

BUILDERS & FLYERS GP4 NEWSLETTER

THE OFFICAL VOICE OF GP-4 BUILDERS ALL OVER THE WORLD

VOLUME 10

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JAKIE YODER OF MIDLAND, MICHIGAN MAKES HIS FIRST FLIGHT IN HIS GP-4!

Hello Spud,

I have good news to share with all our fellow GP-4 builders. "Cotton Candy" as I call my GP-4 made its first flight on 10-6-96. The controls were smooth, with good control

harmony. Everything went very well. I call it Cotton Candy because its pink and burgundy. And when I say pink, think **Pepto Bismol Pink!** Quite a pleasant color combination.

● Letter of 4-20-96

I have a few things to share with the group. First is the turning device that you originally showed in issue number #8. To do a Lomcevoc or 1/2 outside loop. The main concern

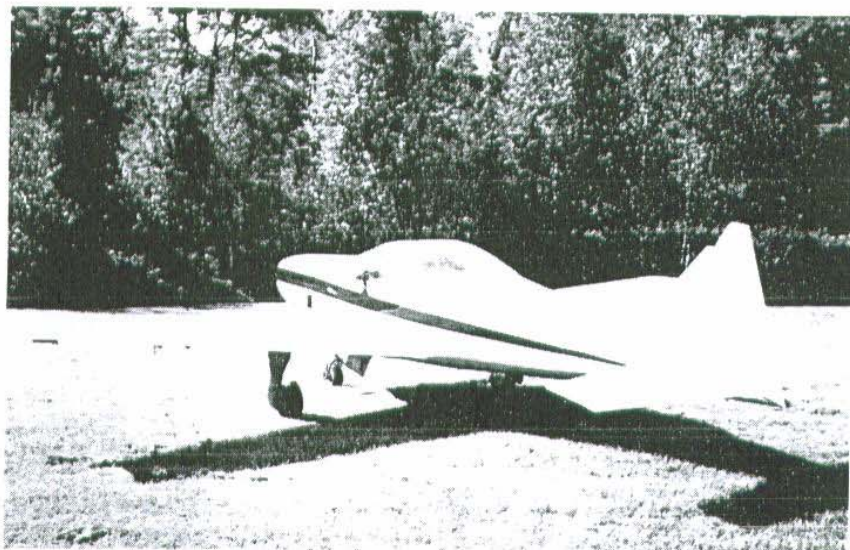
was the angle frame welded up and bolted to the engine mount and the angle bolted to the vertical fin spar to support the tail without vertical fin damage. A lot of construction companies have winch trucks or cherry picker cranes for rent to do the lifting. I went this route! I couldn't find the negatives or anymore pictures other than what you pulled from the **EAA Tech Counselor News** (Thank's Ben and Company) which turned out very good.

