EAA MILE HIGH CHAPTER

VOLUME 9, ISSUE 4, APRIL, 1986

THIS MONTH: This month's meeting will be held on Saturday, April 12, 1986 at the Rocky Mountain Energy Center at 7:30 P.M. The program will be a slide show and talk by member Dean Cochran on the "EAA Down Under Tour" that he and his wife took in the spring of 1983. For those of you who are unaware of what this is, EAA Headquarters sponsors an annual trip to Australia and New Zeland, with an emphasis on attending the larger airshows in those countries. Bob Green was on the same trip with Dean, and may have some comments on the trip, too.

LAST MONTH: With 52 members and guests in attendance, the meeting of March 8, 1986 was called to order at 7:45 P.M. by President Kirby White at the Rocky Mountain Energy Center. The minutes of the February meeting were approved as published in the Newsletter.

Guests: Guests present were Mike Kennedy of Parker -- who is a dealer for a new aircraft engine just coming on the market, James Canaday of Thornton -- who has some innovative ideas about starting a few new airports in the area, Chris Hughes -- the son of member Phil Hughes, Steve Black of Bailey -- who is building a KR-2, and Konrad Schoen of Denver -- who is working on a Cessna 172.

Treasurer's Report: There was none given.

Old Business: The topic of Paul Page getting out of the aircraft salvage business was again discussed. The auction of everything that he has will possibly be held on Memorial Day Weekend. We will be kept up to date on this subject by those who are in contact with Paul. Kirby reminded everyone that Treasurer Cathy Sheeon was collecting the 1986 dues.

New Business: Guest Mike Kennedy talked about the new aircraft engine that he will be selling. It is called the API O-500L, and it produces 32.6 HP at 5500 RPM. It is a four stroke, and weighs 43.5 pounds. There will be one of the engines running at Sun 'N Fun, and Mike hopes to have a demo engine in the near future. He passed out some information pamphlets to those who were interested. Bob Green said that he had gone to the Cactus Fly-In in Casa Grande, Arizona and felt that it was quite good. Guy Clark brought in a variety of information brochures on different airplanes and parts, and said they were for the taking. Roy Maneely showed a military-type headset with microphone that was for sale. It belonged to Lee Dimmick, and the asking price was $50.00. Librarian Cathy Sheeon reported that the Sport Aviation index that Bob Green said he would order and donate to the Chapter had arrived. She said it was very complete, and thanked Bob for the generous contribution.

Gene's Corner: Gene Horsman told us that he had heard from member Dave Krohnfeldt, who moved to Tucson, Arizona a few months ago. Dave has been working as an airborne radar operator for the U.S. Customs Service, and concentrates mainly on border patrol. Dave has been getting in quite a number of flight hours, and has flown in just about everything the Customs Service has at its disposal. Dave has been working on his Stits Flut-R-Bug project, too. Gene also informed us that on September 14, 1986, the Voyager will make a preliminary flight up and down the Pacific Coast.

Progress Reports: Ken Lysek told us that he has one wing in silver on the 1956 Tri Pacer that he is rebuilding. Glen Larson has been varnishing the fuselage sides and spars on his KR-2. Ray Lentz is now working on the horizontal stabilizer on his Acro Sport II.

A&P: The business portion of the meeting adjourned for coffee at 8:20 P.M. After the break, Brad Davenport showed about an hour's worth of slides of "guess what it is" airplanes. We all had a good time figuring out what they were. Thanks, Brad!

ROSTER UPDATE: Please add the following new members to your Roster:
Steve Black, 131 Hitchrack Rd., Bailey, CO 80421 H. 838-7731, KR-2
Scott McKenna, P.O. Box 21545, Denver, CO 80221 H. 430-0092
The following members have a new address:
Russ Grell, 21227 SE 29th St., Issaquah, WA 98027 H. 206-391-0343
Monerai
Dave Krohnfeldt, 4560 Tierra Alta Drive N., Tucson, AZ 85749
H. 602-749-8564, Stits Flut-R-Bug

GLOSSARY: From "I'd Rather Be Flying" by Donna Vasco
Pied Piper: a low wing airplane designed to run on pure alcohol -- usually observed flying during happy hour.
Pilot-In-Command: that person in aircraft, no matter seating position or competency, who has the biggest mouth.
Pitch: story you give your spouse about needing an airplane in your business.

