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June 10, 1982

Dear Falco Builders:

Since our last builder letter most of my time has been taken with continuing work on the instrument panel, center console panel and the electrical system. Chasing down the final details has been slow, but I can see the end in sight on all three areas. I have also taken some time out to do a drawing of the cockpit flooring and interior wall details, the flap indicator system, the Nustrini frame No. 4, the diagonal frame No. 2 and final correct dimensions for diagonal frame No. 6. Our plan is to make a shipment of all of the new large drawings during my trip to Europe.

I would like to thank those of you who answered the instrument panel questionnaire. While we did not hear from all of you, we did get a large enough sample to see what sort of instrumentation you are planning to install. As you may remember, we asked you to indicate which holes you would like cut in addition to the basic instrument holes that almost everyone will want. I was surprised at the number of you who plan to install complete instrumentation. Here are the responses.

EGT, 1 cylinder	44%
EGT, 4 cylinder	56%
Voltammeter	100%
Isocom	56%
Davtron OAT	78%
Silver Fuelgard	22%
DME	78%
Marker beacon	78%

For the depth of the radio stack cut-out, 89% indicated a full stack height of 7.98" and the rest of the respondents indicated no preference. Interest in radio installations by Wyn Jordan of Flight International was indicated by 56% of the respondents. Preference for intercoms was 56% for Isocom, 33% for the RST intercom and 11% for other models.

I have a few comments on the responses. First, I think it will be a mistake for us to cut the radio stack for the full height. I doubt that more than 10% of our builders will use the full height. My plan is to cut the radio stack out to a reasonable height that will accommodate the typical dual Nav-Com and transponder that most of you will use. It will be a very simple matter for you to make the panel

deeper since all you will have to do is use the existing sides of the stack to scribe the extension lines and then you will measure off the depth you want and break out your hacksaw and file.

I was encouraged to see that many of you are planning to install full instrumentation, but I would like to argue with the way that some of you are thinking. The instrumentation that you install in your plane will have a very real impact on the safety of your flying. The most important thing in the airplane is the engine, and you always want to keep it running, and also you want to know when it is developing a problem. To monitor the health of your engine, there is nothing like a four cylinder EGT. I have had one in my plane for the last eight years, and I would never own another airplane without one. I have talked a number of people into buying them, and in every case the owner became equally as hooked as me. Most people think of an EGT as an instrument you use to lean accurately, and this is partly true. A single cylinder EGT is worthless as a leaning aid with a carbureted engine since there is a great variation in EGT between cylinders and the hottest cylinder changes with changes in the throttle position. If you know which cylinder is going to be the hottest, then you can use a single cylinder EGT with an injected engine to lean accurately. The really important thing about a four cylinder EGT is that you are able to tell if everything is okay at any time, and if a problem occurs, you are usually able to detect it long before you can hear the problem. You are also able to pinpoint the problem. I have had my engine sputter on numerous occasions, and a quick look at the EGT tells me it was a little water in the fuel. At other times I have been able to diagnose a valve problem on a specific cylinder, a bad plug or lead on a specific cylinder and magneto, and lead fouling. It also saves you money in that the mechanics do not spend a lot of time hunting down the problem, and it gives you tremendous peace of mind to be able to know with certainty what your problem is. My advice is to get a 4 cylinder EGT and forget the single cylinder versions. I should also tell you that I am a big fan of the Alcor EGT. My first 4 cylinder EGT was a Westach unit that was surprisingly cheap. It was a hopeless little thing, and it gave up the ghost after about 50 hours, during which time it spent all of the time waving the needle back and forth indicating nothing useful.

The second most important system in the airplane is the electrical system. I am glad that 100% of those of you answering the questionnaire plan to install a voltammeter. This is really important since with this instrument, in addition to the ammeter, you are able to tell the voltage, the load on the alternator, the charge to the battery, and the battery condition before start-up. Like the four cylinder EGT with the engine, these instruments allow you to know the health of the electrical system and to spot problems at an early stage.

