Sequoia Aircraft Corporation
900 West Franklin Street
Richmond, Virginia 23220
804/353-1713

June 10, 1984

Dear Falco Builders:

Oshkosh is just around the corner. There seems to be one question on the mind of all of the Falco builders I talk to: will Dave Aronson make it with his Falco to Oshkosh this year?

Dave Aronson has his work cut out for him, but he has a very good chance of flying his Falco to Oshkosh this year. The remaining work includes installing the cowling, engine baffling, engine controls, fuel lines and a few wires. The real control will be if I can get enough time in on the drawing board to finish the remaining few drawings.

Dave had his Falco displayed at the May 20 EAA fly-in at his local airport. There were about 60 homebuilt aircraft displayed, and Dave's Falco was the center of attention. The aircraft was mobbed by the crowd to the extent that Dave and his friend, John Holm, had to fend people off all day long. Dave sent me some photographs of the airplane, and the Falco is unbelievable.

It is difficult to adequately describe Dave's Falco to someone who has not seen the airplane. Many of you have become very excited by the red Falco illustrated in our new advertisement. On a scale of one to ten, the illustration is a "three" compared to the "ten" I'd have to give Dave's Falco. The airplane looks so good that people absolutely refused to believe that it was a homebuilt aircraft -- or that it was made of wood. Dave's Falco has the Nustrini canopy (and he sends word to all of you over six feet tall to forget that option) and our "Venezia" paint scheme. White overall, the stripe down the side and over-the-back is a rainbow of black and reds becoming orange. The same pattern is repeated along the leading edge of the wing. People who have seen it have commented that it easily out-classes the best Christen Eagles.

It takes a while to realize it, but Dave's Falco and others like it are a completely new class of airplane. We have all become accustomed to the odd shapes and the rather inferior finish of most aircraft compared to automobiles. The level of finish is exceptional, but what really does it is the lines of the Falco, the paint scheme and the interior appearance. I once asked Dave what he would sell his Falco for if he wanted to (he doesn't), and Dave replied that he would start at two hundred and would not take less than one hundred forty --

work on the Falco. They built all of their own wood components and ordered all of our kits. In the space of nine months, Syd and friend completely ran me down. Then for the last two and a half years Syd has waited for me to catch up with him. This has been frustrating for both Syd and myself, and I'm grateful for his patience. Now, I am at a point which will allow Syd to complete his Falco is short order. Syd will be the first to find out what a 180 hp engine will do for a Falco. Syd is using the Nustrini canopy and one of our paint schemes. Remember too that Luciano Nustrini now lives in New Zealand. I am giving no odds on which will be the faster!

I received a letter from Nustrini the other day, and he reports that he has been allowed to fly his Falco once since arriving last July. Since then, ZK-RNA has been confined to the ground while government authorities sort through papers and demand more.

The other Falco builders nearing completion are John Harns, Ray Purkiser, Tony Bingelis, and Jim DeAngelo. George Neuman is being sneaky and not reporting in, and I suspect he is getting close. Following these gentlemen, there is a platoon of builders who have their Falco well under way. I remember Frank Christensen told me that he went through much the same thing with the Eagle -- there were a few years of incredible work keeping up with builders, and then once the first kit-built Eagle flew, the rest started popping out of workshops as if on greased skids.

John Shipler was happily working on his Falco recently when he heard brakes squeal on the street in front of his house. Out of the car popped another homebuilder, this one was building a Long-"EZ". Supposedly one of the fastest aircraft to build, John reported that the builder had 2500 hours in his project and was at about the same stage of construction as John, who also has about the same time in his Falco. John has used all of our kits, but made his own wood parts.

When I wrote our latest version of the Falco Product Letter, I wanted to include some realistic estimates of the construction time for the manufacture of the wood components. I called John Shipler, and he supplied the figures that are listed. I have been interested in comments that other builders have made. Most who have made the parts felt that the estimates were reasonably representative of the time it takes. Others have felt the times were too short. Still others said that they were able to make the same parts in a fraction of the times listed. Pilot magazine in England had a short article on the Product Letter entitled "Telling it like it really is". Here is an excerpt.

