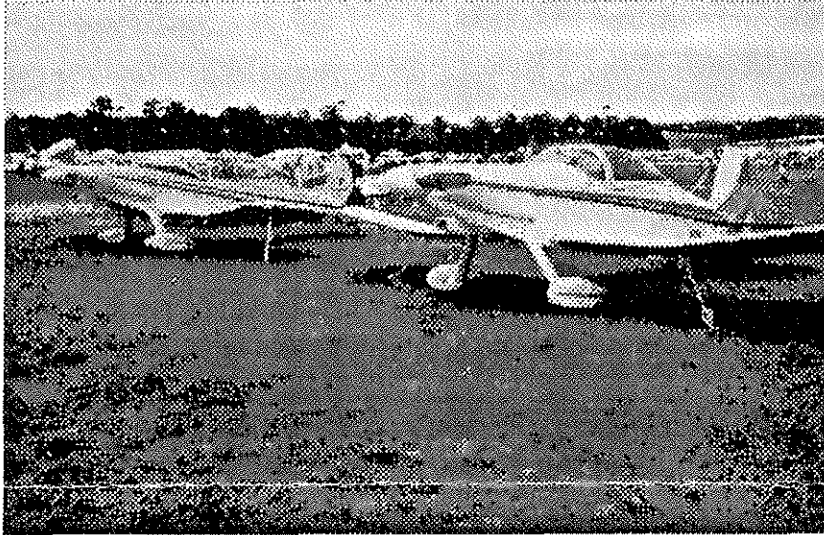


T-18 NEWSLETTER

ISSUE NUMBER 75

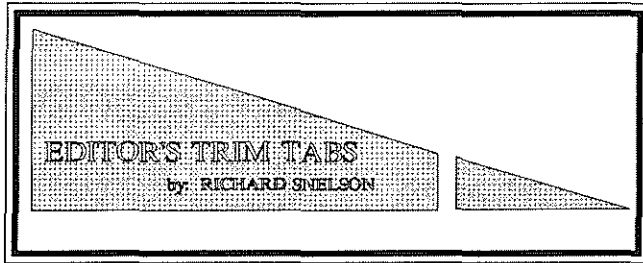


SUN N-FUN 1990 left to right Jim Paine's T-18, Dave Eby's T-18

In This Issue:

Editors Trim Tabs
Flight Safety and Operations
Sun-n-Fun
Kentucky Lake Spring 1990
Builders Corner

NOTICE: (STANDARD DISCLAIMER) *As always, in the past, present, and future newsletters, we would like to make you aware that this newsletter is only presented as a clearing house for ideas and opinions, or personal experiences and that anyone using these ideas, opinions, or experiences, do so at their own discretion and risk. Therefore, no responsibility or liability is expressed or implied and is without recourse against anyone.*



Getting started on this newsletter has been particularly hard, with a fuselage just sitting there ready to be riveted makes one look very hard at his priorities and somehow come to the right conclusion that the newsletter must go out. Several of the members commented in their letters that we should have a least 4 to 5 letter a year to make it worth while. I agree one-hundred percent to keep the interest we need that many letters, the real determining factor in getting 4 to 5 letter out is contributions of article, technical articles, which have been and should continue to be the backbone of this communications media.

Think of it this way, building a T-18 is a very intense project, working day after day can easily result in burn-out. Witness the many projects that are and have been for sale. Pull back once in a while and pickup a pen, put down some tip or idea for the group, you don't have to polish it I'll do that. If you haven't had time to do that maybe you should adjust your priorities!

In the Flight Safety section we have a good article from Paul Kirik on "Constant Speed Propellers" with an Airworthiness Directive on the subject, and another on "Wooden Propellers" that could save loosing a prop.

I was glad to have the news that Dave Eby took second in class at the Sun-60 Air Race topping out at 181.15 over a RV-4 turning 177.27 mph. Thanks Dave for the pictures of the plane at Sun-n-Fun (see our cover).

Kentucky Lake came up short this year due

to a large weather system over the south central area, however eight T-18s made it and lots of other folks drove or flew in for the event. It was a great weekend anyway, my wife got her first ride in a T-18 and lived to smile about it Wow!. Our should I say Rick Jones lived to smile, she told him he would be dead meat if he rolled that thing with her in it, he learns quick!, much faster that I do!.

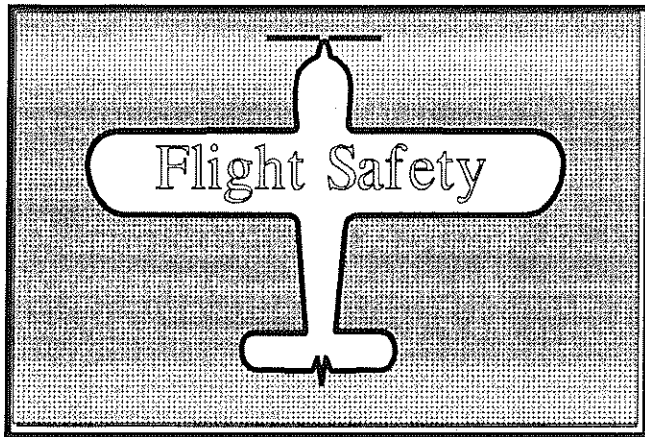
(After writing this article, I promptly adjusted my priorities and went to the basement and riveted my fuselage. It's now on the gear folks!)

**Oshkosh Event for T-18s
T-18 Forum
Monday, July 30, 1990
10:00 - 11:14
in Tent #5**

**T-18 Banquet, to Thank
Dick Cavin for all he's done!
Tuesday, July 31, 1990
6:30 at Butch's Anchor Inn**



Where in the heck is the riveter? This fellow is Bob Adam a good friend of mine from Boston.



CONSTANT SPEED PROPELLERS

The attached (back pages of this letter) Airworthiness Directive is an important one that may not get into the hands of the T-18 builder pilot. If you have a constant speed prop on your aircraft, it is very important to inspect for the presence of the proper clamps as called out in the A.D. If these clamps are missing or broken, the line must be changed. All failures to date were a result of clamp problems.

WOODEN PROPELLERS

After a local incident, seeing a Mustang II limp into OSH, and several other reports of problems with wooden props, a review of precautions are in order.

The bushings in the prop extensions for the T-18 are inserts that are not retained in the extension. It is imperative when installing a new prop to measure the depth of the counterbore of the prop to accept the bushing. If the depth of the counterbore is more than the length of the bushing, the bushing will move forward into the prop and will cause the mounting bolts to fail. They are not designed to carry the flight loads of the prop. The wooden spacer should be inserted into the counterbore to fill this gap. This happened to one of our local T-18's. When he felt a strong vibration in flight, he made an emergency landing at a small airport. He found four of the six bolts broken and the

two good bolts were adjacent to each other. All of the prop bushings had moved into the prop and were completely out of the extension. Lucky guy!! His fix was to install flanged bushings in the extension. This incident occurred less than 10 hours after the bolts had been checked for torque. Even if your prop has been in service for a while, this is something that should be checked. It is also very important to check the torque of the prop bolts 5 hours after installation and every 25 hours maximum thereafter. Also recheck torque at seasonal changes if flying is less than 25 hours.

Paul Kirik
4127 36th Ave
Moline, IL 61265

Editors Note:

We have more information on gear cracking and also held a Mini Seminar at Ky Lake. Jim Paine is putting together an article on the subject and has come up with a fix that involves installing two bolts through the gear leg and corner web, where the cracking occurs. He stresses that a builder uses this fix at their own risk!

By the way ... forgot to include my name and address on the last newsletter:

*Richard Snelson
RR 3, Box 295
Clinton, IL 61727*

Phone (217) 935-4215

AVCO CORPORATION, LYCOMING DIVISION
AIRWORTHINESS DIRECTIVE
ENGINE
SMALL AIRCRAFT

2 90-04-06

90-04-06 TEXTRON LYCOMING: Amendment 39-6427.

Applicability: All Textron Lycoming four cylinder piston engines equipped with a rear mounted propeller governor and external oil line.

Compliance: Required as indicated, unless already accomplished.

To prevent oil line fracture and loss of engine oil, accomplish the following:

(a) Within the next 25 hours in service or whenever the propeller governor oil line is removed, whichever occurs first, accomplish the following:

(1) Inspect the propeller governor external oil line for abrasions, cracks, and oil leaks along the length of the line and at the end attachment fittings. Inspect to determine that the two cushion type support clips (clamps) are properly installed as shown in Figure 1 of the Appendix to this AD, and assure that sufficient clearances exist between the oil line and adjacent components.