Relatively few of you indicated an interest in the Silver Fuelgard, with most making a note that you did not know what it was. I guess I should have explained that for you in advance, but I assumed you knew about the instrument. It is a very useful instrument and one that you should consider along with the four cylinder EGT and voltammeter. The fuelgard is an instrument that measures the fuel flow to the engine and then keeps a total of all of the fuel used. It has a fuel flow

transducer, which is a little turbine that fits in the fuel line and sends digital signals to the computer. The accuracy is to within 2%, which is probably better than the accuracy of the reading on the fuel truck. At any time in the flight you can know precisely how much fuel you have used from the time you started the engine and you are able to know precisely how much fuel you are using at any time. The first of the Silver instruments was the Fueltron, which fit into a 3" hole and cost about \$1500.00. The Fuelgard is smaller and cheaper, and it is the only one that will fit into our panel. The Fueltron had a few nice features in that you could enter the fuel on board, and it kept a running computation of fuel burned, fuel remaining and time remaining, in addition to the fuel flow. The Fuelgard keeps a running computation only of the fuel burned, but it is a simple matter to figure the fuel remaining and the time remaining. At about \$700.00 I say the Fuelgard is worth your attention. Unfortunately, these things are not as accurate with a carbureted engine, and while they can be used, I don't know if they would work well enough to be worth the investment.

Progress with the kits. We have long since got the back-order situation licked for the kits that most of you have ordered. We had a problem with the flap actuator in that they did not pass my inspection and so are back at the manufacturer for replacement. We now have shipped the first of the fuel tanks and will have additional tanks in shortly. The tanks came in well above my earlier naive estimate, so I would advise a shot of whisky prior to delving into the price list! The tanks are more difficult to build than they might appear, for example, the sumps require three progressive dies with annealing between each one to prevent the aluminum from cracking. I take no joy in the high prices of aircraft parts, and we are always anxious to help those of you who would like to make your own parts. We do offer the fuel tanks in a semi-finished kit which includes all of the hard-to-make parts. For those of you who can weld and form aluminum, I think this would be the best bet.

As we have gone along, I have talked to many of you about what sort of things you wanted in the kits and what sort of things you wanted of the Falco. Up until now, your opinions have had little to do with the basic airframe kits, since I had no interest in re-designing the hinges, fittings, landing gear and other basic components. The fuel tanks are a result of the message I have been getting from you; namely, you have told me you wanted more fuel capacity and an instrument panel without a radio box sticking out. These things have had a material impact on the cost of the tanks. Also, you should remember that our tanks have fuel quantity senders, and not the sight tubes of the Pitts or Christen Eagles. The senders are not cheap (about \$50.00 each) and they require special fittings to be machined and then welded into the tanks. These require accurate jiggling. Also, the tanks on many homebuilt aircraft have caps which stick out of the airplane. These are very cheap and easy to make, but I doubt that any of you would want that. To get the fuel capacity we wanted, the front tank filler fitting is recessed slightly into the tank, again adding more work and cost. We made some changes to the design of the tanks to eliminate some cost, primarily in the elimination of the beading on the curved upper sides. The beading is needed only in flat panels to prevent the tanks from "oil

canning" which can lead to cracking with time. (Interestingly, the production Falcos were built with tanks with no beading, but with slightly curved panels on the front, back and bottoms.) The good news is that the tanks hold 40 gallons, and you will have 42 gallons with the inverted header tank installed.

The canopy kits are also nearly done. At this time we have all of the parts in stock except for the canopy and windshields. We have made a couple of these, and we waited until we had the canopy frames done before we went ahead with the bubbles, which we wanted to check to the frame. They fit nicely, and we are working on a trimming jig now. There are two optional things here which can affect the cost of the windshield and canopy kits. One is the color of the plexiglass. I think it is very important that we use a tinted windshield and canopy to keep the heat down in the summer. The usual tint is a green one, and I am sure that you have seen this on many a Beech, Piper or Cessna. I prefer a smoked, grey tint (sometimes called "solar grey") as it is a neutral shade and does not clash with the color of the paint on your aircraft. This adds about \$70.00 to the cost of the kit. To date, I have not talked to any builder who has wanted anything other than the grey, so my plan is to make the grey canopy our standard color. For those of you with plastics shops around, this is Rohm & Haas No. 2515 grey, and it is almost exactly the same shade of darkness as the standard Beech, Piper or Cessna tinted windshields. This meets the FAA light transmission standards, it is not so dark that you will have any visibility problems at night (as opposed to some of the really dark -- and illegal -- canopies you see on many homebuilt airplanes). The other area affecting costs is the trimming of the canopy and windshield. Many of our builders have expressed an interest in having the plexiglass trimmed to fit the airplane and frame. For shipment, the canopy must be trimmed anyway and it adds about \$30.00 to the cost of the kit to have the plexiglass trimmed on a precision jig. When you consider the steady business canopy companies do in supplying additional canopies to builders who destroy their entire canopy in one wrong move, I think this additional expense is worthwhile. At this time we have the plexiglass on order, and we have been able to get one sheet locally to supply the Chilean Air Force with their windshield and canopy, but all other orders will have to wait until the material arrives, which will be in about 6 weeks.