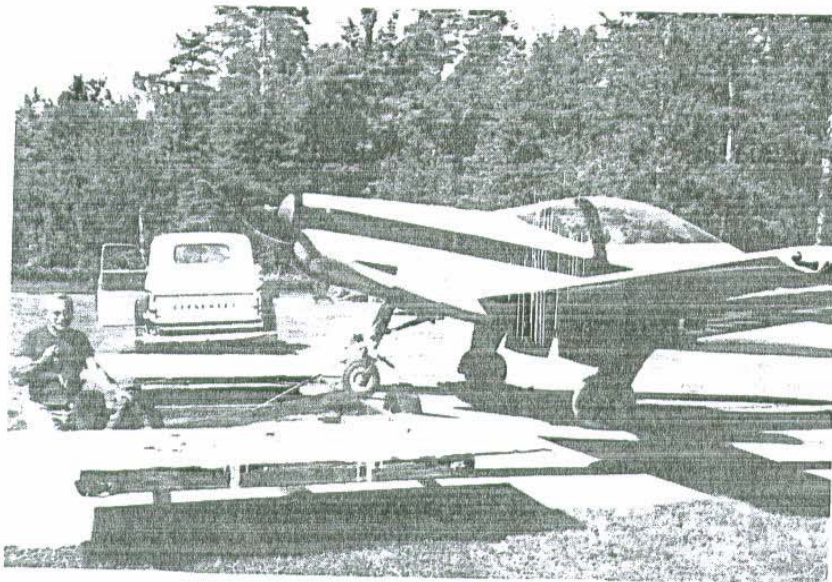
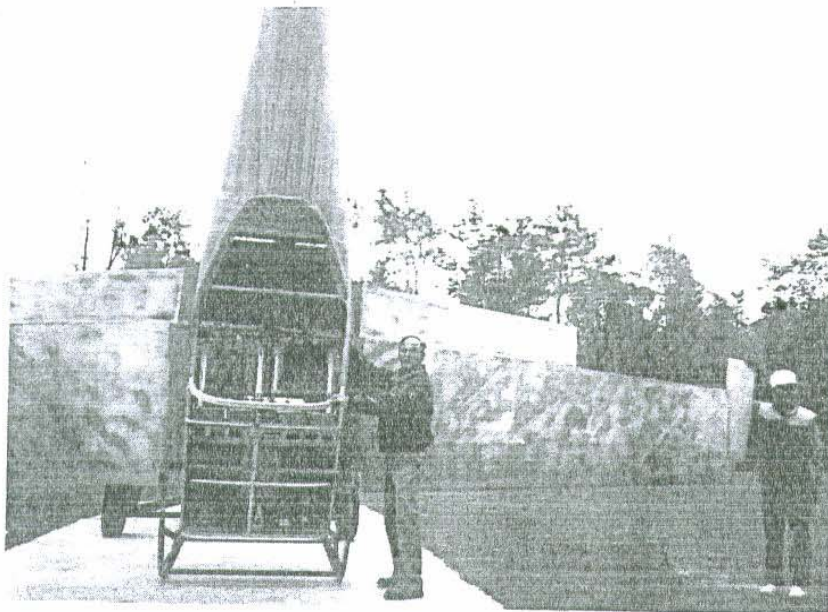
On page 4 is a sketch to showing how I used my 3/8" reversing drill to turn the allthread rod (some times called Ready-Rod) for clamping the spars. 1 hour & 18 minutes to spread the glue and clamp the top half of the spar laminates by myself!!

Yes I have made some changes to my airplane but I won't disclose this information until I prove that it works and are really good ideas and approved by George. (I guess we'll have to refer to Jackie's GP-4 project as the "**Yoder Shunk Works**" - **Top Secret!** - Spud)

● Letter of 9-11-96

Time flies when you're getting close. Well Oshkosh was 10 great days. In July a simple engine tear down and gaskets turned into \$8,000.00 of 6 new Millenium Superior cylinder assemblies, new cam & followers and oil pump gears. NO KIDDING I think I have an almost new engine. While we're on the engine let me tell you a little about it. My engine is a Lycoming O-540-A1D5 (Lycomings lightest 540). I changed it over to a sidedraft carb setup like on the Cessna Skylane using the M/S HA6 carb. This engine has a 7.5 to 1 compression ratio and has three HP ratings! Its rated at 235 hp at 2400 rpm, 250 hp at 2575 rpm and 260hp at 2700 rpm carbured. I didn't use the 6" prop extension called out in the plans to compensate for the additional overall length. I've installed light weight starter and alternator, remote oil filter system, one electronic ignition (The electronic ignition system allows it to idle down to a smooth 300 rpm!). This whole setup is 75 lbs. heavier than the IO-360. With all this horsepower it goes through





gear speed faster than I can get it retracted!

Some of the pictures of the finished bird in the sun and the loaded for the trip to a airport with longer runways for the initial test flights.

