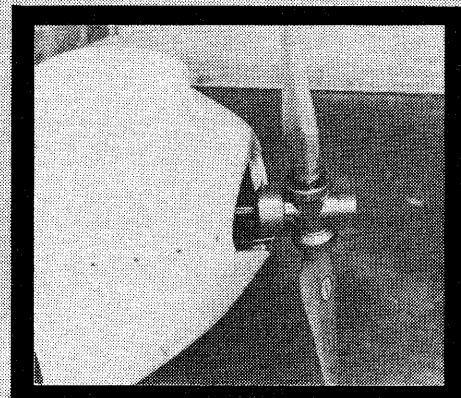
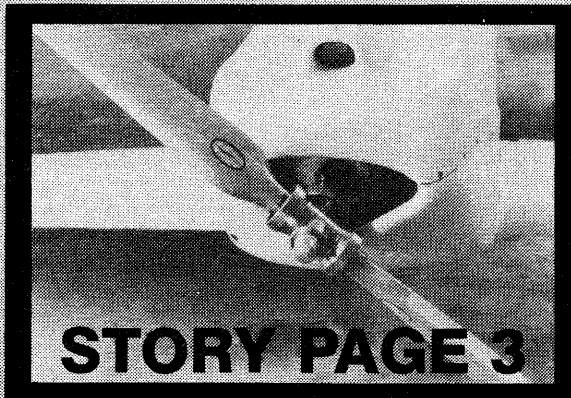