DUES: As everyone should know, this is the last month to pay the 1986 dues. At the end of April, we will begin assembling the Roster and we will have to have your dues by then to include your name. Also, we will be forced to take you off the Newsletter mailing list if you haven't renewed. All I can say is we need all of you for your support and input.

CONGRATULATIONS: I need to (belatedly) congratulate Chapter 43 member Ed Cole for getting his Private Pilot's License in 1985. He wants me to tell everyone to increase the insurance on their houses and aircraft and spouses, etc. He wrote me a letter describing the problems encountered in installing a set of Cleveland wheels and brakes on the Cessna 140-A that he and Dick Weppner own. The two major problems were an incomplete package of parts and the alignment once everything was bolted together. Everything worked out, though, and the airplane flies pretty regularly.

NEEDED: If you are interested in helping out with Airlifeline, an organization which provides transportation to very needy children (many of them terminally ill) whose parents cannot afford the costs of transportation from outlying areas to hospitals, please call John at 674-2815.

FROM THE PRESIDENT: The block of instruction that I am presently taking at Colorado Aero Tech is turbine engines. They are quite interesting, and I am enjoying learning about them. Basically, they are quite simple in components and operation. The part that is complex and intricate is the fuel control system and its related components. It's amazing how little control a pilot actually has over a jet engine, compared to a reciprocating engine. Having never flown a jet, I really have no way of knowing whether a jet would be something that I would like to fly on a regular basis, but I would certainly welcome the opportunity to find out.

FROM THE EDITOR: I certainly hope that you aren't entertaining any thoughts of retrofitting your Cessna 172 with a turboprop now, such as at least one company is doing with the Cessna 210. Don't even let the idea cross your mind. For one thing, I don't believe that an STC even exists for a Cessna 172 for this type of conversion. And if it did, there would be no way that you could afford the operating costs and maintenance of a turboprop, not to mention the initial cost of installation. Just stick with your good old reliable Continental O-300. OK?

I had the pleasure a few weeks ago of having two new Chapter 43 members over on a Saturday morning. Namely, Chuck Ogden and Aaron Schomberg. They are very interested in deciding what type of aircraft they would like as a project, be it homebuilt or the restoration of a factory airplane. They wanted to see my older Cessna 172, and came armed with a lot of enthusiasm and a number of questions, which I hope I was able to answer to their satisfaction. They are very organized in their approach, and when they decide on a project, I'm sure it will be exactly what they're looking for. I wish them the best of luck. Just before they came, I received a call from Randy Smith, who is the Newsletter Editor for EAA Chapter 800 in Grand Junction. I trade monthly Newsletters with Randy, so I immediately recognized his name. He happened to be in town, and asked if I might have some time to get together. I told him about Chuck and Aaron coming over, and said he was more than welcome to join in. He did, and we all had a good time talking about airplanes and getting to know each other. I feel that I partially know the other Editors from their Newsletters, but it is really nice to be able to meet them in person like this.

AVIATION HAPPENINGS: April 19, 1986 FAA Accident Prevention Program, See full page poster elsewhere in this Newsletter.
May 23-25, 1986 The 20th annual Kansas City Area AAA Chapter Fly-In at Amelia Earhart Memorial Field in Atchison, Kansas. For information, contact Lynn Wendl, 8902 Pflumm, Lenexa, Kansas 66215, 913-888-7544
August 1-8, 1986 Oshkosh

MARKETPLACE: For Sale: Avstar navigation computer, excellent condition, new $89.00, sell for $55.00 OBO. John Kennedy H. 986-0190 or W. 799-9090 x230
For Sale: Narco Mk 12A, 360 channel with new power pack, complete and works great. Narco ADF 31 with digital frequency readout. King DME 60C. Narco Mk 3 with all cables and antenna. L. Harper, 4414 Misty Dr., Colorado Springs, CO 80907
For Sale: Wing strake molds for Cozy or Long Eze, $150.00. Jack Grandman 694-3714

U.S. Department of Transportation
Federal Aviation Administration

Accident Prevention Program

Aviation Safety-Education Seminar

April 19, 1986 8:30 to Noon

Stall/ Spin Workshop

12810 East Control Tower Road - Main Hangar

Centennial Airport, Englewood, Colorado

PROGRAM

The Denver Aerobatic Club, Chapter 16 of the International Aerobatic Club (EAA), and the Aspen Flying Club will present a Stall/Spin Workshop. Mick Wilson of the FAA-FSDO will present his WINGS Safety Seminar and other information on spin recovery techniques.