(2) If any leaks, damage, or interference condition exists or if support clips are not properly installed, replace the governor oil line and its attachment end fittings with new parts even though the parts show no visible damage. Refer to Figure 1 in the Appendix to this AD, for parts identification, line routing, and location of support clips.

(b) At the next engine overhaul or anytime the governor oil line is removed for any reason, whichever occurs first, remove any governor oil line assembly having aluminum attachment nuts and fittings (elbow/nipples) and reinstall an oil line assembly with corresponding steel end fittings.

NOTES: (1) Special attention should be given to insure both clips and/or supports are reassembled to the original configuration.

(2) The attachment nuts are components of the governor oil line tube assembly which have been changed by Textron Lycoming from aluminum to steel without changing the oil line part number. Aluminum nuts may be identified by their blue colored anodized surface. The attachment nuts as well as the elbow/nipple end fittings may also be identified by using a magnet to differentiate aluminum from steel.

(3) Textron Lycoming Service Bulletin No. 488, dated September 9, 1989, Textron Lycoming Service Instruction Letter No. 1435, Part III, dated April 25, 1986, and Lycoming Parts Catalog Manual for the particular engine model, contain related information on correct oil line installation and end fitting attachments.

(c) Aircraft may be ferried in accordance with the provisions of FAR 21.197 and 21.199 to a base where the AD can be accomplished.

(d) Upon submission of substantiating data by an owner or operator through an FAA Airworthiness Inspector, an alternate method of compliance with the requirements of this AD or adjustments to the compliance times specified in this AD, may be approved by the Manager, New York Aircraft Certification Office, Engine and Propeller Directorate, Aircraft Certification Service, Federal Aviation Administration, 181 South Franklin Avenue, Room 202, Valley Stream, New York 11581.

This amendment (39-6427, AD 90-04-06) becomes effective on February 15, 1990.

FOR FURTHER INFORMATION CONTACT:

Mr. Pat Perrotta, or Mr. Nick Minniti, Propulsion Branch, ANE-174, New York Aircraft Certification Office, Engine and Propeller Directorate, Aircraft Certification Service, Federal Aviation Administration, 181 South Franklin Avenue, Room 202, Valley Stream, New York 11581; telephone (516) 791-7421.

APPENDIX
90-04-06

In all cases one or both of the Textron Lycoming supplied governor line clamps and/or supports installed at the plant and conforming to Textron Lycoming standards were missing. After careful inspection, it was determined that the clamps and/or supports had not been re-installed per Textron Lycoming specifications during field work on the engine. Proper governor line support is mandatory to avoid engine failure.

A visual inspection should be made to ascertain that both the Textron Lycoming specified clamps and/or supports are installed properly and are intact.

If the visual inspection reveals that clamps and/or supports are missing, the governor oil line should be thoroughly inspected to insure that no cracks exist. This includes that area under the ferrules at the flared ends of the lines.

As a product improvement, the propeller governor oil line now comes equipped with steel connecting nuts, P/N AN818-6. These nuts are a component of the tube assembly and have been changed from aluminum to steel without changing the tube assembly part number. Also, the aluminum elbow at the front of the crankcase has been replaced by a steel elbow, P/N MS20822-6; see Figure 1. There are two ways to identify which nuts and/or fitting you have; (1) aluminum nuts and fittings are anodized making them blue in color or (2) the use of a magnet to determine aluminum from steel. If aluminum components are found they should be replaced at overhaul or earlier at owners discretion.

In reference to Figure 1, the views and identification of parts are only typical. They may not necessarily portray your particular installation. Refer to Parts Catalog for proper clamps. Nevertheless, special attention should be given during dismantling of the governor oil line on your engine to insure both clamps and/or supports are reassembled to the original specified configuration.

APPENDIX
FIGURE 1
90-04-06

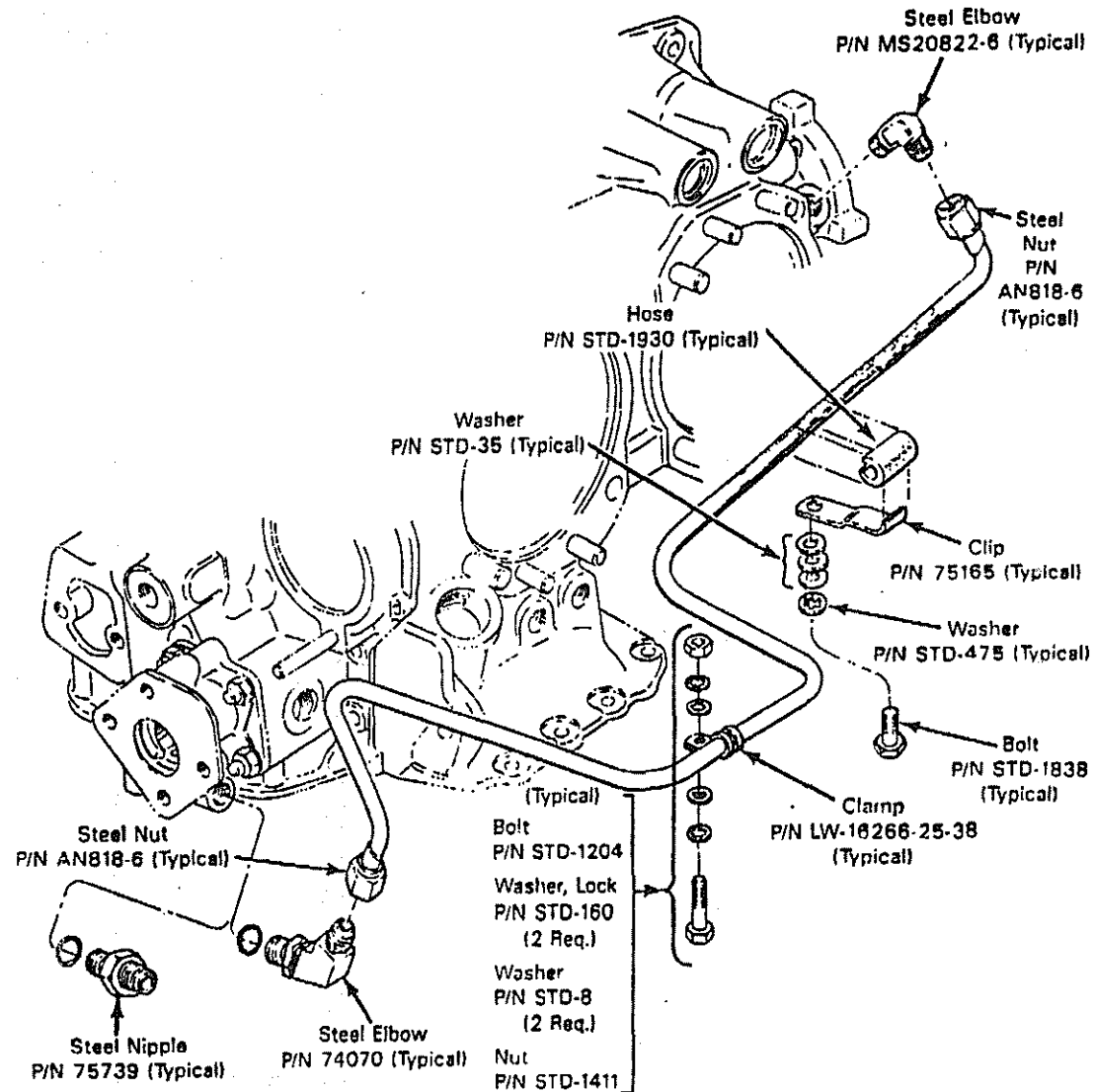
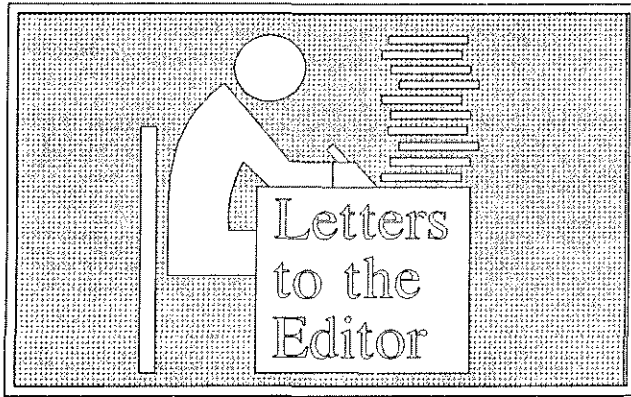


Figure 1. Propeller Governor Line Support



Dear R; I really need the T-18 Newsletter to keep well & happy! Please note enclosed check for a one-year subscription.

