanks.

I am also sorry to tell you that I have heard from some very missinformed people about your loss of the Acroduster at Corona during my trips to the various Fly-Ins this summer. I have done my best to tell everyone I have talked to about the accident, just what I saw. In my opinion the whole thing boils down to one word Speed!!! I have never seen a Biplane go anywhere near that fast in my thirty eight years of flying. My thoughts just before the accident were that he must be past three hundred miles an hour.

I have always felt the Acroduster was a fine little airplane and does not deserve any bad reputation it could get from this accident.

Jim if you manage to run down that award from Corona and get it for me please give me a call and I will pick it up. Thanking you in advance I remain,

Sincerely yours



Mahlon Ward

EDITORS NOTE: The McCoy Acroduster has been sold and the new owner has taken it to Iowa. It will probably be visible next summer at midwestern fly-ins. We sincerely appreciate the fine pictures, one of which is published elsewhere in this magazine.

1144 South 81st Street
 Kansas City, Kansas 66111
 July 22, 1976

Stolp Starduster Corporation
 4301 Twining
 Riverside, California
 92509

Sirs:

I foolishly allowed my subscription to the Starduster Magazine to lapse, and consequently have missed the April and July Issues for 1976. I am enclosing \$5.00 for another year of your fine Magazine, and would appreciate it if you could look around and see if there are an issue or two of April and July still around, and send me those. If you can, then, start my subscription with the April issue. If you can't, I will be looking forward eagerly to October.

Sincerely,

Daniel K. Bailey
 EAA 96269

P.S. I intend to start construction early next Spring on my Starduster Too (As soon as I rake up the money for the first order of tubing). Your plans are a work of art. A Fantastic airplane. (Plans Ser.#1798) Can't wait to get started.

October 18 1976

Dear Jim,

Hope all is well. We are fine. Randy asked me to send you these pictures of his Acroduster. He wasn't sure if you had any to hang on your bulletin board.

If anyone likes the plane would you please let them know it is for sale.

Thank you,
 Sincerely,
 Debbie McCoy.

EDITORS NOTE: The McCoy Acroduster has been sold and the new owner has taken it to Iowa. It will probably be visible next summer at midwestern flyins. We sincerely appreciate the fine pictures, one of which is published elsewhere in this magazine.

RANDY MCCOY'S ACRODUSTER WAS SOLD TO A GENTLEMAN FROM IOWA. LOOK FOR IT IN THE MIDWEST NEXT SUMMER.



After being away from flying for twenty three years, while raising a family, JOE THOMAS is back building airplanes. STARLET N7139 is the most exquisite small airplane ye olde editor has ever seen.

Joe is a machinist, and doesn't believe in buying parts he can make himself.

He has many parts made of Titanium, such as the tail wheel spring and fork.

He also added a FULLY RETRACTING Titanium step, to ease the chore of climbing in and out of the cockpit. Being weight conscious, also, Joe only weighs

650 pounds empty, with a hundred horsepower continental with a full electrical system. At present he cruises 115 MPH, with a climb prop.

Joe belongs to Chapter 92, and lives at 2950 West Floyd Street #B

Anaheim, California--92804

10-18-76

Dear Jim,

Please renew my subscription to the STARDUSTER MAGAZINE, and send a bill, as I don't know how much it costs. Also, I will be happy to send info and pictures about my airplane, if you need material for the magazine (N5462).

I have flown two airshows now, and the airplane has performed impressively as compared with the s-2 PITTS that were also in the show. No problems with flying characteristics have developed as yet, with the exception of the burble that I told you about earlier that has not been corrected yet.

Sincerely,
J. A. Campbell
9645 Baymeadows Road
Apt 661
Jacksonville, Fla.
32216

September 27, 1976

Dear Sirs,

Please send materials catalogue. My next letter will be an order for plans for the STARDUSTER TOO, (the worlds prettiest Bipe.)

Last Sunday, on "MICHIGAN OUTDOORS", (this program is similar to "Wide World of Sports") Experimental Aircraft were featured. Three STARDUSTER TOO'S from the Lansing area stole the show

Sincerely,
GEORGE L. PIERSON
12278 E. Hill Road
Goodrich, Michigan
48438

Bob Caravas
547 Hillcrest Road
San Carlos, Ca. 94070

THANKS FOR THE PROMPT SERVICE. THE TURTLEBACK LOOKS TERRIFIC. YOUR FIBERGLASS ITEMS HAVE IMPROVED 100 %.

Bob Caravas

THREE BEAUTIFUL STARLETS

THE ONE ONE THE RIGHT BY MEL DORNBUSCH, OF SAN DIEGO, CALIFORNIA.



THE CENTER STARLET HAS BEEN FLYING AROUND THE LOS ANGELES AREA FOR SEVERAL YEARS. DUE TO A LANDING ACCIDENT, THE GEAR HAS BEEN MODIFIED.



THE BOTTOM STARLET HAS BEEN FLYING ABOUT ONE YEAR. IT WAS BUILT, FLOWN AND ONWED BY STAN DERRICK, OF STOCKTON, CALIFORNIA



May 30, 76

Dear Jim,

Thank you for good service and open account courtesy. Enclosed find check for invoice #4577.

Our Shenandoah Valley State Wide Fly In Sept 24-25-26 will be in calendar of events June issue of Sport Aviation and will be the states larges event ever held in Virginia (all chapters) plus Antiquers. You will be sent a brochure.

