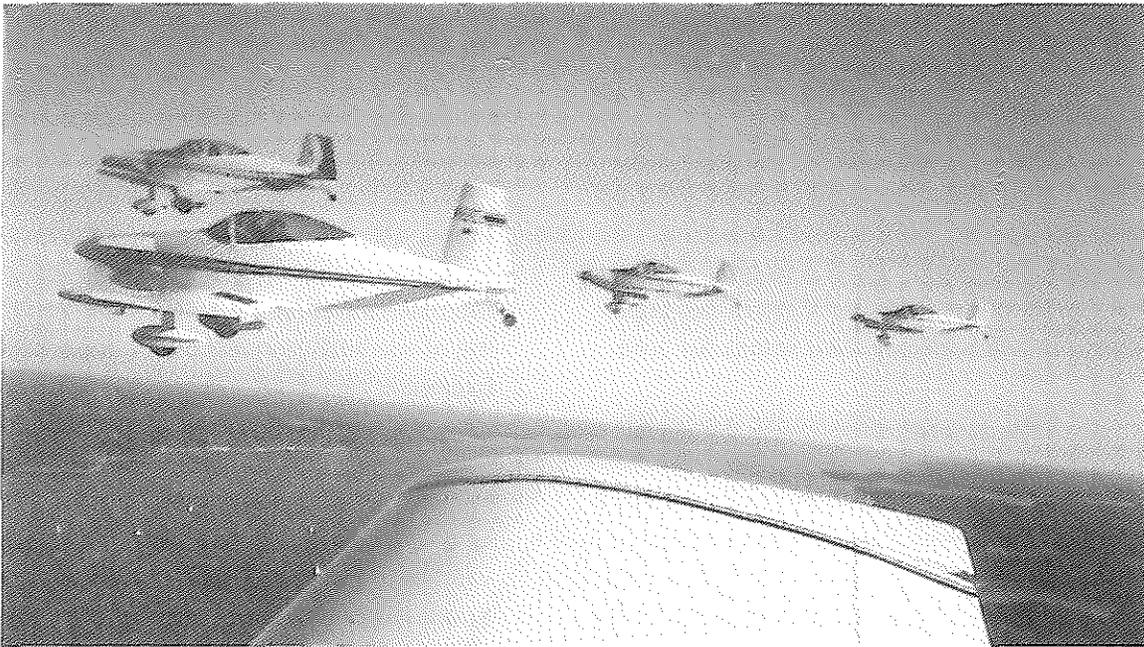


# T-18 NEWSLETTER



*Photo by Roy Farris/Gary Green: Off Gary's wing tip is, Dan Wolfe, Jim Paine, Bob Highley and Les Conwell. Taken at Kentucky Dam 1995.*

## IN THIS ISSUE:

Classic Sport Aircraft

T-18 Travel Club *by Joe Gauthier*

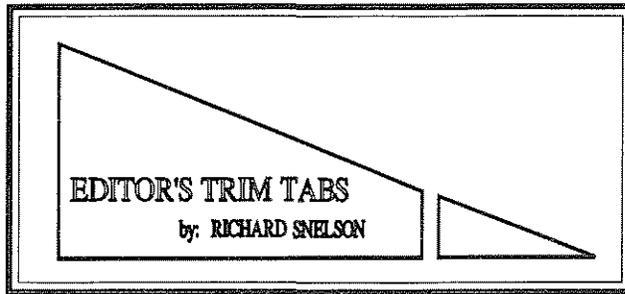
Fat Cat Flies! *by Harvey & Steffie Mickelsen*

Comments *by Gary Green*

Report on Prop Failure

Spring Fly-In "Grandbury, Texas" *at the Green's*  
*(see notice on page 19 for signup details)*

*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.*



## Headline News

### CAFE Report on the Thorp T-18!

What a great report in the Feb issue of Sport Aviation. Quote: "It's a pilot's machine," Be sure and read the report. Show it to all your friends that are thinking about building or buying a Thorp. It will make up their minds for sure.

### Phil Tucker sells Sport Aircraft!

Mike Archer and Phillip Key have purchased Sport Aircraft from Phil. The new business will be called Custom Sport Aircraft and is located in Springvale, California. Both Mike and Phillip have been busy getting the inventory moved and set up in their hangar location. They have been very good about responding to orders that were called in on a rush basis. Word is they plan to kit the S-18 for sale later this year. Good luck with the business. Phone is 209-539-2755. (See their letter.)

On behalf of the Mutual Aid Society, our thanks goes to Phil Tucker for keeping the business going for many years. Phil has always been willing to stand behind his work and to do his best to get out a rush order.

### Forest Products Laboratory Report

I've included this report that was prepared by the Forestry Service at the request of Gayle LeCount. As of this writing Mike Demuth has not seen the report, or the failed prop so he could not comment on it. See the Letter and more comments later in this letter from Gary Green.

### Spring Thorp gathering set for Grandbury, Texas

See Gary Green's notice for this Thorp gathering, and call Gary **NOW** to reserve your room for what promises to be fun event. Rooms at Pecan Plantation are limited. So call now. Phone 817-579-1995.

### New CFI in town.

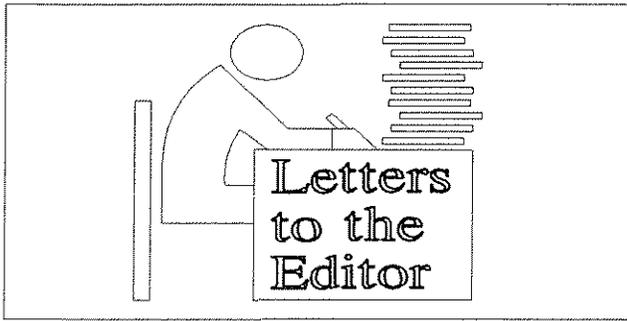
Last week I completed a goal, that I had set for my self two years ago, to be a Flight Instructor. Advanced ratings are becoming harder to get due to the shortage of complex aircraft (rental) required for the checkride. More about that later. With the ratings behind me, I plan to spend more time getting the Thorp ready for a busy summer of flying. I've been moving the oil cooler from the rear baffles to the firewall to stop the cracking of the baffles and the oil cooler flanges. It's happened too many times.

### Sun & Fun ----- April 14-20

Bob Highley and Bill Williams are looking for a big turnout of T-18s for this year's Sun & Fun. Look for a notice in the T-18 parking area, we will try to get together for some evening fun on Sunday. My current plans are to fly down Friday and stay till Monday. I'm having to shorten up because of limited vacation days. See you all there.