Yours truly, John Frew (written & signed by wife, Terry on John's behalf) John Frew
3305 Stoneridge Dr, Birmingham, Al. 35223

Thanks Terry everyone got a laugh out of this one at Ky Lake.

Dear R; *** If I can be of help please let me know. I am very involved with a Canadian organization called Recreational Aircraft Association of Canada (RAAC) it represents homebuilders in Canada, if you wish I can print your name, address and the information on the T-18 Newsletter in our magazine. Look forward to seeing you at Oshkosh, say hello to Paul Kirik and Ken Rhoads if you are talking to them. Happy Flying; Jim M.
Alexandre 31 De Santis Court, Hamilton, Ontario, Canada, L8W 3A9

Please spread the word Jim. Thanks!

Dear R; I am interested in buying a good T-18 with the "wide body" and a good mid-time engine. I prefer 150hp, constant speed propeller, 40-50 gal fuel capacity. It will be much appreciated if you bring this to the attention of your newsletter readers. Thanks C Wayne Martin, 1601 Ridgeway Rd Lincoln, Ne 68506 402-488-6821

Good luck Wayne!!

Dear Richard; I want to congratulate you on the appearance of your first newsletter; it was a big improvement! I would like to suggest that in future issues maybe some of the articles and buddy buddy references include some of the T-18 builders and owners on the west coast. Perhaps the reason Dick didn't do more of this was because the western owners did not furnish him with material. I would also like to see some articles from T-18 pilots regarding things they have done to clean up the drag and low speed landing performance. (I do not feel comfortable with less than 85 MPH on final until I am ready to flare)

Another thing I would hope we might have is a T-18 fly-in somewhere in northern California--away from the congested airways of the general Los Angeles area, which is a bummer for many homebuilts who flub around in high density controlled airspace. Maybe someplace like the Nut Tree Airport at Vacavill, Calif-- (just for the day) We have five T-18's here but they don't all fly regularly. My Thorp was purchase five years ago from the widow of a deceased friend and it has been a very good airplane with virtually no problems. I have done some things to it to suit myself otherwise it is exactly as he finished it in 1974. It of course has always been hangared and well maintained. It has a Lyc. 0-290G engine with an 0-320 pan and cross-over exhaust system. With a Sensenich 68x68 prop. on a cool day I indicate 160 MPH at 2450 RPM. Of course I would like to have a Lyc. 0-320 but I am not willing to spend the money for the difference. If I was building a T-18 from scratch certainly I would go for the 0-320. I have been using Auto gas regular grade Mobile which in my area have been by BP. I've been using Auto gas for more that three years and every now and then I dose it up a little withsome of that old remedy--Marvel Mystery Oil! (it's good for a cough or what ails you) ***
John Thorp lives about 50 miles from here

John Thorp lives about 50 miles from here but I have only met him once and that was when he was in a convalescent hospital last year. I understand he is home now and doing much better. I hope to visit him again soon. Harry Arnold, 4411 Crestwood Way, Sacramento, Ca 95822
916-441-0811 Aircraft N39JP

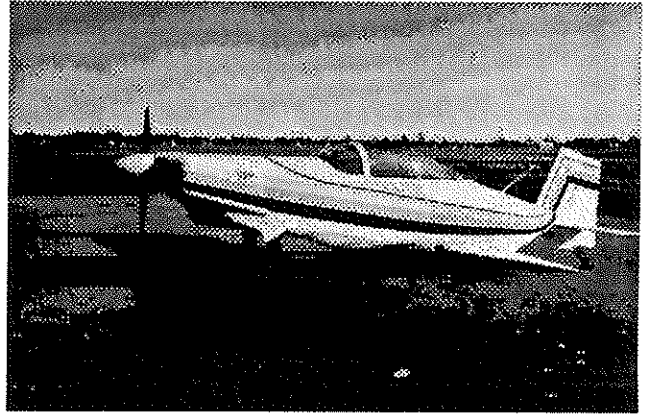
Thanks for the letter, picture, and information Harry, if you would like a list of all west coast members let me know. Rich Great paint job on N39JP.

Dear R; Welcome aboard, I'm glad someone has the courage to step up to this job. Dick has done a magnificent service to all of us over the years and we will surely miss his input. Good luck on your editorial attempts, I know its got to be one of the hardest things for me to do! Lyle Trusty
1665 West Newgrove St. Lancaster, CA.
93534 805-949-1131

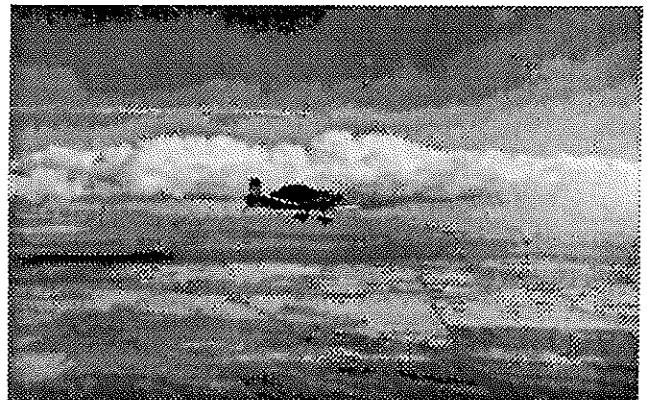
Thanks Lyle! good looking bird.

Richard: I understand that you are about to take over the newsletter. Enclosed is money for my continued reception of it. I have found it useful interesting and enjoyable ever since I purchased plan S/N 380 Dec. 1965. I first flew it August 8, 1972. I am sending a picture of the plane. If you are able to look closely you might see that it is not a show plane. As I told Sunderland when I flew it to OSHKOSH in 1973..."I built it to fly, not to show". Heck, I have never bothered to complete the interior upholstery, although I have done the instrument panel three times and the engine mount twice...the last time to assist in installing the automobile turbo charger. I'm only now making motions towards doing the cockpit side panels. Pedro D. Gonzalez 1318 Server Drive Colorado Springs, CO 80910

Thanks for the letter, picture of N380G, and Performance Data Survey! I'll put the data in a later newsletter.



Harry Arnold's N39JP



Lyle Trusty's N851LT



P.D. Gonzalez's N380G

Dear Mr Snelson: Enclosed is the information we discussed over the phone. I hope to have the catalogue back from the printers shortly, and I will mail you one. Allow me to give you a brief description of Lewis Aviation for your newsletter readers. We have been in business 1981 building RV type aircraft. We are currently involved with the Nigerian AirForce building and supplying parts for the RV-6A as a basic trainer. We also built the only flying RV-4 RG, which will be featured in the June issue of Kit Planes. We now are also building the Questair Venture kit. The total number of aircraft that we have built stands at 17 RV-4s, 1 RV-6A with involvement in 110 more, and 1 RV-4RG. Please feel free to print whatever you would like in your newsletter regarding our services. David G Lewis 3565 A NE Cornell Rd Hillsboro, OR 97124 503-640-0505

Thanks David for joining our mutual aid society. Fellows he has some items we can use: Oil coolers, props, strobes, boots for sticks, "Control Stick grips with push to talk switch and 4 way trim switch"!!! more, more----

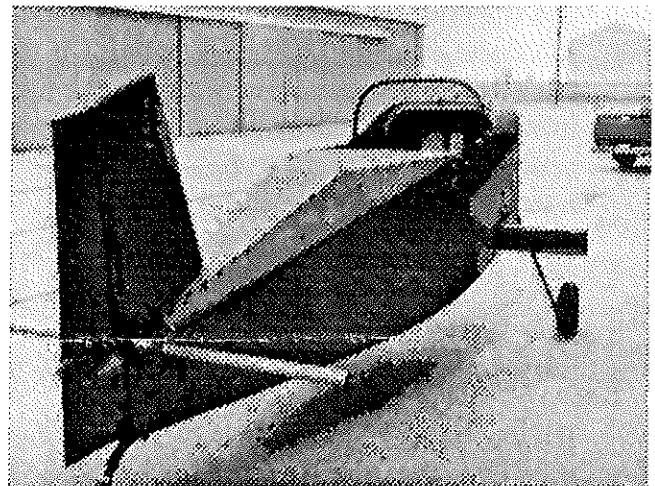
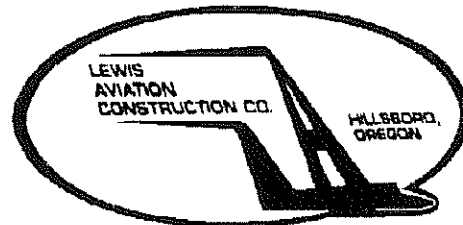
Dear Sirs, Thanks you for sending the newsletter. Enclosed please find our check to help with costs. Lew is hoping to fly this summer, been working at it since 1974. Looking good. Truly hope to hear Dick is improved. Thank you Maxine Avramovich for Lewis 1962- 13th St Cuyahoga Falls, Ohio 44223 Plan #100

Dick Cavin is doing well and staying busy, he's designing a plane! How about an article Dick? Tables are turned aren't they Dick?

