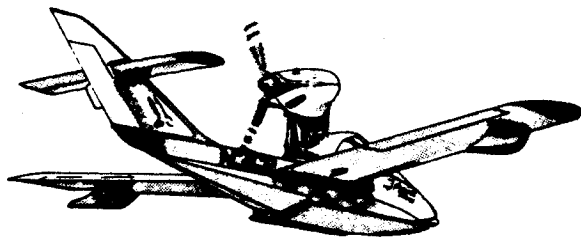


July 85

#29



Fellow Osprey Builders,

It's my fondest hope that some of you will fly your Osprey's to Oshkosh this year. As some of you know the GP4 was awarded Grand Champion last year and I have been asked to bring it back again for the traditional showing of last year's winner. This means I cannot fly the Osprey 2 prototype to Oshkosh unless I can find a suitable pilot. If any of you are on the fence please give it some serious consideration. Incidentally, I have flown the 2,000 mile trip from California nine times and Don MacIness flew it to Oshkosh last year! If any of you decide to go, please let me know. So much for that!

Visiting Ernie Hummel's re-build, I found Ernie in the covering stages of his Osprey 2.

He is using a new light weight fabric (dacron) called Stits Poly-Fiber HS90X. It is recommended for all fabric aircraft regardless of speed. (certified I think). The 90 stands for 90 threads per inch. Weight is 1.7oz per yard.

The old Stits fabric recommended in the Osprey Builders Manual is E103 dacron and weighs 2.6 oz per yard. Both are very close to the same tensile strength.

The big pay off comes in the weight saved in finishing this new fabric. Since the weave is so fine it only requires one brushed on coat of Stits Poly-brush followed by one spray coat of Poly-brush. The weave is now filled so only two coats of the silver Poly-spray are necessary. Be sure to brush the first coat of Poly-brush as this encapsulates the dope to the fabric for a necessary bond for the following coats.

The Stits directions may not call for the use of Poly-tac cement but I advise you to coat all of the surfaces of the ailerons, elevator, rudder, and the 1 1/4" wide cap strips on all wing ribs prior to covering. Use MEK to thin the Poly-tac and brush it on these surfaces.

When you Poly-tac the outside perimeter fabric down you then Poly-brush the 1 1/4" cap strips. This softens the Poly-tac and insures a good bond to the ribs.

The large ply area over the leading edge is also Poly-brushed but leave the unsupported areas between the ribs. When dry you are now ready to heat shrink the fabric.

Some tips:

Be sure all of your cap strips are plane and level. If you have a high side the fabric will not want to lay down. Order 70 inch wide fabric and make your lap joint on the wing on the bottom side about 3" aft of the leading edge. Cut the selvaged edge of the fabric off under the lap for a smoother job. Use a single edge razor blade and a straight edge to cut the fabric. Cut away all stray threads and remove before the dope dries.

Ernie now has the extended wings and he found he needed 17 yards of the 70" wide fabric to cover all surfaces.

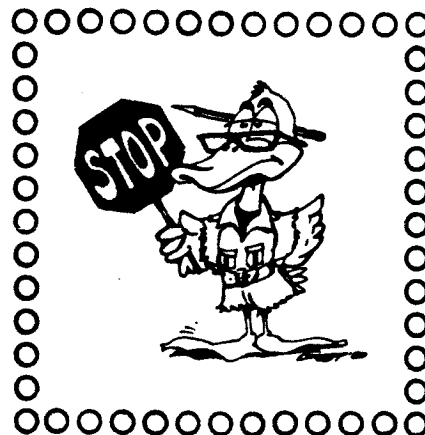
If you like the high gloss wet look that only enamel can give be sure to use a polyurathane enamel. (Iaron, etc) It's a must on fabric because it's flexible. Do not use a clay based primer on the unsupported fabric areas. It will crack under your enamel finish. The Poly-spray is a good surface for your polyurathane enamel on the fabric areas.

Ernie weighed his uncovered wings with all wiring, cables, push rods, hinges, etc. Each panel weighed 69.5 lbs. Ailerons weighed 3.5 lbs each less the lead counter balance.

Wicks Aircraft stocks Stits Poly-fiber HS90X.

Regards to all,

George



WARNING! WARNING! WARNING! WARNING!

DO NOT USE AUTO FUEL In any fuel tanks using polyester resin! This includes Derrick built fuselage and wing tanks. Any of the aircraft fuel is useable. Derrick is making some test tanks to see what, if any, auto gas can be used.

George