### Report on the Dues:

If you have sent your dues this message is not for you. Only 1/3 of the dues are in. That's making it difficult to plan and publish this newsletter. Last year was the same as it took two notices in the newsletter and two separate letters to finally collect the late dues. Twenty members never paid at all and they won't be reading this! I guess everyone is used to getting four to five notices for magazine subscriptions, so they tend to ignore my feeble attempts to get the dues in on time. It never fails when I cut some one from the mailing list, two months later "I didn't get my newsletter, what wrong??" When that happens it's extra postage and printing to get that member caught up. So bottom line: send you dues now. Thanks, Rich.



From: SchischkaA@caa.govt.nz (Tony Schischka)  
 To:rsnelson1@aol.com (T18)

How are you getting on with the oil cooler? I had a real problem locating mine with the updraft cooling system. Re my baffles, I will try and describe them, if that does not work I'll draw a picture and post it to you.

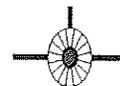
Dear Rich,  
 My new address is: Steve Hawley, 1285 W. Paintbrush Pl., Tucson, AZ 85704.  
 Please renew my newsletter subscription. Send the back issues also if you think I am missing something important. I've been using the T-18 for a lot of traveling. I donate a day a week for a Mission organization named Tribal Air Communications in McNeal Arizona. I commute with the T-18. It is about 120 miles. Sure is better than driving. Last July my wife and I flew it back east. We left Tucson and went to Houston, Aberdeen Mississippi, Sanford, Florida, Orangeburg SC, Waxau NC, Winchester VA, Atlanta, Oak City, and home. My average ground speed was 186 and the fuel burn was 8.6 gph! That is economical flying - much cheaper than airlines. We were fortunate in that the weather was generally very good. Some bad visibility, but then I think that any time I can't see 60 miles things are not so good. We also flew up to Watertown NY a year ago. I just today ordered the B&C light weight starter and alternater. They said it would be a month before they could be shipped because of such demand. I plan on taking the plane apart, stripping the paint, and doing a general overhaul. Afterall, its been 17 years since it was built and I have 968 hours on it now. It might be a year before this work is done but it is in the works. I'm in the middle of a complete restoration of a 1946 Bucker Jungman at this time. I plan on making the T-18 Fly In in Texas next June. Good to be back in touch.  
 Steve.

The baffling is very similar to the standard with the exception of the front end of the engine which is essentially identical to the back baffle. All quite simple really, only difference with the seal material is that it faces outwards rather than in since the higher pressure is in the lower cowl. The outlets are just placed somewhere in the upper surface of the cowl within the area surrounded by the baffling.

The basic principle of this system is that the top surface of the (average) cowl feels a depression thus assisting the cooling air to exit. BUT, the T18 cowl has a 5 or 6 degree downward slope in flight causing a positive pressure over the cowl hence the little deflectors in front of the outlets, these may be visible in the photos I sent. May be they could be a little further forward. See the article in February Sport Aviation page 39 paragraph refering to Fig 6. He has uncovered a similar problem. Now if I could only get a copy of that program!

Regards, Tony

*Editor's Note: See newsletter #97 for pictures of Tony's cowling.*



Subj: SALE OF THORP  
Date: 96-02-20 11:42:25 EST  
From: flythorp@eastky.com  
(BOB MORRISON)  
To: Rsnelson1@aol.Com

RICH

I have decided to sell my Thorp so that I can complete a LONG- EZE project that I started 10 years ago. If possible can you run the ad. in our next news letter. When I sell my S-18, I would like to buy an abandoned t-18 project to complete so let me know if you know of one.

THORP S/18 WIDE BODY SPORTPLANE .  
TOW IT WITH YOUR CAR, KEEP IT IN  
YOUR GARAGE.

LYC. IO-360 200HP, 266 SMOH , FACTORY  
NEW HARTZELL CONSTANT SPEED PROP  
53 HRS ,266 HRS. ON AIRFRAME  
165 KT CRUISE, 2000 FT. MIN RATE OF  
CLIMB  
LONG RANGE WET WINGS  
FULL IFR,DIGITAL MK 12D AVIONICS,  
COUPLED AUTOPILOT  
I MUST SELL TO COMPLETE ANOTHER  
PROJECT!  
\$35,000  
BOB MORRISON  
(606) 789-7379  
EMAIL: flythorp@eastky.com



Dear Rich, Enclosed is my check for 96 Newsletter. I want to complement you on the fine job with the Newsletter the past year and I especially enjoyed the article from Tony Schischka of New Zealand.

His invitation to visit should not be taken lightly, My wife and I visited the Schischka's a few years ago. They were outstanding hosts, inviting us to their home and a flight in Tony's T-18.

Unfortunately I missed the dinner and forum at Oshkosh and the chance to repay the Schischka's hospitality!

Thanks again for the newsletters and the pleasant memories of a wonderful trip to New Zealand.  
Wendell Green, Monte Verde Argyle, Texas  
76226



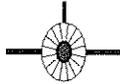
December 22, 1995

Dear Rich:

Here's my \$25.00 dues for the 1996 newsletter. Been making some slow but steady progress on my T-18. I wasn't satisfied with my rear deck area and hip skins. My father had ended up with some buckles and such which he had filled in with bondo. I just had to do something about it. But didn't know just what. Then I remembered that you had written an article about that area, so I went back and read it. We'll, I got the drill out and removed everything. Then I called Phil Tucker and ordered new skins.. Haven't gotten the new parts yet, but the form blocks are finished and the flat area under the canopy is installed. So far it looks much better than before. Also fitted the prop spinner this fall. Seems to have come out pretty well. Also have a cowling on order from Phil, but still waiting for that.

Ran into a problem with a crossover exhaust system from Aircraft Spruce which might be worth mentioning in the newsletter; could save someone else some trouble. It seems that the "Special Crossover System" designed for the T-18. P/N 33250 is for the "wide-deck" engines. The exhaust pipe on number four cylinder interferes with the intake pipe on my 0-290 engine. Mr. Clinton Anderson of Custom Aircraft in San Diego who makes the systems for A/C Spruce assures me that the "Standard Crossover System". P/N 33251, will fit the 0-290 and will swap the 33250 that I have for a standard 33251 at no charge. However, he's not sure if it will fit inside the "Thorp Style" cowling. When I get the

cowling and the 33251 exhaust system I'll let you know how it works. Bob Hartmaier



Dear Rich,

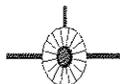
The Newsletter is great as always. I'll try to write something for you in the near future. My ship is flying very well still. I don't know if you saw my new wing tips? Also made a little modification in the air scoop area. I also installed a different main nozzle/jet in my MA4-SPA carb, with good results ---- better distribution & an increase in economy.

