EAA MILE HIGH CHAPTER

PRESIDENT	VICE PRESIDENT	SECRETARY	TREASURER	NEWSLETTER
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423-5134	659-1589	423-5134	232-9535	423-5134

VOLUME 9, ISSUE 11, NOVEMBER, 1986

THIS MONTH: This month's meeting will be held on Saturday, November 8, 1986 at the Rocky Mountain Energy Center at 7:30 P.M. The program will be a slide presentation by Bruce Miller, who runs The Cloud Base glider operation at the Boulder Airport. He and a group of friends took a glider trip from Columbus, New Mexico to Eureka, Montana in June of 1980. Many pictures were taken from the air and on the ground, and Bruce has worked up a program which is set to music. I have seen this presentation, and it is excellent. This is one not to miss.

LAST MONTH: With 47 members and guests in attendance, the meeting of October 11, 1986 was called to order at 7:55 P.M. by President Kirby White at the Rocky Mountain Energy Center. The minutes of the August meeting were approved as published in the Newsletter.

Guests: Guests present were Ron Espejo of Lafayette -- who is interested in automobile engine use in aircraft, Mike McMillen of Pueblo -- who was a guest of member Mike Ladigo and is a student at Colorado Aero Tech, Louise Ernst of Erie -- who is the wife of member Jim Ernst, Gale Abels of Boulder -- who is a former member and has recently rejoined and owns a Greenapples AT-19, Jean Kline of Boulder -- who was a guest of member Gale Abels, and Gerry Bair of Broomfield.

Treasurer's Report: There was none given.

Old Business: Kirby reiterated that he wanted comments and suggestions on what would be the best way to handle the BD-4 project that was donated to Chapter 43 by Don Mobley. He said to contact him either during the meetings or by phone.

New Business: The main part of the business meeting was the annual election of officers and volunteers. The following 1986 Chapter officers and volunteers were re-elected to another term in 1987:

President	Kirby White
Vice President	Fred Seal
Secretary	Kirby White
Treasurer	Cathy Sheeon
Newsletter Editor	Kirby White
Chapter Designee	Brad Davenport
Historian	Herrill Davenport
Fly-In Representative	Cathy Sheeon
Board of Directors	Brad Davenport
Board of Directors	T. Lee Dimmick
Board of Directors	Cathy Sheeon

New Business cont: Cathy Sheeon had decided to not serve another year as Librarian, so the floor was opened to volunteers or nominations for the position. Bill Landers volunteered, and was elected. Gene Horsman had decided to not serve another year as Grand Keeper of the Coffee Pot, which Ken Williams volunteered for. He was elected to the position. During the October, 1984 business meeting, it was voted that at every following October meeting a vote would be taken whether to transfer any money from checking and savings to the Steve Ansley Memorial Fund, and if so, how much. Treasurer Cathy Sheeon was not at the meeting to give a Treasurer's Report, so it was decided to vote on this issue at the November meeting. Kirby asked if the membership wanted to have a banquet for the December meeting again this year. Everyone said yes, and Colacci's Restaurant in Louisville was traditionally voted as the place to hold it. Kirby said that he would make the necessary arrangements. Along the same lines, he asked if the Chapter would be willing to let Cathy Sheeon spend some money for decorations and cookies, as it did last year for the banquet. It was voted that she could spend whatever would be necessary, within reason. Ralph Molski brought in a copy of the Colorado State Airport Directory for anyone interested to look at. He said that it was free of charge by ordering from the proper phone number, but not a lot of them were being printed. Kirby said that he would publish the phone number in the November Newsletter. Ralph also talked about having a valve sticking problem in his 1957 Cessna 172. He had been using Phillips XCII oil, which his mechanic felt may have been a contributing factor in the stuck valves. There was some discussion in the group about not being so quick to blame the oil, though. Brad Davenport brought in a couple of pictures of the Quickie that Chapter 43 member Norm Howell recently finished and flew. Roy Suttie spoke about his brother Donald being seriously ill, and needing to sell his Q-2 project and several other items. Kirby said that he would publish the entire list in the November Newsletter, so everyone would know what was for sale. Kirby talked a little about the Copper State Fly-In which was scheduled for October 17-19, 1986 at the Casa Grande Airport in Arizona. He said that he and Bob Green and Fred Seal were planning to go in Bob's Cessna 172. Kirby also reminded everyone of the Fly-In Breakfast at the Boulder Airport on Saturday, November 1, 1986. It was being sponsored by the Greeley Fly-In Committee.

