



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.

SEE YOUR IDEAS IN PRINT THE DESIGNEE NEWSLETTER NEEDS MATERIALS FOR PUBLICATION

The lifeblood of this and all other EAA publications are the materials submitted by the membership for publication. Technical articles, hints & kinks, special tools or fixtures, or other items dealing with constructing or maintaining aircraft will be gratefully received for consideration to be published in the *DESIGNEE NEWSLETTER* or the "Craftsman's Corner" in *SPORT AVIATION*. Articles ranging from a brief comment to as long as 3 double-spaced, typewritten pages are requested. Longer articles of value can be split into two segments if necessary. Finished artwork or photos add greatly to articles. Photos should be black and white, in sharp focus, with a plain background and sharp contrast. Enlargements are not necessary and if you supply the negative the editor will select and print the photos returning the negative to you when we are finished. Please address these materials to Chuck Larsen, Designee Director at EAA Headquarters.

CONTENTS

Volume 14, Number 4	April, 1983
	Page
INTRODUCTION	1
Oshkosh Events	
TAKE NOTE	2
Posa Carbs	
Fiberglass Scarfing	
Smoke Oil System	
Oil Can Oil Separator - Mod. 1	
Cutting Glass	
AUTO FUEL STC APPLICATION	3
DESIGNEE VISITS	4

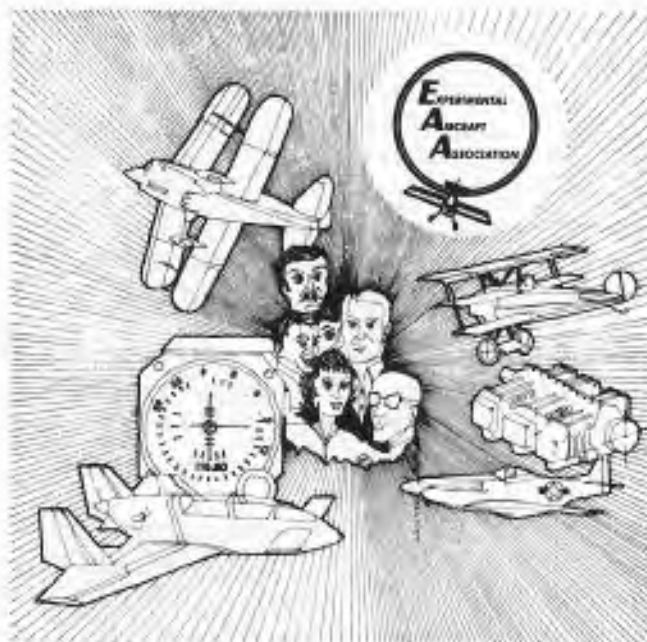
Designees and Subscribers,

Spring brings a new flying season to many aircraft and pilots that have "hibernated" through the winter. Take time to work the kinks out of your airplanes and flying skills before calling for your weather briefing and venturing into the blue. Your local A/I or Designee should be a part of preparing your plane and a little dual instruction after not flying for a time is always a good idea. Lets make 1983 a record year for aviation safety by making sure our skills and planes are fully prepared for each flight.

Preparations for the opening of the new EAA Aviation Center during OSHKOSH '83 are progressing well. An area of the Museum that will be of special interest to Designees is the "Craftsmans Gallery" that will be a full-sized, functional shop where shop equipment and materials will be displayed as well as providing a site for actual aircraft construction demonstrations. This same area will provide an overlook into the EAA Aviation Foundation Restoration Facility at the rear of the Center's Aircraft Display area. This is only one segment of this fantastic new facility dedicated to sport aviations past, present and future.

Preparations for ULTRALIGHT '83 and OSHKOSH '83 see the grounds crew, supported by many EAA volunteers, making giant strides in accomplishing all that is necessary to be ready for the opening days of the events. We need you to make our final plans for Designee Activities at the Convention. Please call John Grega (216) 232-5790 to volunteer your assistance in the review of airshow aircraft, Fred Goldstone (701) 352-2508 to support the Designee Information or Designee Forums Program at the Convention or me at Headquarters. We want you to attend and PARTICIPATE AT OSHKOSH '83.