By the way, some of you may have seen the publicity on the new Schweizer motorglider which they are building for the Air Force Academy. If the canopy looks familiar, that's because it's a Falco canopy. We are also selling the canopy to another manufacturer whose bubble canopied "military" aircraft should be in the news before too long. Sorry, I can't tell you who.

The seat kits are also nearly done. Earlier I have discussed the features of the seats. The tracks are nearly done now, and we have received the first of the fiberglass seat pans. The harnesses are due in the middle of June, and it will probably be August before we have the cushions ready. The seat, tracks and harness work out to be about \$650.00 each. This breaks down to about \$280.00 for the seats and cushions, \$190.00 for the seat tracks, and \$180.00 for the harness and

cables. I don't yet have a weight on the cushions, but I am hopeful that we will save about 20 pounds over the original production seats. It seems crazy that seat tracks should cost that much, but there are only two parts on the tracks that are not custom made, the plastic knob on the end of the adjusting lever, and the spring. The seat pans are one of those things in which you pay for light weight and strength. The constraints of the airplane provide little room for side bracing, and the chopper-gun fiberglass seats you see advertised would not stand up. The harness is only slightly more expensive than the Christen system, but we have the cables which add to this. While none of this may sound like a bargain, Pacific Scientific misquoted the harnesses at 2/3 the normal price. They are honoring the prices on the first fifty sets, so you are getting something of a bargain on this. This is a very nice system and of far higher quality than the price would indicate. If it makes you feel any better, this same system is routinely sold to Bonanza and Baron owners at over \$375.00 per harness (versus our \$127.06 for the harness alone, that is, without the cables, clips and hardware). The drawings for the seats, seat tracks and their installation will be sent out with the next batch of large drawings. For those of you who like to build your own, we have a kit of semi-finished seat tracks (S/F P/N 828 Components) which includes all of the components, and we also have the components in the price list available separately if you want to purchase only a few parts. I am rather proud of this seat, track and harness design, and while I wish it were half the price, I am offering no apologies. This was a very difficult thing to design, and we have a seat that gives you all of the headroom that you can squeeze out of it, with a seat that is easy to get in and out of the airplane and with a harness system that is the only 40g system in a light airplane today except for some agricultural planes.

Earlier I had indicated that I planned to use Temperfoam for the seats. Shortly after that, the company that manufactured the foam stopped production and sold the patents to a group of investors. At that time the new group was working on making the foam. I know they were having some production problems, and they had eliminated one of the softer foams normally used for the top layer. Even so, I bought a box of the stuff and tried it out in our seats. It may be good stuff to crash on, but I didn't care for the lack of comfort. I got a lot of people to sit in the seat, and the usual comment was "I'm still sinking" after a minute in the seat. The reaction was universally negative. For this reason, we will be using molded cushions.

Following our last letter mentioning the throttle quadrant, I received some letters asking about these parts. Accordingly, I think I should explain what we plan to include in some of the kits which we will be offering. The cockpit equipment kit will include the instrument panel, the center console panel, the nose wheel bay cover, the throttle quadrant, the center console covers, a glare shield for the instrument panel, the tachometer, angle drive, and cable, the engine instrument cluster, the fuel selector valve and probably the fuel lines and lines for the pitot static hookup and the vacuum system. So far I have only been able to find one fuel selector valve that has all of the features that we need. There are a number of inexpensive brass valves which are sold to homebuilders for their airplanes, but no manufacturer uses that

type on their aircraft for a number of good reasons. For one thing, the valve should have a detent at each position so that you can feel it "click" as you select a position.

The electrical system kit will include all of the switches, circuit breakers, relays, voltage regulator, indicator lights, switch knobs, plug and receptacle connectors, terminals, and all wires supplied with the appropriate number stamped on them. The pins for the connectors to the instrument panel will be installed on the wires as the tools required are fairly expensive, and we can easily do this here at low cost. The normal ring terminals are easily installed with fairly cheap tools. We may be able to install the ring terminals on the larger battery wires if we are able to get an exact length worked out on the wires. It may also be that your local FBO will have the necessary tools and might be able to do this for you.