> "If you have ever thought about building your own light aeroplane you will know that purveyors of plans and kits frequently throw out claims that 'anyone who can put up a kitchen shelf can build our plane', or 'just a year of spare time work and you could be flying in an aeroplane you built yourself'. Sounds attactive, doesn't it? Sadly anyone who has built his own aeroplane will tell you that things do not always work out that way, and you will more often find that the quoted building times are at very best highly optimistic, and a worst down right dishonest."

"Hurrah then for Sequoia Aircraft Corporation, who market plans and kits for Stelio Frati's classic Falco two-seater. Their latest Product Letter, which is sent to all enquirers, is a 34-page affair of remarkable honesty."

The article goes on about things you already know. Also from England, Barry Mowforth termed the estimates as "rubbish!". Barry is a quick builder and was able to do some of the parts in one third of the times listed. So take your pick! I have a thick skin and don't mind anything except modifications! I just wish that all of you could work at Barry's pace.

Though our stationary does not yet reflect it, we now have a new address: 2000 Tomlynn Street, P. O. Box 6861, Richmond, Virginia 23230. If you are sending us a letter you may leave out the street address. If you are shipping something by UPS, you must use the street address and may leave out the post office box. Our telephone number is unchanged. Now, three weeks after the move, we are at last getting things back in order, and I apologize for the few short delays in shipments. Our old office contained about 1800 square feet and moving things out was an amazing thing to see. For days we carried loads upon loads from the parts rooms. It was like one of those circus acts where the people keep piling out of a tiny car. When we finished, the Falco parts completely covered the floor of our new 4000 square foot building. Now with shelving back in place, things are now in order, and we are once again able to locate the parts.

Our new office is a huge improvement over our old quarters. For those of you who might be stopping by, here are the directions. If you are arriving on one of the interstates (I-64 or I-95) stay on the interstate until you get to the exit for I-195 "Powhite Parkway". This is at the north end of Richmond at the junction of I-64 and I-95. Take the Powhite Parkway south (the only way it goes) into town. Take the Broad Street exit, go right on Broad Street to Westwood, right on Westwood. The first stoplight north of Broad is Tomlynn. Turn left on Tomlynn, and we are in the first block on the left. After Graybar Electric are two cream-colored buildings. We in the one with the red stripe (just think Ferrari) and on the end of the building next to the street.

Just prior to our move, Jean Bowen left our company to return to the Washington area. Jean worked here for six years and did a fine job. We wish her well in her new job. Stepping into her shoes is Brenda Avery who most of you will get to know. So introduce yourself when you call, and you'll find that Brenda is the one who actually gets things done around here! This is particularly true of orders, billings, statements, etc. Brenda will be working at our booth at Oshkosh, so many of you will have a chance to meet her.

Speaking of orders, we are now able to take VISA and Mastercard orders over the telephone. Many of you like to call in small orders, and you might find this a convenience. We can also put the shipping charges on the credit card charge and spare you the inconvenience of producing a check for the man from UPS.

Also, in a few months you may notice that our advertisments will have an 800 number. This is not a direct line to our office but to an 800 number service in San Diego which will be handling brochure orders only. They will not be prepared to take orders for parts.

Any of you who would like to order kits to be picked up at our booth at Oshkosh should contact us in advance and place your order. Your order should arrive here by July 24. JOACHIM RAMTHUN, are you listening?!!

Karl Hansen was in Tucson recently and stopped by to see Larry Wohlers and his Falco. Larry now has about 150 hours on his Falco, and Karl says that Larry loves it. Larry reported that he is able to hold 180 mph indicated to 9,000 feet, for about 212 mph cruise. That's only 42 mph faster than our corporate disgrace! Larry's Falco is now fitted out with an attractive maroon interior. Larry says he finds the Falco a little noisy. Larry does not have the interior walls, and I am not sure what Larry has done to insulate the inside of frame No. 1 -- something you must do if you want the noise level low.

On the enclosed price list, you will note that we now have the propeller and spinner kit. This price is $1,000.00 below list price, and we are happy to use our ability to purchase as an OEM to your advantage. Delivery is quoted by Hartzell at 10 to 12 weeks, but on our first few orders they were somewhat faster than that. We plan to add the governor to the kit in the near future. Be warned that Hartzell raises its prices every October, and they are talking about a 6% price increase next time around.