We made the Placerville Fly-In. It was great.  
Best Regards, John Evens.



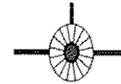
Dear Richard,

I finally finished my instrument panel, except for my vacuum system. The article in N.L. # 97 Why Vacuum Pumps Fail was good timing for me. All of your articles in 97 were very good. Keep up the good work. Sincerely, Mel Clark

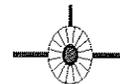


Dear Richard,

My T-18 project #1030, is nearing test time, this year I hope. An old time T18 enthusiast, Howard Henderson, will look at my airplane within the next couple of months in preparation for the application for the FAA Airworthiness paper. This is a good time for me to review the newsletters & appreciate their value. Thank you for your part in making them available to someone like myself. Sincerely, Kim Nack 2940 Devonshire Dr. Florissant, Missouri 63033



Dear Richard, I found a copy of your newsletter and thought it looked pretty good. Enclosed is my check for \$ 25. I have built two T-18s from scratch. One is still flying and is at Arapahoe Co. Airport outside Denver. N3098. Last year I bought a project from Milly Warwick that Bill was working on when he died. I have known Bill and Milly for almost 25 years and was very happy to finish Bill's work. I should have it flying by the end of the year. I go to Sun & Fun every year. Maybe I'll see you there. Chuck Borden.



Dear Rich, Just a note to say Hello! Tell you how much I'm enjoying my T-18, N4MY and the T-18 Newsletters. Looking forward to summer and much more flying - - It was 30 degrees below 0 here last night - - too cold to fly anything!

Speaking of summer, I want to invite all T-18 Flyers and families to our annual Fly-In - Pancake Breakfast at Viroqua, WI. this summer. We plan the fly in the first Sunday following Oshkosh which this year will be August 11. We are in southwest, WI, 30 miles southeast of LaCrosse. The airport is I.D. is Y51. We have 3350 of paved runway and 2000 feet of grass, however the grass strip is used for camping and parking airplanes during the fly-in. Camping is available and we also have a Super 8 with pool about a 1/2 mile away.

I'd love to see a turnout of T-18s. I'll be glad to help with transportation and lodging assistance for T-18 attendee's . Come show folks these great little planes. We served over 700 breakfasts last year to Fly-In & drive in guests. Call me for info. Phone # evening is (608)637-2663 Bill Essenburg

15 Jan. 1996

Dear, Rich and Roxanne,  
I hope that both of you are, doing well in this new year. I sure do appreciate what the two of you have done and are doing for the MAS. The last newsletter was excellent and it just seems to get better.

Please do not faint just because I have sent in my dues almost on time. At least I took care of this task much better than I did last year.

Thanks again for sending a couple of people in the right direction to find me. Both of them are interested in the surplus parts which I have.

I have everything set up in my garage and I can get back to having fun working on my Thorp. I haven't done much of anything on it for the last six months.

The Scottsdale area is real nice and the weather is certainly better than I am accustomed to in Eastern Pennsylvania. However, I do miss the kids, grandkids, trees, etc. Sure is a lot to do here.

If you get out this way, you are certainly welcome to stay with us. We have a nice guest room and Elaine is a pretty good cook. We would love to have you visit here. Well must get busy and thanks for all of your help. Sincerely,  
Don Ruffner



Dear Rich,  
About a year ago I started a new company Aircraft Details. We manufacture small hard to find & get aircraft parts. One of the products we manufacture is a stainless steel firewall shield. We also manufacture 5" & 60 wheel shims. In the past we advertised in Sport Aviation & Kitplanes with limited success. Because of this our stainless steel firewall shields will be offered by Avery Enterprises, Wicks Aircraft Supply &

Aircraft Spruce. Also Vans & Mustang Kit manufactures are offering them to their customers.

I am sending you a copy of a new product release that will be published in Sport Aviation & Kitplanes and information about our products. I will offer our products to the T-18 group at wholesale prices.

Thanks for a great newsletter.  
Al Bosonetto 32625 BENSON DR.  
WESTLAND, MICHIGAN 48185-1573  
800-826-5118 313-261-5518 FAX 313-525-1633  
AOL N8AL

*Editor's Note: See pictures of product in this newsletter.*



Dear Richard,

I have some T-18 stuff for sale, I bought some parts from a wrecked T-18 and will use some in my new T-18 that I am building. Love flying my other T-18 but also like building!! Anyway, I have wing spar for sale, Main spar that is, but looks like some repairs have been made, one side has a row of rivet holes miss- matched (extra holes) other wise it looks good -, includes end fittings, walking beam and push pull tubes and control horns. \$150 for all. Elmer Hymen 36 Center St. Midland Park, NJ Phone is 201-444-7432



Note from Larry Eversmeyer, Stainless cowling fastners , 4002-N3S, are available from Skybolt at 800-223-1963

# Classic Sport Aircraft

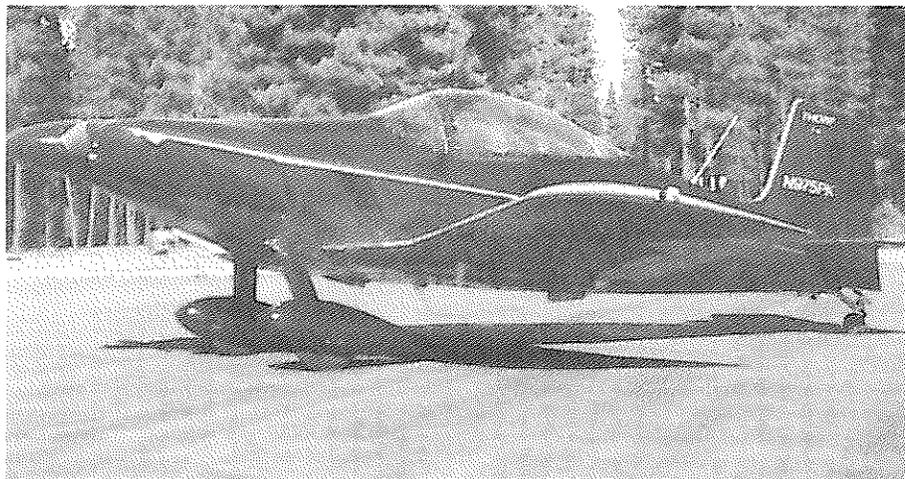
My friends Mike and Frankie Archer along with myself and my fiancée, Phyllis Ward have bought Sport Aircraft from Phil Tucker. The purchase was effective January 3rd, and we moved the company January 19th. The name of the new company will be Classic Sport Aircraft and will be based at Porterville Airport in Ca. Which for those not familiar with the area is about 150 miles north of Los Angeles. The mailing address is 19426 Campbell Creek Dr, Springvale, Ca 93265 and phone number 209-539-2755. The phone is not manned all the time but the recorder will always be on and we will return calls ASAP.