A few items to complete

1. Run in the engine.
2. FAA Blessings.
3. Fly in September!!

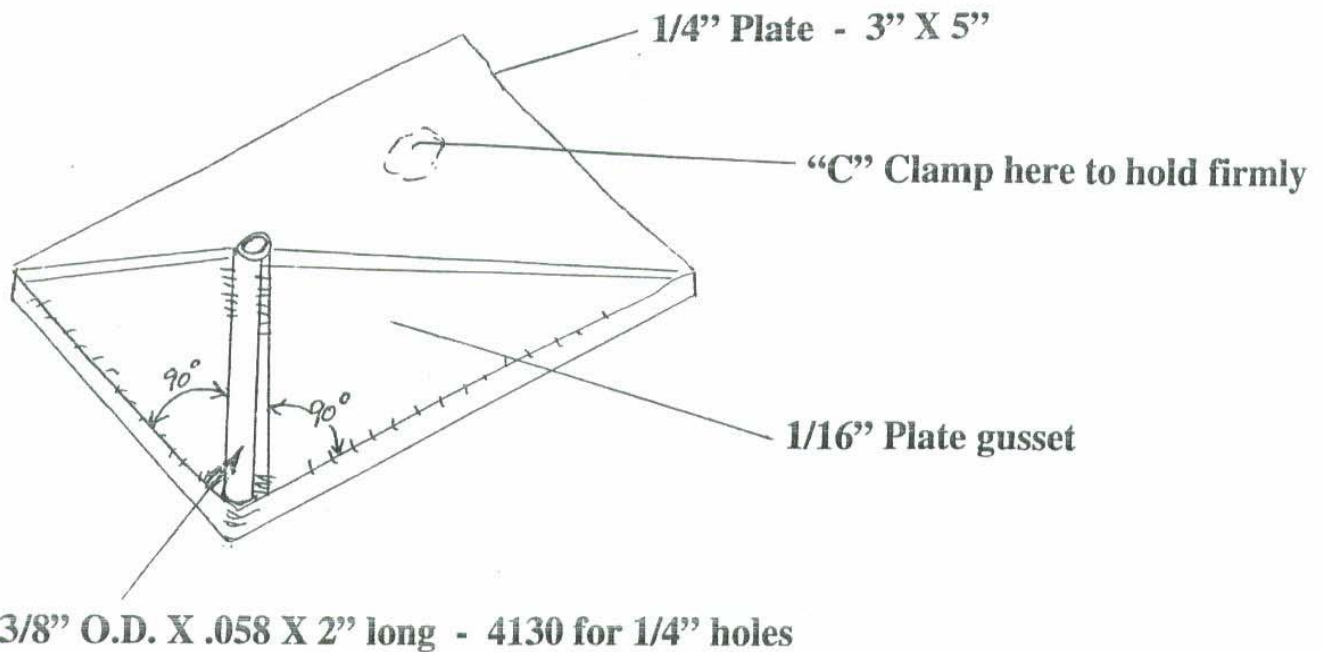
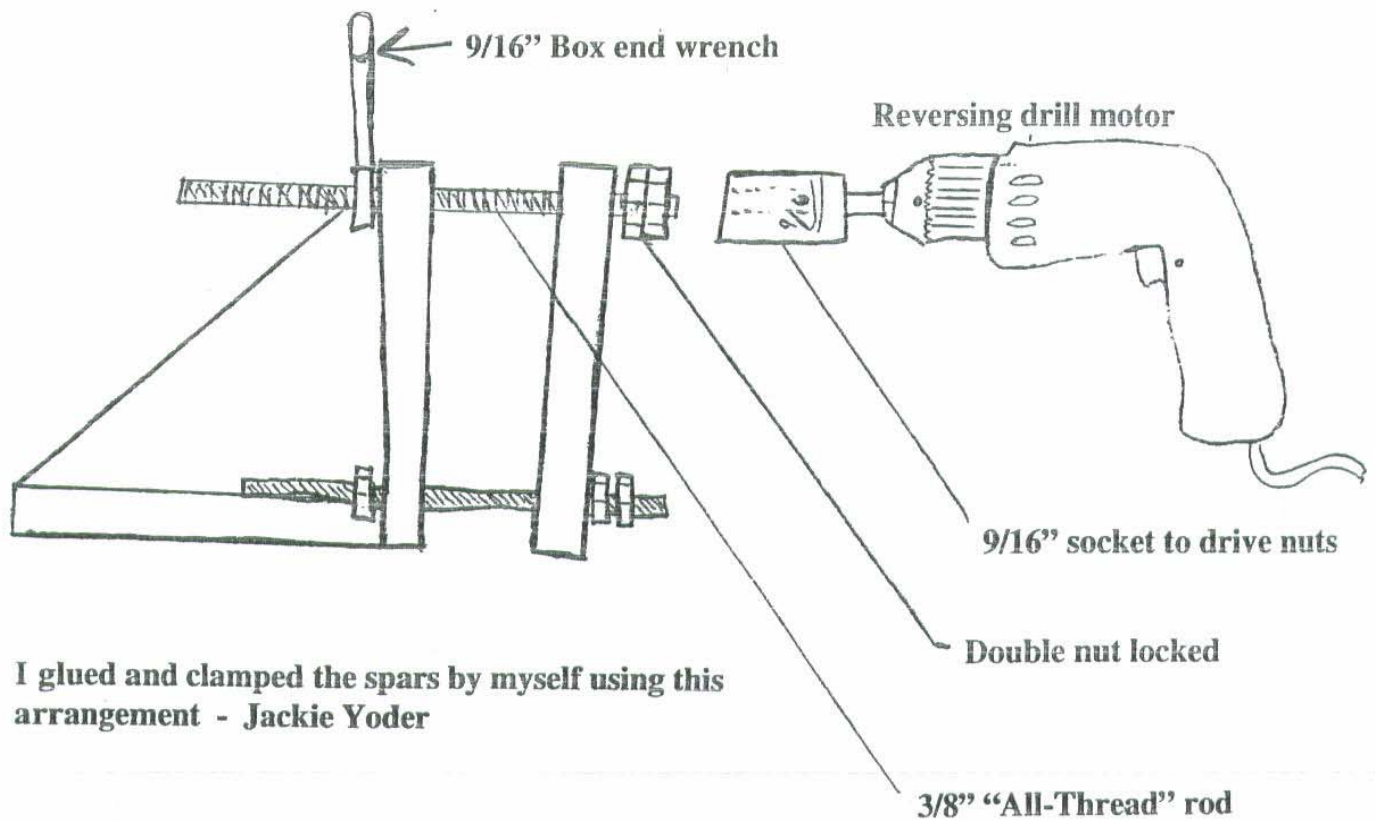
The trip to the airport - The trip to the airport was made via a modified trailer. I used 2" X 12" X 16" ramps for the mains and 2" X 12" X 8' for the nose. All that along with a boat trailer winch made for easy loading. The nose wheel is 10" lower than the mains to get the tail. Leaves a 21' 0" wide load for the road (all of it!). Over width permits from the county and city had to be obtained and off we go! One sheriffs car leading and following. Wow! PIECE OF CAKE!

