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.

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MAYBE IT'D HELP IF YOU WORE PLASTIC GLOVES

Designees & Subscribers,

The EAA Headquarters Staff wishes you and yours the happiest of New Years. May peace and prosperity reside with you and all of the EAA family in 1983 and beyond. This year holds the promise of being a milestone in the history of EAA. ULTRALIGHT '83 will take place at our Oshkosh Convention Site on June 24-26, OSHKOSH '83 will be July 30 through August 6 and will offer the first opportunity for members to visit the new EAA Aviation Center. In our 30th year, we will reaffirm our traditions of quality, comaraderie and action. We are EAA . . . THE Sport Aviation Association.

Chuck Larsen, Designee Director

DESIGNEE/FAA/NTSB RELATIONSHIPS

EAA Designees, Chapter Officers and members should strive to establish a positive, ongoing relationship with personnel in area FAA and NTSB offices. They should be made aware of qualified, interested EAAers in the area that might answer any questions or support their work relative to aircraft licensed as Experimental Amateur Built. In the case of an experimental aircraft accident this positive communications link may prove invaluable from both the "official" and enthusiasts standpoint.

Anyone working with the FAA or NTSB should keep in mind their work could develop into a long term commitment with possible legal entanglements.

EAA TECHNICAL SAFETY STEERING COMMITTEE MEETING

The EAA Technical Safety Steering Committee met at EAA Headquarters on Friday, December 17th. One of the main points of discussion was to establish Safety Officers within each Chapter of EAA. Their responsibilities are to include aircraft operation and other safety areas outside of what is normally addressed by Designees. Two possible formats for Chapter Safety Officers were developed.

1. Expand the concept, definition and responsibilities of Designees to include the activities of a Chapter Safety Officer.
2. Add the Chapter Safety Officer to the present Chapter Officers, giving the option of it being an "additional duty" assumed by one of the other Officers.

I would appreciate hearing your opinion of the concept of the Chapter Safety Officer, whether it is a duty that should be assumed by Designees or as a separate Officer and any suggestions you may have.

Chuck Larsen, Designee Director

LETTERS 'N SHOP TALK

HERE'S A RIBSTITCHING TIP

From Warren Daugherty, EAA 18393, as presented in the Fredricksburg, Pennsylvania Chapter 390 Newsletter

I've just become a ribstitching expert! Don't you all think it's about time? Twenty-four years of flying behind me — some 23 odd (your interpretation) rebuilds of aircraft — and I've always managed to avoid ribstitching. Up until now, that is. Up until THE GREAT PITTS project! Anyway — since I AM NOW THE EXPERT, here goes:

This one will cost you about 2c outlay, take only minutes to fabricate and — I'll guarantee — will make trying the famous "modified sceine knot" much easier, not to mention the "getting the string thru the wing" part. (I did it solo.)

Take a piece of 1/16" welding rod about 40% longer than the greatest thickness of the surface you plan to attack, flatten an end (with a hammer on a piece of steel is fine), and drill thru the flattened end to make an eyelet to receive the cord.

Next, bend the "needle" to form a curve. I have decided this curve works best if it is gentle toward the eyelet-end and more pronounced toward the "point". Oh, yes! The point works best if it is ROUNDED.

You will find that this tool can be passed easily through the surface, (pre-pounch the holes, of course), will not bend, nor tear fabric, nor delaminate the ribstitch cord. Best of all, it makes the actual tying of the knot "a piece of cake", With this tool AND the EAA's fine publication as a guide, you too will quickly become an expert ribstitcher. A-a-hem — like me!

ULTRALIGHT COLD WEATHER STARTING HINT

By Pat Kenny, EAA 176809 as published in the MICRO-LITE FLYER, EAA Ultralight Chapter 1's Newsletter

I've noticed that the intake manifold on the Cuyuna 430D has a downward tilt. This makes it hard for the intake draft to pull the gas into the venturi when cold. I cured that I am able to start my 430D with one pull at 30 degrees below!

I installed a snowmobile primer assembly on the 430D and 2-3 plunges on the primer and PRESTO gas is into the cylinder washing away any cold frosty coating that is on the cylinder and pistons and this also makes it easier to pull over.

It comes with the lines and fittings complete. On the Double Quick I mounted the primer between the motor mount bolts. Complete instructions are included with the primer kit.

CARBON MONOXIDE

From a "Minnesota Department of Transportation Technical Bulletin"

With the approach of cooler weather we will be using the aircraft heaters. Most heaters in light aircraft work by air flowing over the engine manifold. We strongly urge each aircraft owner and operator to check for carbon monoxide leaks which may occur due to cracks in the manifold and seals.