Gene's Corner: Gene Horsman read a long letter which was written by Mike Ryer, who is a local aerobatic pilot and enthusiastic proponent of sport aviation and fun flying. The letter took to task the liability insurance issue and the current interests and concerns that EAA National seems to be pursuing. Mike sent the letter to those that he wrote about in the letter.

Progress Reports: Earl Ellis stood and spoke about the first flight of his Vari-Eze, which took place on Thursday, August 28, 1986 at the Longmont Airport. He spent nine years building it, and was very pleased with the way it flew. Everyone congratulated Earl for his accomplishment. Roy Maneely said that his 1959 Bellanca 260 is about finished. He has been doing the detail work on the paint and engine. Ken Lysek is in the process of painting his 1956 Tri Pacer. Dean Cochran reported that he bought an ARNAV Loran C for his Thorp T-18. Ron Denight told us that his Denight Special is close to flying again after some pretty extensive modifications. His new canopy is fitted, and he hopes to have it flying for the November Fly-In Breakfast.

A&P: The business portion of the meeting adjourned for coffee at 9:00 P.M. After the break, Bob Greeno showed two trays of slides that he took while flying for the Public Service Company and doing survey work. The mountain shots were spectacular. Then Herrill Davenport showed some slides that he took during the summer. Included were some pictures of Guy & Cathy Sheeon's 1947 Piper PA-12 Super Cruiser.

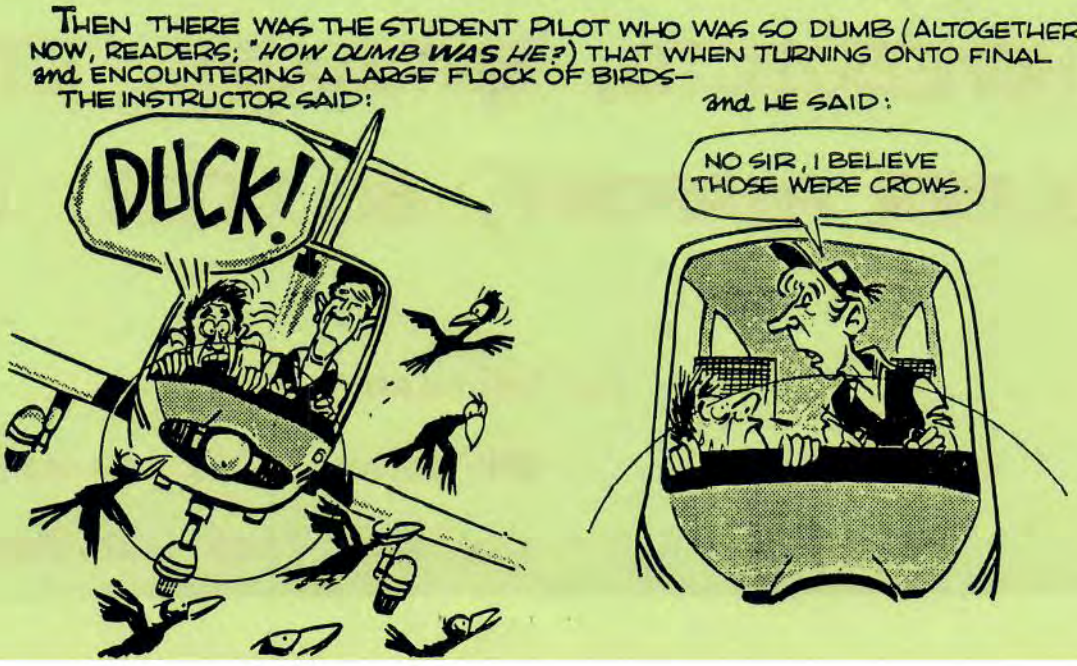
ROSTER UPDATE: Please add the following new members to your Roster:
Ron Espejo, 515 Sutton Circle, Lafayette, CO 80026, H. 666-8252
The following members have a new address:
John Evens, 6855 Allison St., Arvada, CO 80004, H. 420-2724, T-18
Dr. Paul E. Hoverter, P.O. Box 267, Lordsburg, NM 88045, H. 505-542-3705

GLOSSARY: From "I'd Rather Be Flying" by Donna Vasko
VASI: an endearing term used by those who use colored lights to grease a landing.
VFR: instrument weather conditions as observed by a pilot with no instrument rating.
VFR Minimums: those weather conditions under which a chicken can clear a low fence while maintaining satisfactory forward visibility.

