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December Meeting will be a Party!

We will be having our annual **Christmas Pizza Party at Kipplee's Party House** on Wednesday, December 8. Kipplee's Party House is located at 2322 Division St, right behind Kipplee's Stadium Inn, at Boeke and the Lloyd Expressway. Hors d'oeuvres will be served at 6:00 PM, and the Pizzas will be brought out at 6:30 PM.

The Christmas Pizza Party is when we hand out awards to those individuals who have made a

special contribution to the Chapter the previous year. It also provides an excellent opportunity to pay your Chapter 21 dues for 2010. Our Chapter dues of \$15.00 per year is lower than most any other club dues, including most other EAA Chapters.

The cost for the pizza dinner has yet to be determined. Check the website, www.eaa21.org for up to date information.

2011 Chapter Officer Candidates

The Chapter 21 Board of Directors met on November 22, and nominated the following individuals to handle the Chapter offices for 2011:

The slate of officers for 2011 are:

- President: **Steve Eberhart**
- Vice-Pres: **Earl Schroeder**
- Secretary: **Jo Ann Morris**
- Treasurer: **Jim Schmitt**



Election will be held at the December meeting/ party at Kipplee's Party House on December 8. The floor will be opened to additional candidate nominations prior to the election.



In addition, several Chapter responsibilities not subject to election will be/are handled by the following individuals:

Newsletter Editor **Pete Wiggin**

Webmasters: **Steve Eberhart** and **Gary Zimmerman**

Meeting Program Co-Chairs: **Mike Zeller** and **Jay Sanders**

Young Eagles Coordinator: **Jay Sanders**

Young Eagles Committee members: **Steve Eberhart; Earl Schroeder; Pete Wiggin; Greg McMichaels; Twany Eberhart; and Karen Helming**

And finally, we decided that **Creative Embroidery Designs**, owned and operated by **Pam Sanders**, would be named Official Supplier of Chapter 21 Logo clothing and apparel.



Making Fiberglass Molds

by Steve Eberhart

There is no need to fear working with fiberglass. It is one of the most flexible mediums to make airplane parts from that I can think of. The November meeting of EAA Chapter 21 was at my hangar; and all present got to watch the birth of a fiberglass mold for the upper landing gear intersection fairing of a Van's RV-7A. Starting from scratch it took two hours to go from start to gelcoat mold surface. You will be able to view the complete process, later this month, in the EAA Chapter 21 Web Page: <http://www.eaa21.org> but here is a gross overview of the steps involved.



Apply duct tape to the bottom surface of the cowl and the upper surface of the landing gear cover. The tape acts as a very good mold release. Most any adhesive backed smooth plastic material can be used as a release film.



Warm a sufficient amount of modeling clay so it can be easily applied around the intersection of the nose gear and cowl.

Apply the clay to the intersection area.



Using clay working tools, i.e. spring steel scrapers, cutters, etc. start removing clay to achieve the desired contours. This should be a subtractive process where you cut away or scrape off unneeded clay. This is an iterative process of adding clay and cutting or scraping away clay. This is continued until the desired shape is achieved.

Liberaly wipe on Johnson's Paste Wax, allow to dry to a dull haze and buff with a soft cloth. Repeat this three or four times. The Johnson's wax is pure Carnuba wax and forms an excellent release agent for fiberglass work. You can spray on a thin coat of Polyvinyl Alcohol (PVA) as an added insurance that the mold will release from your airplane but for our application it isn't needed. The Duct Tape is a great release medium and the clay will end up being dug out of the final mold anyway so the PVA is unnecessary. Some have used hairspray as a poor man's substitute for PVA but again we don't need it for construction of the mold. We can use PVA to give us a greater assurance that the part won't stick in the mold when we make our finished part, so its use will be detailed in next month's installment.



Mix up a batch of epoxy with some black pigment added to give us a good uniform color to our mold surface. Also add some fumed silica (Cabosil) to the epoxy to thicken the mixture and make the mold surface harder.

Liberaly paint the area being molded with the black epoxy mixture and let cure for 24 hours.



