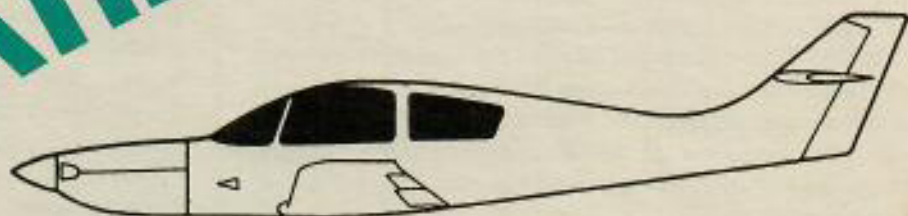


EXPRESS MAIL

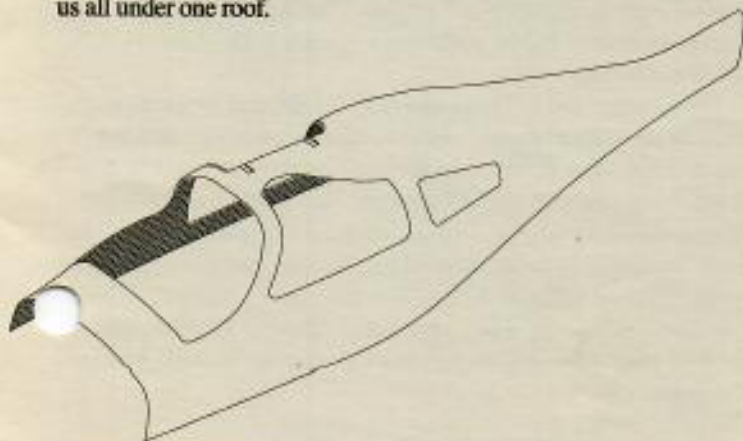


Wheeler Takes The Lead

1989 was a phenomenal year for Wheeler Aircraft. The EXPRESS became the world's best selling composite kit plane gaining nearly 200 new customers. We have shipped over 300 of the first three FT kits (stages) to date and by early February will also be shipping kit four which contains the last major airframe components, the upper fuselage and the tail section. Kit number 5, the finishing kit is expected to go out the door in late March. We have also begun shipping wing kits (kits #1 and #2) for the retractable model EXPRESS.

This means that by February all major airframe components will be in production. Please call Customer Service for information on the next available delivery position for the kit or kits you would like to order.

Our production department is now working three shifts (24 hours/day) to maximize our productivity and to keep delivery time as short as possible. To improve delivery of and control over metal parts, we established our own machine and welding shop this year. We have expanded into a third building but the offices still look like the catacombs, with a maze of tiny passageways between desks and equipment. Either we move to larger quarters soon or we'll need bunkdesks and midget engineers. We are planning the construction of a new 40,000 square foot building to give us some room and get us all under one roof.



N200EX Replacement Well Under Way

The crash of the EXPRESS forced us to build a replacement fixed gear plane that we hadn't planned on so soon. That will slow construction of the retractable airplane somewhat, but only temporarily. Both airplanes are well on their way to completion and we should be flying the FT in February or early March. Although the retractable airplane will have a Continental IO-550-G 300 horsepower engine, production models of the retractable are currently for 200 horsepower. The ballistic version may be available in early 1991.



N200EX replacement in progress.

OSHKOSH '89: Overwhelming Activity At Wheeler Tent

These are exciting times in aviation, and Oshkosh is where you feel the electricity. It's thrilling to observe and participate in what some call "a new enthusiasm for aviation," although we respectfully submit that the enthusiasm isn't new, it's just that homebuilt aircraft have gained respectability and are attracting new enthusiasts from "mainstream" aviation. Cessna, Piper, and the rest didn't die because pilots lacked enthusiasm about flying, they just bored us to death with ancient technology and truck-like handling, not to mention the prices. The liability issue was merely the straw that broke their back. Thanks to our new tent location at the head of manufacturers row across from Beech and near Cessna and Mooney, we couldn't help but observe the lack of interest at their

10/24/90

OSHKOSH '89 continued

tents. I suppose that if auto manufacturers were still trying to sell 1948 autos at today's prices, their booths might be empty too.

Clearly it's the outstanding performance, increased utility and easily constructed kits, that make the new generation of homebuilt airplanes attractive to mainstream pilots instead of only hobbyists. The immense and densely packed parking area for spam-cans is pretty strong evidence. The groundswell of interest has caught the attention of the most conservative and respected of observers.