Chuck Larsen, Designee Director



EAA CHAPTER 168

DALLAS, TEXAS



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

LETTERS 'N SHOP TALK



Dear Chuck,

RE: POSA CARB

If a Posa Carb begins to run richer and richer, the short piece of **flexible hose** between the gas inlet and the needle orifice may be leaking gas into the carb. This hose became hard and leaked a great deal on my plane. We lost so many r.p.m.s that we had to make an emergency landing. My carb has flown about 100 hours.

Henry Olsen, Designee 1037
818 S. 19th Street
Escanaba, MI 49824

FIBERGLASS SCARFING AND AGING

From the *SOUTHERN MARYLAND COCKPIT* published by EAA Chapter 748

Originally, repairs to fiberglass-reinforced plastic structures (FRP) were scarfed at about the same angle as for wooden structures — 10-12/1. German FRP sailplane manufacturers now make factory repair scarfs at 40-50/1.

The US Air Force made accelerated tests on FRP structures to this strength loss are heat and humidity. So keep your glass birds in a cool, dry place.

TIN CAN OIL SEPARATOR - MOD. I

From R. L. Strahlmann, EAA 92965, of Indian Harbor Beach, Florida

The "Craftsman's Corner" in the February, 1983 issue of *SPORT AVIATION* by Rudy Adler, EAA 22476, explained the construction of a "homebuilt" oil separator for aircraft. Bobby Strahlmann suggests there should be a larger outlet/vent rather than inlet to cause a larger pressure differential and more efficient operation. He also recommends the oil return line be smaller than the inlet for the same reason. He recommended a 3/4" inlet, 1/4" outlet/vent and an oil return of less than 3/4". Thanks for the tip, Bobby!

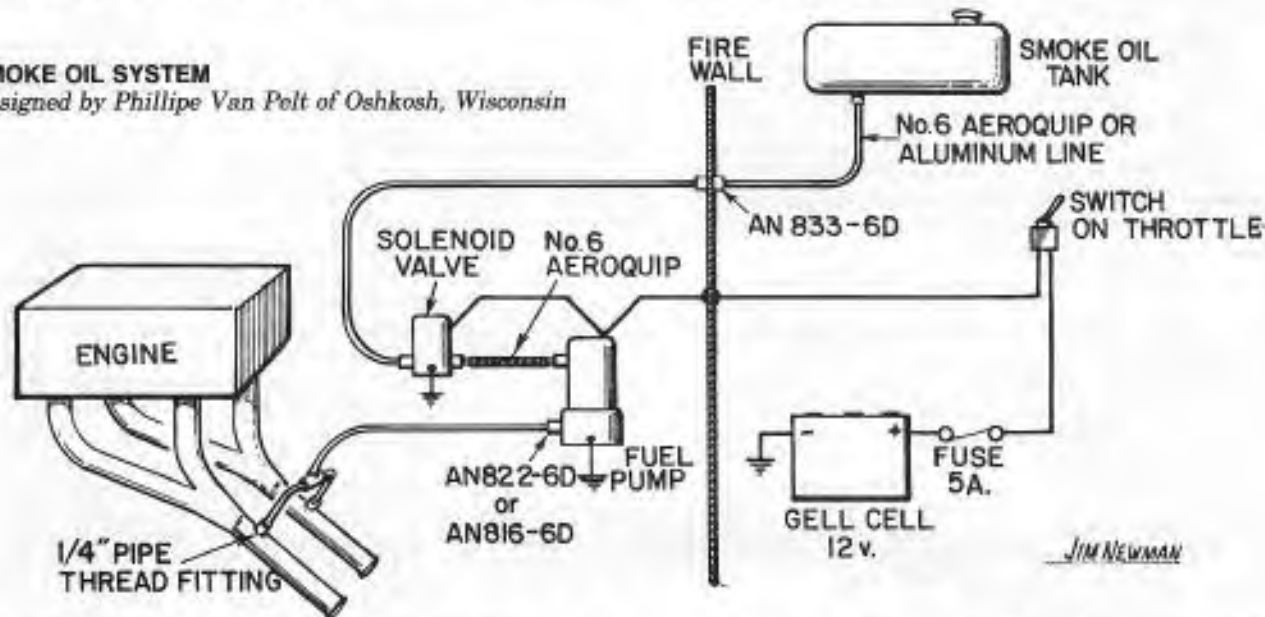
CUTTING GLASS

From the *R.A.F. CANARD PUSHER*

The key to success in cutting glass cloth lies in a piece of sheet rock used as a backing board for the fiberglass. A sharp knife pulled across the glass at a very shallow angle and enough pressure to cut slightly the surface of the sheet rock, will do the job.