BOULDER BREAKFAST: Well it seems as though the weather did a number on the plans of the Greeley Fly-In Committee once again by failing to cooperate on the weekend of November 1-2, 1986. Undaunted, we are going to try another Fly-In Breakfast on Saturday, November 8, 1986 at the Boulder Airport. This is the same day as the Chapter 43 meeting. Please see the full page poster in this Newsletter.

BANQUET: The December meeting will be a banquet held at Colacci's Restaurant in Louisville on Saturday, December 13, 1986 at 7:30 P.M. I will have the final details on this at the November meeting. This is always a good time, so please plan to attend.

AVIATION HAPPENINGS: November 8, 1986 Fly-In Breakfast and Ribbon Cutting Ceremony at Boulder Airport. See poster elsewhere in this Newsletter for details.
December 13, 1986 Annual Chapter 43 Christmas Banquet.



THE ROCKY MT. REGIONAL FLY-IN COMMITTEE AND BOULDER AIRPORT PRESENTS:

FLY IN / DRIVE IN BREAKFAST!!

AND

BOULDER AIRPORT RE-DEDICATION

⟶ 8 ⟵

SAT., NOV 1, 1986

(BAD WEATHER DAY IS SUNDAY NOV. 9)

BREAKFAST STARTS AT 8:ØØ AM

$ 3.50 per person

LUNCH STARTS AT 11:ØØ AM

HOMEBUILTS, ANTIQUES, ETC.

BOULDER AIRPORT, BOULDER, CO.

For information call:

Bill Marcy (303) 986-4398

T. K. Gwin (303) 440-7065

NASAD Airworthiness Alerts

When buying a used homebuilt, missing service info can kill you!

BY REX TAYLOR

Homebuilt aircraft have been an integral part of my life since the early 1960s. I've logged over 2500 hours in Experimental-category aircraft of several different types and planforms from biplanes to canards. I've built some homebuilts and bought three homebuilt aircraft built by others in the last few years.

When buying someone else's homebuilt, there is an element of potential danger that is not present in certified aircraft, that almost cost the lives of my son and myself recently.

I had always had a yearning for a Piel Emeraude, and found out that a friend of a friend had an Emeraude and wanted a Cessna Cardinal RG. My Cardinal was for sale and we made a deal.

The Emeraude was well built, has 1200 flight hours and had been owned by people whom I knew and respected for their knowledge of homebuilts and their workmanship. Other friends had known and flown this aircraft and were unanimous in their comments "It's a good airplane."

After trading aircraft, my wife and I flew home from California, a very nice flight, and we were looking forward to our first trip to Mexico in the Emeraude.

Late the next evening, my son and I took off on a local flight to check him out in the aircraft. In level flight at cruise speed, the engine suddenly sped up and started such severe vibration that the instrument panel in front of us began to literally come apart. The shaking was so intense that as I grabbed for the throttle to close it, the throttle assembly came loose from the panel and fell to the cockpit floor. I grabbed for it and finally succeeded in pulling it to the closed position. Thank God the vibration stopped. As my son and I looked at each other, surprised to be alive, I felt the controls gingerly and told him: "I think we've still got enough airplane left to fly."

The cowling was askew, loose parts and hanging radio testified to the beating the aircraft had taken. We radioed a mayday call and found the radio was still working.

We couldn't make it back to the airport from our position and it was almost full dark. I picked out a dirt road, used the last little bit of airspeed to barely clear telephone wires and we landed safely, both of us very thankful to be alive!

We had thrown one propeller blade and almost shaken the engine off the aircraft. Upon teardown later, we found the motor mount to be cracked in two places, and we estimated that the engine was shut down in less than five seconds! We had almost lost it. The cause? Lack of compliance with manufacturer's instructions for maintaining the propeller.

This aircraft was built in 1966 and a new Warnke ground-adjustable propeller was installed on it about 1970. With the propeller came manufacturer's instructions for its proper maintenance.