The Falco Builder Dinner is at Martini's restaurant at the Midway Motor Lodge at Appleton beginning at 8:00 on Tuesday, July 31. Please let Brenda Avery know if you plan to attend to that we can alert Martini's. We will be able to handle additional people who arrive unannounced, but it would be best if you report in early. Drop Brenda a note or see her at our booth. Many builders have commented that they regard the Builders dinner as the principal reason that they come to Oshkosh. It is the one time of the year to get together with other Falco builders and talk about their common experiences -- before Tony takes over the floor! Those of you who have missed the dinner are missing something good, so plan to make it. If you don't have a ride, see one of in the booth, and if you have extra room in your car, let us know that also.

Francis Dahlman at Trimcraft now has his wing spar sanding table in full operation. Quentin Rench said he saw the sander in operation and that it was able to sand the faces of the spar to a perfectly flat surface. Quentin is taking delivery of his spar shortly. Karl Hansen has already received his spars and should be able to keep up the fast building pace that he started. Karl started his Falco last August, and I'm looking to Karl to set the record for the fastest construction of a Falco.

I have just finished the shop drawings for the engine baffling. I was amazed at the amount of work involved in these pieces.

I began the baffling drawings in December, and it was seven months start to finish. At the time I began them, I thought they would be a two week project. Granted, due to our move, the success of our new advertisement and other things, we had more than our share of interruptions. Also, I will allow that I have made the job more difficult for myself in the way that we are making the baffling, but this will pay off is spades when you install the baffling. What I have done is to design the baffling down to the last nit and pick, so that each part will be ready for assembly. I plan to assemble the baffling here since I have a rivet squeezer. This allows me to set rivets almost as quickly as you can staple paper sheets together. I think I will be able to assemble the baffling in a few evenings. Since many of you are not sheet metal workers, I'd venture the opinion that I can put fifty of the baffles together quicker than some of you would be able to assemble a single set. The installation on the engine will be a real piece of cake. I think most of you will be able to do it in an hour or less.

The baffling is one of those things that you never seem to think about as being a problem. I worked out the baffling also for the 180 hp engines and in all I have 28 of our larger sized sheets just for the baffling alone. I seem to recall that our Falco plans are about 900 to 1000 square feet in area, and I figured out the other night that the drawings I have done for the manufacture of the cowling and the baffling amount to about one third of that area. Don't worry, I'm not going to dump this quantity of drawings on you. When I have time, I will condense them down to assembly and installation drawings.

The cowling has taken much longer to make than anyone thought. At this time, the final molds are being made, and we should be able to get the first cowling off to Dave Aronson by the end of June. We would like to have some feedback from Dave on the installation before we ship any more, but if you are in a hurry we will oblige. I have seen photographs of the cowling, and it is a big improvement over the original cowling in appearance. I will be interested to see how long it takes Dave Aronson to install the cowling. My guess is that the time will be fairly short.

I know that much of the work that I have been doing over the last year may seem painfully slow to some of you. Many of you may not be aware that the firewall forward installation is frequently half of the construction time of a homebuilt airplane. This doesn't seem to make sense when you consider that an engine change on a production aircraft is an 8 hour job for a competent mechanic. The time is all taken up with solving what are essentially design problems. The installation of the cowling and the induction air inlet will be the biggest jobs in our installation. I think the day will come in the next year when we will have the entire engine installation, cowling installation -- everything from the firewall forward -- down to a two week job. If all of the details are worked out and all of the parts provided, this should be no big thing to accomplish.

Recently I have been answering a lot of questions on the finishing process. I have been doing a lot of reading and talking to builders who know what they are talking about. Also, I have made it a

point to search out those who have painted their airplanes and then used them hard for a few years. By the same token, I pay very little attention to the methods used by the latest grand champion show plane that has not seen a few years of hard acro yet.

With the covering of the fuselage and wing (that is, all of the plywood surfaces except the control surfaces) I think you should consider fiberglass as the easiest and best method. With the dacron method, you have too many operations: two coats of epoxy varnish, the fabric to glue at the edges, then shrink, then dope. (Of the dacron methods, I would recommend the Stits process over others, if only for the excellent manuals which are backed up by tests that no one else seems to have done.) With the fiberglass method, you first use epoxy and microballoons ("dry micro" for those of you who associate with people who have been smoking glass in California!) to fill any large depressions (you would also do this with the dacron method.) After this is sanded to contour, you lay 2 oz fiberglass cloth (you can get this from Fiberglast Developments -- see construction manual appendix) and then work in the resin. You will probably be happiest with "Saf-T-Poxy".