# quickie

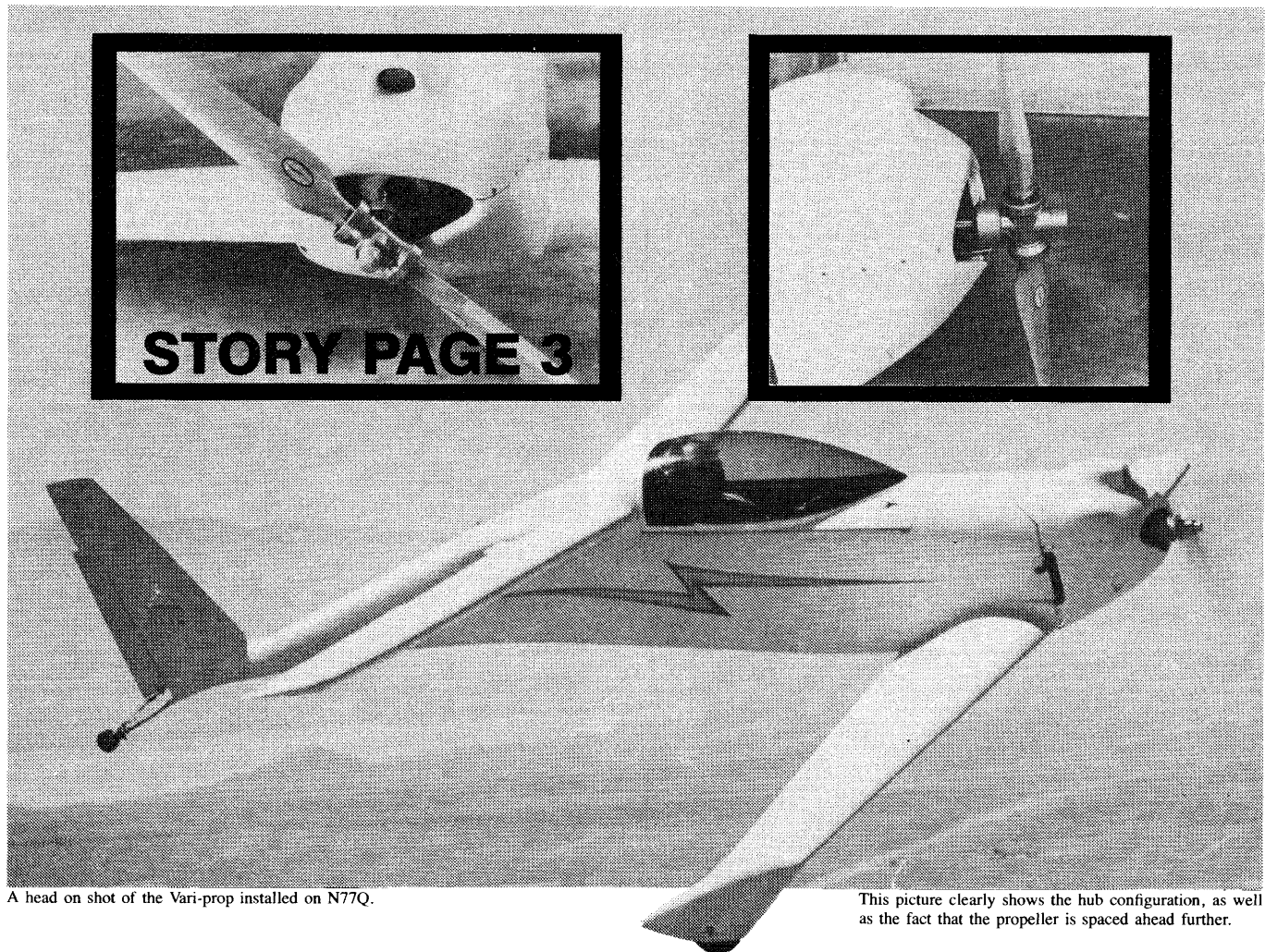
NO. 9

QUICKIE NEWSLETTER

JULY, 1980



(photo courtesy of Don Downie)



A head on shot of the Vari-prop installed on N77Q.

This picture clearly shows the hub configuration, as well as the fact that the propeller is spaced ahead further.

## QUICKIE HOMEBUILDER ACTIVITY

Over 45 Quickies have made first flights. Seven Quickies have been using Mojave as a home base for flying. From the phone calls and letters that we have been receiving at QAC from our builders, it is evident that at least that many more will be flying before the end of the year.

The average time to build has been about 9 months, with the range all the way from 3.5 months to 14 months.

Weights for *equipped* aircraft have ranged from 249 lb. to over 300 lb. Incidentally, in

many cases, the prettier aircraft are also the lighter ones.

Since the last newsletter, we have received information on three Quickie incidents. Two of the three occurred on early test flights, when the pilots left the vicinity of their home airport, and landed off airport. One was due to fuel contamination (see Newsletter 8, "Flight Testing Your New Quickie") and the preliminary report on the second one from the FAA is that airflow to the carburetor had been restricted by improper installation of the cowling, which caused a partial power reduction. The third incident resulted from an unexpected first flight during taxi testing followed by damage during the first landing.

Every one of these incidents could have been avoided by more careful preparation. Remember, as a builder you have spent many long hours building your aircraft. Isn't it worth a little additional effort to assure its success for years to come?

On the bright side, reports keep coming in from very happy Quickie Pilots. Typical comments range from, "... it flies just like you said it would" to "... this is the greatest day of my life" to one individual who said, "Thanks again ... for your encouragement, suggestions, and the patience shown to two guys going around with 1/2 a tank and 2 quarts low!"

Previous newsletters have had pictures of the "Nooner" Quickie, which used the Mojave airport for much of its early flying.

*continued on page 2*

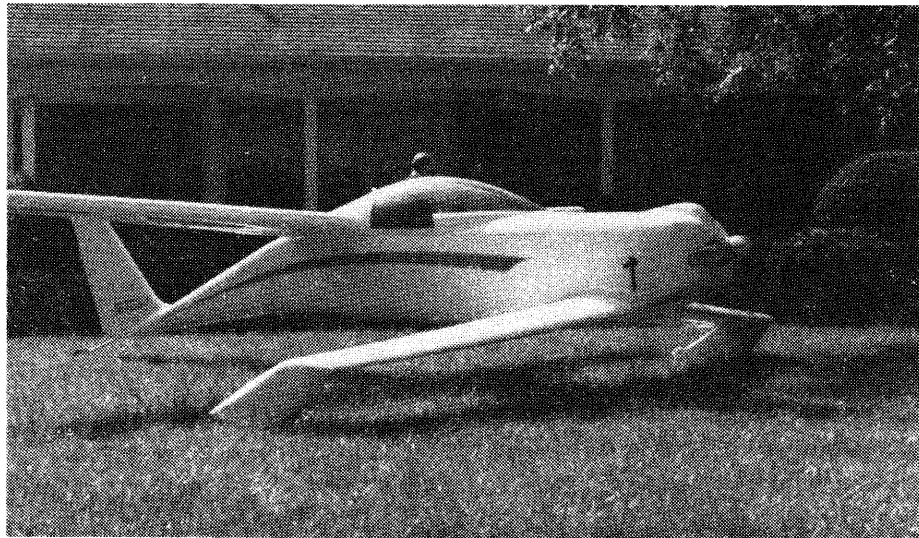
One of the partners in the project, Kelly, recently flew the aircraft back to Camarillo, which is where it will be permanently based. Kelly sent us a letter the next week describing the flight from Mojave. We think that it is appropriate to share it with you:

"Two passes over the field at 80 m.p.h. IAS, 3500 rpm — altitude gain was 900 feet AGL; maintained 85 IAS from Mojave to Fox Field at 3500 rpm (hands-off flying all the way) — altitude gain to 6500 feet MSL; increased speed to 105 IAS, 3200 rpm through Saugus Pass maintaining 6500 feet MSL; 7 miles North of Van Nuys Airport, descended to 3000 MSL and roughly followed the Ventura Freeway to Camarillo Airport — rpm 3400, CHT 250-275 deg F, oil pressure good, oil Temp 150 deg F. CHT Temperature wanted to go below 150 deg F so occasionally I added some Power temporarily; normal pattern at Camarillo till 'final,' slipped to 20 feet AGL leveling out with 60 IAS at beginning of 6000 foot threshold, held 1200 rpm and 60 IAS 12" above deck until the numbers were under me, cut throttle, roll out 500 feet against 15 knot headwind. I smile a lot these days."

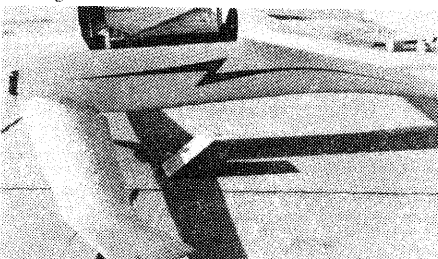
Thank you Kelly.



Al Landry from Idaho has built this Quickie.



George Jacoban's Quickie, s/n 172, has made several flights.



Look closely and you will see the vortex generators on the canard of N77Q. They just slowed the aircraft down. Next to the fuselage is a 4.7 gallon auxiliary fuel tank which fits in the baggage compartment and gives 77Q a 14 hour range at economy cruise, and over 850 miles at normal cruise.

## DELIVERIES AND BACKLOGS

Deliveries are currently running about 4 weeks from receipt of orders. Quickie Dealers in general will have kits in stock,

so a check with one of them could save you a wait.

Because of the expanded advertising along with the formation of our Dealership network, we expect the fall to be extremely busy. It will take several months to increase our production rate beyond 5 per week. Therefore, it might be wise for those of you contemplating purchasing a Quickie to act in the near future.

New customers could assist us in smoothly filling backorders if they would inventory their kit immediately upon receipt and notify QAC in writing of all parts not there, including the ones indicated as backorders. In this way, we will have a complete record from the beginning. We normally wait 45 days from shipment of the basic kit prior to sending the remaining backorders, to give each customer an opportunity to verify the packing lists.

By mid-July, we expect to have Unidirectional cloth back in stock, as well as all backorders filled through serial number 360.

Published quarterly (Jan, Apr, Jly, Oct) by

Quickie Aircraft Corporation  
Post Office Box 786  
Mojave, CA 93501  
(805) 824-4313

Newsletter Subscription (1 yr.)*	\$6.00
Information Package (2nd edition)*	\$8.00
Pilot's Manual*	\$8.00
Quickie Construction Plans**	\$150.00
Quickie Composite Starter Kit	\$45.00

\*Add \$1.00 for Air Mail overseas (U.S. funds)

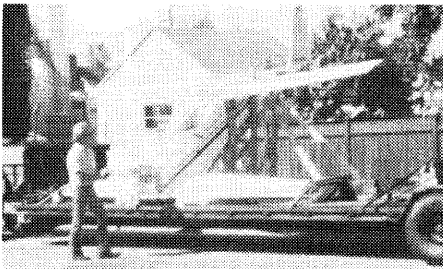
\*\*To be used with the Quickie Aircraft Kit. Also, purchasers of the plans are entitled to a \$150.00 discount on the purchase price of a Quickie Package #1 Kit. California residents should add 6% state sales tax.

Quickie Aircraft Corporation is located on the east end of the flight line at the Mojave Airport, Mojave, California, which is located approximately 80 miles north of Los Angeles. You are welcome to come by to see N77Q, the Quickie prototype, to ask questions, and to bring in parts of your Quickie for inspection. The building number is 68.

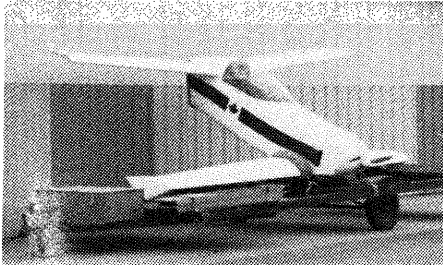
We are normally open from 9 to 5 on Tuesday thru Saturday, but you should call first if you are coming from far away, since we occasionally must close the office to attend a flyin, conduct business, etc.