Following the workshop, the Aspen Flying Club will make four Cessna 150's and flight instructors available (at cost) to participants wanting further Stall/Spin experience. I A C 16 will have aerobatic aircraft on display and literature available for those interested in competative and sport aerobatics. The workshop will be held in the main hangar of the Aspen Air Flying Club on April 19, 1986, beginning with coffee and donuts at 8:30 AM and ending at Noon.

sponsored by

Acknowledgement of the sponsor is not an FAA endorsement of products or services

IAC Chapter 16
The Denver Aerobatic Club
P O Box 793
Elizabeth, Colorado 80107

Aspen Air Corporation
12810 East Control Tower Road
Suite 105
Englewood, Colorado 80112
303-799-6794

AVEMCO
FLYING SAFETY UPDATE

Metal Propeller Care

If you're like many pilots, you may not give much thought to your metal propeller. But you should. Even though a high margin of safety is incorporated in the design of modern, metal propeller blades, failures do occur.

Reports of propeller blade failures do not show that the failures can be attributed to any particular aircraft/engine/powerplant combination. Failures can occur with any type of propeller, be they fixed pitch, ground adjustable, variable pitch, or constant speed.

Indeed, propellers can be quite complicated. The typical, two-bladed constant-speed propeller consists of approximately 200 separate parts.

An investigation of a representative number of propeller blade failures discloses that the majority of failures occur because of fatigue cracks that started at mechanically formed dents, cuts, scars, scratches, nicks, or leading edge pits. In most cases, blade material samples did not reveal evidence of failure caused by material defects or surface discontinuities existing before the blades were placed in service.

Often, fatigue failure occurs at a place where previous damage has been repaired. This may be due to the failure actually having started prior to the repair, or improperly peformed repairs. Too many blade straightening or blade pitching operations can overstress the metal, causing it to fail.

Metal propeller blade failure may also occur in the least suspected areas, such as under leading-edge deicer boots, under leading-edge abrasion boots, and under propeller blade decals. During propeller blade overhaul, all leading-edge boots and blade decals should be removed and these areas checked for corrosion, pitting and evidence of fatigue cracks.

Another cause of metal propeller blade failure, thou less frequent, is flutter. This vibration causes the ends of the blade to twist back and forth at a high frequency around an axis perpendicular to the crankshaft.

At certain engine speeds, this vibration becomes critical and, if the propeller is allowed to operate in this range, propeller blade failure may occur. For this reason, tachometer accuracy is very important. Periodic tachometer accuracy checks should be made using reliable testing instruments.

Don't Let Little Problems Become Big Ones

How do blades fail? The stresses that normally occur in propeller blades may be envisioned as parallel lines of force that run within the blade approximately parallel to the surface. When a defect occurs, it tends to squeeze together the lines of force in the defect area, thereby concentrating the stress.

This increase in stress may be sufficient to cause a crack to start. Even a small defect, such as a nick or dent, may develop into a crack. The crack, in turn, results in a greater stress concentration. The resulting growth of the crack will almost inevitably result in blade failure.

There are, of course, many stresses on a propeller. The propeller is at the end of the energy chain, and is responsible for efficiently converting the brake horsepower of the engine into thrust. During normal operation, there are at least four separate stresses imposed on a propeller: thrust, torques, centrifugal force, and aerodynamic force. Additional stresses may be imposed by vibration caused by fluttering or uneven tracking to the blades.

Where do blades fail? Experience indicates that fatigue failures normally occur within a few inches of the blade tip; however, failures also occur in other portions of the blade when dents, cuts, scratches or nicks are ignored. Since failures also occur in blades, near the shank, and at the propeller hub, no damage should be overlooked or allowed to go without repair.