Jim DeAngelo found that it was best to apply the resin along a six inch wide area, then squeegee it out into the dry area, then apply more resin and squeegee again until the entire airplane is covered. As the glass is so light, it will tend to float up on the resin, so it is vital that you get this first application well squeegeed. Jim DeAngelo also found that he was able to blot up the excess resin by using toilet paper. The type he used was not the "squeezibly soft" type people normally prefer, but also not as hard and shiny as you find in service stations -- something of a medium grade without a lot of "fuzz". He just rolled out the paper over the airplane and blotted up the resin, then pulled off the paper and threw it in the trash.

After the resin is tack-free, you should fill the weave with a second layer of resin and squeegee it down to the top of the weave of the cloth. The next step is to use Featherfill. This is a polyester primer-surfacer which sands to a beautiful finish. As polyester is hydroscopic, it should <u>not</u> be wet sanded.

The best way to sand the Featherill is with a sanding spline. This is a piece of three ply aircraft plywood the width of a piece of sandpaper but not quite as tall. At the top and bottom, glue on a strip of wood about 3/4" square. The face of the grain of the plywood should be in the same direction as the pieces of 3/4" square wood. This makes the plywood bend more easily. To sand the surface, you should use an open coat sand paper, starting with 80 grit and working up to finer grits on the final coat of featherfill. The spline is held with the sand paper wrapping up around the 3/4" pieces and held there with your fingers. The 3/4" pieces are aligned with the leading edge and the spline is sanded by moving at 45° angles. Thus you sand diagonally, always moving along the wing. Sand diagonally to the right and then to the left. This way you will be able to get an unbelievable finish on the wing. For the leading edges, the best way to sand the radius is with a loose sheet of sandpaper and using a "shoe-shine" technique.

Again, don't sand in any one place for any length of time -- always move around.

Initially, you will think that you have a really good finish, but be aware that sunlight has a way of showing imprefections that do not show in your shop. One trick is to take a bright light and hold it at a low angle to the surface. The shadows will show you any low spots.

After you have finished with the Featherfill, you should apply an ultraviolet protection. For years "silver" aluminized dope was used, and it still may be used. The Christen Eagle is using duPonT 70S primer which has carbon black in it. This is also used by all of the composite airplanes, and it reputed to be quite good. Certainly it does not have the problems many of you worry about with radio interference for the internal antennas with silver dope.

The final finish leaves you with a number of choices. The polyurethanes give excellent finishes, but you should stick with one that is fairly flexible such as Imron or Ditzler. I don't know if it is essential to use their primers over the 70S primer, but I believe you can shoot either Imron or Ditzler over 70S without difficulty. About the only disadvantage of the polyurethanes is cost and repairability. Unlike automotive enamels, lacquers and dopes, you cannot sand out imperfections with these paints. If you can live with these problems, you will be extremely happy with the finish, which will last a long time and will have an extremely high gloss.

For a repairable finish, you should stick with something like the Stits Polytone. This paint is relatively easy to use and after it is finished, you have the option of spraying a coat of clear Stits polyurethane paint for the same gloss and durability of the other polyurethanes.

For the control surfaces, I think I would suggest that you stick with the Stits process and use Stits fabric. While the new lightweight Stits cloth is equal in strength to Grade A cotton, the specs carefully do not talk about strength over time. Also, I am dubious about the savings in weight since I think you may well add more paint to this fabric to get a smooth finish, so I would prefer to have you stick with the proven 2.7 oz. Stits fabric. I would stick with the Stits process up to the silver, and then proceed as with the wing using 70S primer and the paint of your choice. The Christen Eagle uses Featherfill on their fabric, but I would caution to go easy on the controls with this and don't add more than is needed to fill the weave. Smooth surfaces on the control surfaces will only add to appearance and weight and will do nothing for speed.

I received a notice from the Falco Club in Italy on their activities. Unfortunately, many of the activities have already occurred. Gatherings are planned for July 8 at Lucca, and for July 29 at Palermo. For further information, contact the Falco Club, Presidente Guilio Boschi, Ae. C. Alimaremma, Via Orcagna 125, 58100 Grosetto, Italy. Mr. Boschi's telephone number is 0564/933096 or 933031.