The EXPRESS was the first kit plane ever to earn a pilot report in the prestigious magazine *Aviation Week and Space Technology*, and they commented that "The Wheeler EXPRESS FT is an easy-to-fly, cross-country aircraft. Its composite construction, high performance and relatively low cost could represent the future in U.S. light aircraft design."

One thing is certain after attending the show this year; the new wave of enthusiasm for aviation is real, and it couldn't have been more evident than in the Wheeler display tent. Attendance at Oshkosh was again record-breaking and old-timers at Oshkosh told us the EXPRESS attracted more attention than any kit they'd seen since the introduction of the Christen Eagle.

We brought eleven people to the show representing engineering, manufacturing, customer service, builder support and marketing. We thought we'd all have time to explore other displays and learn what we could, but no one had time to leave our tent. Fortunately many of our builders helped us with the crowds.

The overwhelming level of activity at the Wheeler tent clearly demonstrated that the EXPRESS meets the needs and desires of a great many pilots. It's not so much that the EXPRESS is a dramatic standout in any single area, or a breakthrough in technology or aerodynamics, but simply that it offers pilots an unequaled combination of features that yield the greatest value for the money in an attractive package. In fact, it's *because* the EXPRESS isn't a dramatic standout in a single area that it's so successful.

Most of us can afford only one plane whether kit or factory, and it needs to satisfy *most* of our requirements, with no surprises. Unusual aerodynamic configurations, exotic materials, or blinding speed are interesting, but the basic requirements of ease of flying, baggage space, comfort and reliability must still be met. Inevitably, when an airplane is particularly outstanding in one area such as top speed for example, it bites back with demanding handling, high landing speeds, little cabin room or all of the above. The laws of aerodynamics remain constant if not simple, and the most important one is "you don't get something for nothing."

The EXPRESS is seen by many as the leader in the new wave of interest in aviation, and we feel it's simply because we haven't neglected the *real* needs of pilots and builders, but listened to them and expended a great deal of effort to tailor the EXPRESS and the kit to meet *your* needs. And we're still listening. Any suggestions?

"If I've got to have a dead engine in one of the new generation of hotrods, I want it to be the EXPRESS..."

Jim Campbell, Editor, *Sport Pilot*, February, 1989

Jim Campbell, who was the editor of *Sport Pilot*, appreciated the glide ratio of the EXPRESS in the first pilot report on the EXPRESS in February of 1988. Gary and I of course agree with Jim on this, but having reviewed the crash, we've concluded that there's a major change required for the next one; do it in a pea field with no spectators. Crashing into a hot-bed of anti-aviation controversy in an already sensitive metropolitan area was poor planning on our part. The major uproar has died down, but the ripples continue. The FAA responded to the airport manager's request to close the Santa Monica Airport and hang Wheeler high with a firm letter explaining that we were legal and reminding him of the rules under which he operates. He must have gotten legal advice to find a way to violate us, but fortunately, we play by the rules and document, document, document.

So far there are no new revelations in the crash investigation, but the mode of failure for the engine seems clear. There are aluminum 'buttons' which float in the wrist pin bores of the piston on each side of the wrist pin between it and the cylinder wall. In one cylinder both buttons were somehow forced against the cylinder wall and worn down. The aluminum material of the buttons clogged an oil gallery in the crank and caused a main and rod bearing seize and spin on their respective journals. According to the investigator, all this took place in a few hours, so it wasn't a problem that had been developing over a long time.

Several people have written saying the same thing happened to them in various airplanes, and the engine teardown expert has seen this problem often enough that he thinks an AD should be published. In the overhaul of the engine, all Lycoming or other certified parts were used so use of non-standard parts was not the cause. The cylinder assemblies and the case were assembled by respected certified overhaul stations (not us), so the assembly was probably correct, which is reinforced by the fact that so much time had elapsed since the engine was overhauled.

It's important to note that if we had had a customer aboard, the crash would probably have been much less catastrophic because all demo flights were conducted over the ocean within easy gliding distance of both the airport and the beach. The fact that the plane was enroute to another airport put it over a densely populated area with few places to land.

