



## newsletter

### FIRST FLIGHT TIPS FROM OUR DESIGNER

Fellow Osprey Builders:

Since the plans for the Osprey 2 have been around for awhile many of you are getting close to the big day, FIRST FLIGHT! About sixteen of you have already been there!

I have test flown three of my own designs and others with some hair raising results. Since I have run the risk of mistakes I would like to pass on some ideas that may help you.

To set up the first flight in your Osprey 2 I would start a check list of things to do prior to final assembly. It's so easy to forget to safety your aircraft for flight. A friend who is familiar with your project can double check your list and add a few items that you may have forgotten. Carefully check the rigging drawing No. 38. One builder set the stabilizer at -2 degrees instead of +2 degrees. He made the first flight with full forward stick!

You can attach a shoulder harness to the engine mount legs just above the spar. Carry a fire extinguisher. When you weigh your Osprey for weight and balance, weigh it with the wing incidence at a +1.5 degrees. This means that the floor under the seats will be going downhill at a -3.5 degrees as it sets on the scales. Remember the most aft C.G. loading is one pilot, full fuel and no baggage. Your Osprey should balance no further aft than 31% of the M.A.C. or 18.5 inches aft of the wing L.E.

I recommend the first flight be off land. Try to select a field with good approaches and long enough to make a lift off and touch down with plenty of stopping room. You can do it in 3,000 ft. but 4,000 ft. is much safer. Don't be in a rush to start taxi tests. After assembly set up your taxi tests the following morning when its cool and calm. Be honest in appraising your ability to test your Osprey. If you have any doubts try to find another pilot with experience with small responsive home-builts. Wear a crash helmet and fireproof clothing if possible. For test purposes I recommend a cylinder head temp gauge.

Your Osprey will rotate on the main wheels at 45 to 50 M.P.H. You should practice holding the nose off adding power and reducing power until you can hold a constant angle of attack at 45 to 50. After several low lift offs and touch downs and every instrument in

the green you're ready for your first flight.

If you're breaking in a new engine don't keep full power on for a long climb out. Your Osprey will climb very well on 60% to 70% of power. You may notice during taxi tests that the engine is running rich. Check the smudge around the cowl exhaust holes. Lean it out some even at sea level if necessary prior to take off.

After climb out to traffic altitude I would circle close to the field for a few circuits. You will gain confidence and a feel for your Osprey. It's a real rudder aircraft. Very little aileron is used in turns. You kind of drive it around with your feet. You will probably fly around slightly nose high until you find the right reference for level flight. After a few minutes it will become second nature. You may not have retracted the gear. You will find that the rudder requires more push gear down due to the steering cables turning the nose gear. Don't be surprised when you put the gear down that it gets harder to push a pedal.

On my first landings I would carry a little power on approach. Assuming your airspeed is correct, I would approach at about 90 MPH coming gently back on power over the numbers for touch down. Make a full stop landing and taxi back to your smiling crew for some chit chat. Pull the cowl and check everything.

Don't be too eager to add trim tabs until you have flown at different airspeeds. You probably will not need any. Get to know your Osprey well before you take up a passenger. When you are assigned a test area try to get one with some water suitable for your water tests. Your water work should only come after you are very competent in flying off land. In the meantime you have done stalls, steep turns and full power off landings.

Water testing is a brand new ball game and I hope to cover this in the next newsletter.

Oh, Yes, when you break that bottle of wine over the nose watch the paint!!

# YOUTH

### WILSON AREA HIGH SCHOOL AVIATION CLUB BUILDING A OSPREY 2

Approximately 17 students from Wilson Area High in Wilson Borough, PA are building an Osprey 2. This group was started as an aviation club in January of 1980 by Bruce Couillard, a industrial arts teacher at the school. He also is a commerial pilot and flight instructor. Bruce is helped in advisory chores by Philip Zajac, also an industrial arts teacher.

Club members are given flight instruction and many have student licenses and have logged time with Mr. Couillard. Mr. Zajac even soloed for the first time. One of the highlights for the class/club was their trip to Oshkosh last year. There were 13 students, Bruce and Philip, 4 tents and all the other camping paraphernalia needed. Students were assigned chores every day. They were in charge of van maintenance, tent housekeeping and KP. While attending Oshkosh the students purchased two Osprey 2 fuselages. Have not heard how far along they have gotten.