



DESIGNEE NEWSLETTER

THE PUBLICATION OF THE EAA DESIGNEE PROGRAM



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The *DESIGNEE NEWSLETTER* is a forum for the exchange of information and ideas of interest to aircraft and ultralight builders, restorers, and flyers. The sources of the materials published are EAA Designees, readers, Chapter newsletters, and other publications. Readers are encouraged to submit manuscripts, drawings, and black/white photos for consideration. Every effort is made to select accurate materials of interest to a majority of readers. Opinions expressed and responsibility for accuracy rests entirely with the contributor. All materials submitted become the property of EAA — no remuneration will be made. Materials should be sent to Chuck Larsen, EAA Designee Director.

Designees and Subscribers,

July will see many of us gather at Wittman Field in Oshkosh, Wisconsin for our annual Convention. OSHKOSH '83 will bring many to reflect on the past and plan for the future while revitalizing ourselves as we learn and plan for our personal as well as our organization's future.

1983 is a milestone in EAA's development. The new EAA Aviation Center will open its doors to members and the public on the first day of the Convention. This Center is not EAA, people are. This new facility was conceived and constructed for people . . . to memorialize their accomplishments and contributions, to provide a center for aviation development and activity as well as

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providing a facility capable of providing an ever-expanding level and variety of services to EAA's Chapters and members around the world. The EAA Convention Site, EAA Aviation Foundation Museum, Kermit Weeks Research facility and EAA World Headquarters at one field to better serve its members and aviation. A dream has become reality for EAAers at Wittman Field in Oshkosh, Wisconsin.



JULY 30 - AUGUST 6, 1983
WITTMAN FIELD
OSHKOSH, WISCONSIN

We still need your help at OSHKOSH '83. Please contact me at Headquarters before and/or at the Volunteer Center during the Convention to volunteer your time and talents at the Convention. You will enjoy the experience and return home with the satisfaction of knowing you have had a part in presenting the largest . . . and best aviation event in the world.

Meet and here EAA Founder and President, Paul Poberezny; EAA Aviation Foundation President, Tom Poberezny and key staff members. They will present a program explaining the full range of EAA endeavors and how Chapters and members can actively participate in them.

This program should be a top priority for Chapter Officers and Members attending OSHKOSH '83. Put it on your Convention schedule.

Monday, August 1, 9:00 a.m.
Forum Tent #2

DESIGNEE FORUMS are scheduled to take place in the Chapter/Designee Tent (Forum Tent #8) from 1:30 - 2:45 the first five days of the Convention. The schedule includes:

SATURDAY, July 30
EAA DESIGNEE TECHNICAL SYMPOSIUM

FAA Advisory Circular 20-27C
FAA Designated Airworthiness Representatives

Larry Nelson
FAA-EMDO #43

SUNDAY, July 31
EAA DESIGNEE TECHNICAL SYMPOSIUM

Questions Builders Should Ask Designers

Ted Slack, EAAC
Technical Committee
EAA Safety Committee

MONDAY, August 1

EAA DESIGNEE TECHNICAL SYMPOSIUM

Designee Visits to Wooden "Homebuilt" Ultralights

Stephen Wood,
Designer of the
Ultralight Sky Pup

TUESDAY, August 2

EAA DESIGNEE TECHNICAL SYMPOSIUM

Designee Forum

Tony Bingelis,
SPORT AVIATION
Feature Editor

WEDNESDAY, August 3

EAA DESIGNEE TECHNICAL SYMPOSIUM

EAA Aviation Safety

Ben Owen, EAA
Aviation Safety
Executive Director

Any additions or changes to the schedule will be posted in the Forum Tent, Chapter Center and Technical Information Center.

For EAAers, from July 30th to August 6th all airways and highways lead to OSHKOSH '83. We hope you will be able to join us for this year's celebration of flight. This year's theme, "Wings On Dreams" will be illustrated by the thousands of aircraft on display, forums and other educational activities, evening programs, the Museum opening and everything else that goes together to make OSHKOSH '83. See you there!

Chuck Larsen, Designee Director

LETTERS 'N SHOP TALK



HUMMEL BIRD — ENGINE

Dear Chuck,

I wish to report a couple of failures on my Modified Windwagon known as the Hummel Bird. They showed up in the last month at about 90 hours flying time. See the article in the December *SPORT AVIATION*, Page 50.

The engine started to misfire at high RPMs and no one could find the cause until I decided to check valve clearance. On removing the valve cover, I found a broken spring clip and wavy washer used to hold rocker arms in place. The rocker arms moved sideways off the valve stem and did not open far enough. The fix involved making spacers to replace the spring clips and washers which were thrown away. I put a 1/4" x 28 screw in the end of the rocker shaft with a large wooden washer to hold the spacers on one end.