I said in the "crash" letter (dated 11-13-89) that the press fixed on the word "experimental" and ignored whatever I said after that. I owe at least some of them an apology, because although it happened, there was also fair and accurate reporting. I was really prepared for unfair treatment, especially considering the location of the crash, but several reporters even went so far as to interview experts to get an objective opinion. Below, I've excerpted comments from a story titled *Aviator praises "very safe" Wheeler Express*, which got front page treatment the day after the crash in the Santa Monica newspaper.

Ed Phillips has flown a lot of airplanes in his day, and the Wheeler EXPRESS is one of his favorites. As the business flying and general aviation editor for *Aviation Week and Space Technology* magazine, it is Phillips' job to report on new aircraft on the market. In June, he flew the prototype of the Wheeler EXPRESS, the same airplane that crashed into a West Los Angeles home on Thursday.

"I thought it was a well-built, easy-to-fly airplane and certainly very safe," Phillips said Thursday night in a telephone interview from his Delaware home. "Failures in the power train of airplanes are always a possibility, but I would say the design of this plane is very solid."

"Both those guys (pilot Mavrovic and sales manager Cooper) really loved that plane," Phillips said. "They thought it was fun to fly and it did everything they said it would do. I gave it high marks in my review."

In his article, published July 17, Phillips detailed his flight. He gave the plane good ratings on just about every point. He said he liked the craft's sleek shape, handling capabilities and accessories. Even in rough air, Phillips said the EXPRESS handled well.

"It's what I call a viceless airplane," he said. Phillips said build-it-yourself kit planes are just as safe as factory-production planes. "It all comes down to pilot skill," he said. "Kit planes are not inherently more susceptible to crashing; it's the pilots that make them go down. In this case, it sounds like the engine failed, and there's not much you can do. But considering no one was killed and the pilot walked away, it says a lot for the design and construction of that aircraft."

The *Seattle Post Intelligencer* ran a story after the crash with the headline "Saved by the plane he crashed" (kinda sounds like the *National Enquirer*). In that very positive article which appeared November 14, the reporter interviewed Keith Holsapple, professor of aeronautics and astronautics at the University of Washington who "...agreed (with Wheeler) that in designing an aircraft the trick is to let the plane absorb the crash, and that apparently is what occurred in the crash of the Wheeler EXPRESS."

Why Has The Express Become The World's Best Selling Composite Kitplane?

It's not so much that the EXPRESS is a dramatic standout in any single area, or unique in technology or aerodynamics, but simply that it offers pilots and builders an unequaled combination of features that yield the greatest overall performance and value in an attractive package. In fact, it's because the EXPRESS isn't a dramatic standout in a single area that it's so successful.

Any airplane design is a constellation of compromises. Inevitably for any given design parameter, there are competing advantages at opposite ends of the range. Depending on the mission of the airplane, a designer may choose to emphasize one at the expense of the other. For example, to achieve unusually high speeds (higher than

aircraft of the same passenger or load capacities) the designer must reduce cabin volume (fuselage size) and/or wing area in order to reduce drag. There's no magic and no alternatives. The obvious drawback to emphasizing speed alone is a small, uncomfortable cabin and/or a "hot" plane with the glide ratio of a brick. On the other hand, a designer could choose to accept more moderate speed but gain cabin comfort, forgiving handling, and a decent glide ratio. The laws of aerodynamics being what they are, the designer (or pilot) can't have everything, and he can't change later, so both the designer and the pilot must choose the intended purpose of the airplane carefully.

From its inception, the EXPRESS design was thoughtfully balanced to meet the requirements of the single airplane family who loves fast, comfortable travel by air. It's not the fastest, largest, or most expensive, nor is it a canard or pusher configuration for the adventurous; but for its mission, the aggregate overall performance and features of the EXPRESS are unsurpassed by any other aircraft today.

- EXCELLENT CRUISE SPEED (WITH FIXED GEAR YET)
- MODERATE STALL SPEED
- EXCELLENT GLIDE RATIO
- EASY, STABLE HANDLING WITH NO VICES
- EXCELLENT TURBULENCE PENETRATION
- OUTSTANDING CLIMB PERFORMANCE
- GOOD SHORT FIELD PERFORMANCE
- LONG RANGE
- EXCELLENT FUEL ECONOMY
- LARGE USEFUL LOAD
- LARGE, COMFORTABLE FOUR-PLACE CABIN
- THREE BAGGAGE AREAS, LARGE VOLUME
- BUILT-IN SKI OR FISHING POLE STORAGE
- SIMPLE, STRONG FIXED LANDING GEAR, RETRACTABLE OPTIONAL
- LARGE WHEELS AND BRAKES FOR SHORT/ROUGH FIELDS
- LOW MAINTENANCE FIBERGLASS AIRFRAME
- STRESSED FOR AEROBATICS
- AND ... "THE EXPRESS TURNS EVERY HEAD ON THE RAMP"