One thing I should mention about these two kits is the incredible amount of time that will be saved. You will sometimes hear old time homebuilders scoff at first-time builders who announce that they are nearly finished on an airplane when the basic airframe is completed. It is not at all uncommon to have a builder take a year or more with the electrical system and instrument panel. Many a builder makes more than three panels before he finally gets one in which everything works and without any mis-drilled holes. At this time, I have about 6 months of work in both the instrument panel and the electrical system -- work a typical builder on his own would have to face. Even if you do not buy our kits, I think all of you will benefit from the drawings and system design work that I and others have done on the panel and electrical system. I think that a kit builder with all of the parts in hand could assemble the entire instrument panel in two evenings, but let's say a week. (That would not count painting or covering with a veneer.) The electrical system will take a little longer, but again I think it could be done easily in a week. The work that I have done is more than a schematic, I have done a complete installation drawing of each circuit, working out the routing of each wire. This is very important when you have a removable panel with all of the wires from the panel going through connectors. I have also spent a lot of time trying to place things where they will be the easiest to work on and the most trouble-free. I will have the starter relay, master relay, ammeter shunt, starter vibrator (if required), and main negative bus on the aft face of frame No. 6. This gets a lot of the parts out of the engine compartment where they are subject to heat, vibration and moisture. I also think that with the electrical system, I will have to sit down and write out complete installation instructions since it is almost impossible to put it all down on a drawing.

For those of you who will want to make your own panels, we will have the instrument panel blank (P/N 841-10, \$37.28) and the center console panel blank (S/F P/N 831-2, \$40.84) available.

At this time we stand at about 240 builders. We are seeing more and more builders who purchase all of the wood kits in addition to our kits. A large number of these are people who have built another airplane. We are also seeing builders complete the airplane with

greater speed than our earlier builders did. Tony Bingelis and A. D. Spurlock both told me they spent around 550 hours building the wing ribs. Tony was machining his own wood, and I believe Mr. Spurlock does the same. On the other hand, Hal Engel has completed almost all of the fuselage frames, tail group, wing spar and wing ribs in about 750 hours. I believe that Hal is working from wood machined to size. In general, I am seeing builders spending around a year -- sometimes less and sometimes more -- building the basic wood components. After all of this, then the assembly of the airframe begins. Those who buy the wood kits are making very rapid progress, and it is not unusual to see them with the basic framework complete in three months ready for skinning. Jim DeAngelo had the basic wing structure done in two weeks, the ailerons and flaps in another two weeks, and I think it took him another month or so to complete the basic fuselage and tail section. On one hand it is quite easy to say that this or that wood kit is expensive, but on the other hand you have to look at the actual building time saved. At about \$6,000.00 more than the cost of the wood, it represents a considerable savings in time. As I see it, there are two good reasons for doing your own woodwork: (1) you can't afford the kits, or (2) you want to do your own woodwork for the satisfaction of it. For the most part, I find that people who are well into the project agree with this assessment.

Enough about our kits. The only real news of the other kits is that Trimcraft has bought out Little River and is now offering the same kits direct from Trimcraft. All of the outstanding orders for the kits have been filled, and Francis Dahlman of Trimcraft is working on trying to keep a few of everything in stock so he can make quick deliveries. Bill O'Brien's own graphic design business has picked up of late. He has been out of town more often than not and by his own admission he was not giving the Falco kit business the attention that it deserved. While it was at my insistence that he sold the business, I don't want to give the impression that Bill is going out in disgrace. Bill put a lot of money into the Falco kits, and it is really unfortunate that things did not work out well for him. He still plans to finish his Falco and win the Grand Champion award at Oshkosh!

Bill O'Brien has also sent us most of the Falco garments for us to handle for him. See the accessories section of our price list. We are continuing to sell these at the "Oshkosh Special" prices, and can include them with your other orders.