Dear Dick, Have about 7 years work toward completion of S-18. Hope you make a go of the newsletter effort. I live west and south of Des Moines about 30 miles by road. Thanks

Paul Shifflett Rt 2 Bx 44, Earlham, Iowa 50072

Thanks Paul, This guy makes it to just about every T-18 event there is, keep up the good work Paul and fly that baby!!



Ken Morgan's T-18 Project Dec 1989

Dear Rich, It was good to visit with you by phone, sounds like your project is coming on in good order. I moved mine back home last weekend to get rid of a 25 mile drive to arpt. should improve my efficiency by a big percent. As I mentioned to you, will send article on dual brake instl & outside rudder cables. Will try to get it to you in couple of weeks. Am forwarding picture as of Dec 89. Now have instr. Panel plumbed & fuel rudder/brake systems complete working on windshield/canopy and seat attachments. Ken Morgan 922 Simpson, Bedford, TX 76021.

Thanks for the pictures and letter Ken!

SUN-N-FUN 1990

EAA Sun-n-Fun Fly-In
Lakeland, Fl.

I didn't make it to Sun-n-Fun, but several good folks sent me some information on the air race. Here a little bit from that newsletter.

RAIN-LOW CEILING-CLOUDS-MORE RAIN-

That's what Mother Nature did to us on race day this year. She did let up just in time for the start, with some blue skies showing through. Out of all race pilots only 3 wanted to cancel and go next day. Sooo off we went. We had 42 entries with 2 more to show up race day, but with the bad weather only 32 planes started the race.

The big race this year was in open class 1A, that's under 100 hp., with seven aircraft on the line at start time. Pat Cargile in his 85 hp. Wittman Tailwind took first at 161.40 mph., Man that is really smoking for a 30 year old design.

The open class 150 to 160 hp. had 3 entries with Frank Smith taking 1st. in a RV-3 at 212.87 mph. followed by DAVE EBY in a nice T-18 for 188.15 mph. Claudia Tonnini in his RV-4 was 3rd. at 177.27 mph.

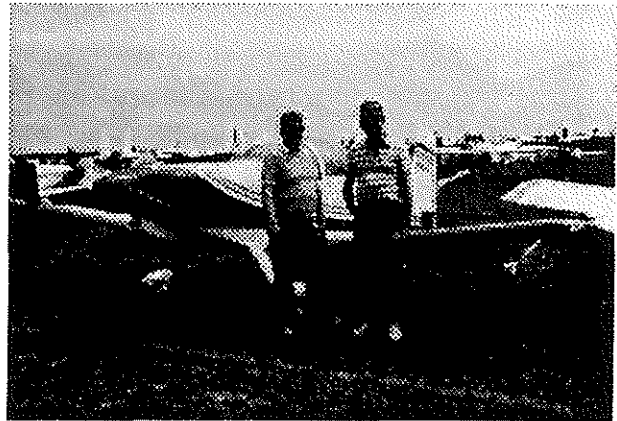
NEXT YEAR

1991 SHOULD BE A GREAT YEAR FOR THE SUN-60 RACE.

with 42 paid entries this year we were able to buy better trophies than usual. *** Next year we hope the weather is better.

Looking forward to seeing you all next year-

Charlie and Marshall Gray
P.O. Box 251
Loughman, Fl. 33858
813-424-6060



*Tom Ostendorf and Ron Reiter (left),
Tom's S-18 54266 first flew on July 1, 89*

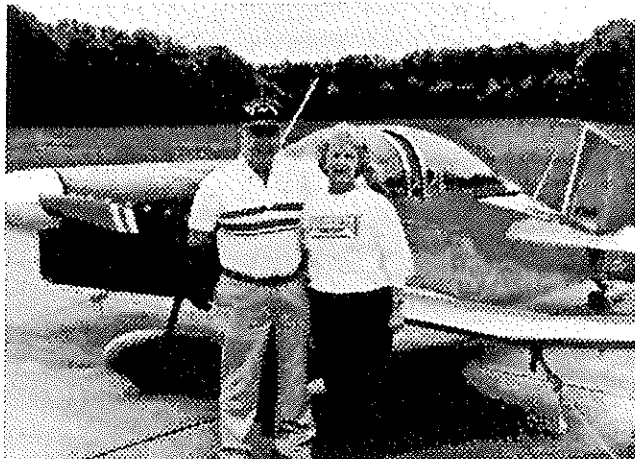


*Jim French working in the Electro Prop
Booth at Sun-n-Fun.*



*Flash! Flash! Dave Eby's T-18 places
second over an RV-4, at a speed of 188.15
mph in the Sun-60 Air Race.. Congrats.
Dave.*

Kentucky Lake Spring 1990



Ken and Mary Rhoads of Peoria, Il



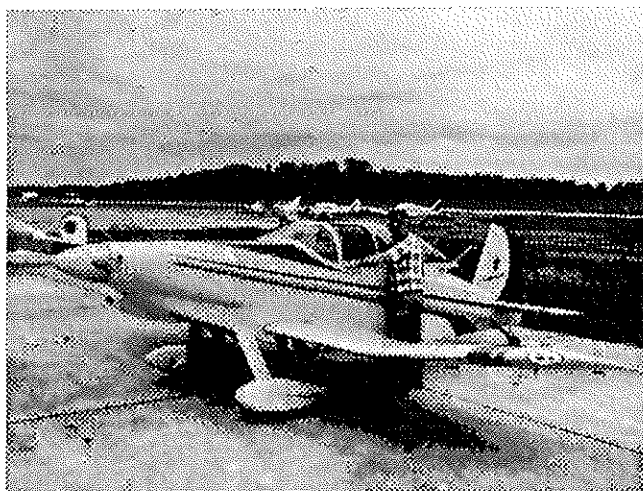
Rich Jones and Jim Paine on a low pass!



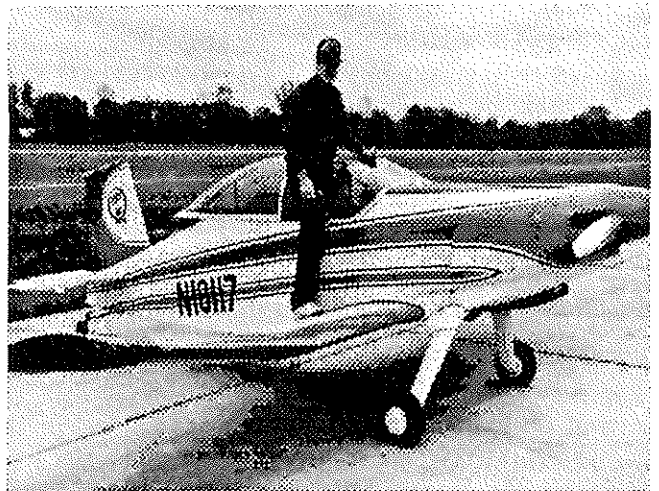
Ed Ludtke of Sioux Falls, SD.



RoxAnne my wife after her first ride in a T-18, look shes smiling!



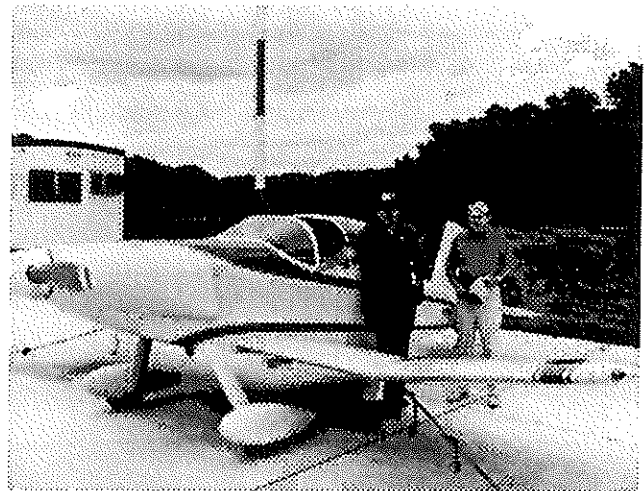
James Paine of Dayton, Ohio



Rick Jones of S. Charleston Ohio! more about this fellow in later newsletters.