Over the years, the aircraft changed owners and the second owner didn't get the propeller instructions, only the recommended torque setting on the prop and hub bolts in the aircraft log. This owner flew the aircraft seven years with no problems, carefully retorqueing the prop at periodic intervals.

The third owner again maintained the torque settings and thought he was performing proper maintenance on the prop. In fact, the last annual inspection and retorqueing was only five flight hours before the blade separated from the hub.

Warnke's propeller maintenance instructions clearly specify that the two clamping blocks that form the propeller hub must always have clearance between them to allow all clamping pressure to be exerted on the blade shank.

Over the years, the wood in the propeller had shrunk and gradually the blocks came closer together until they came in contact, and began to press against each other, nullifying clamping action on the blade.

It was inevitable that the blade would let go. Fortunately, we are here to tell about it and learn from this experience. If you are in possession of a Warnke ground-adjustable propeller or any other critical component and don't have in your possession the manufacturer's maintenance procedures, ground your aircraft until you get that information and study it. Make sure your aircraft is airworthy.

If you're buying someone else's homebuilt, be sure that you get every

The clamp blocks of Warnke's ground-adjustable propeller hub should not touch (points 1 and 2). If they do, through wear, the hub loses its clamping ability and may cause a propeller failure—notice the piece of thrown prop blade still in the hub (point 3).

Photos: Rex Taylor

bit of maintenance data. If it's not part of the aircraft's records, insist on the seller securing it, then make sure that the aircraft is in compliance before you complete the deal.

The former owners of my Emeraude were as surprised and concerned as myself at this incident; they simply didn't know that their maintenance was faulty. The man I bought it from flew in the Los Angeles basin, virtually a sea of houses. Had he flown it a few more hours and not sold it to me, he may not have had the dirt road I had. The consequences could have been terrible.

This incident has very graphically demonstrated the great need for dissemination of safety-related information to the builders or pilots of Experimental aircraft.

In the United States, a homebuilt aircraft is viewed as a "one of a kind" aircraft and no airworthiness directives are issued by the FAA when an accident or incident occurs that is the result of a mechanical or service-related problem.

The National Assn. of Sport Aircraft Designers (NASAD) has been very involved in establishing design standards and promoting flight safety in Experimental aircraft for the past 15 years. Originally concerned only with the design and construction of the homebuilt, NASAD's directors are becoming increasingly aware of the need for airworthiness information to be available to all who fly homebuilts.

KITPLANES magazine is also concerned, and will publish information critical to the safety of homebuilt aircraft. Homebuilders are encouraged to share their experiences. Manufacturers are invited to use this column to reach builders who may have acquired products second-hand without the proper maintenance and usage information.

Don't learn about proper maintenance procedures by accident; if you're missing information, write the manufacturer. It may save your life. And please, when you write and request information from the manufacturer, slip a couple of dollars in the envelope to cover costs. Remember, the manufacturer has already provided the information to the original purchaser.

So, read the following manufacturer's airworthiness alerts. If they don't apply to your aircraft, perhaps you know someone it could help. Lack of information can be hazardous to your health!

Rex Taylor is the president of the National Assn. of Sport Aircraft Designers.

Replace Aged Plastic Parts In Posa's Carburetors

A VP-1 recently was sold in Louisiana by the builder to a second party. The airplane hadn't flown for a while and after assembling it, the new owner was making his first flight in the aircraft. He experienced an overlean condition in the air, resulting in an engine stoppage, and went down in the trees. The airplane was badly damaged, but the pilot was unharmed.

The cause of the overlean condition and the engine stoppage was traced to the plastic parts in the Posa carburetor. These parts had not been maintained and replaced as per manufacturer's recommendations. Heat and age had caused embrittlement and shrinking in the plastic parts allowing air to enter the fuel-metering system.

All users of Posa carburetors or Posa Supercarbs should carefully check the plastic parts in those carburetors to assure airworthy condition. In early Posa carburetors, parts A and B (refer to the photo) should be replaced every two years or part B should be replaced earlier if less than 14 in.-lbs. of torque are required to move the main metering needle. This part is designed to prevent the main metering needle from rotating after adjustment. Part A should be replaced bi-annually or sooner if examination reveals that the tubing has lost its flexibility or is discolored.