If you've chosen the EXPRESS, as your airplane, you're not done yet because you've got to *build* it. Well, we didn't let you down here either. Most pilots who choose the EXPRESS over "sport" planes are what we call "reluctant builders," so like the EXPRESS, its kit was carefully designed with clear goals in mind:

1. Tailor it to the novice builder.
2. Make it fast to build.
3. Eliminate the tedium which leads to apathy.

It seems that these are goals to which all kit manufacturers would strive, but it's obvious that most kits are designed for the convenience of the manufacturer, not the builder. You really have to see an EXPRESS under construction to understand why its kit is so well received. And to *really* appreciate the EXPRESS kit, look closely at other composite kits under construction. The differences are not subtle. Compare:

World's best selling continued

1. The quality and finish of the parts, composite and metal.
2. The precision of the pre-cut composite parts and their fit.
3. The organization and packaging of the hardware.
4. The assembly manuals.

We're not exaggerating when we claim that you can build the EXPRESS in $\frac{1}{3}$ to $\frac{1}{2}$ the time of the popular two-place kits!

The EXPRESS is seen by many as the leader in the new wave of interest in aviation. We feel it's simply because we have listened to the *real* needs of pilots and builders, and expended a great deal of effort to tailor the EXPRESS and its kit to meet *their* needs. The EXPRESS and its kit aren't perfect, but we're trying real hard.

New Continental Six Cylinder Engine Available

We originally specified the four cylinder Lycoming 200HP engine for the EXPRESS for several reasons; its availability on the used market, our familiarity with the engine, and of course the fact that it has a good service record (generally speaking). However, as we gained experience with the EXPRESS and our customers reactions, we felt we had to find a smoother powerplant. The four cylinder vibration was a particular annoyance which we went to great lengths to eliminate without success. We had the engine balanced and blueprinted, had the prop statically and dynamically balanced, and still it vibrated. Not only was it unpleasant, it surely wasn't good for the avionics, or anything else, for that matter, and we always felt we had to apologize for it. Many of you who flew the EXPRESS agreed that the engine didn't compliment the quality of the airplane, particularly those accustomed to the smoothness of six cylinders. Finally, many of our builders expressed interest in buying new engines instead used ones and so we began looking for an engine that would enhance the quality of the EXPRESS.

As many of you know, we explored numerous alternatives ranging from the Porsche aircraft engine to various auto engine conversions. Although we were unable to find anything on the market that met all of our requirements, Teledyne Continental offered to tailor an engine to suit us. They proposed modifying the excellent six cylinder TSIO-360-MB engine as supplied in the turbocharged Mooney 252, utilizing its tuned induction system without the turbo rather than the usual log induction. They made some additional configuration changes and delivered an engine that makes 210 HP, offers improved fuel economy and has a TBO of 2000 hours! What makes us particularly happy is that they started with a well proven engine and made conservative changes which maintained its horsepower while increasing its TBO and fuel economy.

We feel that Continental has developed the perfect match for the EXPRESS. Here's a smooth, powerful, reliable six cylinder engine that radiates quality and delivers ten more horsepower than the Lycoming. It has excellent fuel specifics, has the intangible bonus of the muscular sound of six cylinders, and finally, it looks like what you'd find in the engine compartment of a BMW or Porsche; it's beautiful.



Our 210hp Continental sporting tuned induction.

We are installing this engine in our demo airplane and finalizing the installation engineering. We will offer complete factory support for the installation of this engine including the mount and exhaust system.

We are not yet able to support the installation of other Continental engine models in the EXPRESS. We will of course continue to support the Lycoming installation.

Continental will be ready to ship engines beginning April, 1990. For those of you who would like to order the Continental, its pricing, detailed specifications and ordering information will be mailed shortly. We expect its price to be under \$20,000.

Turbocharger For The Express?