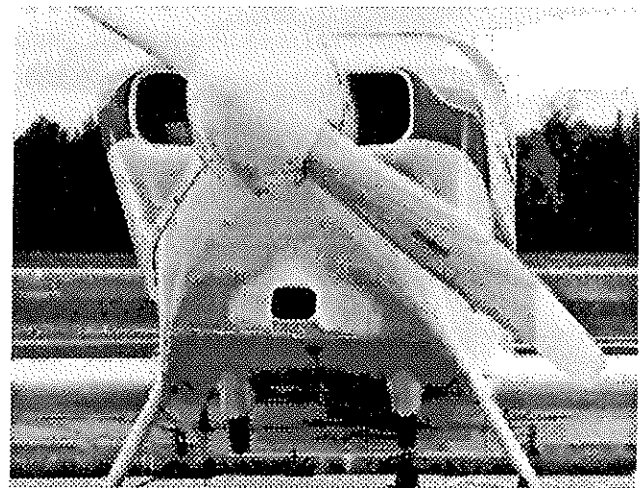
Clif Redden with N18CR of Georgetown , Ohio



Bill Williams and Lee Skillman



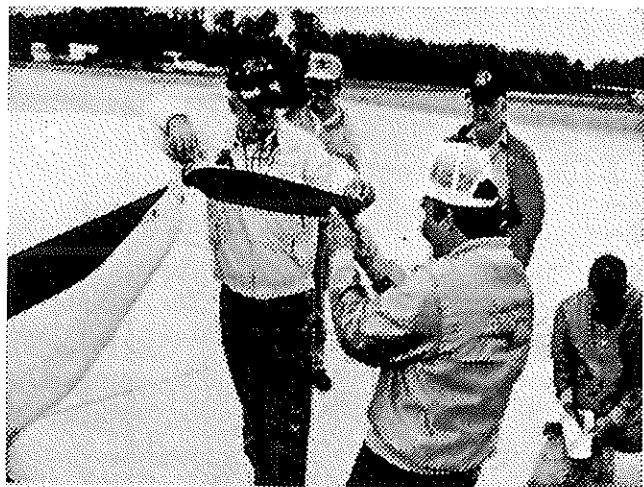
Seminar on gear-cracking, by Jim Paine



Ed Ludtke's carb airbox is the tightest installation I've seen on a T-18

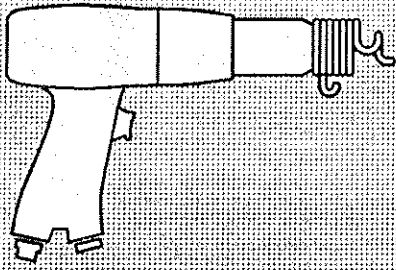


Some of the folks at Sat evening dinner. on the right, Sue and Jim French, and then LouAnn Jones, that fellow across the table is her hubby Rick.



Tom Foster of ElectroProp using an angle level that I am now marketing to homebuilders.

Builders Corner



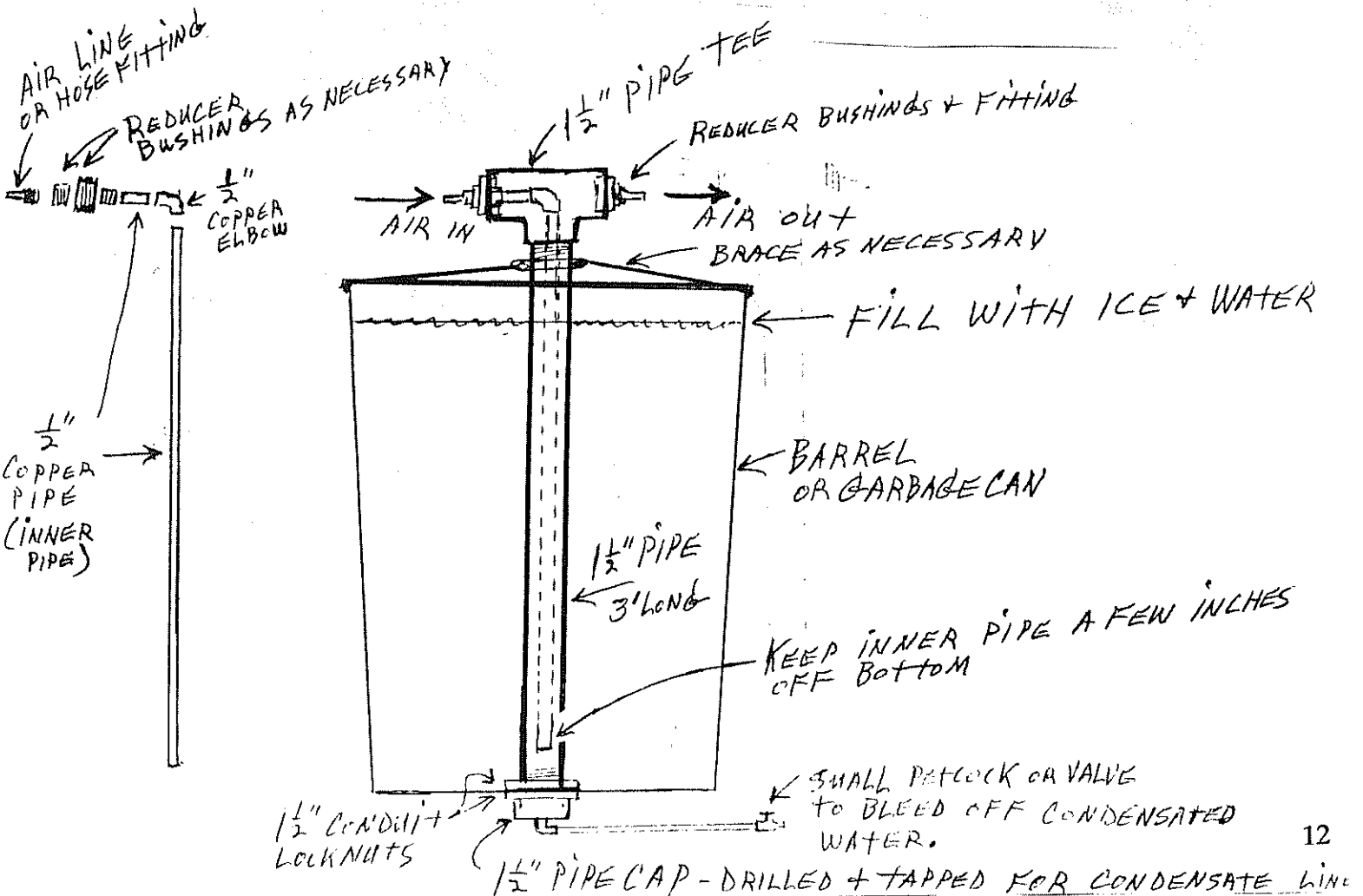
In this Corner :

Air/Water Separator by Cliff Reddon
 English Roller & Performance Chart
 by Bob Dial
 Ken Coleman's T-18 by Don Ruffner
 Electrical System by Frank Snedeker

DEar Richard,

Enclosed is a sketch of the homemade water separator that I used when I painted my airplane. It is made out of 1 1/2 inch pipe and fittings with 1/2 inch copper pipe and fittings for the inner pipe. The bottom end of the 3 foot piece of 1 1/2 pipe needs to be threaded extra long so conduit locknuts can be used to mount the assembly in the bottom of the garbage can, and have enough threads left for the pipe cap. (seal with RTV at locknuts.)