Weather permitting, each Saturday at 10:00 we will give a flight demonstration with the Quickie.

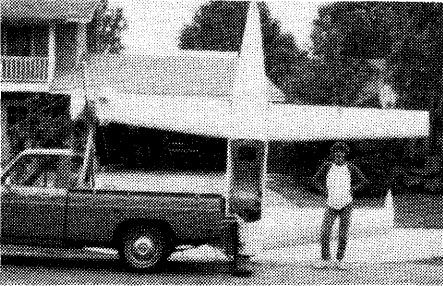
When writing to QAC, always send a stamped self-addressed envelope along if a reply is necessary.



Frank Kopecky's Quickie being moved to Mojave for first flight. Do you think that the trailer is large enough? Seriously, anyone having good ideas on low cost, lightweight, easy to build trailers should contact QAC, so that we can pass the information along to our homebuilders.



Garry LeGare's Quickie on the trailer. Airplane and trailer combined have traveled well over 8,000 miles.



No, this is not the result of a quick stop! This is how Mark Raidy and his dad got their Quickie to the airport for first flight. Mark is pictured in front looking justifiably proud of their ingenuity.

## CURRENT FLIGHT TESTING AT QUICKIE

We have written an article for *Sport Aviation* on our flight test results on the variable pitch propeller mentioned in Newsletter 8. The Vari-prop, which is hydraulically controlled, was originally designed for the 312 by Morris Elliott. We have had one for over a year, but only began to test it about two weeks before the Chino Airshow. The improvement in all regimes — takeoff, climb, and cruise — was so dramatic that we immediately decided to launch a full-scale test program to document the improvements, with the idea of offering it to our builders at a later date.

The *Sport Aviation* article, which should appear in the September issue, has complete details on the prop itself, as well as the flight test effort. In this newsletter, we will summarize the results that we have determined to date:

1. The Vari-prop installed in a Quickie is equivalent to about a 15% horsepower increase.
2. Performance with the Vari-prop alone points toward a 5 m.p.h. increase in cruise speed, a 60% increase in climb rate at high density altitudes, and a 20%

improvement in fuel consumption.

We plan to continue testing the propeller to determine the reliability, and expect to fly it to Oshkosh this year. If everything proves out, it would be available to Quickie builders about December, 1980. The price would be in the \$800 range.

Qualitatively, the unit gives the Quickie the feel of a much higher performance aircraft, since it more efficiently uses the horsepower available from the Onan engine. This is particularly noticeable when operating at the higher density altitudes, such as at Mojave in the summer time, when the density altitude reaches over 6,000 feet. A Quickie builder operating out of New Mexico or Colorado will see between a 60% and 100% increase in the rate of climb. This is not to say that the Vari-prop does not work closer to sea level, but simply that the increment in performance is very noticeable at the higher altitudes.

We will keep everyone informed through our newsletter of the results of our continuing testing on the unit. By the way, to anticipate a question, yes, it is retrofittable to any Quickie.

While performing flight testing on the Vari-prop, we noticed that the engine oil temperature and cylinder head temperatures had decreased markedly, by over 30%. In addition, the performance improvements were greater than analytically would appear possible. These facts indicated that several factors may have been at work. We decided to investigate the matter thoroughly. The complete description of the testing is included in that *Sport Aviation* article, but the results are as follows.

1. The necessity of moving the Vari-prop slightly forward had resulted in better cooling airflow and perhaps a slight increase in prop efficiency.
2. A subtle modification that Gene had made to a stock Onan carburetor had increased the horsepower of the engine by over 7%.

Currently, we are preparing to dyno test the carburetor modification to determine the exact increment in horsepower.

We have also been flying a version of the tuned exhaust system. We are still not completely satisfied with the results, and plan further flight testing and dyno work. The required installation in 77Q is complex, and the reduction in noise level is minimal. We will have to satisfy our concerns about long-term reliability prior to releasing it. In addition, the cost, which would be around \$100, is expensive for the 0.7 h.p. increment that it gives. Finally, the tuned exhaust system is not compatible with the planned turbocharger package, which will be discussed later.

Our current thinking is that we will substitute the carburetor modification, which can be done on an exchange basis, for the tuned exhaust. This will result in a 22.5 h.p. engine package.