Some builders have asked us about the wisdom of installing a turbocharger on their EXPRESS. As with many "improvements" you really have to examine your intended use of your plane, the maintenance you're willing to support, and the amount of discomfort you'll accept. There are two main reasons for installing a turbo: (1) You live in Denver or Albuquerque and own an airplane whose climb rate is poor, (2) You do serious long distance cross-country flying where you are willing to accept the maintenance and discomfort to obtain maximum speed.

Regarding your intended purpose and the discomfort of using oxygen gear, we refer you to an article on Mooneys by Bill Cox in the December '89 issue of *Plane and Pilot*. He comments, "The fact is that most pilots who own turbocharged, unpressurized airplanes (this one included) rarely operate them in the Flight Levels. Breathing oxygen is just too much of a pain most of the time. Mooney has done some demographics on how its turbocharged airplanes are operated, and the results are revealing. Only three percent of Mooney's 252 owners fly their airplanes in the rarified air above 20,000 feet, and a mere 15 percent operate in the 15,000 to 17,000 foot range where nasal cannulas will suffice. Most Turbo Mooney operators opt to cruise in the lower 12,500 feet where they can be out of ATC's hair. Contrary to popular belief, Mooney pilots (like Piper, Cessna and Beech pilots)

Turbocharger continued

prefer not to file IFR in the flight levels if they don't have to partially because of the oxygen requirement and also because the ATC system is so inefficient."

Regarding the maintenance of the turbo, our product manager, Merritt Kline who is an IA and is the former Director of Maintenance for Turbo-Plus, a company which specialized in the aftermarket installation of turbos, intercoolers and spoilers has this to say; "Turbocharger is how you spell headache with a T. It adds a whole new dimension of complexity and problems to an airplane. Often it's a band-aid for an airplane with poor high altitude performance. Engine cooling becomes critical and the high temperatures of the turbo itself cause problems under the cowl. Spoilers are almost mandatory to avoid engine damage from shock cooling during descents from high altitudes. In addition, you have to put up with the maintenance and the cost and hassles of the oxygen system."

The EXPRESS has outstanding high altitude performance without a turbo, as we demonstrated flying the EXPRESS to Oshkosh with a Mooney Turbo 231 in 1988. Merritt was the pilot of the 231 and we found that the Mooney couldn't keep up with the EXPRESS until we reached 11,500 feet at which we were doing 203 MPH true. Moreover, the EXPRESS significantly out-climbed the Mooney through much of that altitude.

Most people who contemplate a turbo for the EXPRESS, simply aren't used to this kind of performance in a non-turbo airplane. Look closely at your requirements and we think you'll agree; for most people with an EXPRESS, a turbo is a needless and costly complication to an otherwise simple and easy-to-maintain airplane. However, for those who do wish to install one, we will be working with Continental to achieve an optimum installation.

Retractable Landing Gear Testing Complete

Testing is complete on the main retractable landing gear. We're pleased to say that the design has met all our goals of strength and simplicity. Extensive testing of the gear leg and wing structure was conducted using a drop-test fixture that simulates worst case conditions. The impact conditions we tested exceed FAR part 23 requirements and verge on crash instead of landing. Our goal, of course, is to provide you with a trouble free gear that'll handle all the use ... and abuse ... that you can give it.

The test fixture is mounted in such a way that the test wing with the gear assembly installed and some 1300 pounds of ballast fixed to the top of the wing can be raised and dropped. The pivot axis of the fixture can be adjusted for different angles of attack for the drops. Watching the test with the wing rotated to the worst nose down position is a sobering experience. I wouldn't want to be in the plane during a landing like that.



RG test before drop.



RG test, maximum impact.

A series of nine different tests were conducted as called out in FAR Part 23. With a static load of over 1300 pounds fixed to the top of the wing, dynamic landing loads of over 6000 pounds were tested. Additionally, drag loads as well as inboard and outboard side loads each were applied to simulate maximum performance braking and worst case crab angle landings.

For a practical indication of what all the numbers mean, the worst case drop was 16.2 inches which simulated a landing with a descent rate of about 558 feet per minute or some 6.6 G's, your basic carrier landing. After numerous cycles, neither the gear nor the wing was damaged, nor was there any sign of stress.