Posa carburetors and Supercarbs produced in the last two years have an added positive-lock set screw that securely locks the needle against possible rotation. These carburetors are easy to identify by the hole in the body (at end of thumb in photo) that allows access to the needle locking screw. This feature can be "added on" to early carburetors. All users of Posa carburetors are strongly advised to contact the manufacturer for complete instructions concerning the use, care and maintenance of these carburetors if you do not have such instructions.

On Posa carburetors, part A must be replaced every two years or if brittleness or discoloration appear. Part B must be replaced every two years or if it fails to exert less than 14 in.-lbs. of torque resistance to lock the metering needle.

Designee inspectors, A&P mechanics or other service personnel are also encouraged to obtain this information and retain it in their service bulletin files. When contacting HAPI, Rt. 1 Box 1000, Eloy, AZ 85231 please include $1 and a stamped, self-addressed envelope for the instructions.

Long-EZ Parts Recalled; Wrong Grade of Steel Used

Ken Brock Manufacturing Co. is recalling Long-EZ part No. NC-CLT. These parts were made of 2024-0 steel rather than 2024-T3, due to an error in material identification. The parts were sold between June, 1985 and January, 1986.

Brock has notified all purchasers of record via certified mail and is replacing the defective parts at no charge upon receipt.

For more information, contact Ken Brock Manufacturing Co., 11852 Western Ave., Stanton, CA 90680. □

NASAD encourages anyone, builder, pilot, mechanic or accident investigator to contribute any information that may help to prevent unsafe conditions in homebuilt aircraft.

Please send your input to NASAD/Air Safety, P.O. Box 3361, Oshkosh, WI 54903. Please include pertinent drawings, photos and a brief description of the problem caused by the malfunction. We will not publish the names of individuals or location of incidents, so don't worry about being embarrassed if you did something dumb—we've all been there.

"You remind me of a blind sparrow. He knows how to fly, but he can't. You have *all* the tools. For God's sake, use them!"

By Dudley A. Henrique

A Little Help From a Friend

The weather was beautiful on that November morning. The city of Fredericksburg, Va., passed beneath the left wing of the rebuilt P51 Mustang fighter as I rolled out on a heading of 330 degrees. Ahead was the place I was looking for, the town of Culpeper.

My altitude was 15,000 feet. Pushing the stick forward, I started the Mustang down in a hurry. I found the spot I was looking for, then rolled the fighter into a dive. The airspeed indicator showed over 400 m.p.h. when I eased out of the dive. I was at treetop level and headed up the correct country road. I counted three seconds and performed the finest climbing roll of my life.

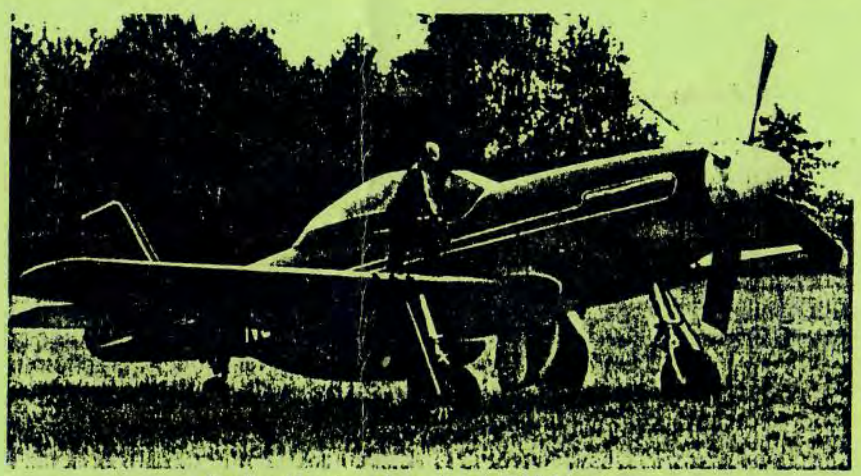
I realized that I had violated a number of federal flying regulations, including unauthorized low buzzing, flying in illicit proximity to buildings and performing aerobatics under 1500 feet. And this by an official of the Combat Pilots Association and a play-it-by-the-book flying instructor! But I had no regrets about my single outburst of lawlessness. Right or wrong, that moment was forever mine.

I was six when my father divorced my mother and left us in New York City to fend for ourselves. It was 1943 and times were tough.