Incidentally, since we had unsuccessfully spent 18 months and several thousand dol-

lars trying different carburetors looking for more horsepower without compromising starting and mid-range performance, it was a rude shock to discover that the solution was lurking within the standard carburetor.

Based on testing that goes back over one year, we are now prepared to talk some about our work with turbocharging a Quickie engine. Thus far, we have had experience with three different installations for test stand and dyno work. The fourth configuration, which we expect to be suitable for flight testing in 77Q, will be available in early July. We expect to have the engine at Oshkosh, but anticipate that there will be insufficient time for testing to warrant actually flying the installation to Oshkosh. At our current timetable, we would expect customer availability about the end of the year. Our original goal, which was to develop an uprated engine rated for 25 h.p. from sea level to 12,000 feet, is well within reach. The performance improvement available to the Quickie builder with this uprated engine will thrust the Quickie into the 180-200 h.p. class performance wise. Gee, it's going to be fun jumping Grumman Tigers!

Work continues on 80QA, which is the Quickie we built to attempt several 250 kg and 500 kg World speed, distance, and altitude records. It thus far has had a rather low priority around the shop because of activity on the regular Quickie program. The aircraft was built also as a test bed for new materials and ideas, and contains carbon fiber spars, along with the use of Kevlar and some additional ideas to improve efficiency and speed. Whether it will be at Oshkosh depends on how quickly the turbo-Onan program progresses on 77Q. Our timetable for some of the record attempts would be early next year.

If it seems as though we are rather busy around Quickie, you are correct! We are a small enough company to prevent getting bogged down in the past, and yet large enough to tackle several different projects and ideas at one time. We invest heavily in research and development because that direction leads toward the future. Further, education and knowledge in one area can often be applied to another with excellent results.

Incidentally, we have of late been doing some consulting on outside projects, including one in Australia. This sort of activity is worked into our schedule on an as time available basis, so as not to interfere with our primary activities.

We have begun installing the high performance engine modifications at the factory, in addition to our normal exchange basis. If the customer takes advantage of the factory installed option, he will have to carefully break in his engine for 15 hours prior to flight. If the customer will be uprating his engine on a parts exchange basis, he should obtain a minimum of 10 hours running prior to returning his *cylinder heads and carburetor intake manifold assembly*.

Price for the 22.5 h.p. engine option is \$275.00 in addition to the basic 18 h.p. engine price of \$900.00. If the option is installed at the factory, the cost is \$300.00.



## QUICKIE DEALERSHIP ACTIVITY

Since the last newsletter, we have brought on board three additional dealers. We are in the process of screening another 20 prospective dealers, and expect to be able to complete the basic 10-15 dealer network by the end of 1980. As indicated in Newsletter 8, several prime areas remain open, including Los Angeles, Phoenix, and Dallas, so interested parties are invited to contact us for complete details.

In the first three weeks of activity Ken Johnson, our Washington State dealer, sold six aircraft kits. He subsequently reordered 11 more for inventory. Ken reports that his early customers like the idea of working with a representative close to home.

We plan to begin a Dealer Newsletter in August of this year.

## Quickie Distributors

### 1. Canada

Legair  
18992 32nd Ave.  
Surrey, B.C.  
Canada V3S4N8  
(604) 576-6638

## Quickie Dealers

### 1. Washington State

Quickie Northwest, Inc.  
26627 Manchester Ave.  
Kent, WA 98031  
(206) 854-2543  
(206) 852-7787

### 2. Michigan

Quickie Aircraft Sales of Michigan  
611 N. Main  
Plainwell, MI 49080  
(616) 685-5238

### 3. Eastern Canada

Stubbs AeroProducts, Inc.  
Alton, Ontario  
Canada L0N1A0  
(519) 941 1600

### 4. Florida

Southeast Quickie, Inc.  
5610 Pinetree Rd.  
Pompano Beach, FL 33067  
(305) 721-9265

### 5. Pennsylvania

R.F. "Bob" McFarland  
Harrisburg Seaplane Base  
333 So. Front St.  
Wormleysburg, PA 17043  
(717) 763-7654  
(717) 737-2665

### 6. North Carolina

Ray Stroud  
P.O. Box 34  
Wilkesboro, NC 28697  
(919) 838-8957

## QUICKIE CONSTRUCTION PLANS

At the 1978 & 1979 Oshkosh, Wisconsin flyins, we had several sets of Quickie Construction Plans available for visitors to examine. In addition, individuals are welcome to visit our Mojave, California facility and to study the plans there.