CAFE 400. My plans for the CAFE 400 is to fly out to California arriving Friday, June 18th. The competition is the following morning, and I expect that I will promptly head back east. The timing is very poor for me as we will be leaving for Europe the following Saturday. I doubt that this will be a very good time to see much of the Falco since the aircraft are weighed and impounded for the night on Friday. On Saturday, we will spend a couple of hours in the air and then land. There is a big dinner that night for all of the contestants. If we are to get together, it would be best to gather for dinner on Friday evening, let's say at 7:00 PM at the front desk of the Flamingo Hotel, 4th & Farmer's Street, Santa Rosa, California. The telephone number there is (707) 545-8530. The only other logical time to gather

and see the Falco would be on Saturday at the end of the race. This would be around noon. I doubt very seriously if I will stay over on Saturday evening as I can probably be in Colorado by that night. It doesn't look like a very good time to gather, but if you are nearby you might want to make a short trip. There is also the possibility that bad weather or other circumstances might cancel the trip, and the only thing I can suggest is a call to our office. Ray Purkiser will be co-pilot on the race. I don't have any great hopes of doing anything spectacular with the Falco. My Falco is not particularly fast, plus it is a little heavy, since planes tend to get that way with age.

Guy Valvekens in Belgium has his series 2 Falco for sale for \$25,000.00. This airplane has a very striking paint scheme and has a 150 hp engine with a constant-speed propeller. Guy reports that he gets 145 knots indicated at 65% and 155 knots indicated at 75% power. This aircraft was made by Aviamilano and so is not covered by the U.S. Type certificate which only covers aircraft made by Aeromere -- at least that is my understanding. Anyone interested in the airplane can contact Guy Valvekens, s.a. J. & G. Valvekens, Hasseltsestraat 49, 3290 Diest, Belgium. Telephone: (013) 33-14-96.

I am always learning new things about the Falco. I knew that the series 2 Falcos had wing tanks, but I never understood before that they were in addition to a front tank. Valvekens' Falco has two wing tanks of 15.8 gallons each and a front tank of 18 gallons, for a total of 50 gallons. This is the same as Nustrini's Falco, and it also explains a question I have always had about how Nustrini was able to fill his aft tank through the big skirt fairing on the canopy. The size of the wing tanks also confirms my calculations of the volume of the wing tanks. After working on the two fuselage tanks, I am of the opinion that the wing tanks are likely to be much more expensive than the fuselage tanks. There are a number of problems to be overcome, such as unusable fuel, the filler fitting, and the fuel quantity senders. For those of you who must have wing tanks, I will do some drawings, but I don't want to gear up to make another type of tank. I would suggest you go back and consider the fuselage tanks one more time.

I would like to thank those of you who have been sending in your questions in letter form. This is by far the easiest and best way to handle things. I always enjoy talking to you builders, but the telephone is my greatest enemy, and the many telephone calls I get during the day is a major reason that things do not happen more quickly. We also get a number of "drop-in" visitors. If it is a builder, then we always take the time to show our visitor around. Those of you who have stopped by our office can attest to the fact that we are hard to find. The fact is that we do our very best to be as hard to find as possible, which includes no sign on the door. Our office is in an apartment building that I own with another fellow, and tenants always want to see me instead of my manager, but they have the message now and leave me alone. One of the real curses of being in the aircraft kit business is that there are so many people who just like airplanes and are fascinated by this sort of thing. If someone is genuinely interested in the Falco they will have bought the brochure or will stop by to pick one up. We have long since learned that this is the litmus test of their

seriousness. The most insulting sort are the types who say they have no intention of parting with \$10.00 for a brochure but who also expect that we spend a couple of hours answering their questions and want to ride out to the airport to see and fly in our Falco. As you might imagine, we don't react very warmly to this sort of thing, so if you occasionally hear people talking about an unfriendly reception at our office, now you know why! We stay as far away from the airport as possible to avoid these types of people, and I understand that Mr. Frati's office is just about as hard to find as ours. By the way, we get a lot of requests from potential builders who want to know the names of nearby Falco builders. We always make the request that they do not call on a builder until they have read the brochure completely through. As most of you know by now, visitors can take up a lot of valuable building time, so feel free to give tire-kickers the same treatment we give them! If you would like to a Falco builder who has been here and gotten the complete tour, Falco builders Murph Ivey (H: 803 224-6159, O: 803 225-3741), Walt Greczyn (H: 609 395-0627, O: 609 655-3700) and Dave Aronson (H: 612 636-4469, O: 612 636-0458) are a few who can tell you what it's like to visit the great halls of Sequoia Aircraft Corporation and fly in the Falco.