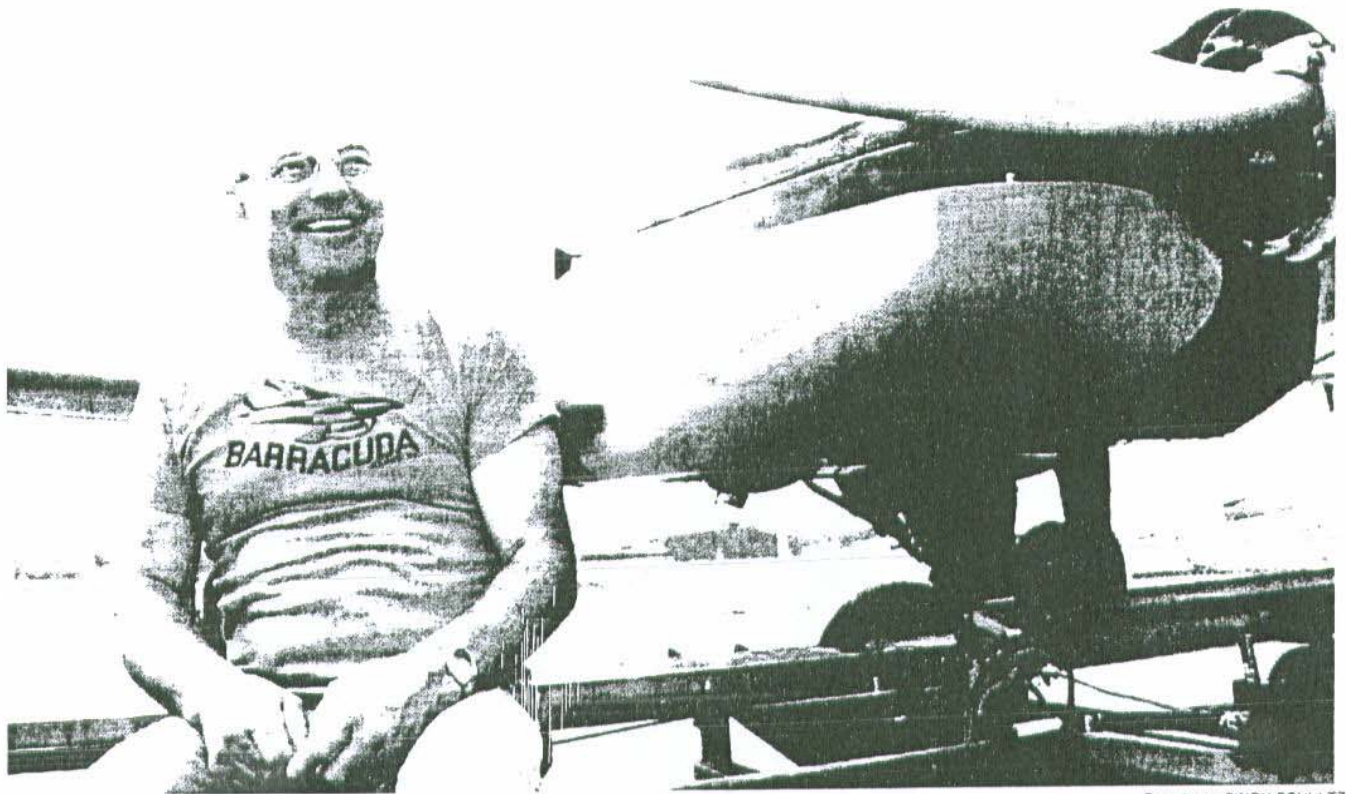
1949 Chevy pickup doing the pulling chores - Spent money on airplane, nothing left for a new truck, HA,HA!