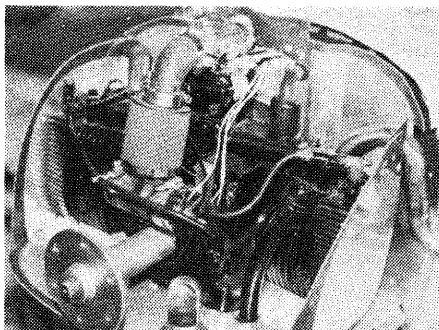
However, many visitors want the opportunity to examine the Quickie Construction Plans at length in the privacy of their own homes. This is understandable and we have the following arrangement to facilitate this. The Quickie Construction Plans are available for \$150.00. Purchasers of the plans are entitled to a \$150.00 discount on the purchase price of the Quickie Aircraft Kit. The plans are identical to those that an individual would use to build a Quickie from our Quickie Aircraft Kit.

Chapt.	Title	Pages
1	Description/Introduction	4
2	Bill of Materials/ Sources	1
3	Composite Materials Education	23
4	Miscellaneous Parts	7
5	Hot Wiring	4
6	Ailerons and Elevators	2
7	Building the Fuselage	14
8	Vertical Fin and Rudder	5
9	Building the Main Wing	14
10	Building the Canard	13
11	Wheel Pants/Wheels/ Brakes	9
12	Fuel System	3
13	Mounting the Wing and Canard	3
14	Fuselage Details	6
15	Canopy	8
16	Instruments and Pitot- Static	1
17	Engine Installation	2*
18	Electrical System	1
19	Finishing/Painting	7
Appen.	Large Drawings	6

\* The remaining pages of the Engine Installation section are included only with the Quickie Engine Package.

Quickie Aircraft Corporation supports individuals building Quickies from our kits.

California residents buying the plans should add 6% state tax. Foreign orders must include an additional \$12.00 for postage.



A close up shot of George Jacoban's engine compartment. Note the air filter.



We're getting worried about those two guys up in Alaska! First it was the F-82 style two place Quickie (see Newsletter 7), and now they are making a tandem version (looks like they can't figure out what to do with the second tail — maybe make a twin tailed version?). Seriously, Pete and Kurt, who live in Kenai, Alaska have flown one Quickie, and are trying to fly off the time so that they can get it to Oshkosh, 1980.



Tom Blythe's Quickie being lifted off the trailer at Lakeland, FL EAA flyin. See Newsletter 8 for complete details. With so many people clustered around, you would think that they were lifting a Cessna 152, instead of a Quickie.

## QUICKIE CONSTRUCTION SEMINARS

We are tentatively planning on again having a series of construction seminars on building the Quickie. These seminars would take place between November and March, 1981. We would coordinate them with our dealers so that people in all parts of the country would be able to attend one close by.

In discussing the subject with many homebuilders, and based upon our experiences over the previous two years, we are considering changing our method of running these seminars. Previously, a seminar used the lecture method of presentation, with demonstrations of the important points. The difficulty, however, is that very few members of the audience can gain any hands-on experience with the materials. We are, therefore, considering a series of seminars that would provide each participant with the opportunity to laminate, to hot wire, etc. Further, the participant would go home with the samples that he had made, thus providing an important bridge between theory and practice. These seminars would comprise an entire weekend, and the registration fee would probably be around \$50-100, which could be credited toward the purchase of a Quickie. We would appreciate hearing from people concerning whether they feel that this would be an appropriate effort. We will make a decision on the format following Oshkosh.

There will be a Quickie workshop daily at the Oshkosh EAA Flyin, August 2-9, 1980.

## BUILDERS TIPS

1. The F.S. 110 Bulkhead is used for jiggling the fuselage sides during the assembly procedure. It is not used for strength in the finished aircraft. For that reason, glass tapes join it to the fuselage sides and bottom to keep the sides from kinking or bowing at about station 110.00. The bulkhead may be omitted if found to be unnecessary.
2. Page 7-6, Contouring The Fuselage Bottom. At the location of each bulkhead, approximately 4 inches of foam (2 inches on either side of the bulkhead) should remain uncarved. This allows easier installation of the bulkheads, as well as some tolerance in their locations due to the bottom curvature. The instructions on page 7-6 have been found to be somewhat confusing.
3. Page 19-7 — Please check your Quickie Construction Plans. If you do not have page 19-7, advise QAC so that we can send it to you. Apparently, some plans were sent out without this page.
4. Page 12-1 — Installation of fuel tank stiffeners. The small nominally 0.3" x 0.3" orange foam stiffeners must either be glassed after installation or painted with epoxy. This is to prevent particles of the foam from perhaps breaking off and contaminating the fuel tank area.
5. Regulator Mounting — We recommend that the regulator be mounted on the left cylinder baffling forward near the nose, with the fins pointing inboard toward BLOO. Regardless, it must be mounted in a cool place.
6. Check your carburetor heat muff. There must be a hole in the "can" encircling the exhaust pipe in order to conduct the warm air through the hose to the carburetor heat box. Application of carb heat should result in a minimum of 50 deg F temperature rise of the carburetor air.