Right now we are trying to unpack and get things organized. This will take some time. Our goal is to offer the S-18 as a kit by mid summer. We have all agreed that we would like to continue to provide the trophy for best Thorp at Oshkosh.

Mike and I have both been Thorp enthusiasts since the early 70's. We both had the honor of meeting John at his workshop at Burbank Airport. We were hot to build, but one thing and another kept us from it. I eventually bought Earl Ody's original Thorp SN 480 in 1993 and have completely restored it. New instrument panel, new instruments, radios, new wiring throughout, new interior, strip and paint inside and out. I've enclosed a couple of pictures. Mike is now green with envy. He is currently in year 13 of a plans built Stuart S-51 project and he also has a Stearman project underway. Just to make sure we have no idle time, we will be building a new S -18.

We hope to be able to contribute to the Newsletter from time to time, and look forward to seeing every one at the Thorp Forum at Oshkosh 96.

Please change the address for my newsletter to 6050 Placer West Drive #302, Rocklin, Ca 95677. My phone is 916-974-9300 days, and 916-783-7756 evenings.  
Sincerely, Phillip Key



*Phillip Key's restored Thorp T-18*

12 February 1996

CLASSIC SPORT AIRCRAFT

Dear Richard:

Here is some background on myself (Mike Archer), my wife (Frankie), Phil Key and his finance Phyllis Ward.

In the early 70's Phil and I had the pleasure of meeting with John Thorp at Mr "C"'s Coffee Shop in Sunland, Ca. We both wanted to build the T-18, but life had us wander in different directions. In 1993 Frankie and I called on an ad for a T-18 for sale and Phil and Phyllis went along and tried it out. They ended up borrowing our deposit check that we had taken with us and bought the airplane. It turns out it was built by Earle Ody. Phil has completely refurbished the plane (as you can see from the photo enclosed) and it is beautiful.

Some time later he heard Sport Aircraft was for sale and he proposed that we go together and buy the company. We did and made the move from Lancaster, CA to Springville, CA on January 19, 1996. We are still sorting to see where we are and what is good and not good. We are working very hard to get everything squared away so we can find what we do have.

Michael Archer (brief background)

*USN* - flew as flight engineer/plane captain in Martin P5M.

Employed as Operations Program Manager by Litton Industries.

Started my own distribution business in 1978 and developed a successful Aircraft/Parts sales business, specializing in agricultural aircraft and still operating today - will merge into Classic Sport Aircraft later.

My wife Frankie has been a major part of our aviation career, including bucking rivets, and can talk aircraft with the best.

Phil Key

Commercial, IFR and Certified Flight Instructor. He is one of the few instructors qualified in taildraggers.

He was employed in Operations Scheduling also at Litton Industries which is where we first met. In 1978 he started a computer payroll service company. This too was successful.

Phyllis Ward

New to the aviation way of life, but has clutched to it with both arms.

All four of us are active members of EAA Chapters 152 and 1124.

Our plans are to build parts and kits for both the S-18 and the T-18. We will have most of the items on the shelf this first year. We do not plan any major redesign to the airplane, but will incorporate minor changes to correct any problems identified in the field or cost reduction items.

We have started shipping from the parts built by Phil Tucker. Things will be slow at first but please tell everyone to hang on and be a little patient as we are backing up for a good start. As part of our drawing package we will include the first year membership to the T-18 Newsletter. We will then send

you the \$25 and their name and address. We believe your writeups in the newsletter will convince them the S/T-18's are the way to go. We will include your name and address for back issues.

So far, we plan to attend the following EAA Fly-In's:

May	Chino, CA
June	Camarillo, CA
August	Oshkosh, WI
Sept	Madera, CA
October	Copperstate - Arizona

Placerville T-18 Fly-In and others but do not have any dates, but we will be attending as many as we can. Thanks for your help and please advise us of anything we can do to further the S/T-18 airplane. Tell us what you need from us for Oshkosh.

PS Check enclosed for our subscription to your great publication.

Sincerely, CLASSIC SPORT AIRCRAFT

Mike Archer

19426 Campbell Crk Dr

Springville, CA 93265

(209) 539-2755

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## FOR SALE

**For Sale:** Thorp T-18 Standard Body built in 1985, 150 HP 720 hours. Airplane is a former winner of Best T-18 at Oshkosh and is a Wright Brother's Award winner. KT 97 Com, King Xponder and Loran. Price is \$32,000 For more information call 605-361-2301

**For Sale:**

Scott 2000 Tail wheel (New) \$300

Maule Tail Wheel (Used) \$75

Apollo Loran 612C (Used) \$250

Danny Cummings Phone Days, 615-473-5401

Evenings, 615-668-9899

**For Sale/Wanted**

For Sale: Flat engine mount with mounting ring.

Wanted: Dynafocal engine mount and Prop for 180 HP- 0-360

William Beswick 7144 Heathwood DR. Jenison, Mich. 49428

Email T18BES@aol.com

# T-18 Travel Club

December 28, 1995

Dick,

Back on November 28, 1995 I sent you a letter telling you about the successful first flight and subsequent flying in our S-18. Our Thorp is now resting for the winter in my garage. The convertible wing makes that very easy. I'll complete some detail work on the paint, finish the upholstery, install wheel pants and fairings and put on my new Sensenich metal prop and Ellison throttle body slide carburetor.

The reason for this letter is to specifically suggest that the Thorp T-18 / S-18 Mutual Aid Society (You) could publish a list of members who are willing to share hospitality with other members who would like to travel around the country without making millionaires of the Hotel/Motel and car rental agency owners. I for one, would be perfectly willing to offer our hospitality to any Thorp crew traveling in New England who would like to fly in and out of central Connecticut. I've discussed this with my family and they agree. It occurs to me that this may have previously been stated but I haven't seen it so forgive me if that is the case and add my name and phone number to the roster.