SMOKE OIL SYSTEM

Designed by Phillippe Van Pelt of Oshkosh, Wisconsin



The basic system uses a smoke oil tank with an internal flop tube on the Pitts plans.

An electronic pump and electrically actuated solenoid valve are mounted on the front of the firewall. The solenoid valve is needed if the tank is higher than the pump and would continue to gravity feed with the pump off. These are hooked up in parallel to a switch mounted at the pilot's throttle quadrant position, both are 12 volt actuated. The pump and solenoid operated valve are connected with aircraft braided hose using aircraft fittings with 1/4" pipe thread.

At the exhaust stack an AN flared tube fitting is screwed into a nut which is welded to the stack. This nut is a cut off AN 817 or similar. The flared tube fitting must be removed from the end of the flared tube fitting by brazing it over the drilling it out in progressive stages until the proper smoke output is reached. This should be about 1/8" but depends upon the engine, location of the output fitting in the exhaust stack, etc. The output nut in the exhaust stack is about midway between the engine and the end of the tube.

The pump, solenoid valve and electronic switch are available through auto supply houses. The tubing, flared ends and braided hose are aircraft quality items.

PUMP USED:	SOLENOID VALVE USED:	SWITCH USED:
Stewart Warner 12 Volt-82050 (D.C.) 7 psi (low pressure Has a built in filter on the bottom.	Skinner Electric Valve Co. 12 Volt D.C., 10 Watts V52DA2008	Any of Suitable 12 Volt type

NOTE: Prior to developing the above system an engine mounted pump was used. Due to lack of adequate lubrication this pump frequently failed. On one occasion failure of the line caused the pump to fill the cockpit with oil spray because it was controlled by a valve located in the cockpit. The electric system above avoids these problems.



C-150 AUTO FUEL APPLICATION FOR STC's SE634GL & SA633GL

UNLEADED AUTOMOBILE GASOLINE APPROVED FOR USE IN AIRCRAFT: Federal Aviation Administrator, J. Lynn Helms, presented two Supplemental Type Certificates to EAA President, Paul H. Poberezny, on August 5, 1982 at the EAA International Fly-In Convention in Oshkosh. These Supplemental Type Certificates (STC's) constitute FAA's approval of the use of unleaded automobile fuel in Cessna 150 aircraft equipped with TCM O-200 and O-200-A engines. The STC's are a direct result of the EAA Aviation Foundation's Flight Research Program. EAA has been attempting to obtain federal approval for the use of unleaded auto fuel in aircraft for six years. In the latest research program and engineering flight tests, a Cessna 150 owned by the EAA Aviation Foundation was flown for approximately 750 hours while powered by unleaded auto gasoline.

CONDITIONS: The STC's approve the use of unleaded automobile gasoline in Cessna 150 series aircraft equipped with TCM O-200 and O-200-A engines under the following conditions: 1) The gasoline must conform to ASTM SPECIFICATION D-439. Most state laws require automobile fuel to conform to this specification. However, in all areas it is the responsibility of the pilot to insure that the unleaded auto fuel with which he services his plane does meet the specification. 2) The engine ground idle speed must be set to 700 rpm, minimum.

Please Type or Print

NAME _____ EAA # _____
 ADDRESS _____
 STREET CITY STATE ZIP
 AIRCRAFT N # _____ AIRCRAFT SERIAL # _____

RELEASE

I, _____, Applicant for the assignment of the above-mentioned Supplemental Type Certificate, my heirs, executors, administrators, successors and assigns, do hereby release, forever discharge and hold harmless, the Experimental Aircraft Association, Inc. and the EAA Aviation Foundation, Inc., and their respective officers, agents or employees from any and all actions, causes of action, claims and demands for, upon or by reason of any damage, loss or injury which hereafter may be sustained by anyone as a consequence of the use of the aircraft in conformity or pursuant to the Supplemental Type Certificate to be assigned. I further acknowledge that in signing this Application, **neither EAA nor the EAA Aviation Foundation has made any express or implied warranties or representations of any kind with respect to the use of the aircraft in conformity of pursuant to the Supplemental Type Certificate**, and I hereby assume the risk of such operations.