The V.W. shop informed me that these spring clips of wavy washers do break once in a while. I don't want this to happen to me again.

I called Joe Horvath of Revmaster and he said they have had no failures. However, it only takes once to cause a forced landing. My 1/2 VW only has two cylinders.

The other failure was cracked skin and front stabilizer spar on inboard end. Watson the Designer does not show a nose rib at this point. The fix is to install a nose rib ahead of front stabilizer spar and tie into inboard rib with at least two 1/8" rivets on web of the nose rib. This will stop torsional twisting of the stabilizer at this point.

I believe the other Designees should be aware of these two failures as there are a lot of VWs flying and the Windwagon flock is also growing. I hope these suggestions will help improve our safety record. I was lucky!

Morry Hummel
509 E. Butler
Bryan, OK 43506

ARE YOU KEEPING A PROPELLER LOG BOOK?

From *Plane & Pilot News*

Effective last October 14, each registered owner or operator of an aircraft is required to keep the total time in service of the airframe, each engine and each propeller, as required by Federal Aviation Regulation 91.17(A) (2) (i).

Maintenance entries in the past have been recorded in the aircraft and engine logbooks. Now, however, in order to comply

with the regulations, a separate logbook for propeller maintenance must be kept.

In addition, each owner and operator has the responsibility to ensure that maintenance personnel make appropriate entries in the maintenance records for the airframe, each engine and each propeller, per FAR 91.165.

DESIGNEE AN ON-BOARD FIRE SUPPRESSION SYSTEM

From *Thomas O'Donovan, EAA 107196, 538 Old Elm Road, Highland Park, IL 60035*

EAA member Tom O'Donovan has expressed an interest in collaborating with other members in the design and construction of homebuilt on-board fire suppression systems for experimental aircraft. He can be contacted at the address above.

WHERE CAN I FIND "TUBING CLAMPS"?

From *Bob Whittier, EAA 1235, Designee 30*

Does anyone know a supplier for what were called "tubing clamps" or "Dutch clamps"? They were commonplace when welded tubular steel fuselages were the standard. They were good for non-structural brackets and mounts to tubing. They look very similar to bicycle frame clamps that are bolted together but are of better quality.

If you are or know of a source of supply for these clamps, please let me know and I will forward the information to Bob and publish it in a future *DESIGNEE NEWSLETTER*. — Editor —

VACUUM PUMP CHECK

From *CONTACT, the Newsletter of the Brighton Sportplane Association, EAA Chapter 384, Brighton, Michigan*

Dry vacuum pumps fail with dismaying frequency in modern high-performance aircraft. Unfortunately, there's not a whole lot one can do to prevent such failures. (Short of keeping Stoddard solvent away from the pump when washing the engine.) But there is a way of gaging when a pump is about to fail. The drive coupling is visually accessible on most dry pumps. (Look for a small open space between the pump and pad.) Quite often, this area accumulates bits of carbon and/or nylon (from the disintegrating rotor or drive platform) a few hours before outright failure of the pump. On some aircraft, such as the Beech Bonanza, this pump is plainly visible upon opening the cowl; in such cases, the pump drive area should be a preflight check item.

FAA DESIGNATED AIRWORTHINESS REPRESENTATIVES

The Federal Register of April 14, 1983 carried an FAA announcement adopting rules modifying Part 183 of the Federal Aviation Regulations providing Designated Airworthiness Representatives. These DAR's will be representatives of the FAA Director of Airworthiness to perform certain certification operations under the Federal Aviation Act of 1958. The new rule takes effect May 16, 1983.

The program is essentially an enlargement of a program that the FAA has been running for over 20 years with its Designated Manufacturing Inspection Representatives using private individuals employed by a manufacturer to make inspections on behalf of the FAA. The new DAR program will enable qualified individuals to issue airworthiness certificates for aircraft including amateur-built aircraft, approval of aircraft modifications, export approvals and export certificates of airworthiness.

Use of DAR's is not mandatory for FAA certification. Applicants can use regular FAA employees as in the past. By creating the DAR program the FAA believes time will be saved by both the applicant and the government. DAR's will be permitted to charge for their time.

To launch the program the FAA will train DAR's in administrative procedures and using FAA forms. The training will be done by the FAA office within the DAR's area of operation but the FAA will also run a short training course at Oklahoma City. No technical subjects will be covered in these courses as all applicants are to be technically qualified in the field.