German Engineering Intern Studies With Wheeler



Engineering intern, Mike Fischer

Mike is a student in aeronautical engineering at the University of Stuttgart, Germany. He spent 18 weeks with us and demonstrated the high quality of training at the University of Stuttgart. We kept Mike busy on numerous projects including structural design of our new hydraulic dynamic testing apparatus (ODDJOB) for cyclical structural testing of major structures like the fuselage. Mike also assisted in static structural testing of the nose gear support and the flap actuator, and coupon testing of various laminates. He helped with the retractable landing gear drop testing, setting up the test system and data recording and he helped with the data reduction and analysis. Mike earned his private pilot license while he was here and looks forward to flying in Germany on his return. Mike enjoys his work and hopes to work for a small composite aircraft manufacturer after his graduation.

Questions And Answers

Q. Why are there three different gross weights for the EXPRESS?

A. Originally the EXPRESS was designed for 5.00X5 tires which limited the gross weight to 2300 pounds in the Utility category. Subsequently we introduced 6.00X6 tires as standard equipment which enabled us to increase the gross weight to 2663 pounds in the Normal category. Following that change the FAA proposed the Primary category which has a gross weight limit of 2500 pounds. In the event that already constructed planes might be able to obtain the Primary certificate, we arbitrarily limited the gross to 2500 pounds.

Q. What is the service ceiling of the EXPRESS?

A. Estimated 20,000 feet. We've had the prototype to 17,500 feet and still climbing at about 350 feet per minute.

Q. Can I get insurance for the EXPRESS?

A. The EXPRESS can be insured like any other airplane. Some insurance companies are easier and/or less expensive than others. Avemco, as an example lists the EXPRESS right along with the production planes. Your cost will depend on your experience, your flying record and the value you declare.

Q. Is lightning a problem for the EXPRESS?

A. Thanks to preliminary research done by one of our builders, Larry Riegert, an aerospace engineer, I can offer a brief answer here, but this is a complex subject for which a more in-depth answer will be forthcoming to our builders.

First, according to Langley Flight Research people, lightning does not randomly strike aircraft, but rather the aircraft is the trigger when flying too close to storm centers. Advice: stay 10 miles vertically and horizontally from storm centers.

Second, according to the electro-magnetic discharge experts at Beech Starship engineering, because the EXPRESS does not use carbon fiber, it's non-conductive and would not tend to attract lightning. They felt the EXPRESS would stand a higher chance of being hit by lightning on the ground. (The Starship is molded of carbon fiber which is conductive, but has a bonded wire mesh in the exterior skin to prevent lightning damage.)

Some aircraft kit designs use carbon fiber for spar caps—or the entire spar, without the wire mesh protection. These are built-in lightning rods, so any prospect of a lighting encounter should be avoided in those aircraft.

Finally, according to the NASA publication, *Lightning Protection of Aircraft*, compared to other hazards (hail, birds, turbulence).

Q. Do I have to paint my airplane white?

A. Yes. You'll notice that even most of the aluminum airplanes are white. A darker color on the exterior can cause high interior temperatures which can cook avionics, melt grease from fittings, harden wiring, and other nasty things, never mind that composites (all of them) are heat sensitive, and must be protected from high temperatures (160 degrees F). Boeing uses 350 degree cure, autoclaved carbon composites for some control surfaces on several of

their jetliners and even they prohibit dark colors on any horizontal surface. Their prepreg materials and processes are far superior to the prepreps commonly available on the kitplane market.

I will invoke Burt Rutan's name and quote from his newsletter the *Canard Pusher*. "We are alarmed by the trend to paint composite aircraft dark colors. An orange or dark blue or dark red surface can easily reach temperatures of 190 degrees on a warm summer day with no wind. We saw at Oshkosh a deep orange and a dark red (aircraft) parked, unprotected in the hot sun. We would not have flown in either of these aircraft for any reason. Don't be lulled into a false sense of security by those who must not have considered the consequences of their actions. Paint your airplanes white."

Q. What inspections are necessary for certification of the EXPRESS?

A. The FAA no longer performs inspections during construction. However, we still recommend that inspections be made by a knowledgeable person such as an EAA member designated to perform such inspections. The inspections should be recorded in the construction log. The builder should take plenty of photographs to document his construction. The FAA will perform a final inspection of the aircraft itself, and the FAA may inspect the above mentioned documents and records.

Q. Will a cargo door be available for the EXPRESS?

A. Yes. We are working on it now and it will be available as an easily installed option. And yes, it will be large enough for a folding bike.