When performing propeller inspections and preflight inspection in particular, inspect not only the leading edge, but the entire blade for erosion, scratches, nicks and cracks. Regardless of how small any surface irregularities may appear, consider them as stress risers subject to fatigue failure.

During your preflight inspection of the propeller, *be certain* to consider the propeller "hot", and capable of roaring to life. More than one pilot has been surprised to find even the slightest movement of the propeller result in a spinning prop.

Propeller manufacturers' manuals, service letters and bulletins specify methods and limits for blade maintenance, inspection, service and repair. Remove from service damaged blades that are on the manufacturer's list of blades that cannot be repaired. When repairs are possible, the manufacturer's instructions should be followed using accepted industry practices and techniques. *All* propeller repairs should be performed by qualified repair agencies and competent personnel.

Moreover, owners and pilots should be aware of airworthiness directives that apply to the propeller installed on a particular aircraft. Close attention should be paid to repetitive requirements of applicable ADs.

The following blade tips will help you care for your propeller and help it provide you with many hours of enjoyable flying:

- Keep blades clean. Cracks or other defects cannot be seen if they're covered with dirt, oil or other foreign matter.
- Avoid engine runup areas containing loose sand, stones, gravel, or broken asphalt.
- Do not move the aircraft by pushing or pulling on the propeller blades; they were not designed to be used as handles. There is always the potential of injury should the engine start because someone left the ignition switch on or the engine isn't grounded.
- During the normal 100-hour inspection, the engine tachometer should be checked for accuracy to preclude operation in any restricted RPM range.

All propellers will wear and become unairworthy at some point in time. The best way to pro-long its life is thru regular care and maintenance.

THE FAR SIDE

Life on cloud eight.

THE FAR SIDE By GARY LARSON

The perils of improper circling.

"He said he coulda bailed out, but he knew how bad we need planes, so he brought her in."

THAT'S JAKE

"It's not so great in the air, but boy it'll taxi like all get out."

EMERGENCY AIRWORTHINESS DIRECTIVE

U.S. Department of Transportation
Federal Aviation Administration

AVIATION STANDARDS NATIONAL FIELD OFFICE
P.O. BOX 25082
OKLAHOMA, CITY OKLAHOMA 73125

Pursuant to the authority of the Federal Aviation Act of 1958, delegated to me by the Administrator, the following priority letter Airworthiness Directive (AD) No. 86-05-02 applicable to United Instruments, Inc. altimeters Part Numbers 5934, 5934A, 5934M, 5934AM, 5934P, 5934PA, 5934PM, 5934PAM, 5934D, 5934PD, 5934AD, and 5934PAD is issued February 28, 1986, and is effective immediately upon receipt.

This AD is necessary to detect altimeters which could display erroneous altitude information to the pilot. Several reports have been received stating that upon adjusting the barometric pressure setting, the adjustment knob could become disengaged from the altitude indication pointers. This disengagement negates the coupled gear arrangement between the adjustment knob, barometric pressure indicator and the altitude indication pointers leading to an erroneous display to the pilot. This AD requires an immediate check of the adjustment knob system to determine if the altitude indication pointers become disengaged with a slight pull on the knob. If disengagement occurs, the United Instruments, Inc. altimeter, Part Number Series 5934( ), must be returned to United Instruments, Inc., 3625 Comotara Avenue, Wichita, Kansas 67226. Regardless of the results of this check the AD also requires the eventual return for modification of all affected serial numbered altimeters to United Instruments, Inc. by July 1, 1986. The AD requires that the rework be accomplished by the manufacturer due to the critical nature of the close tolerances within the altimeter.

86-05-02 UNITED INSTRUMENTS, INC.: Letter issued February 28, 1986. Applies to altimeter Part Numbers 5934, 5934A, 5934M, 5934AM, 5934P, 5934PA, 5934PM, 5934PAM, 5934D, 5934PD, 5934AD, and 5934PAD with the following serial numbers:

6C461 thru 6C999
7C000 thru 7C999
8C000 thru 8C999
9C000 thru 9C999
0D000 thru 0D999
1D000 thru 1D999
2D000 thru 2D869

NOTE 1: This AD is applicable to pressure sensitive altimeters that do not have encoding capabilities. The affected altimeters were manufactured after February 1, 1985.