Mother was working in a defense plant when she married a man who became known to me as Jack. He was a man prone to fits of rage. Life with Jack was a series of loud arguments in the night, sometimes followed by the sounds of hitting. I remember my mother crying a lot.

One night Jack told me that he and my mother were going out and that I was to go to bed and stay there. Then he turned off my light and left.

I had a habit of sneaking out of bed and watching from the window as they drove away. As I was walking across the room in the dark, the light snapped on. Jack was standing at the door, holding a belt and a piece of clothesline. He cursed at me, shouting that I had disobeyed him. He threw me on the bed and tied my hands and feet to the frame. Then he beat me until I was bleeding. At some point the belt buckle hit my mouth, knocking out a front tooth. He then untied me and left. My mother must have heard what was going on, but I did not see her until the next morning.



Dudley Henrique boarding a P51 Mustang

I lived under these conditions for the next two years. Then one night my father's mother came up from Wilmington, Del. After a violent argument with my mother, Grandmother whisked me out to a waiting car and drove away. That was the last time I saw my mother.

For the next eight years I lived in Wilmington. My grandmother was a good woman but very strict; she almost never used the word "love" in conversation. Meanwhile, my father had remarried and was living in Texas with his second wife. He came to visit from time to time, but I hardly knew him. I remember him as a man who brought me presents.

Grandmother was a business manager for a large company and had little time for me. I would see her before I left for school, and not again until after 6 p.m. when she came home. At school I constantly got into fights with the other kids, and my attitude was surly and aggressive.

When I was 15, I was expelled. Grandmother enrolled me at a military academy in Bryn Mawr, Pa., which had a reputation for handling problem children. In a way, this was the first positive thing that had ever happened to me. The school forcefed me my first taste of education, along with fair and firm discipline. But I couldn't make it there, either, and was expelled at age 16.

Back again at a Wilmington public school, I had weekends to myself and little to do. One Saturday I took a bus to the New Castle Air Base, which was located outside the city. There at the Delaware Air National Guard hangar I got my first close-up look at an airplane. It was a World War II P51 Mustang fighter. I was

hypnotized! I walked around the P51 touching the wings and propeller; then I jumped up on the wing and slid into the cockpit. In an instant a man wearing three stripes on his green sleeve appeared and shouted, "Hey, kid, get out of there."

I was scared stiff and started to climb out. Then a hand touched my shoulder and pushed me back into the cockpit. Turning, I came face to face with an officer in a flight suit. He was standing on the wing; his hair was red, his eyes were smiling.

The pilot's name was James Shotwell, and he was a captain. Before I left the field that day he had become "Jim." Thereafter, I visited New Castle each weekend. Jim had been a fighter pilot in the Pacific during the war. After coming home he graduated from college with a degree in electrical engineering, and went to work for an engineering firm in Georgetown, Del.

The weeks came and went and I found myself drawn closer and closer to Jim Shotwell. I told him about the rotten time I had had so far. He responded with warmth and friendship. I had found my first real friend—and as a result my life was to be forever changed.

Jim and I would sit under the wing of his Mustang and talk about airplanes and subjects like math, history and physics. It was wonderful! Perhaps most important, Jim introduced me to the other pilots. For the first time in my life I experienced the feeling of belonging to a group.

One day I told Jim I wanted to quit school and find a job. Suddenly he got quite serious. "Dud," he said, "you remind me of a blind sparrow. He knows how to fly but he can't, because he can't see. Even if he got off the ground he would bump into things that would stop him cold. He wanders through life accomplishing nothing. He has no sense of direction. You have *all* the tools, Dud. For God's sake, use them! No matter what you do in this life, you need to develop one thing: a sense of direction! Think about it."

Away from Jim and the air base, though, my life was still unchanged. I continued to get into trouble and my grades were bad. Finally my grandmother decided I should go to California and live with my aunt. I told Jim about this. Several nights later, he came and talked with my grandmother for hours. But it changed nothing, and at the end of August 1953, I was on a plane bound for Los Angeles.

My aunt was very kind to me and tried to help in every way she could. I missed New Castle and Jim, but I did my best to adjust to my new surroundings. Letters from Jim brightened my days.

Then one night in March 1955, the telephone rang. My aunt answered. As she spoke I could tell that something was wrong. She replaced the receiver and gently told me that Jim Shotwell had been killed. He had lost an engine while returning to New Castle from a practice mission. He could have ejected but chose to stay with the plane, steering it away from the populated area—until it was too late to bail out.