One of the most important aspects of the DAR program is the question of liability. To make this point clear here is a direct quotation from the FAA announcement: "One commentator ques-

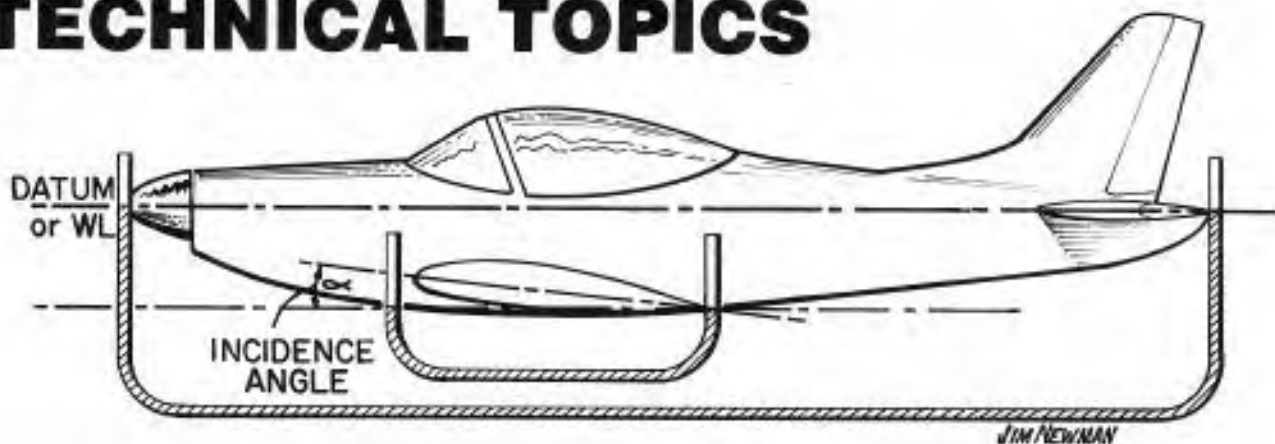
tions whether or not the FAA will provide liability insurance for DAR's while acting on the FAA's behalf. As with other similar categories, the FAA will not provide such insurance coverage." And again quoting, "Like any other person, a DAR can be held legally accountable and liable for negligent conduct. Similarly, if a DAR has been negligent in his/her capacity as an employee, the employer may also be held accountable and potentially liable. The United States has consistently taken the position that Representatives of the Administrator are not employees of the FAA. Therefore the FAA neither provides for their legal defense nor considers itself to be liable for a designee's negligent conduct."

To qualify as a DAR an applicant must have at least 2 years experience in working with the FAA in connection with the type of work to be covered in the designation. In the case of many specialized operations an applicant may need as much as 5 years experience.

With its announcement the FAA published an Advisory Circular dealing with DAR qualifications and the duties they can perform.

NOTE: The Federal Aviation Administration Designated Airworthiness Representatives have no relationship to the EAA Designee Program. Qualified EAA Designees may, of course, apply for this FAA "license" but must then "sign off" aircraft as an FAA Designated Airworthiness Representative. Designees should continue to "visit" and discuss builders and restorers projects and submit Designee Visit Reports but should under no circumstance sign logbooks or offer "approvals" in their capacity as an EAA Designee.