Q. Can I put a three bladed prop on the EXPRESS?

A. Yes, we're working with both McCauley and Hartzell and expect to announce it in our Options catalog.

Q. What is the building time for the airframe?

A. We estimate that the average builder will take between four and five hundred hours to complete the airframe. Probably the most time consuming task for the average builder is the instrument panel.

Q. Many aircraft kit manufacturers have gone out of business, how do I know you'll be around if I buy a kit?

A. I guess some folks who bought Chryslers before Iacocca got the company on an even keel wondered the same thing. Unfortunately, in this or any other business, regardless of size, there are no guarantees. However, Wheeler Technology is a strong, healthy company with excellent prospects for continued success. We've been designing and building kit planes since 1985, and we've experienced a continual increase in strength and business prospects since our inception. We may move more slowly than some other companies, but ours is a deliberate, planned growth, intended to minimize risk and maximize our long term strength. Many visitors come to see if we're real before they order an EXPRESS, and the fact that so many people are comfortable with our company's health after they visit has undoubtedly contributed to our success. We're proud of our company and love to show how serious we are, so you're welcome to visit and take a look too.

Name Change To Wheeler Technology Inc.

Our official name has for some time been Wheeler Technology Inc., though we have continued doing business with the name Wheeler Aircraft. We now answer the phone as Wheeler Technology and will be changing our literature.

While aircraft will remain our primary activity (and love), this change reflects our growing strength and capabilities in structural composites engineering and manufacturing. Future involvement with non-aircraft composites will be limited to high-technology applications where our aircraft will be the beneficiary as we continue to explore new composites technology.

Independent Builder Newsletters

We know of two independent newsletters now being published for EXPRESS builders by other EXPRESS builders. We welcome their efforts and hope that other builders will find their newsletters helpful in completing their EXPRESS.

Unfortunately, we are not in a position to edit their work, so we must state that any deviation from the procedures as described in our assembly manual are not approved by Wheeler. Which is not to say there aren't better ways to do things, we just don't have time to review all of them, and until we do, we must state emphatically **DON'T DEVIATE FROM THE MANUAL!!!** Otherwise, you may find useful hints and suggestions.

The EXPRESS Builders Exchange is published bimonthly by two EXPRESS builders, Bruce Williams and Doug Holden and costs \$15.00 per year. Write to Bruce Williams, 11157 Fieldcrest Drive, Baton Rouge LA 70811.

The EXPRESS Builder is published bimonthly by an EXPRESS builder, Charlie Corbin and costs \$20.00 per year. Write him at 1102 Winona St., Northfield, MN 55057.

New Information Package And Options Catalog In The Works

Talk about publish or perish; what with the newsletter, assembly manual, information package, service documents, internal documents and now an options catalog, we've probably become a take-over target for Random House.

We are working hard to catalog and price a complete offering of options and accessories such as autopilots, Continental engine installation packages, propellers, radios, wiring harnesses, upholstery and the like. We haven't had time for this in the past, especially for those projects which required additional engineering. But now we're able to free up some people as the major parts of the EXPRESS project wind down. Our first options catalog should be published in mid-February. Following that will be our long overdue, updated information package which everyone on the mailing list will receive.

SUN 'N FUN 1990

As usual, the SUN 'N FUN EAA Fly-In, the first airshow of the season will be held at Lakeland, Florida from April 8 to April 14. This show is second in size to Oshkosh but is much more relaxed and the weather is usually great.

We will, of course, be there with at least our new fixed gear demonstrator EXPRESS. Prospective purchasers of the EXPRESS may make reservations to obtain a demonstration ride. Advance reservations are available starting at 8:00 AM and ending at 12:00 noon daily during the show and can be made by calling Wheeler at 206-851-5793. If you make a reservation, then we ask that you come to our tent at least one hour before to register and make your \$75 deposit towards the purchase of an EXPRESS airframe series. This deposit will apply even if you choose to delay your purchase to a later time.

Wheeler

WHEELER TECHNOLOGY INC.

Tacoma Narrows Airport
1522-26th Avenue NW
Gig Harbor, WA 98335

PRESORTED
FIRST CLASS MAIL
U.S. POSTAGE PAID
TACOMA, WA
PERMIT NO. 899

IMPORTANT SUBSCRIPTION INFORMATION

If the number following your name on the address label is "6," this will be your last newsletter. If you wish to renew your subscription, please send \$8.00 to receive another four issues of EXPRESSMAIL. Please reference your customer number on your check.