We will not have another builder letter out until after Oshkosh, so it is time to give you a final reminder about the Falco builders dinner. It is at the Midway Motor Lodge in Appleton at 8:30 PM on Tuesday, August 3. If you need a ride, stop by our booth, and we'll see what we can do about arranging a ride. Also if you have some space in a car, please let us know as well. We will probably also arrange for a Falco builders bull session on Monday or Tuesday. We have done this the past couple of years and most of the builders have found it helpful to have a chance to talk about common problems of building the Falco. There is nothing formal about the thing, just a chance to ask questions and kick around ideas and ways of doing things.

Speaking of that, there is one little point in aircraft woodwork that is not usually covered in the standard texts. Whenever you have plywood butting against another piece of plywood or spruce (such as rib gussets butting against the inside of the wing skin or against the spars) the plywood should be beveled at the edge. The reason for this is that as the wood dries out during dry spells, the plywood does not contract at the same rate as the spruce, with the result that the plywood begins to push against the skin or spar. The only purpose of the plywood is to join the spruce pieces together. All you need to do is to sand or file the plywood to a 45° angle so that at the point where the rib (or whatever) is joined to the other piece, the plywood is almost completely gone. This is standard practice in aircraft woodwork, and it will help keep your aircraft from having that "starved horse" look during dry spells.

I have received a number of letters questioning if the bolts we have selected for the tail group are too long. First, you must recognize that the bolts are selected by grip length and not by overall length. You should be able to tighten the nut all the way down without binding on the shank of the bolt. Ideally, the shank of the bolt will be in the hole in the fitting, and you do not want threads in bearing.

The nuts that we use are lightweight reduced-dimension nuts, and they make the bolt look too long when they are installed. In a number of cases I may have a bolt that is perhaps 1.5mm too long, but that is the greatest I have found on re-checking. If you find the bolts slightly too long, you have a choice of adding a piece of birch plywood under the channel-nut (this is the best way) or adding washers under the nut (not as good as you could forget to replace the washers if you removed the fitting).

I will also draw your attention to the revision for the fuselage assembly drawing. I have been doing the final installation drawing of the left hand throttle modification, and you will need to install a solid block of wood in front of frame No. 4 and below the "combing" (the 20x40 spruce piece just above the side longeron). This will provide a base for the pivot fitting for the left hand throttle. Also, when you get the next batch of drawings, many of you will be writing me about my drawing of the diagonal No. 2 frame. I show it 50mm wide, and I think this is best. After the frame is installed in the fuselage, much of it is cut away when it is sanded for the skin. Also you want the fuel tank hanger fitting bolts to go through this lamination. Additionally, you want the lamination to protrude slightly inboard at the sides to provide a surface to glue the 20x20 curved strip that gives you a gluing surface for the piece of plywood that covers the instrument panel area inside the windshield. The skinning of this area is a little confusing, and I'll get a detail into one of the drawings that will show more clearly how it is done. So far, everyone has been able to understand it from the drawing, so no problems have arisen.

Earlier I cautioned you against installing the NACA vent as outlined by Tony Bingelis in a recent article in Sport Aviation if you were planning on following our drawings for the instrument panel. I have learned long ago that there is no such thing as a small change. Our instrument panel will extend down to W.L. -30 and will extend four inches forward, and then will have a flange extending up. The left hand throttle torque tube will be hung on the bottom of the panel and will extend down to W.L. -110 at its lowest point. These are the only complications that I see at this point. I really like the vent idea, and I plan to incorporate it into the plans at some point. The design is simple, light and cheap. Its disadvantage is that it brings fresh air in lower than I would like. It would be best to have a good flow of cool air coming up just inside the windshield. This can be done, but it may not be simple. It will be best to attack this problem after the instrument panel is done.

There is some confusion about the left hand throttle modification. This will not replace the quadrant in the center of the aircraft. It will consist of a torque tube that mounts on the bottom of the instrument panel, a throttle lever that pivots on a fitting that is screwed to the side wall of the fuselage, and two pushrods. The throttle lever at the center, the center console panel, and the instrument panel will be set up for the modification. The pivot fitting must be screwed to the side wall, and all other pieces will bolt on without further ado. It will be a very simple thing to install, and the two throttle levers will work together. The way it works is that the

left hand throttle moves the center throttle by way of the torque tube and the two pushrods, and the center throttle is the part that actuates the throttle cable. It's a rather neat little thing, and I think we will see alot of them installed on Falcos. We will offer it as an option to the cockpit equipment kit.