Within the next year or so, when I retire from the telephone business where I've worked for 34 years, my wife Carol and I are planning to visit friends in all corners of the country in our S-18. It would be comforting to know that there are other Thorp enthusiasts who feel the same way as we do regarding hospitality for the Thorp fraternity away from their home base.

I hope you think this is a good idea and are willing to pass it along to your readers and encourage participation. I would be happy to serve in some coordinating capacity if you think that would be appropriate. I could compile the list and keep you updated. Please use my address and phone if you agree .....

I offer my congratulations on your achievement at the Dayton Air Fair. I'm looking forward to meeting you again this summer at OSH and looking over your Thorp. Joe Gauthier 9 Kowal Drive Cromwell, CT 06416 (860) 635-4058

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Good idea Joe! I'll be glad to add a note to the database for those that would like to add their names to "a come visit roster". We will put yours and our names at the top of the list as stopping places. I plan to publish a new membership list very soon so if you would like to be listed drop me a line now. Richard Snelson Route 3, Box 295 Clinton, IL 61727

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## *Fat Cat Flies !*

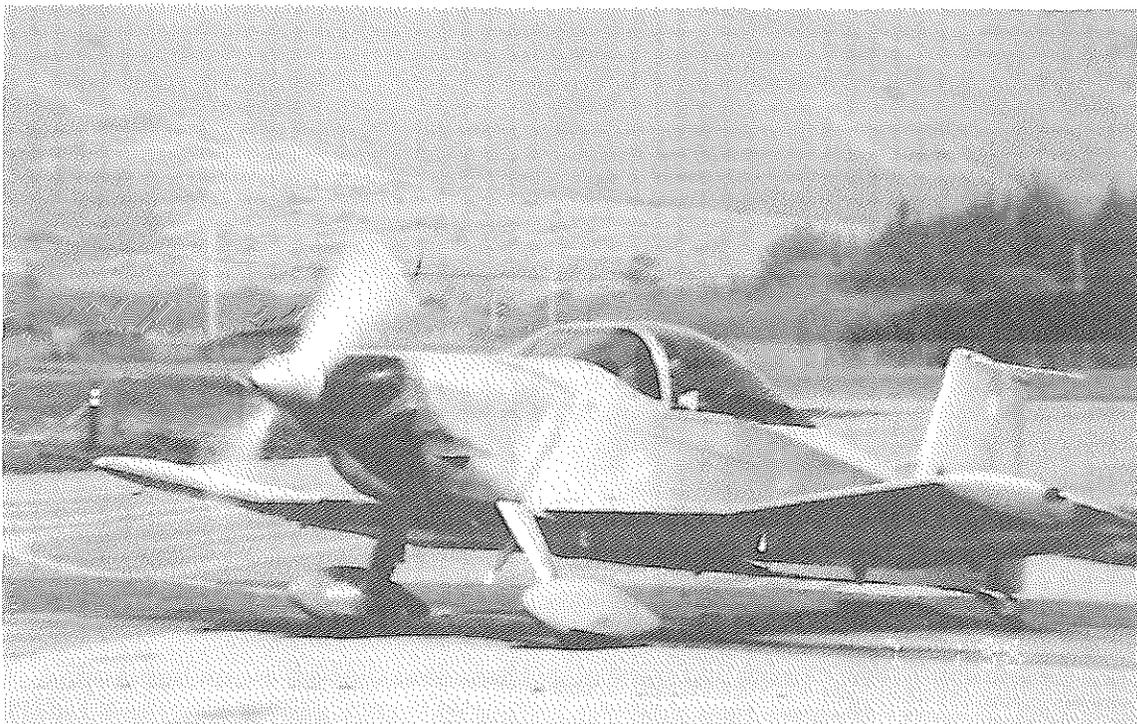
by **Harvey & Steffie Mickelsen**

Well folks this is what we have all been waiting for — “Fat Cat Flies”. The big event occurred at Half Moon Bay Airport (HAF), California on January 7, 1996.

When I received a letter from John Thorp in January 1979, letting me know that my plans (#1332) were on the way, I never thought it would be 17 years before my T-18 would fly. Some of those years were spent making modifications and not actually accomplishing much construction. (See Newsletter # 90, dated 2/18/94.) Fat Cat has an empty weight of 1080 pounds including 8 quarts of oil and lots of electronics. The engine is an IO 360 B2G6 and the prop is a Prince 68X78 wood with “P” tips. It is a wide body with non-folding (I can’t say standard!) wings.

When the article came out in Sport Aviation (Sept. ’95) on breaking in the engine on the ground, it solved the conflict between breaking in the engine and conservative flight testing. I made a hood out of galvanized iron and got the Engine Components booklet and a couple cases of their break-in oil. I then put on 2.2 hours of ground running with my tail spring towing adapter hooked to my truck tow hitch. The hood kept temperatures in the green and oil consumption went down as the rings seated. I highly recommend the procedure. Besides breaking in the engine properly, it builds your confidence in the engine.

I taxi tested Fat Cat next and got her up to 60 mph with the tail up. This also determined that the right break was inop. Many hours and bruised arms later the problem was located - a loose fitting. Cooling was no problem, with cylinder head and oil temps in the green, so the new cowling works. After some Summertime experience I may even close up the cooling air scoop a bit.



Fat Cat in the nude, Tiger paint to come

*Steffie Mickelsen, wife and navigator, camcordered the events of the first taxi test and flight test.*

Before doing any flight testing, Mac Booth let me fly the T-18 he inherited from his father. Mac is a student pilot and taking lessons in his Thorp from Hal Stephens who also gave me my biannual. Hal and I flew it for 2 hours. It is one of the original high back models. That experience was very helpful. Thanks Mac and Hal! Mac flew in to HAF for the test flight, one of his student solo cross country flights.

An old flying buddy, Mark Kadrach, talked me out of doing the first flight and recommended a friend Robin Reid as a test pilot. Robin is a First Officer on 747s for Northwest Orient, a CFI, an A&P, a Formula I race pilot at Reno, etc. He has flown two other Thorps including Mac's. He is Amelia Reid's son. Amelia is still flying airshows! Robin charged me \$250 and earned every penny of it. He's great! *(Editor's Note: Amelia Reid was my first flight instructor back in 1963.)*



Steffie and Harvey with Fat Cat

Robin first spent 4 hours inspecting the plane. (The FAA inspector had spent 10 minutes.) To my total amazement Robin found a wrench in the tail cone! Then after Robin's inspection, I spent the next few days working off the small list of squawks.