I sat the garbage cans on blocks so the condensate drain line would clear. Fill the can with ice cubes and cold water, then crack the petcock on the condensate drain line and watch the water sputter out as you are spray painting. This seemed to remove the moisture out of the compressed air adequately for me. Cliff Reddon 8774 Airport Rd. Georgetown, Oh



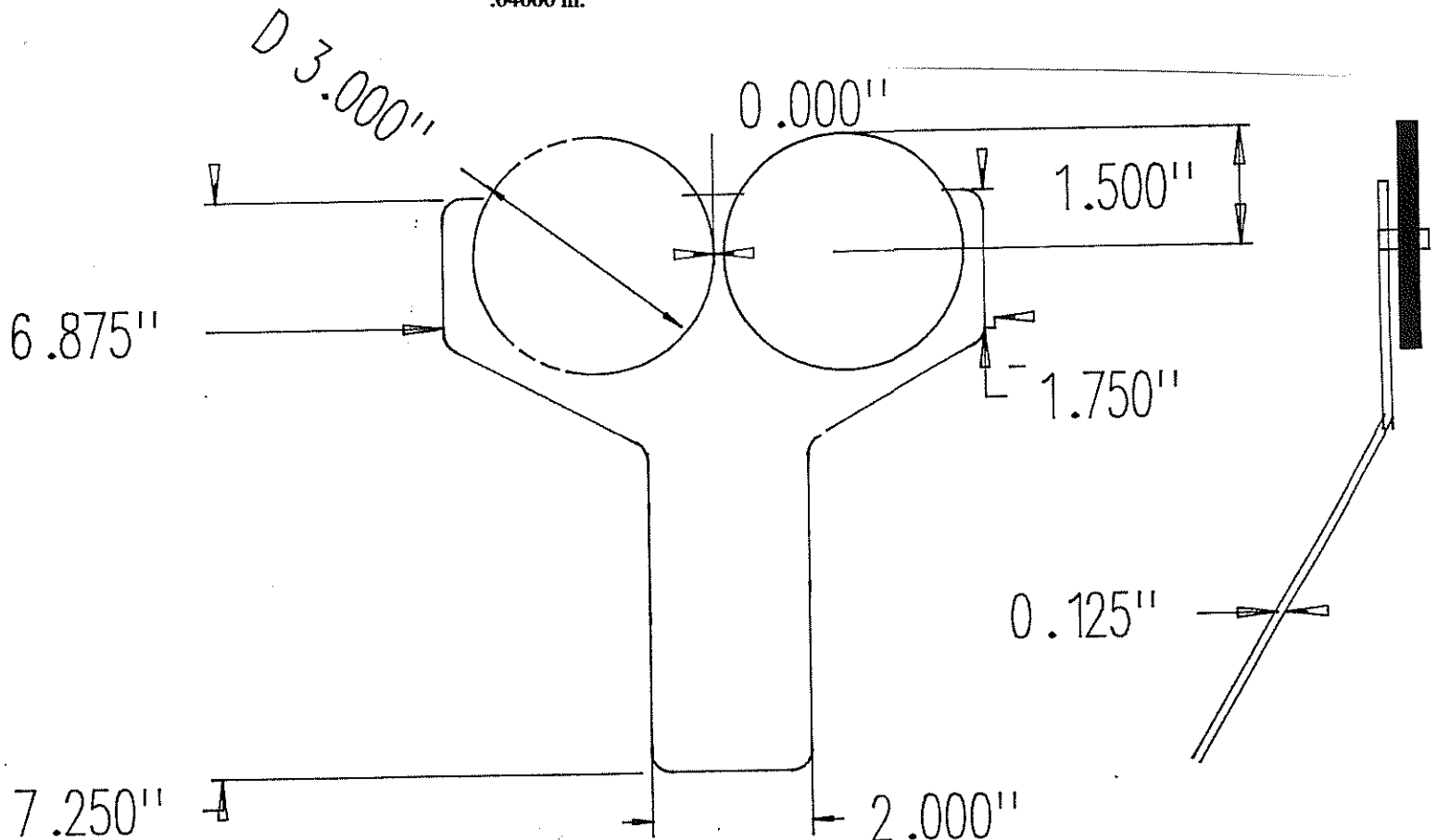
English Roller & T-18 Performance Chart

by *Bob Dial*

The drawing of the English Roller is useful for rolling the edge of the skin where it goes over the windshield. It is also useful for other roll jobs on the airplane. The dimensions are certainly not critical and it may be too large as shown. It will give a nice, airtight fit to the skin at the windshield and this seems to be something of a problem for some builders. In use you should make several passes, bending the skin upward a little at a time. The skin should, of course, be on the outside of the windshield.

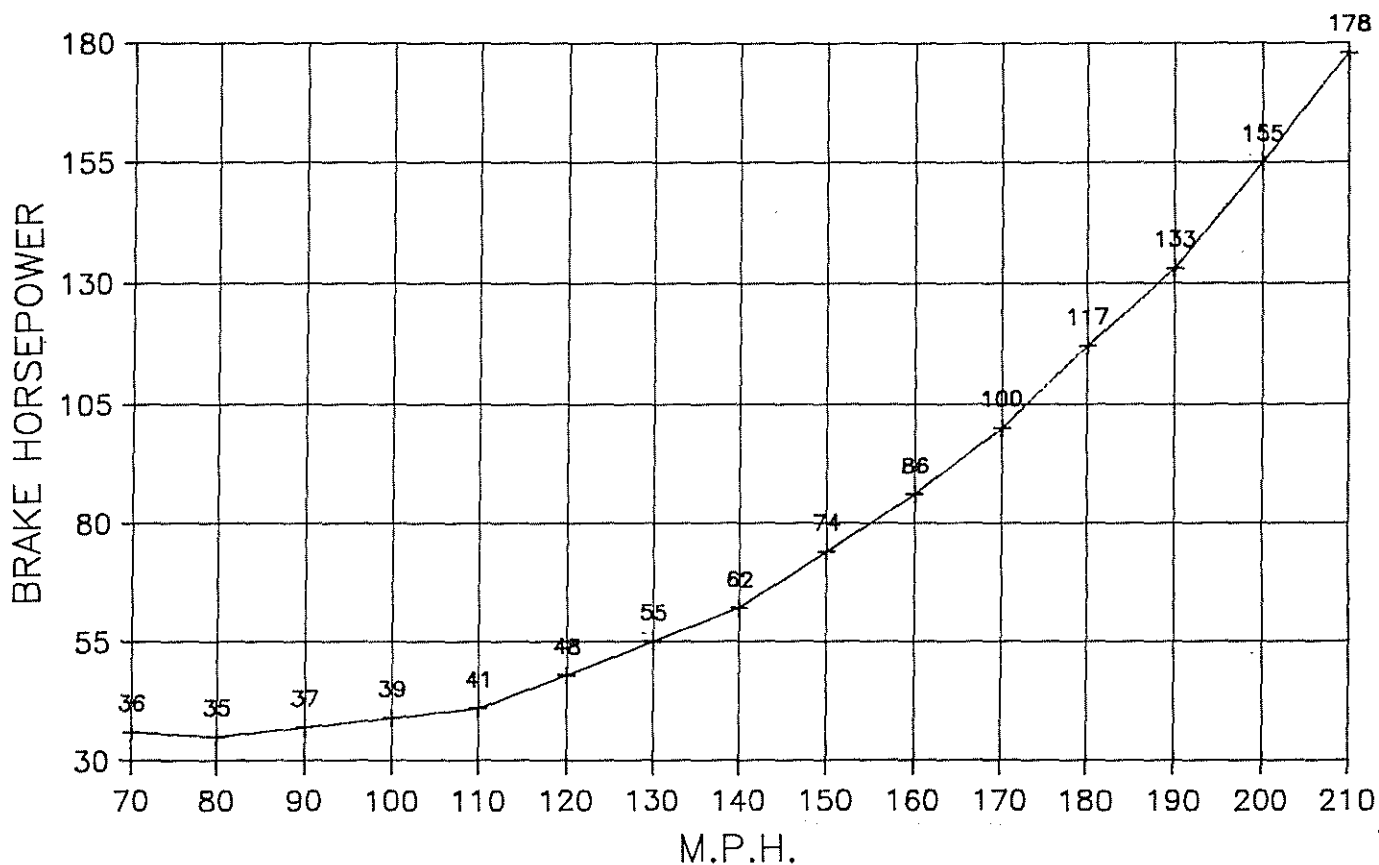
The performance chart is a "howgozit" chart prepared from very accurate data from two different typical T-18s. One airplane is a B.C. Roemers 180 hp fixed pitch prop T-18. It is a clean airplane, somewhat heavy, that won the Lowers-Baker-Falk trophy for the fastest single lap speed at Oshkosh about 5 years ago. The other airplane is Howard Henderson's lightweight, 125 hp fixed pitch, no wheel pants, T-18. Howard is a retired performance engineer from McDonnell aircraft and he gathered the data from this chart. I find it very accurate and it will tell any builder how his airpoane compares with two tested airplanes and how his airplane should perform if it is typical.

Note: Dimensions between rollers to be determined by thichness of sheetmetal to be rolled +.01000 in. max thickness tool will roll is .04000 in.