For those of you who would like to run some experiments, there is a new glue on the market. This glue is EPI (emulsion polymer isocyanate), developed by Ashland Chemical Co. and available from them at Box 2219, Columbus, Ohio 43216. The glue is being used by cabinet makers, primarily for its lighter color. A submission by a reader of Fine Woodworking had this to offer: "It's an interior/exterior glue similar to resorcinol, being at least as water-resistant but having a much lighter color (about like white oak when cured). EPI is prepared by mixing two liquids, the resin (water-based) and the crosslinker, in variable proportions, depending on how much water-resistance and strength are desired. The glue has as pot life of several hours after mixing, and the recommended clamp time is 30 minutes at 70°F. EPI gives good results at temperatures as low as 40°, and it doesn't release any formaldehyde, as do the other glues. All in all, I've found EPI to be the most versatile glue in my shop, and although I don't use it for everything (it's not practical to mix up just a dab), I certainly feel that it should be recognized as a very important woodworking adhesive." This is the limit of my knowledge of the glue, but it sounds like it is an interesting possibility. Please run some tests on the glue before you start to use it with abandon. Remember, there is no substitute for proven materials and from the experience with epoxies, I think you should approach any new material with plenty of caution.

I have noticed that many builders seem to worry a great deal about the things that they do not know before they start building the Falco. Charles Wagner, from Scotland, stopped by the other day. He commented that the real problem with building a Falco is a "mental problem". Once he got started on the work, he has not found any difficulty. Jerry Ward built up his woodworking skills by building a cedar strip canoe, and since he used the Falco's airfoil he has set the record for the largest Falco rib!

If you are looking for something to do, you might want to consider building a scale model Falco. An article appeared in the December 1983 issue of Scale R/C Modeler on the Falco. Plans for this 1/4 scale model are now available from R/C Sweitzer Enterprises, P. O. Box 834, Hillsboro, Oregon 97123. The plans are $43.50 post paid (add $18.00 for overseas orders). The plans are stunningly beautiful drawings with all details "full size" (for the model). The structure of the model is substantially different from the actual Falco. Unfortunately, the drawings were done from our brochure and some of the fuselage cross-sectional shapes are off. This is particularly true of the windshield frame. Since all of you have the correct dimensions, this should not be a problem for you.

We are not including any revision sheet this time as we have no revisions. We are very nearly ready to release drawings for the installation of our new jack-pad and tie down rings for the wing. John Oliver is currently running some tests. These should be ready in about a week, so don't hesitate to drop us a line if you cannot wait until the next builder letter.

Our Oshkosh booth this year will be in the same building, but we will have a new location. I hope to see many of you there. I have a

lot of work to do, therefore this letter is somewhat shorter than most. Also please remember that the principal obstacle to getting things done here is the interuptions from telephone calls, visits, etc. Our new advertisement really caused a lot of havoc this spring, and there were times when the telephone never stopped ringing. So please go easy on me until after Oshkosh!

Sincerely,
SEQUOIA AIRCRAFT CORPORATION

Alfred P. Scott
President

TOOL TALK

John Shipler reports that the small hand held sander that he likes is a Skil No. 593 "Sand-Cat". This sander has a 2½" wide belt. The sander is about the size of a "steam iron", and being small and light weight it is extremely versatile and easy to handle. The sander sells for about $50.00. Most sanders have the motor between the hand grip and the belt, making them awkward to use with one hand. The Sand-Cat has the motor at the aft end, and the hand grip is down low near the belt. This makes the sander easy to use with one hand.

Dave Bowen reports: "I have found that a laminate trimmer bit in a router is very handy for cutting birch plywood after gluing. It cuts right up to the edge of the wood underneath, follows around curves and best of all does not splinter the plywood as saws do." Dave's Falco, by the way, was pictured recently in an article in Sport Aviation.

John Rawlings sent in some information on Gil-Bilt power tool kits made by Gilliam Manufacturing Inc, 1700 Scherer Parkway, St. Charles, Missouri 63301. Send $1.00 for catalogue. John reports "These Gilliam power tools are just the ticket for the modest income. But they are tough -- my oldest one, the 12" wood lathe, is 17 years old and still going strong. My newest is the 12" bandsaw, real handy on the Falco."

From Fine Woodworking advertisements, I'll add the following.

Jackson Wood Technology, 1616 Capital Avenue, Madison, Wisconsin 53705. Makers of wood moisture meters. Complete meter is $128.00. Meter kits also available.