Then on January 7, 1996, Robin and many others arrived at the Half Moon Bay Airport. Robin began his inspection work. He helped me close the airplane up. After another very careful preflight, he put on the 'shute', jumped in and did two high speed "taxi tests" never exceeding 5 feet altitude. After another thorough inspection it was time for THE FLIGHT.

What a thrill! Watching and hearing my airplane take off. The flight lasted about 30 minutes and consisted of conservative flight testing and feeling out what trim adjustments needed to be made. His log book entry concluded with NO PROBLEMS, NICE FLIGHT! Someone in the crowd of airport denizens broke out a bottle of champagne and that was the end of the first day of testing.

*The first moments of lift off were so beautiful - Fat Cat flew straight and smooth - engine sounded quiet and purred like a kitten. I camcordered the event and really had a hard time keeping up with our T-18. This bird flies real fast.*

On Monday, January 8, Robin flew it two more times over an entire afternoon expanding the envelope and recording the performance figures. By that time it was getting dark, but he invited me into the right seat for a 10 minute flight. Thrills again when I took control of MY airplane! Stability in pitch is greater than Mac's Thorp which is to be expected in a wide body with it's longer tail. The controls felt great!



*Harvey's buddy riding in the rumble seat!*

*I watched Robin all afternoon flying at approximately 4 - 5,000 feet making lots of turns, stalls, plus a left and right roll. His final comment was this is a real "screamer" ' It is! I'm so thrilled for my husband - we will take Fat Cat to OSH - by - Gosh the first week of August '96. Look for us.*

I'm going to take an hour or so of dual from Robin when he gets back from the Orient in 2 weeks, so that I can learn how to do those 3 point greasers he was doing. Then I will have another thrill when I solo in Fat Cat.

Now for the numbers. The top speed was 197 mph true at 4000 ft. on a balmy California day, 60 degrees (in January). This was determined from two-way runs and GPS readouts. The airspeed indicator read 185 mph and that agreed with the GPS within a few mph. RPM was 2700 so the prop guess was right on. A paint job and some more cleanup should improve the top speed. No-flap stalls were straight forward with a slight pre-stall buffet at 60 mph indicated!!! Stalls with 30 degrees of flap did not register on the airspeed indicator!!!! but were straight forward with a slight buffet. I don't have stall strips. Climb rate at 100 mph is 1100 fpm indicated. No timed climbs have been

made yet and the airspeed indicator has not been calibrated at the low end so these numbers are preliminary. The plane seems to be going very slow on landing. I plan on flying formation with our Half Moon Bay Flying Club Robertson STOL C172 to check the low end airspeeds.

The Riblett GA 35U-A315 airfoil and Clark Y flap airfoil seem to have given the results I was looking for, improved low speed performance with no decrease in the top end. The new cowling improves the top end performance, however and thus clouds that second conclusion. Switching from filtered to ram air causes a 150 rpm increase.

*There were so many people, including Eddy Andreini (Airshow performer) watching - all Harvey's expectations have been more than filled with this T-18.*

I thank my wife, Steffie for her help with the project and patience with me. There are so many other people I must thank for helping me with my project that I cannot list them here, but thank you all! I will write a further report after the test period (40 hours) with some solid data.

Note the new address and phone number below. Update your membership list, Newsletter #81.  
Signed: Harvey Mickelsen Steffie Mickelsen 657 Terrace Ave. Half Moon Bay, CA 94019 phone 415-712-1438

## FOR SALE

THORP S/18 WIDE BODY SPORTPLANE . TOW IT WITH YOUR CAR, KEEP IT IN YOUR GARAGE.

LYC. IO-360 200HP, 266 SMOH , FACTORY NEW HARTZELL CONSTANT SPEED PROP 53 HRS ,266 HRS. ON AIRFRAME  
165 KT CRUISE, 2000 FT. MIN RATE OF CLIMB, LONG RANGE WET WINGS  
FULL IFR,DIGITAL MK 12D AVIONICS, COUPLED AUTOPILOT I MUST SELL TO COMPLETE ANOTHER PROJECT! \$35,000  
BOB MORRISON (606) 789-7379 EMAIL:

Distress Sale - Thorp T-18 Project:

Vertical Fin - Complete with fittings, Wing Ribs, Wing Spar ,Wing Fittings, Fuselage Skins - drilled for clecos, Fuselage fittings, Tail Fittings, Maple form blocks for wing, fin & tail ribs, Rib blanks cut & drilled, Plans set With mylars of fittings. All for \$ 1100 O.B.O.

Also: 0-290 G conversion complete & running on Stits Skycoupe project. Crossover exhaust & muffler, starter & generator. New Hegy prop. \$4500. O.B.O.

AND: Stits Skycoupe (2 seat high-wing) project. Nearly finished. Fuselage covered, painted, engine running. Lexan doors & Huge skylite for great vis. Wings almost done. All mat'l to finish. Finish & fly in 2 months. \$7450 or make offer.

Call (919) 662-0720 or write. Hopefully someone can finish and fly these two projects. Larry Oppegaard 1102 Brucemont Dr. Garner, NC. 27529-4505

Some thoughts from:

Gary Green

Jan 4, 1996

Dear Richard,

I forgot to include my '96 dues with the flyer on our Father's Day T-18 Fly-In. So, here's my check for \$25. By the way, that is a bargain. You do a great job on the N.L. and I appreciate it. Every article in this last issue was very good.

I have a comment on some of the items in N.L. No. 97. First, on the failure of Gayle LeCount's Aymar-Demuth prop. To my knowledge, there has never been an 0-360 Lyc certified with a wood prop. They all ran fixed pitch metal or constant speed props which are much heavier than a wood prop. Now, you know I'm no engineer and the following is just my opinion/suspicion. I think that the added mass acts as a flywheel and absorbs and smooths the power pulses of an 0-360. I suspect the heavy power pulses of the 0-360 tend to shock the light weight wood prop and may have contributed to its early failure.