● Phone up-date on 11-18-96

Flight #2. Clear day, brake release, fast acceleration, lift off, gear up time, landing gear handle moves back 8" and stops solid (can't move it) OH SH.....T! This thing is stuck (Not good!). Climbed to altitude, slowed it down to 75 mph and put it through all sorts of gyrations trying to get things loose. Finally got the gear back down, Wow! Wait a minute, I only have right rudder!!!! Over flew airport trying to have a friend see anything. Wheel was cocked in the wheel well. When I was on final I had to reverse the effect of the right turning tendency with opposite ailerons. Landing was uneventful. What had happened that during the construction of my plane I missed the steering stops. Well with these not in there it allowed the rollers to ride up over the steering bar. I now have the steering stops in and have 15 degrees travel left and right with plenty of rudder travel.

continued on page 7





Daily News CINDY SCHULTZ

Jack Yoder of Midland built "Cotton Candy," a two-seater pink plane.

Cotton Candy

Pink plane will take to the air at Barstow

By CHERYL WADE
of the Daily News

Jack Yoder's new airplane is bright pink, and he's named it Cotton Candy. After all, he said, what else is pink and sweet?

Yoder, a local pilot, started building his Osprey GP4 experimental airplane in late 1991, and it's been a spare-time hobby ever since. He built the two-seater plane from blueprints by the craft's designer, George Pereira of Sacramento.