It may help you to know what things I am working on now and will be working on in the future. I have learned a long time ago that it is best to do a complete installation drawing of each system. This takes more time than you can believe, but it is well worth the effort as things tend to fall into place for the builder. I am not going to be casual about any item, no matter how small. My plan is to work on all of the unfinished items in the fuselage before going to the engine compartment. The nose wheel bay cover will be more than a cover, it will also serve as a base for a bracket that I am calling the "garbage bracket", since I plan to use it to hold all of the garbage behind the panel in order. This will hold the engine control cables and will also keep things like wiring bundles, tachometer cable, cabin heat cable, parking brake cable, carburetor heat/alternate air cable, vacuum line (and possibly the regulator), fuel line, fuel pressure line, manifold pressure line, brake lines, etc. in place and out of each others way. There is a lot going on in this area, and it will all work very nicely, but it must all be thought out very carefully. I will also be working on the final design of the center console covers which will require some minor changes. These parts are not critical, but there are a number of interference problems which must be overcome. These will not be obvious to you at this time. I also plan to work on the installation of the pitot tube. Mr. Frati has sent me some drawings of the installation of the pitot tube in the SF.260, and I plan to do essentially the same installation. I plan to install the static ports on the sides of the fuselage. I will also be working on the design of the firewall connections. This will include the cabin heat box, and connections for the various cables and hoses that go through the firewall. Standard fittings will not always work due to the thickness of the firewall, indeed the production Falcos all had custom made bulkhead fittings to accomodate the thick firewall. I'll do my best to avoid this, but sometimes it is cheapest to use one expensive part in place of 4 cheap parts. Once I have completed all of the basic work in the cockpit, I will then begin work in the engine compartment. The first order of business will be the exhaust system. I hope to be able to use a cross-over system but there are two potential problems. One is that all of the cross-over systems made do not fit the injected engines. This can be remedied. The other problem I see looming is that the cross-over system may preclude the installation of heater mufflers for cabin heat and carburetor heat. The heater mufflers must be located forward of the engine mount tubes going from the lower lugs to the nose gear supports and behind the junctions of the exhaust pipes. I plan to make a number of small changes in the cowling. I am convinced that we can make substantial improvements in the cooling drag on the Falco. This is where most of the speed for the Mooney 201 comes from, and I think this is the secret to Nustrini's speed. While the Falco has a very clean cowling, there are portions of the nose bowl which are a little blunt. Also the air for the oil cooler comes into the engine compartment just below the propeller (through the little "smile"). This brings high

pressure air below the cylinders and the air intake for the carburetor does the same thing. For those of you who are planning to use the injected engines, it will be tempting to eliminate the scoop for the carburetor. I think this is a mistake, since you need a bump anyway to cover the nose gear. It is better, I think, to use the scoop for both injected and carbureted engines. This will give us a ram air effect which should boost power at speed. Also I would like to design an induction air filter arrangement that will be common to both engines. The original Falcos did not have a carburetor filter, and this is important. I hope to mount the oil cooler on the front left engine baffle or on the aft left engine baffle, but you have to work these things out very carefully. I also want to design the installation of the landing light in the cowling. I will also have the challenging job of working out the engine control cables and the mounting brackets for them. We will be using cables that are essentially identical to the elevator trim tab cable, but without the plastic covering which should not be used in the engine compartment. When I finally get all of this work done, I plan to sit down and write a complete step-by-step construction manual for the Falco. While this will be a major undertaking, it will make a very substantial difference in how long it will take you to finish the Falco. As it now stands, you have all the information you need to build the aircraft, but even so, most builders spend a lot of time thinking about what to do next. I may eat my words at a later date, but I think there will be a time when we will see Falcos routinely built in a year. It is always the little details that get you, and if they are all thought out well in advance, the building time will come down very rapidly.