## QUICKIE VISITS

1. "Dayton Air Fair" Dayton, Ohio, 18-20 July, 1980
2. "Oshkosh EAA Flyin" Oshkosh, WI, 2-9 August, 1980
3. "Tullahoma EAA Flyin" Tullahoma, TN, 1-5 October, 1980

## FLYING TIPS

This is a new feature of the Quickie Newsletter intended to pass along ideas and suggestions based on the experiences of our homebuilders who are flying their Quickies.

1. Tire Pressure — The 400 x 5 tires used on the large tire option should be inflated to approximately 20 psi.
2. Wheel Bearings — The Zytel wheels in the large tire option package have proven to be as durable as the smaller aluminum wheels that we had previously used. One builder, however, has reported a failure of one of the bearings. He corrected the problem by introducing a spacer inside the wheel between the two bearings. He also replaced the standard bearings with the ones out of his original aluminum wheels, which are interchangeable. The cause of the failure is not known for sure, but could have been caused by excessive pressure against the bearings by the *outside* spacers.
3. Small vs. Large Tailwheel — With the large tire package, there is included a 6 inch diameter tailwheel to replace the original 4.5 inch tailwheel. Reasons for including this new tailwheel are: easier to taxi in soft ground, better steering capability, and maintenance of the original ground angle of the aircraft. Once a builder has a few hours on the basic configuration, he might try switching to the smaller tailwheel. This switch will increase the angle of attack of the aircraft on the ground, and might result in improved takeoff performance. However, carefully watch for any signs of the canard and main gear "hammering" at takeoff speed, or else the tailwheel lifting off before the main gear. Either of these indicates *too much* ground angle of attack on the aircraft.

## FLYING THE QUICKIE IN THE RAIN

Quickie Newsletter 6 detailed information on the effect of rain on the performance and flying qualities of the Quickie. The "Initial Flight Test of Your Quickie Guide," which is available to all builders, also has information on this subject.

Since that information was published, several builders have flown in the rain, including takeoff and landing, and we have conducted further testing ourselves.

The results are consistent with the previously published information. Upon entering an area of rain, the Quickie pilot will notice that he has to increase the amount of back pressure on the stick in order to maintain the same elevator position. Note that only the pressure required on the stick changes; for a given airspeed, the elevator position is the same. At higher speeds, and consequently lower angle-of-attack, the increase in force required is minimal and might only require one notch of trim to compensate. At low speeds, and during takeoff and landings, the force required is much higher, and several notches of trim may be required. Our performance testing to date has shown no change in minimum or maximum speeds, and climb rates appear to be the same within 10%. This is what would be expected, since we have noted in other production aircraft the same characteristics.

One builder in Alaska reports a decrease in rate of climb on the order of 40%. We have not been able to verify that amount in our testing. However, since at climb speed a large amount of additional force must be carried, the tendency would be to let the nose drop some to pick up speed in order to reduce the force required. This would result in a faster climb *speed*, with consequent reduction in climb *rate*. We have verified that fact in our testing.

## OPTIONS

Kevlar Engine Mount — \$110.00  
Standard with 21 horsepower kit.  
Substantially reduces vibration.

Large Tire and Wheel Kit —  
\$150.00 when ordered with pkg. #1  
\$230.00 for retrofit.

Very useful for those Quickie owners who standardly operate off of grass or dirt strips. Also includes improved braking system. Can be retrofit to any Quickie.

22.5 Horsepower Kit —  
\$275.00 with *exchange* of cylinder heads and carburetor/intake manifold assembly.

Includes Kevlar engine mount and modified cylinder heads & carburetion.

Custom Upholstery Set — \$125.00 Blue.

Communication Radio Antenna Kit —  
\$13.50

Navigation Radio Antenna Kit — \$13.50

\*\*Quickie Construction Plans — \$150.00

Quickie Composite Starter Kit — \$45.50

\*\*To be used with Quickie Aircraft Kit.  
Cost of plans to be credited at time of  
Quickie Pkg. #1 purchase.