Emotions I had never felt welled up inside me. I tried to hold back the tears but could not. Everything seemed fragmented and confused.

Gradually I stopped crying and started to think of Jim and the many things he had said to me. His analogy of the blind sparrow kept coming back. I had always known that what Jim had told me about myself was true. But until that night I hadn't been able to piece together the puzzle my life had become. Finally, I fell asleep, waking at dawn in a cold sweat. My mind was strangely clear. Instinctively, I was aware that something had changed. Now I knew where I was going in my life and what I would have to do to get there.

That year I enlisted in the Air Force and became an air-traffic controller. The Air Force finished the job Jim had started. By the time I was discharged in 1959, my negative attitude had been reversed and my faith in God and man restored. I wanted to go places!

I hurled myself into an intense year of hard work and study, and obtained my FAA pilot ratings. Employment as a flight instructor soon followed. It turned out I had some talent in aerobatic flying, and through teaching and flying airshows every weekend, I developed a reputation of sorts.

By 1971, I had accumulated thousands of flying hours, flown more than a hundred airshows and lectured all over the country to flight instructors learning the trade. During those years I flew just about everything, including some experimental and military aircraft.

In the fall of that year, a New York doctor contracted me to ferry a P51 Mustang from Newark, N.J., to Manassas, Va. I carefully plotted a course that would take me somewhat south of Manassas. With 180 gallons of fuel in the wings, I calculated I could include an extra 30 minutes' flying time before arrival at my final destination.

On November 21 at 7:30 a.m., I climbed into the Mustang on the ramp at Newark and angled south across Cape May, N.J. There I picked up a heading for Cambridge, Md. Reaching Cambridge on time, I swung to starboard and headed toward Culpeper.

The place where I violated the federal flying regulations that morning was the Mount Carmel Baptist Cemetery. There beneath a tombstone were the remains of my friend Capt. James R. Shotwell, Jr. It had taken me 16 years to find the right opportunity to pay my respects to the man who changed my life. And I did it flying the same type of airplane I had been sitting in the day I met him at New Castle. That climbing roll was my cry of triumph and gratitude, the salute of the fighter pilot.

TODAY my wife still kids me about my flight over Jim Shotwell's grave. "The Day Baron von Leftover Led the Great Culpeper City Raid," she calls it. But she knows how much that moment means to me. It keeps alive in my mind two potent lessons: One man *can* make a difference in the lives of others—as Jim Shotwell proved. And you can accomplish almost anything with hard work, perseverance . . . and a little help from a friend.

For information on reprints of this article, see page 215

The poet can reach where the sun cannot. —Hindi proverb

AVEMCO
FLYING SAFETY UPDATE

PREVENTIVE MAINTENANCE

Preventive maintenance on your aircraft makes good sense for several reasons. By keeping your airplane in good airworthy condition, you may well avoid a costly repair bill or, possibly, an accident. You also get to know *your* airplane better, and sometimes save a little money, too.

But along with the desire to perform preventive maintenance comes a great deal of responsibility. And, according to the FAA, pilots often misunderstand the Federal Aviation Regulations that govern what preventive maintenance can be legally performed by an owner.

Also, there have been a number of recent changes in the rules concerning preventive maintenance.

The related FARs as of October 28, 1983 are Part 1, Definitions and Abbreviations, Section 1.1; Part 43, Maintenance, Preventive Maintenance, Rebuilding, and Alterations; Part 61, Certification: Pilots and Flight Instructors, and Part 145, Repair Stations .

The holders of mechanic and repairmen certificates, persons working under the supervision of these mechanics and repairmen, repair stations certificated under Part 145, and air carriers certificated under Parts 121, 127, and 135 are authorized to perform preventive maintenance. For purposes of this discussion, though, we'll consider preventive maintenance only from the owner operator's point of view.

FAR Part 1, Section 1.1 defines preventive maintenance as ". . . simple or minor preservation operations and the replacement of small standard parts not involving complex assembly operations."

Part 43, Appendix A, paragraph (C) contains the list of those functions determined by the FAA to meet this definition. (Space does not permit a listing of those functions here, but pilots should have ready access to the FARs.)