I flew a fixed pitch (68-82) Sensenich metal (EM-76 that was cut down) for 12 years and about a thousand hours. In March of '93, I installed the Aymar-Demuth 68-80 wood prop. It out performs the metal prop in every regime. It takes off quicker, climbs better, and cruises faster. I flew it to Sun 'N Fun that April. I noticed it started very abruptly and shut down abruptly also. It idled OK, even down at 600-700 RPM. But I didn't like the explosive start and instantaneous shut down. My C.G. also shifted aft so much I lost some baggage capacity. So, I bought one of Mark Landoll's dynamic balancers. This is a 1 3/4" thick disc weighing 12 pounds that bolts to the front face of the ring

gear. It doesn't interfere with the cowl, spinner, or extension. It requires no modifications. Now, the engine turns through more smoothly on starts and shuts down much more smoothly. Landoll claims you will see a performance gain of as much as 100 RPM increase. I didn't see any difference. My engine had been mass balanced and the cylinders flow matched by Monty Baffett, so it was smooth with the metal prop and the wood prop without the balancer. The improvement with the dynamic balancer was slight but noticeable. However, I believe the 0-360 needs that added mass bolted to the crankshaft to absorb the heavy power stroke. I would like to see some qualified engineer do a study on this and publish a report in *Sport Aviation*.

Next subject: Earl Ody's oilcooler failure. I've seen several oil coolers fail on T-18's, RV-4's and RV-6's that were mounted in front of the #2 cylinder like Earl's or attached to the baffling behind the #4 cylinder. Rich, you've seen that also. It is my **opinion** that those are not the best locations for coolers on a T-18. You cannot isolate the cooler from the shake and vibration of the engine in either place. With the cooling air exiting out of the side gills of the T-18 instead of out the bottom of the cowl, an ideal location is on the firewall on either side. I placed mine on the left side. This is a simple installation, isolates the cooler from all engine vibration and provides excellent cooling air flow. You have to make a little fiberglass duct to attach the air hose and funnel the air to the cooler. That's the most difficult part. Mine cools too well so I built a throttle valve into the fitting on the aft baffle plate so I can choke off part of the air flowing to the cooler. Even on the hottest days, I have to choke off the air when cruising at altitude to keep the oil temp at 180-190 degrees.

Next subject: Stan Sutterfield's letter states "...climbs like an angel at 85 m.p.h. indicated, but eng cylinder head temp goes above redline. " Is this a misprint? He surely isn't actually climbing a T-18 at 85 M.p.h. IAS! The pitch attitude would be so high, he couldn't see over the nose, the RPM (fixed pitch prop I assume)

would be lugged down to 2200-2300 and there would be so little air coming in the cowling inlets, he'd fry the cylinder heads. Even a mouse motor 0-290 powered T-18 climbs best at 120 or better. I prefer to climb a 150 HP T-18 at about 140 IAS and a 180 HP model at 150 or 160 M.p.h. indicated.

Final item: Its sad to hear of John Cragins mishap with his new Thorp. Sadder still that it was possibly due to a disconnected tail wheel tiller spring/chain. I have a friend who is a very proficient tailwheel pilot who almost lost his Skybolt a few years ago due to that exact disconnect on a rough grass strip. It probably won't bite you on smooth pavement. As a Tech Counselor, I try to discourage use of those light weight sash chains and little wire clips connecting tail wheel springs. I use an AN 42B-4 eyebolt on the rudder horn, an AN 43B-5 or AN 43B-6 eyebolt (page 163 in Wicks Catalog) on the tail wheel arm and an AN 115-8 cable shackle (Page 203 in Wicks Catalog). I run the compression spring thru the eyebolt at the rudder horn, run the other end of the spring thru a link in a chain (not sash chain) and put the cable shackle at the other end of the chain (I use three links). The cable shackle attaches to the AN 43B-5 eyebolt at the tailwheel arm. I wish I had a close up photo of this to send you. I'll try to draw up a crude sketch. Its sunny and nearly 70 degrees here today..think I'll quit this and go flying. Keep up the good work. Gary Green



*View of Pecan Plantation, Grandbury, Texas*

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### For Sale:

SENSENICH 66/78 WOOD PROPELLER. BRAND NEW, NEVER INSTALLED. FACTORY PAINTED GRAY WITH LEADING EDGE "ESTANE". POSITIVELY RAIN PROOF. KEN BROCK T-18 SPINNER CUT TO FIT THE 66/78 PROP. SPINNER USED 300 HOURS. NO CRACKS IN IT OR FRONT AND BACK PLATES. 6 PROP BOLTS GO WITH SALE. A 66/78 IS THE PERFECT PROP FOR A 160 HP. T-18. VALUE \$1200 - *ASKING* \$800. (817) 766 2523

## Letter from Forest Products Laboratory to Gayle LeCount on failure of his wooden prop.

*Editors Note: Gayle's engine is a 180 hp.*

**File Code:** 4710-GL

**Date:** February 7, 1996

Dear Gayle:

This is the written report of our findings as to probable cause of the in-flight failure of the AYMAR-DE-MUTH laminated-lumber propeller on your Thorpe T-18 homebuilt airplane. The nature of the failure has already been reported to you by phone. The propeller was returned to you by UPS around January 26. I am sending a copy of this letter to Ben Owen of EAA because of his interests in airworthiness of EAA-member aircraft, and because he referred you to me.

Dave Kretschmann, an engineer here at the Lab with expertise in fracture of wood, also examined your propeller. Both of us came to the same conclusions as to probable cause of the fracture. Because of the nature and location of the failure on the propeller, we think impact loading on the leading edge was the probable cause, although diagonal grain direction, with respect to the leading edge, greatly reduced the propeller's resistance to impact bending. The following observations are offered as possible contributors to failure, but none are clear and observable causes of failure.

- (1) There was no indication of strength loss due to overheating (hydrolysis of wood) either in the hub or blade trailing edge.
- (2) There was no indication of splitting or checking of wood from moisture losses at blade tips or other edges.
- (3) There was no indication of biological deterioration (decay or insects).
- (4) There was no indication of fracture initiating along the trailing edge where failures from flutter often begin.
- (5) There was clear evidence of propeller vibration, as indicated by scoring of both blades by the edges of the propeller openings on both sides of the spinner. These scorings probably occurred after the failure when severe vibration and deflection from load imbalance would have continued until engine shutdown.
- (6) The failure appears to have initiated along the leading edge—actually with two splits. The primary splitting failure developed along the grain, and an adjacent and shorter split ran parallel to the primary. The splits initiated at the base of the painted tip on the leading edge. The primary split followed the grain to near the trailing edge, then abruptly stopped at the spinner opening where the broken piece tore away. The splitting began in the third lumber laminate (from the leading edge) and continued radially through the weaker ray tissue, parallel to the longitudinal fiber direction.