You are cordially invited to attend also display any aircraft or products you wish. There will be an air show. If interested make reservation immediately as 75 rooms have already been taken. Our banquet will seat 650. This is beautiful country. Should be around 8000 people.

Will recomend your business to all Chapter members.

All at EAA hdqtrs have been invited.

Kindest Regards

Ed Todd

Editors note: This is one Fly-In I would like to attend next year.

John D. Elder
4 Hickory Ridge Rd
Smyrna Del. 19977

Dear Jim-

I received all the back copies of the Starduster magazine except Jan 1976. Was it intentional or an oversight?

Incidentally, had I received this magazine as they were published I doubt if my 'Two' would have sat in the hangar, almost ready to fly since 1972, with some of the excellent data I have read.

I started my SA300 in Feb. 68, covered it in 1971, pulled the weight and balance and became despondent. However after reading all I can on the subject I am once more interested in flying it.

John D. Elder

Classified Ads

ADVERTISING CLOSING DATE: JANUARY 1, APRIL 1, JULY 1, OCTOBER 1.
 CLASSIFIED ADVERTISING RATE: \$3.00 PER COLUMN INCH-MINIMUM CHARGE \$3.00
 MAKE CHECKS PAYABLE TO STOLP STARDUSTER CORP. THANK YOU.

FOR SALE

Build & Fly The Worlds
 easiest to build & best
 performing biplane -
THE ACRODUSTER ONE

BROCHURE \$5.00
 COMPLETE KIT \$4500.00

SA300 I Struts Fairing.
 Stamped Aluminum.
 \$195.00 Set of 4,
 Finished & Trimmed.
 \$135.00 Set of 4, you
 Finish & Trim.

Stolp Starduster Corp.

SLIDING CANOPY RAILS-
 Steel-Light Weight- Small
 Profile- Ball bearings-
 Very smooth and rigid
 action. Will open up to
 20". Only \$10.00/two.

IRON ON TRANSFERS--Goes
 on cotton or near cotton
 cloth. STARDUSTER TOO or
 ACRODUSTER TOO, both in
 full color. #1.00 each.

SPECIAL-SPECIAL-SPECIAL
FLEX ARMORED CABLE FOR
THROTTLE INTERCONNECTS.
 Length accurate to 1".
 AN667 FORK on each end.
 Made to your measurement
 ready to install.
 \$15.00 each.

BUY "STARDUSTER"

"STARDUSTER" Decals
 for

Starduster Too
 Acroduster Too
 Y-Star
 Starlet
 from

"Starduster"
 only \$1.00 each

Get a New

Stewart Warner
 Oil Cooler,
 8604E,
 for only \$95.00

from
 "Starduster"

TWO THROTTLE QUADRANTS--
 Military surplus. Three
 levers. When these are
 gone thats all there is.
 #49.50 each.

SPINNERS-FOR FIXED PITCH
PROPELLERS- 14" Base by
18" Long. Fiberglass with
Aluminum back and front
plates. Only \$57.50.

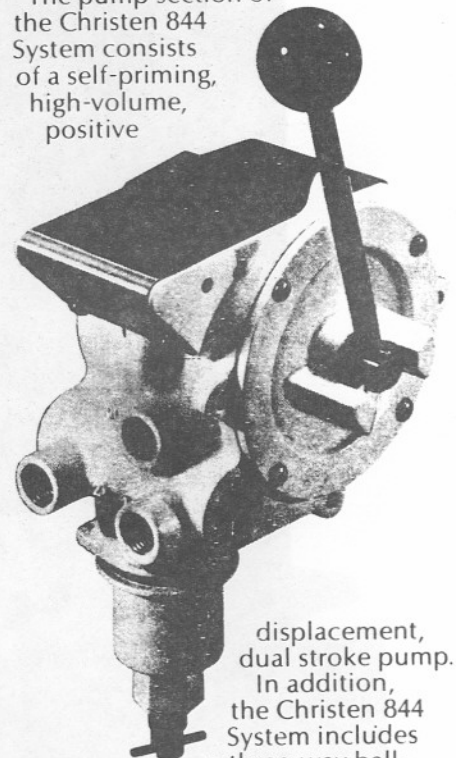
AIRSPPEED INDICATORS-
 0 to 125 M.P.H.- Good
 for gyros, gliders, and
 slow airplanes. Rebuilt
 to new condition by the
 the West's foremost Inst-
 rument rebuilding shop.-
 Only \$45.00 each.

CRANKSHAFT-FOR CONT.
125-145 H.P Engines.
 TWO only. Will give
 cam free with first
 one sold. Only \$75.00

Reliable Fuel Control

The Christen 844 Manual Fuel Pump System introduces a new concept in fuel systems for light aircraft. It is a self-contained single fuel control unit which provides all fuel management functions for light aircraft without the need for connection to electrical power.

The pump section of the Christen 844 System consists of a self-priming, high-volume, positive



displacement, dual stroke pump. In addition, the Christen 844 System includes a three-way ball-type fuel selector and shut-off valve, a replaceable filter, and a moisture sump with a quick-drain valve. The Christen 844 System functions in all aircraft attitudes and is particularly suited for installation in sport aircraft. Simplicity of design assures reliable trouble-free performance.

ONLY \$179.50
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... quick-drain
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... or installation
... city of
... trouble-



John R. Elder