You cannot smell carbon monoxide. It is tasteless and colorless. It impairs the oxygen carrying capacity of your blood, as a result Hypoxia effects occur.

PLAY IT SAFE HAVE YOUR AIRCRAFT CHECKED FOR CARBON MONOXIDE LEAKS. WATCH FOR CRACKS IN YOUR MANIFOLD.

COLD WEATHER OPERATIONS CHECKLIST

From a "Minnesota Department of Transportation Technical Bulletin"

1. Keep your aircraft in a hangar if possible.
2. Cover pitot tube, wings, and engine(s) if the aircraft is left outside.
3. Remove frost formations on the aircraft with DEICER FLUIDS on mops. Remove any snow or ice, but NEVER USE HOT WATER TO REMOVE ICE of any type. It may freeze and produce a condition worse than before.
4. Check compressor blades for icing prior to starting jet engine(s).
5. Check NOTAMS, especially for snow or ice on runways.
6. Check weather carefully with the FSS; ask the right questions so that you get all the facts that you need.
7. Wear sunglasses if there is glare.
8. Check controls for restriction of movement.
9. Taxi slowly and use brakes with caution.
10. Avoid water and mud puddles on the ramp, taxi strips, and runway.
11. Be alert for icing of jet engine air intake ducts and compressor inlet screen.
12. Watch for propeller icing if the humidity is high. After runup in fog or rain, check the wings and empennage for ice in the propeller wash area.
13. INSURE that anti-icing and deicing equipment is in operating condition before takeoff.
14. Check carburetor temperature prior to takeoff. If it is near 0 degrees C., use heat to prevent ice formation or to clear the carburetor of ice, but DO NOT USE carburetor heat during takeoff unless it is absolutely necessary. Inflight, preheat carburetor to prevent ice formation; DO NOT WAIT UNTIL AN icing condition exists.
15. Avoid taking off in slush or snow, if possible.
16. Be alert for snowbanks during takeoff and landing.
17. Use pitot heater when flying in rain, snow, clouds or known icing zones.

SENSIBLE AVIATIN': THE CARB ICEMAN COMETH:

From Charlie Haynes, EAA 93373, as published in the Birmingham, Alabama Chapter 557 Newsletter

Most of us are flying aircraft with carbureted engines. I'm sure you've all heard that carburetor venturis are among the world's best refrigerators, or ice makers. Since ice is solid, it tends to block passages in these venturis, causing loss of power. Continue this vicious cycle, and you end up with a glider looking for a place to land! Reams of information have been written on carbureter ice, but still we have a significant number of accidents occurring each year from it. Remember, carb ice can and does readily occur at OAT's in the 50-60° range, not just on cold days and nights. If you have a fixed-pitch propeller, monitor the tachometer. If you see it losing revs, try pulling the carb heat knob **all the way out** and see if the revs return shortly. If you have a constant speed prop, monitor the manifold pressure gage. Any unwarranted decrease in MP may indicate carb ice. If you have an EGT, watch for an unexplained enrichment (cooling) on the gage. With these indicators, we can hopefully avoid the carburetor iceman this winter season.

TECHNICAL TOPICS

IS MY AIRCRAFT AIRWORTHY?

From the FAA CHATTERBOX distributed by FAA-FSO #61 of Milwaukee, Wisconsin

For optimum safety and freedom in aviation, every airman should know the Regulations pertaining to his/her responsibilities. This article will point out and discuss some of the pilot, operator and owner responsibilities while operating general aviation piston-powered light aircraft under 14 CFR 91 (Part 91). 14 CFR 91.29 prohibits operation of a civil aircraft unless it is in an airworthy condition. Two conditions must be met for an aircraft to be considered "airworthy". These conditions are:

1. **The aircraft must conform to its type design.** Conformity to type design is considered attained when the required and proper components are installed and they are consistent with the drawings, specifications and other data that are part of the type certificate to which the aircraft was built. Conformity would include applicable supplemental type certificates and field approvals, and, of course, equipment must function properly when installed.
2. **The aircraft must be in condition for safe operation.** This refers to the condition of the aircraft with relation to wear and deterioration. Such conditions could be skin corrosion, window delamination/crazing, fluid leaks, tire wear, etc. A component can only be considered operational if it performs all the functions for which it was intended.

Now to take a look at 14 CFR 91.27 which tells us that a civil aircraft may not be operated unless it has within it a current airworthiness certificate. A standard airworthiness certificate and certificates issued for restricted category aircraft are only effective as long as maintenance, preventive maintenance and alterations are performed in accordance with Parts 43 and 91. Reference 14 CFR 21.181.