Further, because of differences in aircraft, a function may be preventive maintenance on one aircraft, but not on another. To provide for this, paragraph (C) contains the limitation, "provided it does not involve complex assembly operations" on the aircraft involved. Owners and pilots must use good judgment in determining that a specific function may appropriately be classified as preventive maintenance.

Note: A pilot may *not* perform preventive maintenance on aircraft used under Parts 121, 127, or 135, *even when the pilot owns the airplane.*

In addition to those individuals named earlier, the holder of a pilot certificate issued under Part 61 may perform preventive maintenance. Section 43.7 of the FARs limits the privilege to persons holding at least a private pilot certificate, and Section 43.5 prohibits operation of the aircraft unless it's approved for return to service. Further, pilots may only approve for return to service preventive maintenance *which they themselves have accomplished.*

Pilots also must adhere to certain performance standards when performing preventive maintenance. Specifically, Part 43.13 requires preventive maintenance to be accomplished using methods, techniques, and practices acceptable to the FAA Administrator. These are normally set forth in the manufacturers' maintenance manuals; however, some may be found in the advisory circulars published by the FAA. FAR 43.13 requires the use of the tools, equipment, and test apparatus necessary to assure completion of the work "in accordance with accepted industry practices."

Moreover, FAR 43.13 requires that any special equipment recommended by the manufacturer or its equivalent must be used in a manner acceptable to the FAA. This provision is directly applicable to maintenance rather than to preventive maintenance. However, because it may come into play, owners and pilots should be aware of it.

Lastly, FAR 43.13 requires that the work performed and the materials used are to be such as to ensure that, when the work is completed, the item worked on is at least equal to its original condition.

Caution must be exercised because some functions which appear to be simple tasks may, in fact, be quite complicated. Care should be taken to ensure that the manufacturer's instructions are understood and that the function is within the individual's capability, within the definition of preventive maintenance, and that it is listed in paragraph (C) of Appendix A of Part 43.

Preventive maintenance *must* be recorded in accordance with Section 43.9 of FAR 43. This is done by entering in the maintenance record, of the item worked on, the following:

1. a description of the work performed. This should indicate what was done and how it was done.
2. the date of completion of the work performed.
3. the kind of airmen certificate exercised and the certificate number.

Affixing a signature to the entry constitutes approval for return to service.

Adhering to these preventive maintenance procedures is a good idea at any time, but particularly now, because of the FAA's recently announced safety audit of general aviation. If you're into performing preventive maintenance, be absolutely sure you know what you're doing and have the permission of your F.B.O. to do so; (some F.B.O.s frown on pilots independently performing any maintenance on aircraft while based at their facility); and that you carefully follow the FAA's regulations.

DIRECTORY: The phone number that you need to call to request a copy of the Colorado State Airport Directory is 866-2156. Only 500 of them are scheduled to be printed, so I'm not sure if there are any left or not. In any case, it's worth a phone call.

MARKETPLACE: For Sale: Aeroshell Oil - Premium W, 1 qt. Grade 100 (50 W) and 20 qts. Grade 80 (40 W), $1.50 each. Phil Young 665-5773

For Sale: KR-2 project, fuselage and tail 35% complete, spars complete, tricycle gear, firewall mounted, modified for Continental O-200, comes with miscellaneous items, over $1,500 invested, $500.00 or best offer. Carlos Suarez, 8303 Zephyr, Arvada, CO 80005, H. 431-6747

For Sale: (8) RHM-40E spark plugs - new, $8.85 each. Herrill Davenport 444-0734

FOR SALE: Q2 Project. Approx. 80% complete. 75 HP Revmaster. Airframe primed and ready for for paint. Many extras. Over 13,000 invested, plus 1500 hours. Asking 8,000.

		Approx. cost	Asking
ALSO:	REVERE HUSH-A-COM	325	250
	NAVTRONIC EXPLORER CALCULATOR	223	100
	EPOXY PUMP	-	100
	VARIABLE TRANSFORMER (for hot-wiring)	-	50
	2 HP COMPRESSOR (Used approx. 10 hours)	390	300
	Two large KER-O-SUN HEATERS	185 ea.	120 ea.

If interested in any of the above, please contact ROY SUTTIE, at 303/ 429-2397. He is arranging the sale of the above for his brother, Donald Suttie, who is seriously ill.

Chapter 43 Newsletter
c/o Kirby White
8780 West 90th Place
Westminster, CO 80020

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