Compliance: Required as indicated unless already accomplished.

To prevent possible erroneous altitude information from being displayed to the pilot, accomplish the following:

EMERGENCY AIRWORTHINESS DIRECTIVE

(a) For all altimeters that are installed in an aircraft, prior to further flight,

(1) Check each installed altimeter or check the aircraft's permanent maintenance record to determine if the altimeter falls within the Serial Number designations set forth in this AD. The owner/operator of the aircraft may make this check.

(2) If, as a result of this check, it is determined that the altimeter falls within these designations, check the altimeter by applying a slight outward pull on the adjustment knob while turning the knob and determine that the altitude indication pointers and the barometric pressure dial remain synchronized.

(3) The holder of a pilot certificate issued under Part 61 of the Federal Aviation Regulations (FAR) may conduct this check on any airplane owned or operated by him. The person accomplishing this must make the appropriate aircraft maintenance record entry as prescribed by FAR 91.173.

(4) If the altitude pointers do not move simultaneously with the barometric dial, prior to further flight remove the altimeter and return it to United Instruments, Inc., 3625 Comotara Avenue, Wichita, Kansas 67226, no later than July 1, 1986. Replacement altimeters must be serviceable units.

NOTE 2: It is recommended but not required by this AD, that the above check for synchronized movement be accomplished each time the altimeter barometric pressure dial is adjusted.

(b) Regardless of the results of the check specified in paragraph (a) of this AD, on or before July 1, 1986, for all affected altimeters installed in an aircraft, remove the altimeter and return it to United Instruments, Inc. at the above address. Replacement altimeters must be serviceable units.

(c) For all affected altimeters not installed in an aircraft, prior to further use but no later than July 1, 1986, return the altimeter to United Instruments, Inc., at the above address, for examination and modification as required.

(d) For each altimeter returned to United Instruments, Inc. per the instructions of paragraphs (a), (b) and (c) above, the examination and rework by United Instruments, Inc. will be identified by a yellow dot approximately 1/4 inch (6.4mm) diameter on the lower half of the rear case and the letter "M", approximately 1/8 inch (3.2mm) in height stamped on the data plate just before the word "altimeter". Units that have been reworked and so marked may be used as serviceable replacement parts.

(e) Aircraft may be flown in accordance with Federal Aviation Regulation (FAR) 21.197 to a location where this AD can be accomplished. Prior to dispatch, set the altimeter to field elevation and do not reset in flight.

(f) An equivalent method of compliance with this AD, if used, must be approved by the Manager, Wichita Aircraft Certification Office, 1801 Airport Road, Room 100, Mid-Continent Airport, Wichita, Kansas, 67209.

3 86-05-02

United Instruments Service Bulletin No. 2, dated February 24, 1986, pertains to the subject of this AD.

This airworthiness directive becomes effective upon receipt.

FOR FURTHER INFORMATION CONTACT:

Mr. Robert R. Jackson, Aerospace Engineer, Wichita Aircraft Certification Office, 1801 Airport Road, Room 100, Mid-Continent Airport, Wichita, Kansas 67209; telephone (316) 946-4419.

CHANGE OF ADDRESS NOTICE

Signature requirements:
- Individual owner must sign.
- Partnership, a general partner must sign.
- Corporation, a corporate officer or managing official must sign-
- Co-owner, each co-owner must sign, continuing as necessary on an attached sheet-
- Government, any authorized person may sign.

Airworthiness Directives (AD) for a particular make and model aircraft are mailed to the owners using the permanent mailing address on file with the FAA Registry. This address is the same as the one shown on the aircraft Certificate of Registration. Federal Aviation Regulation (FAR) Part 47.45 requires owners of U.S. registered aircraft to notify the registry within 30 days after any change in this address. A revised Certificate of Aircraft Registration is then issued without charge.