Delmhorst Instrument Co., P. O. Box 130, Boonton, N. J. 07005. (800) 222-0638. Delmhorst makes wood moisture meters.

A kit is available for making your own clamps, similar to the Jorgensen type. The Klamp Kit is available for $9.95 postpaid from The Rockledge Co. Inc., Box 56, Milwaukee, Wisconsin, 53201.

Brad point bits are usually available locally, and if you do not have a set, you should definitely get some of these drills. A set of drills (1/8", 3/16", 1/4", 5/16", 3/8", 7/16", 1/2") for 3/8" chucks with matching stop collars is available for $9.95 plus $2.00 shipping and handling from The Fine Tool Shops, 20 Backus Avene, Danbury, CT 06810.

An inexpensive stationary 4"x36" belt and 6" disk sander is available for $95.00 prepaid with motor from Grizzly Imports, Inc., P. O. Box 2069, Bellingham, Washington 98227. (206) 647-0801.

ROLL CALL

Please send in your progress report on a separate piece of paper and not as part of a letter as these entries go into a separate file. Please give your name and builder number.

547. Frank Leahy. All wood parts constructed such as main spar, beams, ribs, fuselage rings, etc. Fuselage assembled, control surfaces constructed but not covered. Metal parts such as all hinges, bellcranks, landing gear bushings, main landing gear, gas tanks and bands, etc. Nose gear and trim tab control purchased. IO-320-B1A engine purchased. My next project is to build a larger garage this summer to finish the assembly of the Falco. I have really enjoyed building the Falco so far and have noticed that has been taking second place to building the Falco. As mentioned above, I have built the main spar and the main landing gear. All the parts mentioned have been inspected and passed. The parts that gave me the most problems were the ailerons and flaps, not the spar or the landing gear.

632. Jim Shaw. Well, here's a quick note from a busy person. I've presently got the fuselage done, skinned and cut apart. Wings are already glued to fuselage and are almost ready to be skinned. Fuel tanks almost complete, gear and gear retraction equipment installed. Control equipment finally fit after a few nights of vigorous cussing! Instrument panel cut out and holes punched after about 12 hours of work. It has yet to be painted but fits nicely -- used standard Falco layout, and it looks impressive. If I can only fill all those holes! Canopy on order and should be on by May. Well, gotta get back to work if she's not flying by April of '85, she won't get done.

660. Rex Hume. I have finally sold my property in Southern California, and I am moving to the Medford, Oregon, area. We will be locating about 40 miles from Ray Purkiser. My Falco is already stored in a barn in that area until I get a shop ready. I am ready to assemble the wing.

722. Roman Wasilewski. My progress on the Falco has not come to a complete halt. Have made all the aluminum hinge and control fittings for the Falco. Finding the correct material 2024T3 or T4 extrusion (tee and angles) was no problem.

729. Carvian K. Brumfield. I have been working on my Falco for 1½ years now. My metal work is 80% finished. I have started my wood work now. I will do wood units this summer and finish my metal this winter.

MAILBOX

Have had my Falco plans one year now. Haven't made much tangible progress... but I have been busy. I have read ANC-18 & 19, Spencer's "Aircraft Woodworking", all available EAA publications, in particular "Wood" Vol. 1 & 2.

I designed and built a 22'8" cedar strip canoe, NACA 64009 plan form (Falco vertical stab rib ordinates). Used 1700 L.F. of western red cedar strips 1/4x3/4 cut from 2x12 boards, spliced strips together with over 200 1:15 scarf joints, laminated interior formers from poplar and oak. That project got me "up-to-speed" on my woodwork.

Have spend considerable time studying plans and construction manual. Have spend about as much time thinking about how I'm going to do things, I feel like I have mentally constructed the entire aircraft. The aforementioned represents two major achievements;

1. I have built the largest Falco rib -- 22'8"??,

2. I have, through study, acquired the knowledge to complete the wooden airframe.

On February 1, 1984, I cut and machined to size all capstrips for horizontal and vertical stabilizer ribs. Ribs were completed on February 25th, 75 hours construction time, at my slow pace. Wing ribs are now under construction. Jigboards and layout work for horizontal and vertical stabilizer spars and beams complete. Will order first hardware kit soon. I intend to purchase all available kits. Wife has already planned a grand tour of the U.S., when our Falco is completed. (She has not suggested an interim divorce, yet!)