"When I first started in November '91, the first two months I put about 200 hours on it," he said. "I try to work on it as often as I can."

Monday, Yoder hauled the plane on a trailer from his home

on Yoder Drive to Barstow Municipal Airport. He had a police escort by the Midland County Sheriff's Office from his Ingersoll Township home to the airport. Midland police helped, too.

"When we got into town, the city cars were on site and made contact with the (county) officers to help if we needed it," Yoder said.

Yoder had to get city and county permits to haul the plane. He also had to give the City of Midland a \$2,000 check, just in case he knocked over street signs or caused some other damage. That didn't happen, and Yoder expects to get the check back.

The fuselage is covered with 1/16-inch mahogany plywood and

the wings with 3/32-inch mahogany plywood, Yoder said. Protecting the wood is a type of fiberglass cloth that's about as heavy as a lady's nylon stocking.

"I went scrounging for materials and ordered raw materials from around the country," Yoder said. "UPS is a friend of mine."

The pink color is "basically to make a splash," Yoder said.

"Jack Yoder has to be different," he said.

Yoder built his first plane, a Barracuda, 20 years ago. It, too, is a two-seater made of wood. That plane has been in the air 1,000 hours and flown 433 passengers.

Yoder plans to share his new "baby" with as many people as he

can, including young people who want to take their first flight as part of the international Young Eagles program.

Cotton Candy isn't yet ready to take to the air. Yoder has to check the engine's timing and make other adjustments, then get the paper work ready for a final inspection by the Federal Aviation Administration. Then will come taxi tests to make certain the plane handles well on the ground. He hopes to be in the air by late this month.

"When I feel comfortable, we'll turn on all the power and go flying," he said. "It would be nice to fly to California and visit my granddaughters."

UPDATE FROM BILL BERRICK

Dear Spud,

My neighbors and some doubting friends were happy to see that my GP4 could indeed be taken out of the basement! It was a little crowded down there when it was completely assembled, engine, prop and all! Our Chapter 80 members are getting used to coming down in groups of 15 to 20 strong men when it is time to move big pieces of airplane. My wing is complete and at the airport now awaiting the fuselage which is still at the paint shop. I took George's advice about having a professional painter get involved unless you are a real expert and have the facility for clean painting. I had painted my Acro Sport on my back deck and front driveway several years ago, and it took from October to June! I was delayed by cold weather from mid-November on, then a wet Spring, and always seeking the dry windless, above 70 degrees early mornings to spray dope!

We are lucky to have a body shop owner in our EAA Chapter. He primes the parts in one side of his wash bay then does the finish coats in the auto paint booth on weekends. We used Featherfill then two more coats of primer. I sanded almost all of each coat off, then he would spray on the next coat. It was helpful to me that he sprayed on a very light mist of flat black

with a spray can, then I would use a sanding block until the black was gone. This left some gray primer in the low spots but only the epoxy slurry coat in between. I was happy to use an air driven block sander with 180 grit sheets about 2" X 22" for the first two coats, then a hand

fuselage sanding and painting in September then put everything together again in October before it gets too cold to work at the hanger. I'm still hoping to fly it this year.

I enjoyed your Volume 8 issue and especially Jackie Yoder's article and

beautiful photo! I do want to comment on the drawing for additional canopy locks. (I went with the original design only; a good positive lock, I think).

I would like to suggest that Jackie and anyone else who might use the additional locks, should mount the hook on a shaft that passes through the windshield bow to an outside latch, (similar to the main latch but smaller).

We really need the fuselage tank for adequate range, but having that fuel tank in the cockpit is not the ideal arrangement from a safety standpoint. What I am getting at is--you want outside help to be able to open that canopy quickly in the case

of a landing accident that could incapacitate you, but that would be survivable if you could get out before a tragic fire. Please give that possibility some thought before you add more inside locks!