Applicants Signature: _____

Mail this form and a check for \$65.00 per airplane (EAA members \$50.00 per airplane) for the EAA Aviation Foundation, P.O. Box 469, Hales Corners, Wisconsin 53130.

You may photocopy this form for use by applicants.

APPLICANTS: Please complete this form in duplicate. Submit one with your remittance and retain the second for your information and record.

LIMITATIONS: The unleaded automobile fuel is fully approved for FAR Part 91 General Operations and FAR Part 141 operations (Pilot Schools), and, of course, your ordinary personal use for business and recreational flying.

Operations under FAR Part 121 (Airlines) and FAR Part 135 (Air Taxi) are **not approved**.

MIXED FUELS: Aviation and unleaded auto fuel may be mixed. When they are mixed the resulting fuel is considered to be automotive fuel and is subject to the previous limitations.

PLACARDS AND MANUAL SUPPLEMENT: In order to legally use unleaded auto fuel, placards (available from EAA) must be placed at the fuel tank inlets and an approved flight manual supplement (available from EAA) must be carried in the aircraft at all times. In addition, the aircraft must be inspected and a log book entry made by an IA mechanic.

MODIFICATIONS: Except for the required placard, and an increased minimum engine idle speed, no design changes or modifications are necessary to the airframe engine of the aircraft.

APPLICATIONS: In order to obtain a Supplementary Type Certificate, including placards and flight manual supplement, fill out the attached application form the release statement for each aircraft to which you wish to apply the STC. Mail this form and a check for \$65.00 per airplane (EAA members \$50.00 per airplane) to the EAA Aviation Foundation, P.O. Box 469, Hales Corners, Wisconsin 53130. The funds resulting from the sale of this STC will permit the Foundation to continue its efforts in extending the use of unleaded automobile fuel to other aircraft which may safely use it; and, in seeking additional ways to reduce the cost of flying.

DESIGNEE VISITS

One of the important services provided by our DESIGNEEES is visiting aircraft building/restoration projects to discuss and offer suggestions about them. The DESIGNEEES 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 DESIGNEEES visiting them. DESIGNEEES are requested to note problems or procedures observed in their project visits in the comment's section of the Designee Visit Report.

James McGinness, #1364
Fort Myers, Florida
(813) 481-4050
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*Jungster II

Douglas Wallen, #1403
Plano, Illinois
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*Poliwagen
*Cassutt III

Dick Alkire, #1406
Dayton, Ohio
(513) 890-1068
*Jungster

Raymond Oliniski, #1416
Westminster, California
(714) 892-9451

*Bryan Aircraft
*LongEZ
*Q-2
*Rotorway Exec.
*LongEZ
*LongEZ
*Quickie
*LongEZ
*LongEZ
*Smyth Sidewinder
*Q-2
*LongEZ
*LongEZ
*LongEZ

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Roseville, California
(916) 783-7294
*KR-2

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Las Vegas, Nevada
(702) 645-6095
*Mustang II

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Wederland, Texas
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*Dragonfly

Glenn G. Moore, #926
Wilmington, North Carolina
(919) 762-7285
*Jodel D9

Richard Kurzenberger, #937
Horseheads, New York
(607) 739-4196
*P-38 Mitchell
*Stuka

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*Maranda AMF-814F
*Fokker D7 Replica

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Cromwell, Connecticut
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*Vans RV-4

Frank Roncelli, #949
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*VariEze
*Thorp T-18

R. C. Stiles, #983
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*American Eagle
*KR-2
*Kolb Flyer

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*Woodstock Sailplane

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*Cuby

Glen Tuttle, #1028
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*Christen Eagle

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*VP-II

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*Thorp T-18

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*Glasair
*RV-4

Charles Burich, #1093
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*Taylor Monoplane

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*Two-Tu-One

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