MAIL TO:

FAA Aircraft Registry, AAC 250
Mike Monroney Aeronautical Center
P.O. Box 25504
Oklahoma City, Oklahoma 73125

AIRCRAFT REGISTRATION NUMBER N	SERIAL NUMBER
MAKE	MODEL

ADDRESS CHANGE REQUESTED

NAME AND ADDRESS OF CERTIFICATE HOLDER

STREET

CITY

STATE	ZIP	COUNTRY

SIGNATURE (IN INK)	TITLE	DATE

CANCELLATION OF REGISTRATION REQUESTED:
(check applicable block, sign, and date)

☐ 1. Aircraft sold to: (Purchaser's name and address)

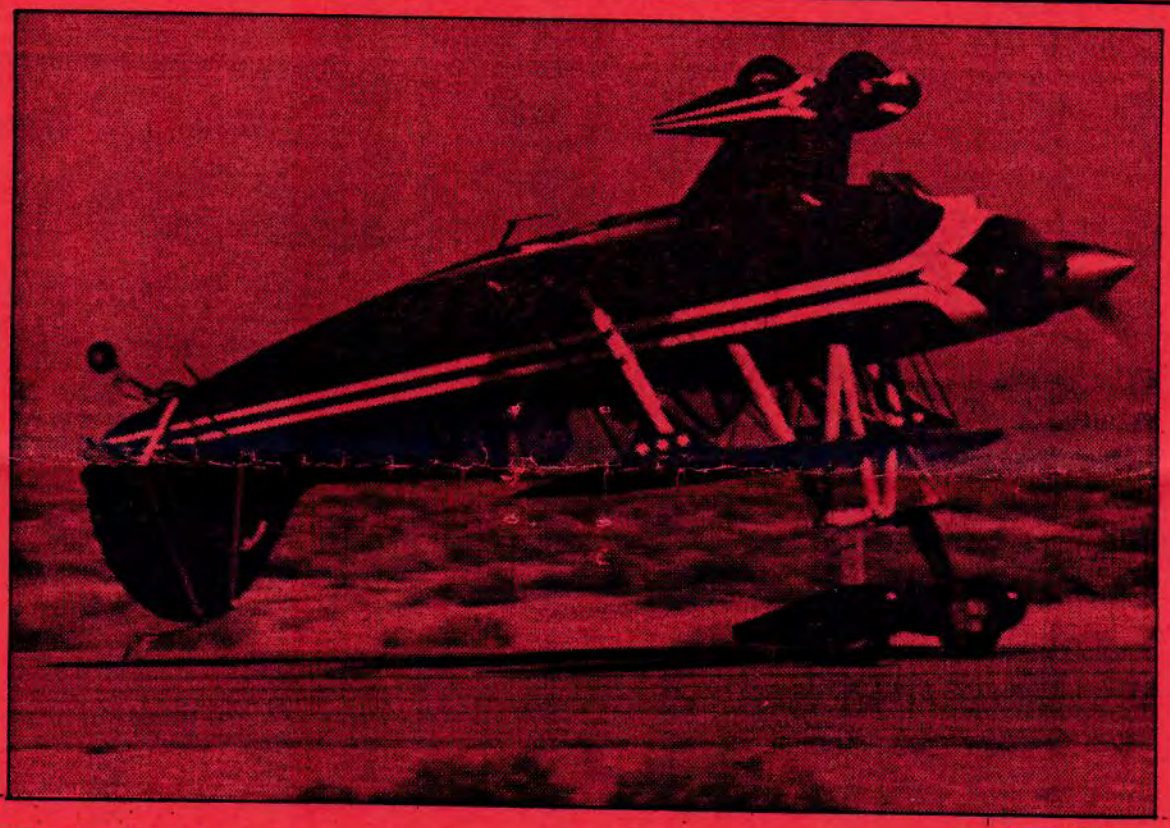
☐ 2. Aircraft destroyed/scrapped

☐ 3. Aircraft exported to

☐ 4. Other, specify

I (we) request cancellation of registration for the above reason

SIGNATURE (IN INK)	TITLE	DATE



Associated Press

WHICH WAY IS UP?

Pilot Craig Hosking from Bountiful, Utah, taxies his modified Pitts-S2B plane after landing in Lancaster, Calif. Hosking modified the crop duster to allow him to land the plane from the lower cockpit upside down. He claims to be the first person ever to land a plane upside down.

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

DENVER, CO
APR 8
PM
1986

USA 22

Gene Horsman
210 Lookout View Ct.
Golden, CO 80401