T-18 POWER REQUIREMENT FOR CLEAN AIRPLANE

ASSUMING $C_D = .026 + .086 C_L^2$ PROP. EFF. = .85%



Ken Coleman's T-18 by Don Ruffner

This is what I was able to put together about Ken Coleman's Thorp. I hope that is acceptable and that the content is of value. This article is a result of Dick Cavin trying to motivate some of us new builders to send him material. I do not feel that I am knowledgeable enough to write about my project, so here is my contribution...

As a result of attending an EAA chapter social function, I have come in contact with a pair of super T-18/EAA people. Last August I met Ken and Gladys Coleman at the Chapter 45 (Pittsburgh) picnic held at Rostraver Airport. They have a great Thorp in a hanger there and I have been able to dig some information out of them about their bird. So, the following is a report on N955K.

First of all, Ken was in the U.S. AIR CORPS in WWII and flew C-47's in the CBI theater. He was in the Army National Guard afterwards and he has about 3000 hours flying time. Ken joined EAA and first saw the plans which Ed Burke of Chapter 45 had. Ken was

smitten and he purchased the plans for his Thorp in late 1964. Actual construction started early in 1965 and he finished the airplane in 1970.

Ken installed an O-320 Lycoming with a constant speed prop from an early Mooney. The landing gear is short gear, with extensions, and Cleveland brakes. He originally had installed Rosenhan brakes, but they would not hold during runup. The panel is full IFR with Transponder and Loran. The empty weight is about 943 pounds. Ken stated that he did not need to add any weight in the tail. I might add that this is one of the very early Thorps, and that it has the high back fuselage (behind the seat,) and does not have flaps.

Ken took the airplane to Finleyville Airport which, at that time, had a 2600 ft. grass and gravel strip. He did high speed taxi tests and when he was ready, he flew it with no problems. Ken did relate that his military experience was a help as he had flown many types of a/c and he automatically planned for emergencies. The Thorp has about 800 hours on it and the only problem he has is cracking of the top center piece of the cowling. Ken replaced this piece with 0.040 thick material and there has not been any cracking since.

As with all Thorp people, Ken speaks very highly of his airplane. He said that the Thorp gets off in about 700 feet and climbs out, on a cold day, at about 3000 FPM. The airplane stalls at about 67 MPH straight ahead with good aileron control. He did state that whenever a stall occurs at extremely high nose altitude, the airplane will develop a secondary stall. Ken said that he doesn't really need flaps as the constant speed prop helps slow the airplane down and helps in descending. He lands in a three point attitude with no problems. Air speed checks were accomplished by matching speeds with a Bonanza and he found that the air speed indicator was reading about 145 to 150 MPH indicated while holding 2300 RPM and 21 or 22 inches Hg. manifold pressure and he believes that this is about 65% power.

Gladys, Ken's wife, learned to fly in a Cessna 150 and then he checked her out in the Thorp. She says she has no problems flying the Thorp and thoroughly enjoys the way it handles.

Ken and Gladys have flown to various parts of the country including Daytona Beach, the Outer Banks, and other places. Ken and Gladys are retired from their jobs but not from flying and are still enjoying their Thorp.

Ken also found that the use of FAA approved Microline worked wonders for performance. One quart of Microline is added to the engine and four ounces to fuel. This is a one time application, and it markedly reduced engine vibration as well as helping to improve fuel consumption. He believes that the fuel consumption has dropped to the 7 to 7 1/2 gallon per hour range.

Ken and Gladys have a very nice T-18 and they are fine people who are ready, willing, and have a strong desire to help Thorp builders like myself. I am happy that I have come to know them and look forward to further discussions and visits with them. Don Ruffner, 106 Spring Hollow Rd. Apollo, Pa.

Electrical System by Frank (Speed) Snedeker

My T-18C has a folding wing and also a fold down instrument panel which I developed. These are two important mods that I recommend but any mod makes building more difficult and time consuming. My T-18 is so near going to Arlington for the Testing program that I can taste it. Having the folding wing I can work on the final details at home and then trailer it to the testing area. Having the fold down panel has saved a great deal of energy in tracking down wiring problems. It is never easy to get behind the panel.

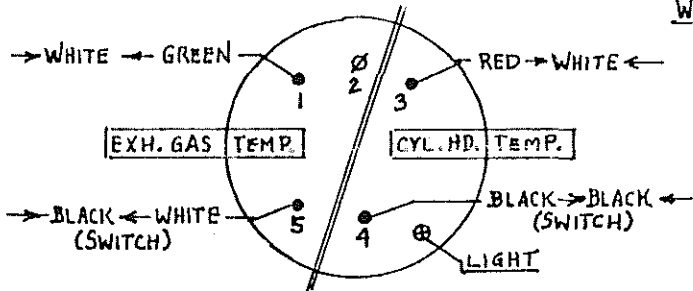
Enclosed is a schematic of my electrical system developed as I proceeded. It does not show all wire sizes. Some are indicated on the drawing like a starter cable (#2). Bullet connectors are used in the wing tip connections, the wing fold area, back of the panel, and in the engine compartment. Three plastic tubes, attached to drilled out AN firewall fittings carry wire sets over the main fuel tank to the panel. Tube 1 carries CHT and Tube 2 carries EGT wires. Other engine wires use the same routing. The tubes allow easy running or removing of wires.

The second drawing enclosed may be helpful for installing EGT/CHT in a single dual instrument. I used a four way switch for each but Westach has a single switch that will do the same. Care must be taken to wire it correctly. Both drawings are for my installation and should be used only as a guide to others to dwell on as they apply ideas to their systems.

One other thing... Cecil Hendricks is a T-18er with years of experience and a technical councilor with Chapter 26. He has been both an inspiration and an instructor to me. I doubt that my project would ever come to fruition without him. Everyone needs someone to 'bounce ideas off of'. I hope that I can be as helpful to other builders.
 Frank (Speed) Snedeker 5528 231 Ave. SE Issaquah, WA 98027