The slope of grain along the split, with respect to the leading edge at the point of fracture, was an approximate 20 degree angle or a slope of 1 in 3. For maximum impact bending strength, grain angle to the leading edge should be 0 degrees, or essentially straight-grain. Obviously, the steep grain angle severely lowered the laminate's ability to resist impact loading. As you will see in Tables 4-9, Chapter 4, Mechanical Properties of Wood, of the enclosed Wood Handbook, impact bonding strength for a 1 in 3 slope of grain would be less than 36 percent of straight-grained lumber. The grain direction in the fourth and fifth laminates that partially supported the third, was almost exactly the same as the third. Therefore, there was minimal diagonal grain from adjacent laminates to resist splitting in the third laminate.

- (7) The second and fourth laminates in the blade opposite from the failed one contained diagonal grain in close proximity to knots. Such cross-grain is weaker than straight-grain wood, but failures did not occur here.
- (8) The advantage of a propeller laminated from 60 veneers, rather than 5 pieces of lumber, is random distribution and orientation of defects such as cross-grain. In this 5-ply laminated lumber propeller, only one 26/32-inch-thick laminate with very steep slope of grain (from leading edge) resisted impact loading.
- (9) Wood in the hub beneath the outboard retainer plate is compressed nearest the bases of both blades. This probably occurred from extreme vibration at failure. There is also a small dished area in the hub that does not contact the retainer plate. This appears to be of no consequence.

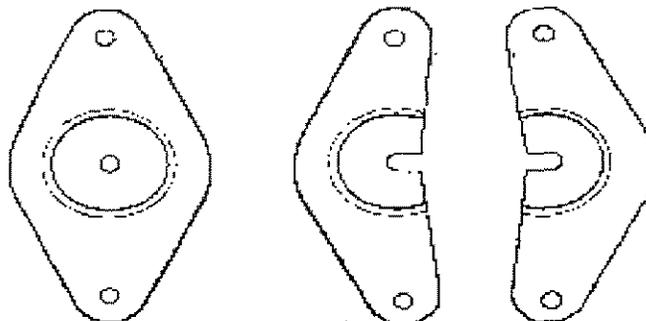
If you would like to discuss this report further, then please call me at (608) 231-9295. Congratulations on the safe landing for yourself and your T-18 Sincerely, Charles B. Vick Research Scientist  
Wood Adhesives Science and Technology Enclosure cc: Ben Owen, EAA, Oshkosh

**\*\*\* NEW PRODUCT RELEASE \*\*\***

AIRCRAFT DETAILS, INC. of Westland, Michigan is pleased to announce that it is now manufacturing a complete line of one and two piece DIMPLED STAINLESS STEEL FIREWALL SHIELDS. Shields are also available in flat stock for use in thick firewalls. The one piece is designed for use in new installations while the two piece is perfect for adding grommet protection to existing installations. Hole sizes range from 1.811 up to 3/411 to accept wire bundles, Bowden cables, vernier push/pull cables, battery cable up to 0 gauge and fuel line hose and fittings. Also included is a new miniature shield with gasket for installing a single wire or 1/811 tube through the firewall. Three dimpled styles are available for grommets with 3/4", 1" and 1 1/4" outside diameter. The shields are similar to those installed on factory aircraft ( but only 25% as expensive) and are designed to protect the grommet or sealing material from excessive heat or flame. Preserving the life of the grommet or sealing material is critical to preventing smoke, CO2 or fumes from entering the cockpit. For more information call or send SASE for free catalog to:

AIRCRAFT DETAILS, INC.  
32625 BENSON DR.  
WESTLAND, MI. 48185  
(313) 261-7766  
FAX (313) 525-1633

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# THORP T-18 FLY-IN

WELCOME T-18 PILOTS AND ENTHUSIASTS

JUNE 14-16, 1996

PECAN PLANTATION (0TX1)

GRANBURY, TEXAS

As discussed at last Fall's Kentucky Dam T-18 gathering, we are planning for our Spring '96 gathering a little later in the Spring than before in hopes of getting a better weather pattern.

Pecan Plantation is a private airstrip community 40 NM southwest of the DFW airport. It lies well outside of the DFW Class B (TCA) airspace. It has 3500 feet of asphalt (newly resurfaced!). Runway 18/36 is located 5 NM south of the Acton VOR (110.6) on the 180 degree radial.

**ROOMS:** Gary & Maxine Green have reserved 15 rooms at the Pecan Plantation Clubhouse for arrivals on the 14th and departures on the 16th. They are \$58.30 single occupancy and \$73.14 double occupancy including tax. Cancellations will require **24 hr advance notification**. Full rates will be charged for no shows and cancellations later than 24 hr prior. These rooms will be charged to the Green's account and reservations will have to be made through the Green's. If you want one of these rooms, you must contact the Green's at **817-579-1995** or mail to **9111 Bellechase Rd, Granbury, Tx 76049**. Please don't put this off until the last minute.

**MOTELS:** There are several nice motels in the town of Granbury which is about 14 miles from Pecan Plantation. We'll work out shuttle vans/cars to get folks back and forth if they choose to make their own reservations in town. Following is a list of local motels:

Best Western Classic Inn 1209N Plaza Dr. 817-573-8874 or 800-528-1234.

Brazos Motel 900 E. Pearl 817-279-7779

Comfort Inn 1201 E Hwy 377 817-573-2611 or 800-221-2222

Dabney House Bed & Breakfast 817-579-1260

Days Inn 1339 N Plaza Dr 817-573-2691 or 800-DAYS INN

Lodge of Granbury 400 E Pearl St. 817-573-2606

Plantation Inn on Lake Granbury 1451 E. Pearl St. 817-573-8846

## BRING YOUR OWN TIEDOWNS

**P.S. If you think you may attend, PLEASE let the Green's know as soon as possible to help them in their planning.**

T-18 NEWSLETTER  
ROUTE 3, BOX 295  
CLINTON, IL 61727  
1-217-935-4215  
Issue #98, March 96



**Look!! Look!! for a RED ZERO on mailing label, it means I don't have your dues for this year!!**

All dues run from Jan to Jan. Please send your 96 dues now.

**1996 DUES**  
T-18 Mutual Aid Society.

Please continue your support by sending your dues in now.

**Name:** \_\_\_\_\_

**Address:** \_\_\_\_\_

**City:** \_\_\_\_\_ **State:** \_\_\_\_\_ **Zipcode** \_\_\_\_\_

**Phone:** \_\_\_\_\_ **N** \_\_\_\_\_

Send your check for \$25 in U.S., \$30 Others.  
to: Richard Snelson Route 3, Box 295 Clinton, IL 61727