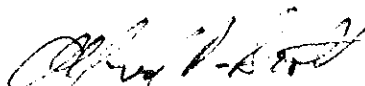
We make a real effort to get out kits out the same day that we receive the order. This makes a good impression on people. One Falco builder told me that he ordered his tail group kit and a couple of days later at his local EAA chapter meeting, he told the group that he had ordered the kit. There was a lot of laughter, and everyone told him to expect delivery in six months. Three days later he had the kit in hand. To my knowledge, we are the only kit supplier that can give you this sort of delivery. The delays that builders often see are more common than you might realize. Joel Shankle ordered his first batch of wood from Aircraft Spruce, and it took nearly six months to arrive. To make matters worse, he never got an order acknowledgement and had to call out there a number of times. Joel now buys only from Trimcraft. Jerry Preiser's Falco project is at a halt due to a delay of more than a year on his wing spar materials from Aircraft Spruce. He got a very good price, and has been told that he is next in line for delivery. That was in February when I was in Florida, and Neil Johnston was through town the other day after being in Florida, and Jerry was still waiting. Wicks Aircraft has a reputation for very prompt delivery of spruce. They have talked about making up a kit for the Falco but so far have done nothing. I have gotten nothing but high praise from builders about Trimcraft and Aero Cabinet. For those of you who are making your own steel parts, I also get glowing reports on Dillsburg Aeroplane Works in Pennsylvania. Dillsburg seems to specialize in 4130 steel and hardware.

Everything is still set for the Falco get-together at Elstree Aerodrome near London. There is also some possibility that Mike

Slazenger might bring his Falco over from Ireland. Brian Fox of Doncaster Sailplane Services will also be there. I'll be easy to recognize, by the circles under my eyes. Some of our builders have suggested a trip to a pub after the event, but -- I warn you -- you might hear my indian joke!

We got a better response on our roll call this time. Keep those reports coming in!

Sincerely,
SEQUOIA AIRCRAFT CORPORATION



Alfred P. Scott
President

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.

513. John D. Shipler. I have the fuselage and tail assembly out of the jig and skinned. All of the wing ribs are completed, and I'm now building the wing spars.

537. George Neuman. Wood structure except lining of cable complete. Fuselage ready for silver coat behind frame No. 8. Wheel bay doors (fully enclosed) complete and installed. All hardware except items backordered installed -- this is only hardware behind the firewall and does not include instrument panel supports or gas tanks. Presently working on cloth cover bottom of wings.

552. Dave Bowen. I have completed all spars, ribs & fuselage rings. The jig is almost ready to go. Now I am in the process of completing tail, wing and fuselage hardware, control system and flap system. Will begin fuel tanks.

605. John Oliver. Rudder, elevator, horizontal stabilizer complete including plywood skin, but no dacron on yet. Hardware install on same. Fuselage frames covered with plywood both sides and now making cut-outs for longerons. Longerons in hand ready to fit. Fifty per cent of wing ribs complete.

641. Mike Pepper & Peter Grist. Fuselage frames complete, lined up on jig and longerons in position. Stabilizer and elevator complete. Main spar under construction with wing rib kit No. 205 in hand. Engine mount, front fuel tank, main undercarriage, canopy frame, seat frames and tracks, trim control wheel/gearbox, rudder pedals, control stick support salvaged from G-AVUJ damaged in hangar fire at Doncaster, England, 1979.

655. Herbert Mueller. All woodwork complete and covered. All fittings, rudders, flaps with motor mounted. Main gear mounted with

complete covers. Front tank and instrument panel ready. (This is our second communication from Herbert. The first time we knew he was actually under construction was when he showed up at Oshkosh with photographs of his Falco with all of the woodwork nearly finished!)

659. Jim Martin. Fuselage, fin, stabilizer, elevator & rudder 100% complete and ready for plywood cover. I'm working up my courage to attempt that now. Enough cover must be installed for strength to move it to the hangar to start the wing. I have all spars, ribs, leading edge and trailing edge, for the wing.

664. Quentin Rench. Rudder compete. Elevator needs tips and skin. Fin as developed as possible prior to installation on fuselage. Station 8 frames complete. Began final assembly of horizontal stabilizer. Fuselage jig set up and ready.

683. Earl Edwards. Tail group complete. Wing spars & ribs on hand. Fuselage rings have been shipped.

694. Ron Sorensen. All ribs and beams for the vertical and horizontal tail completed. Am now working on the fuselage frames and have completed station 11 with station 10 approximately 50% completed. I can only describe this activity as pure fun.

726. Robert E. Logan. I've lofted fin and rudder ribs, ordered materials kit from Trimcraft & completed station 1 and 2 with no problems.