WESTACH DUAL CHT & EGT INSTALLATION

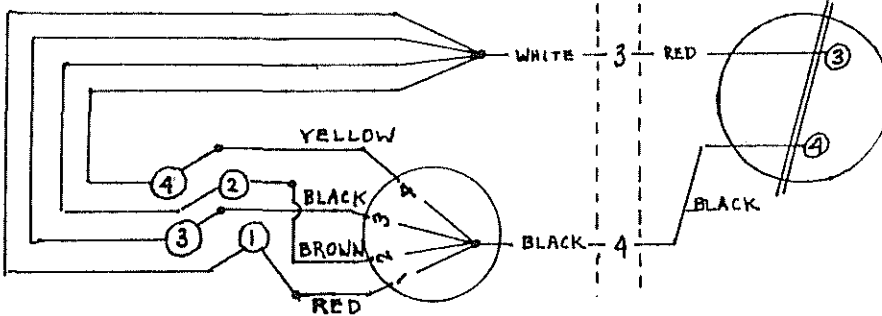
WESTBERG MFG (707) 938-2121



SENDERS & SELECTORS

CHT PINS

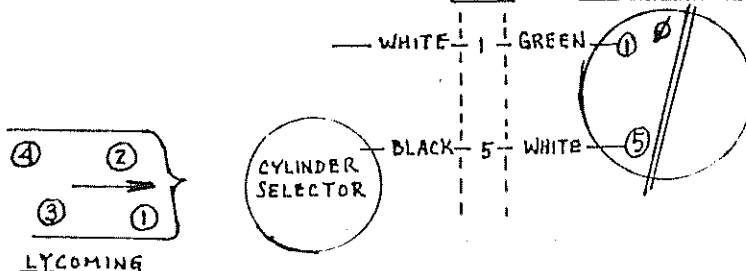
INSTRUMENT CONNECTIONS



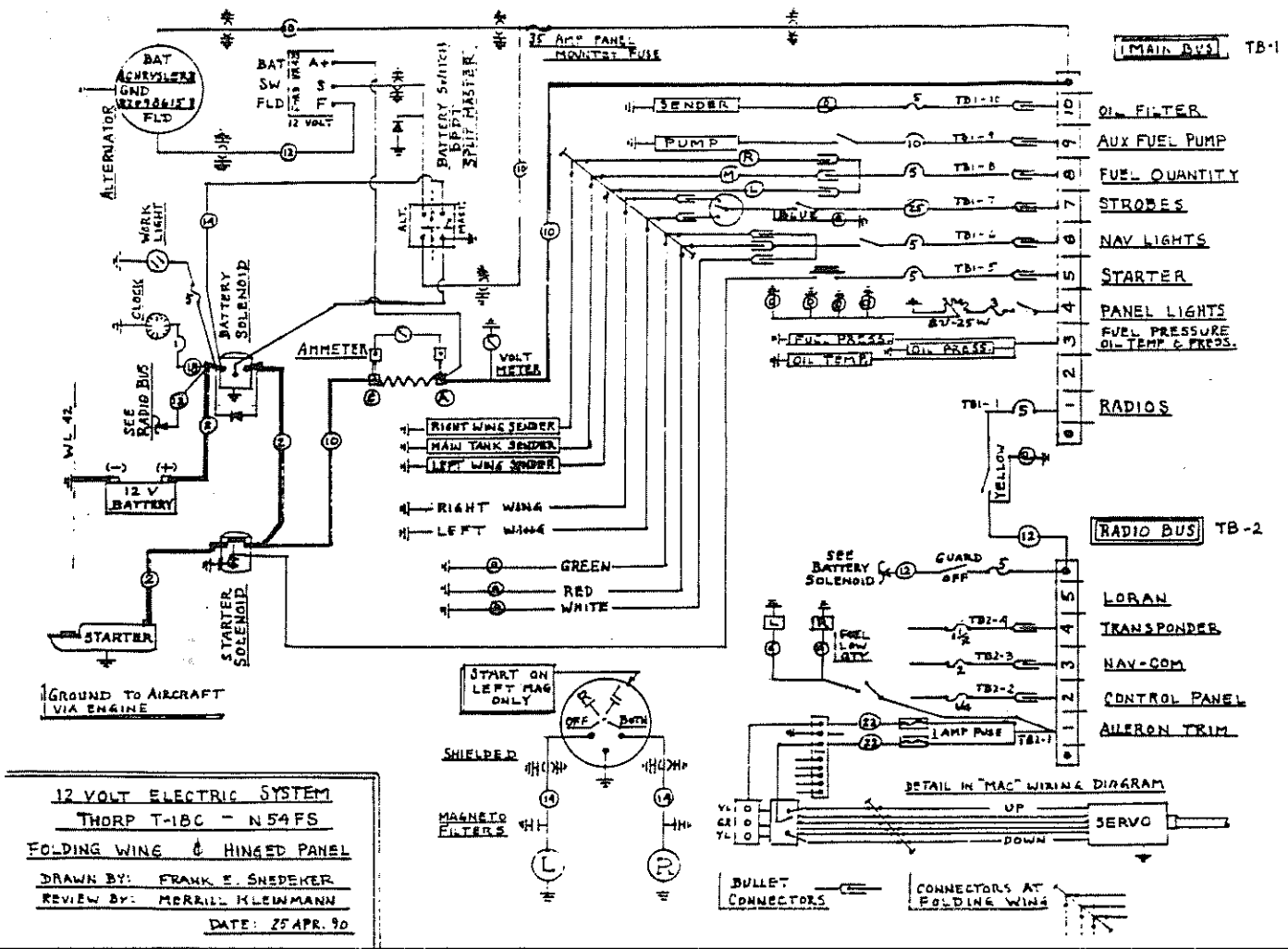
EGT HOOKUP SAME AS CHT ABOVE

EGT PINS

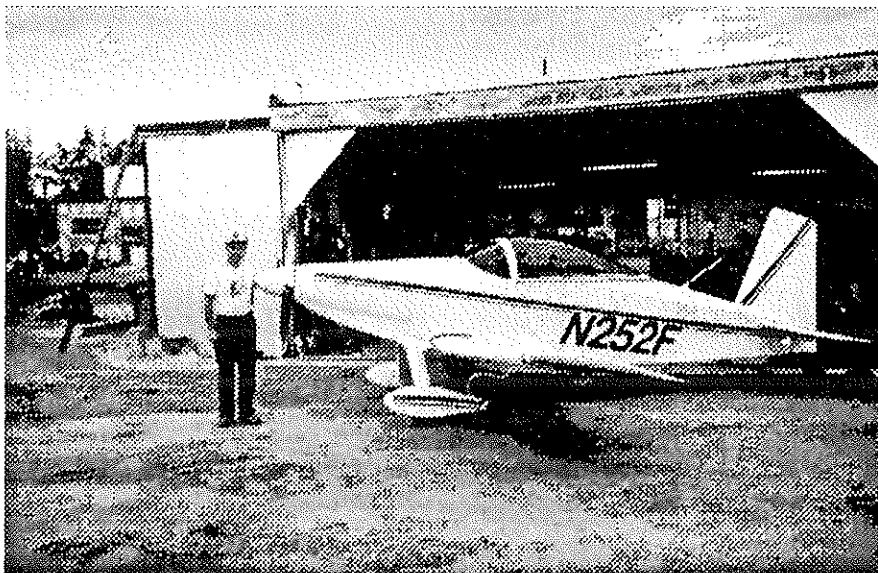
INSTRUMENT CONNECTIONS



Electrical System (cont)



For Sale Items



Lyle Fleming's N252 F For Sale

For Sale: T-18 CW folding wing --Save Hanger Rent-- includes a beautiful trailer. 0-360 A3A O.S.M.H. DG&AH plus 2 new comm, inter com, encoding trans(King), Narco Loran C, 4 E.G.T., 4 C.H.T. Ellison Carb., Sunderland Wing \$35,000 or best offer. 805-942-2481 (cont)

For Sale (Cont from page 17)

also have T-18 fuselage, landing gear & 4" Prop extention. Lyle Fleming 46035 20th St. E. Lancaster, CA 93535

Editor's Note: This is Lyle's second T-18 and I understand he is a good craftsman, If you compare what your getting here vs what's available for this dollar amount it's a bargain folks!

For Sale:

T-18 project, 80% complete, 95% of all parts to complete. All modifications complied with. Flush riveted. No engine or instruments. All assemblies completed. Willing to sell for actual money invested \$6500. Phone 206 392 0607. Wayne Heigel 23023 SE 37th ST. Issaquah, WA 98027

Editor's Note: Another project for a give away price!! I think we're selling them too cheap guys.

For Sale:

T-18 on it's gear, everything to complete except canopy, windshield and prop. Most of the instruments, no radio. Lots of extra parts and all in excellant condition, stored in a heated and dry building. Asking \$4000 call 216-428-6194 Dick Lurkenburg 5390 S. Ridge W. Madison, Ohio 44057

For Sale:

0290G, Zero Time with certified shaft, cam, and reconditioned tappets. Will develope 135 HP with D2 pistons, includes crank flange reinforcement, lugs, chrome rings, 0320 sump. Ken Morgan, 922 Simpson Ter. Bedford, TX 76031 817-498-8533

For Sale: Unused Dynafocal engine mount for a T-18 Phone 513-474-5578 Carl Cole 7927 Heather Glen Dr. Cincinnati, OH 45255

For Sale: Warren Spencer's T-18 CW T-18 with Sunderland's update on airfoil. All parts complete & have been fitted together at one time. Used pop rivets non-flush (each was dipped prior to insertion), canopy needs a skirt to finish it off, no work done on inside. Nothing on firewall. Includes seatframes, engine mount, spinner, metal prop, cowling, all tips, pants, wheels, tires, brakes. Asking \$8000 or \$14,500 for plane and engine. The engine is a completely OH Lyc 160 HP with a flat mount, 0320-B2B, crank is standard, cyl are steel will sell for what I have in it. \$7000. *Warren says he is selling because of health reasons and the craft is well made.* contact Warren Spencer 1512 North Ave Crystal Lake, Ill 60014 Phone 815-459-2578

For Sale: Front and rear spars, main landing gear (2" longer), windshield frame and many ribs, bulkheads, firewall fittings inst. panel and various fitting for wing and fuselage also 2 sets of plans. Call 412-727-2312 Don Ruffner.

For Sale: Set of ribs for standard wing, excellant workmanship, one Scott 2000 tailwheel-excellent, one set of Rosenhan 500/5 wheels and brakes with axles. Two rattray fiberglass seats. Will take reasonable offers. Russel Ross RR #1 Box 411 Sioux City, Iowa 51108

For Sale 5x5 Goodyear Wheels & brakes Make Offer! R.H. Yeakey 5952 RoyalLn S0226 Dallas, Tx 75230 Day 214 750 7438 after 5 214 348 2947

For Sale: P-Strip to run around the canopy I think it will work well. I'll send a free sample to anyone if they will send a SASE Eddie Eiland 1350 Thunderbrook De Soto TX 75115 214 230 8266 Wanted Wing for standard Fuselage. *(Try Ken Morgan Ed)*