## QUICKIE KIT PRICES

\$3,100.00	Quickie Package 1
850.00	Quickie Package 2
900.00	Quickie Package 3



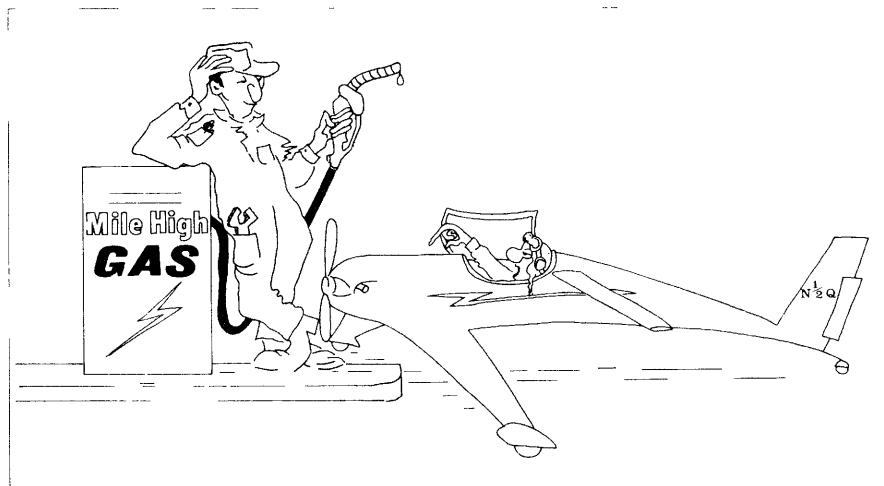
# COMPOSITE MATERIALS INTRODUCTORY KIT

CAN I BUILD A COMPOSITE AIRCRAFT?  
 WILL I ENJOY WORKING WITH GLASS & FOAM?  
 IS MY WORKMANSHIP ADEQUATE TO BUILD A QUICKIE?  
 WHAT ARE THE TECHNIQUES USED IN THE QUICKIE CONSTRUCTION?

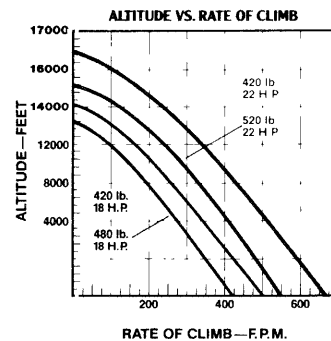
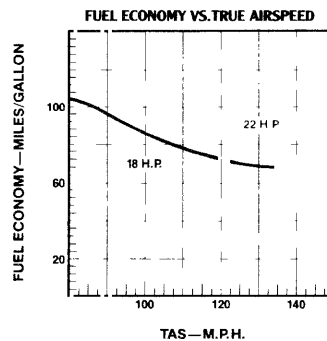
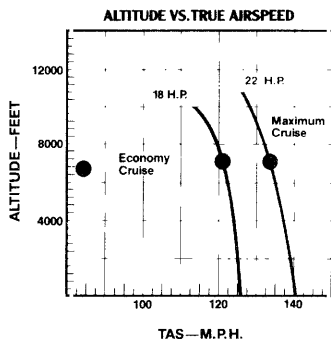
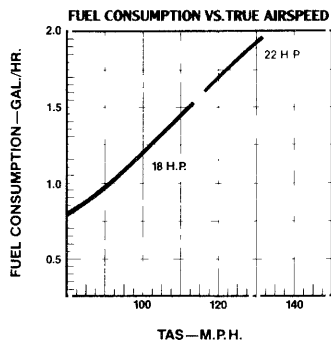
There is now available an introductory kit to answer these questions for you. The kit consists of a book and sample materials, or the book can be purchased separately. The book, "Moldless Composite Sandwich Homebuilt Aircraft Construction," consists of 26, 11 x 17 pages (equal to 52 pages) describing how the material is applied, education on the materials, tools required, inspection and repair methods. Sample materials include: epoxy, microspheres, flox, peel ply, wire for hotwire saw, etc.

The book is \$14.50 and is available from us. The kit (book and materials) is \$45.50 and is also available from us. California residents please add 6% sales tax. Foreign orders must include an additional \$15.00 for postage.

# The Quickie PIT STOP



WHAT DO YOU MEAN 10 GALLON LIMIT? IT ONLY HOLDS 8.



Quickie Aircraft Corporation  
 Post Office Box 786  
 Mojave, CA 93501  
 (805) 824-4313



FIRST CLASS MAIL