William H. Berrick
11803 Hunters Cove
Omaha, NE 68123-1119



sander with 240 or finer grit for the third coat. The hand sander looks like a hand plane, again about 2" X 22". The body shop guys call it the "Idiot Block". He used a final sealer coat in the paint booth, followed at once with the final coats of Du Pont acrylic urethane. I am surely happy with the slick finish that resulted! I'm using a very light blue-gray that looks white. We hope to finish the

continued from page 3

Don't forget though steering stops fellow builders!

One other thing I would like to point out. The prop turns clockwise on a Lycoming engine. My gear door is on the right, the pressure from the prop has a tendency to push this door shut. If you'll look at the article in Contact magazine that they did on George's GP-4 you'll notice his is on the left. This is a factor.

Fight #3. Finally got the gear up, decided to fly close into the airport, wasn't the best weather with a ceiling at

4000 feet. I had the plane set up at 22"MP and the prop at 2400 rpm. I had just poked into the clouds just a little and had to slightly lower the nose to get out. when I just got out of the clouds she was indicating 260+ mph at this setting. I think when I get it all debugged, I think she's going to be a fast one!

The biggest suggestions that I can make right now to everyone that is building. If your not to far along, if there is anything that I suggest that you do, it is to install George's **Hydraulic gear!**

I'll expand more in future issues of

our GP-4 newsletter on how I did my weight and balance and how I stuffed this Lycoming O-540 in my GP-4.

I have another business known as Yodaire Inc. I build the landing gear for the Barracuda and etc. and also I build Hangar door assemblies. If I can be of assistance in any of these areas please don't hesitate to call.

Regards,

**Jackie Yoder
Midland, Michigan
(517) 832-2012**

THE CLASSIFIEDS

For Sale: Pre-fabricated composite components for GP-4. Cowling - \$700.00, exhaust blisters - \$100.00, inlet ramps - \$100.00, tailcone - \$100.00. All four pieces for \$925.00. Jake Jackson - Rio Linda, CA (916) 992-0608

For Sale: Quality custom fabricated metal components for your GP-4. See GP4BFN issue #4 for complete component listings and pricing. Please allow generous time allowances for your orders. Darry Capps, 813 Hoyer Road, Newman, California (209) 862-2707

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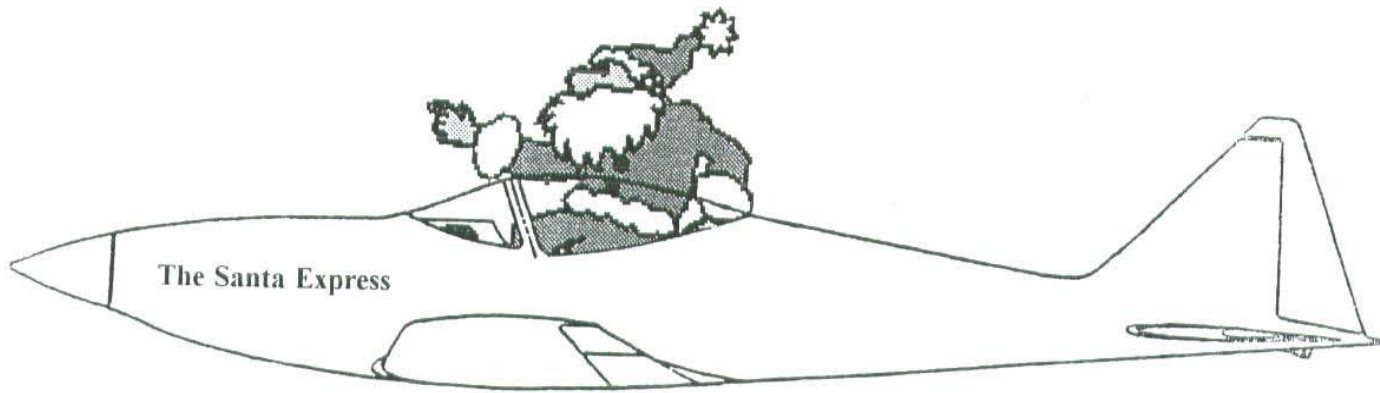
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