Scuff the black epoxy surface with a maroon Scotch-Brite pad so the successive layers of fiberglass will form a good bond with the black gelcoat.



Cut up triangle pieces of Rutan harness weave 8 ounce fiberglass cloth.

Mix up a batch of epoxy and start laying up the fiberglass mold. Strive for at least three layers of glass over the complete mold.

Let the mold cure for 24 hours.

Using a Die Grinder with a cut off wheel slit the back edge of the mold so it can be removed from the landing gear.

Using wooden wedges to help separate the mold from the plane work the mold from the landing gear. If unable to remove, liberaly apply bondo and paint; and swear to everyone that you were really making the final part and not a mold.

At the January meeting, Steve will complete the process by laying up fiberglass in the new mold, to create the finished part.

178 Seconds to Live

This commentary was forwarded to me by Earl Schroeder. He got it from the Lancair email forum.

This study was done a long time ago, but still applicable today. Just something to think about. Get an instrument rating, and keep current even if you don't ever plan to fly in actual IFR conditions. If you are uncomfortable in flying in actual IFR conditions, get with an instructor who will go with you and get some actual instrument time. It's a LOT different than always flying with the foggles on.

178 Seconds To Live

Words to Live By

How long can a pilot who has little or no instrument training expect to live after he flies into bad weather and loses visual contact? Researchers at the University of Illinois did some tests and came up with some very interesting data. Twenty student "guinea pigs" flew into simulated instrument weather, and all went into graveyard spirals or rollercoasters. The outcome differed in only one respect - the time required till control was lost. The interval ranged from 480 seconds to 20 seconds. The average time was 178 seconds -- two seconds short of three minutes.

Here's the fatal scenario.

The sky is overcast and the visibility is poor. That reported five mile visibility looks more like two, and you can't judge the height of the overcast. Your altimeter tells you that you are at 1500 feet but your map tells you that there's local terrain as high as 1200 feet. There might be a tower nearby because you're not sure how far off course you are. But you've flown into worse weather than this, so press on.

You find yourself unconsciously easing back just a bit on the controls to clear those towers. With no warning, you're in the soup. You peer so hard into the milky white mist that your eyes hurt. You fight the feeling in your stomach. You try to swallow, only to find your mouth dry. Now you realize you should have waited for better weather. The appointment was important, but not all that important. Somewhere a voice is saying, "You've had it -- it's all over!"

You now have 178 seconds to live.

Your aircraft feels on even keel but your compass turns slowly. You push a little rudder and add a little pressure on the controls to stop the turn but this feels unnatural and you return the controls to their original position. This feels better but now your compass is turning a little faster and your airspeed is increasing slightly. You scan your instruments for help but what you see looks somewhat unfamiliar. You're sure that this is just a bad spot. You'll break out in a few minutes. (But you don't have a few minutes left.)

You now have 100 seconds to live.

You glance at your altimeter and you are shocked to see it unwinding. You're already down to 1200 feet. Instinctively, you pull back on the controls but the altimeter still unwinds. The engine is into the red and the airspeed, nearly so.

You have 45 seconds to live.

Now you're sweating and shaking. There must be something wrong with the controls; pulling back only moves the airspeed indicator further into the red. You can hear the wind tearing at the aircraft.

You are about to meet your Maker; you have 10 seconds to live. Suddenly you see the ground. The trees rush up at you. You can see the horizon if you turn your head far enough but it's at a weird angle -- you're almost inverted. You open your mouth to scream but.

. . . .you just ran out of seconds.

Think about it before you press on into marginal weather.

EAA Chapter 21

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Address Service Requested



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Upcoming Chapter 21 Events

EAA21 Chapter Meeting: Wednesday Dec. 8th, 6:00 PM, Kipplee's Party House
Kipplee's Party House is located at 2322 Division St. Evansville, IN right behind Kipplee's Stadium Inn



At the December Chapter 21 meeting/Christmas Party, we will recognize our Chapter Leaders for 2010, and we will elect our 2011 Chapter Leaders.

We will be accepting Chapter dues for 2011 (\$15.00) at the December meeting. And we will eat pizza!



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