Keep those, most excellent, builder letters coming and, please continue to be "a real stickler" on doing things the right way. A shabby, shoddy, homebuilt aircraft is of no value to anyone except the local undertaker.

Jerry Ward

Construction on the Falco slowed down considerably the past few months due to other commitments, but -- not to worry -- things should be back to normal operation very soon.

At this point in time I am micro-ballooning the front fuselage section and wing in preparation for the dacron covering, which will be going on soon. The seats and instrument panel have been ordered, and they will be going in when they arrive.

Several potential Falco builders have phoned and visited my project, and I must say, I have enjoyed talking with them, as much as they have enjoyed the opportunity to see a Falco under construction. Without exception they have all been very interesting people to meet. I have always been impressed with the quality and character of the people associated with aviation, but I honestly believe the Falco attracts an individual who ranks at the top of this group.

Everything is going smoothly at this time, and going together beautifully. My appreciation again for the outstanding effort from your position.

John Shipler

QUESTIONS & ANSWERS

Q: I plan to use Chem-Tech's L-26 epoxy resin on the interior structure of my Falco. I feel that the epoxy sheathing will be superior to polyurethane spar varnish. I am, however, concerned about weight.

Epoxy resin cures instead of drying like the polyurethanes, so fully cured resin will weigh essentially the same as it did in-the-can. Do you agree that epoxy resin is superior to polyurethane? Will the weight difference be all that great?

A: I do not think that there is any appreciable difference between two-part polyurethane clear paint and epoxy, based on the tests by the Forest Products Laboratory. Use whatever you wish. The advantage of the epoxy is that you do not have to mask for the glued area as you do with all other finishes if you are also using epoxy as the glue. I don't know anything about L-26, except that we have found Chem-Tech's claims of temperature performance of T-88 to be very far from the facts. Two coats are important, and I would try to get the first coat to wet the surface and a final coat to seal it well. I would not worry too much about the weight, it will not be substantial, but be careful to do a neat job, and you will not build up excessive weight.

Q: How are the trailing edge strips attached to the ribs? I believe that the trailing edge strips are slotted and the ribs simply glued in the slots. Please verify.

A: See Sheet B11 for the detail shown for the aileron. This is typical for all of the trailing edge strips. You cut the ribs short and notch the trailing edge strip as shown.

Q: I have ordered some books from Zenith Aviation Books. My letter was returned. Do you have their currect address?

A: Zenith Aviation Books, Rt. 2, North Branch, Minnesota 55056.

Q: The plans do not show any flooring or inside side walls between fuselage stations 1 and 2. Is this correct?

A: This is correct.

Q: My wing spar has twisted on the outer ends. What went wrong and what should I do about it?

A: From your description (on the telephone) it is apparent that the moisture contents of the spar and the plywood used for the outer faces were different at the time that these pieces of plywood were glued on. To avoid this sort of problem, the only sure way is to use a wood moisture meter (see "tool talk"). In most cases, storing all of the wood in the same place for a few weeks is sufficient, but beware of gluing during extremely dry or moist spells, since spruce picks up moisture much more quickly than plywood. If the twist does not correct itself over a period of time, the twist is permanent. The problem can be corrected in a couple of ways. One way is to glue on the ribs and before you glue on the skins, make sure the wing is correctly aligned. This will twist the spar back to where it should be, and once the skins are glued on, the wing will be rigid and will not give you any problem. The problem with this method is that the spar may not want to twist evenly over its entire length. The other method is to sand and shim the ribs to fit the spar.

Q: Some time ago, a plans revision changed the rib at wing station No. 1 from the inner face to the center line of the ribs. This will require that I cut material off of the end of fuselage frames No. 5 and 6. Is this really necessary?

A: The reason for the change in the position was because the rib interfered with the landing gear side load fitting on the front face of the wing spar. There is no such interference problem on the aft face of the wing spar, so you do not have to make this change between the main spar and the aft spar, or aft of the aft spar.

Q: My canopy fit beautifully when I first installed it. I just noticed that a crack has appeared between the canopy frame and the windshield frame at the bottom on each side. What happened?

A: Plexiglass is hygroscopic and swells when it picks up moisture. (In this case, the builder confirmed that it had been very wet lately.) This would cause the windshield to push the windshield frame aft. The condition should be only temporary.