14 CFR 91.163 states that the owner/operator is responsible for maintaining the aircraft in an airworthy condition, including compliance with Part 39, which deals with Airworthiness Directive compliance.

14 CFR 43.3 lists the persons who are authorized to maintain, alter or perform preventive maintenance, as follows:

1. The holder of an appropriate mechanic certificate.
2. The holder of a repairman certificate employed for a specific job by a certificated repair station.
3. A person working under supervision of a holder of a mechanic or repairman certificate may perform the maintenance, preventive maintenance and alterations that his/her supervisor is authorized to perform, not including 100-hour or annual inspections, nor inspections performed after a major repair or alteration.
4. The holder of a repair station certificate may maintain or alter any airframe, powerplant, propeller, instrument, radio or accessory, or part thereof for which it is rated.
5. The holder of a pilot certificate issued under Part 61 may perform preventive maintenance only on an aircraft owned or operated by him/her that is not used in air carrier service.

14 CFR 43.5 states that an aircraft may not be returned to service after maintenance, preventive maintenance, rebuilding or alteration unless it has been approved for return to service by an authorized person and a maintenance record entry has been made.

KITS MEETING THE 51% RULE

The following "Revised Listing of eligible Amateur Aircraft Kits" dated October 6, 1982 was distributed to all FAA Flight Standards Divisions and all FAA Aircraft Certification Divisions by the Chief of the FAA Aircraft Manufacturing Division. It lists aircraft that meet the major portion (51% constructed by builder) criteria of FAR 21.191(g). This listing establishes that these specific kits meet this basic criteria for being licensed in the amateur-built category.

"The following is a compilation of kits that have been evaluated and found to be eligible to meet the requirements of FAR 21.191(g) and the intent of AC 20-28A.

Kit Manufacturer	Model	Date Evaluated
American Eagle Corp. Muskegon, Michigan	Minibat Sailplane Kit	6/23/80
Birdman Aircraft Co. Daytona, Florida	TL-1	11/8/76
CGS Aviation, Incorp. Cleveland, Ohio	Hawk Model A	7/15/82
Christen Industries	Christen Eagle II	4/5/78

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CGS Aviation, Inc. Cleveland, OH	Hawk Model A	7/15/82
Christen Industries Hollister, CA	Christen Eagle II Aircraft Construction Kit Array No. 1	4/5/78
Eipper-Formance, Inc. San Marcos, CA	Quicksilver MX II	5/19/82
Franklin Mfg. Corp., RD 2 Landrock, PA	Hummer Kits Model A and B	5/13/81
Monnet Experimental Aircraft Co. Elgin, IL	Monerai Models Sailplane	2/8/79
Pitts Aerobatic Aircraft Co. Afton, WY	Pitts Master Kit List No. 100-200-201	11/25/80
Rotec Engineering, Inc. Duncanville, TX	Rally 3 "A"	4/7/82
Rotorway Inc. Tempe, AZ	Exec Model Helicopter Kit	1/11/82
Rutan Aircraft Factory Mojave, CA	Vari-Eze	11/8/76
Sorrell Aviation Tenino, WA	Hiperbipe Model SNS-7	8/25/75
Stoddard Hamilton Co. Maple Valley, WA	SH-2	10/29/79
Swallow Aero Plane Co. Rockfall, CT	Model 2	5/19/82
Ultra Systems, Inc. Salt Lake City, UT	Woodhopper J24 Aircraft Construction Kit	11/13/78
Zenair Corp. Richmond Hills Ontario, Canada	CH-200 MC-12 Cricket	10/29/79 5/19/82

Currently, there appears to be a great deal of confusion on the part of the aviation public regarding the purpose of FAA evaluation of kits to be utilized in the amateur-built aircraft program. The purpose of the FAA evaluation of kits is to determine the eligibility of these kits to meet the major portion criteria of FAR 21.191 (g). Please stress this policy when dealing with the amateur builders.

Additionally, please advise all kit manufacturers that the evaluation's purpose is not one of certification but of determining the eligibility to meet the major portion criteria of FAR 21.191(g) and should not be advertised as being FAA "certificated", or "approved".

Please disseminate this information to all of your field offices, as appropriate, for their attention and information."

DESIGNEE VISITS

One of the important services provided by our DESIGNEES is visiting aircraft building/restoration projects to discuss and offer suggestions about them. The DESIGNEES in the following listing are to be commended for their efforts in helping to make sport aviation a safer activity by providing this service. Comments for publication are selected for the purpose of providing guidance or assistance to builders and the DESIGNEES visiting them. DESIGNEES are requested to note problems or procedures observed in their project visits in the comment's section of the Designee Visit Report.

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EXPERIMENTAL AIRCRAFT ASSOCIATION

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