TECHNICAL TOPICS

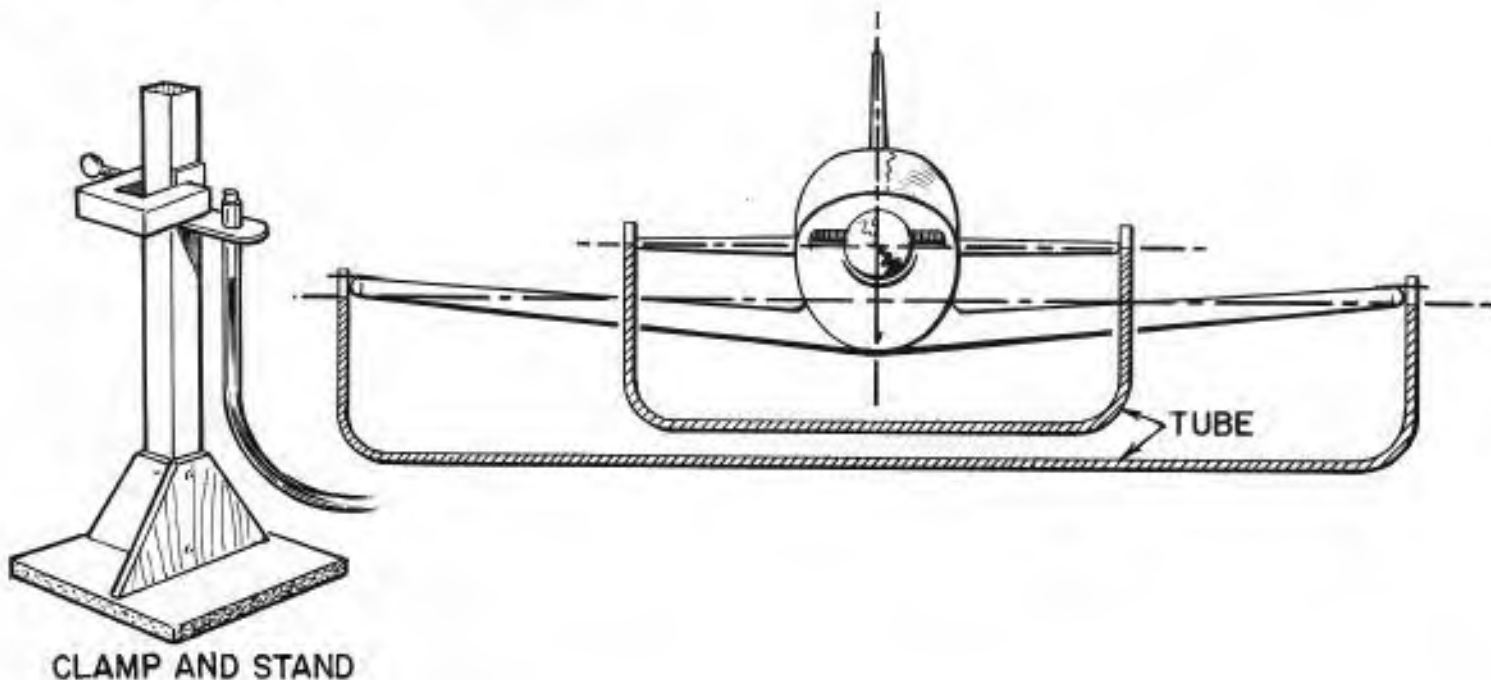
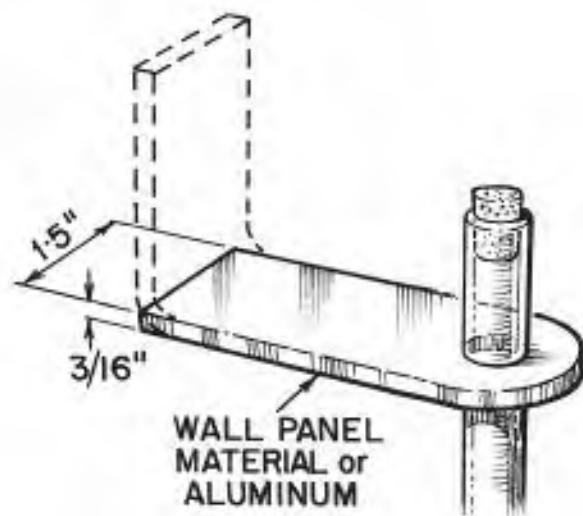


PLASTIC TUBE ALIGNMENT GUIDE

From the Dalworth Chapter 34 SKYWRITER
Method for checking alignment with a water level made of plastic tube

This method has been used by several builders. $\frac{1}{4}$ " to $\frac{1}{2}$ " plastic tubing is used filled with a solution of water, any type ink and a very small amount of liquid dishwasher soap. The soap is used to reduce the surface friction in the tube. This method is a very accurate way of setting incidence angles, water lines, wing tip wash out, and incidence angles between wing and stab. Scrap wall panel make good holders to keep tubes in. Position drill holes for plastic tube for snug fit.

NOTE FROM ILLUSTRATOR Jim Newman, EAA 109981. I use this system extensively on construction projects around my house and to check the rig of my radio control models. As a consequence I have shown the alternate of having a 90° bend in the bracket — allowing it to be clamped or taped to a vertical surface. I have also illustrated the simple stands I use around my (model) planes and these are an enormous help, along with card tabs strategically taped to the plane and on which the datum is marked. The tabs sticking out allows them to be set against or behind the liquid column. I also use an alcohol/food dye mix to preclude bacteria growth in the tube and subsequent discoloration.



Ten Commandments From An Antique Aircraft Rebuilder

From EAA Chapter 492's Newsletter

1. Go it alone. Absolutely no partnerships.
2. Don't trust yourself. Find someone who is kind enough to look over your shoulder and provide helpful advice.
3. Make drawings or photographs of all disassembly procedures.
4. Do not buy replacement parts from any source more than one-half day's drive away.
5. When buying parts more than one-half day's drive, ask seller to send parts on a light draft arranged through a shipper.
6. Build a glass bead blasting box — the most valuable tool in the shop.
7. Try to remove all corrosion from aluminum. I found the best method is to brush with a stainless steel brush and Dupont aluminum etch. Follow up with Dupont's instructions on applying alodine solution.
8. Use Dupont steel etch on all steel parts prior to painting.
9. If applying for an STC from the FAA, allow one year. Also allow one year for an "N" number if the aircraft has been in storage for a long time.
10. When calculating the cost of material, a more realistic actual cost is to double the original estimate. (Double your time estimate as well.)

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