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## MILE HIGH EXPERIMENTAL AIRCRAFT ASSOCIATION

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## VOLUME 7, ISSUE NO.2, FEBRUARY 1984

LAST MONTH: Kirby White started the January meeting off at 7:51 P.M. There were six guests and fifty four regular members present. Several reasons for it getting such a late start, Bill Davis was swamped with calendar sales and collecting 1984 dues. New officers feeling out their new Jobs also contributed to the slow start.

Guest Jim Byers of Arvada came to get some questions answered, and to see about help. Well Jim, I came to my first meeting with the same Premise, and I advise you to continue attending the meetings, come early to ask questions, and consider Joining our organization. Other guests were Wayne Stacey, Dan Ashberger, and Tom Eichhorn. It was Chapter 43's Pleasure having you, we hope that you enjoyed yourselves.

Bill Landers read from a newspaper about some new ultra-light fields. Tom Eichhorn, ex-Treasurer, discussed the Halon fire-extinquishers, if you want to order one call Roy Maneely 750-5535, right away. The meeting broke for coffee at 8:15.

THIS MONTH:

Place ---- Rocky Mtn. Energy Center
Date ---- Second Saturday, February 11th
Time ---- 7:30 in the evening

There are still a few calendars for sale. They cost the Chapter three dollars, and the fifty-cent we gain, goes into the treasury. I hope to have a Treasurer's report to put into next months letter. Remember, we need your dues payed by March 31, 1984, so I can put out the new Chapter Rooster.

ADDITIONS: I understand there are five new members, but I don't have their mames at this writting.

PROJECTS: Ron Denight and Gene Horsman report they have put the wind-sheild in the Luscombe, and plan to hang the engine before the first of Feb. Gene hasn't done any work on the BD-5, to busy.

Roy Maneely is spending all of his spare time between the firewall and instrument Panel of his Bellanca "260".

Bill Schneider has been waiting for parts to come in, like stainless steel cable and turnbuckels.

Your's truly has finished putting lightening holes in the wing and center section ribs for my Mustang Two.

MARKETPLACE: For Sale- 2 1/4 inch turn bank indicator, this instrument operates on 12-14 volts, asking \$200.00 call Roy Maneely 750-5535

SPECIAL FEATURE: There were two working guests at our January meeting. They gave us a slide Presentation about their recent trek around the country.

With over half of the membership missing this great show, I feel it's my duty to fill them in.

John Schoonhough started the program by introducing his flying Partener .nd companion, Duane Burnett. Now John is a retired airline captain, with more time in the left seat than this reporter has in total time on earth. He had a dream of flying around the United States before he reached his 70th birthday. So he started looking for a Stearman and Planning the trip. When September 1983 rolled around he decided to ask Duane to come along, and the two men set off on a 10,200 mile journey around the Perimeter of the USA. Duane flying his little Skyote N102DB, and John in his big Stearman N52967. They meet many interesting, and sometimes strange people from all over the U.S. and Canada. After 39 days, 1438 gallons of gas in the Stearman alone, 71 takeoff's, and GOD only knows how many landings. The two Antiquers returned to Denver, with an experience they will never forget. On behalf of EAR Chapter 43, I want to thank you for sharing your trip with us.

John Duane your story was greatly appreciated.

FROM THE PRESIDENTS DESK: I was really excited that John Schoonhoven and Duane Burnett agreed to give the slide Presentation of their trip at the January meeting. One could easily tell from their presentation that they had a wonderful time. I think I can safely say that everyone was envious of them. I didn't get a final committment from John and Duane of whether they would be able to work the presention into their schedules until after the newsletter was on it's way, thus the reason no mention was made of it in the newsletter.

I have recently seen the Vari-Eze that Earl Ellis is building. He is really making some progress on it . Both wings, the canard, and the anopy were on it the night I went over. He was in the Process of fitting the cowling. He Plans to bring Pictures of it to the next meeting. As for a completion date, Earl is shooting for spring or early summer.

Roy Maneely brought a set of used skis for his L-3 in January. Right after he got them the weather turned and the snow started melting. So, regretably, he hasn't had a chance to try them out yet. If any of you were hoping for the snow to melt, you have Roy to thank for buying the skis. Roy washes his car every day hoping to make it snow again.

Procrastination, a major problem to overcome in any airplane project.

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FLYING SAFETY UPDATE ARTICLE #58

## **Avoiding Prop Chop**

In the last "Update," we pointed out the importance of carefully preflighting your propeller to guard against inflight failure. But, as this "Update" installment notes, propellers can cause accidents when your aircraft is sitting on the ground.

Even though propeller-to-person accidents are a small percentage of the total aircraft accidents, they generally result in grave - and oftentimes fatal -

injuries.

A review of National Transportation Safety Board accident statistics for three recent years shows a total of 44 propeller-to-person accidents. Those accidents resulted in 14 fatalities and 30 serious injuries.

The majority of those injuries occurred when a passenger was deplaning an aircraft with its engine(s) running, when a propeller was being handpropped or when passengers assisted the pilot in taxiing and parking.

A rotating propeller, even at low RPM, is very difficult to see, especially to passengers who aren't all that aware of its presence. But even flight crew personnel familiar with the danger of a rotating propeller sometimes forget, with tragic results.

Some propeller manufacturers use paint schemes to enhance the visibility of the blades. For that reason, aircraft owners should maintain the original

propeller paint scheme.

In the event that the paint scheme does not lend itself to high visibility, the owner should have the blades repainted. Customized paint schemes, however, should not be used until an evaluation is made by a person qualified to determine that it will not interfere with the pilot's own field of vision, promote vertigo or even create an unbalanced blade condition.

Prior to starting any engine, and thus propeller rotation, a careful preflight, such as the one outlined in "Flying Safety Update, No. 57," should be followed.

Above all, the pilot should make absolutely certain there are no persons near the propeller. And remember, children may be too short to be seen readily so take special precautions. Yell "Clear," look around carefully and then wait for a count of five to give persons a chance to get out of the way.

The best method to avoid propeller accidents involving passengers boarding or deplaning is to shut down the engine(s) first. Never permit passengers to "hop out" to close a baggage door or remove wheel chocks with the propeller turning.

The boarding or deplaning of passengers, especially children, with an engine running is extremely dangerous and should be allowed only under the

closest supervision. In these instances, the pilots should instruct passengers on the path to follow to avoid the propeller before they exit the aircraft.

Pilots who normally start their aircraft with electric starters often are inexperienced in hand-propping. The following procedures and recommendations

should be helpful.

Before handpropping, position the aircraft, if possible, so that it cannot become airborne. As unlikely as that may seem, it has happened, and with fatalities. Being stopped by a ditch or fence is preferable to crashing into parked aircraft.

Apply the parking brake and chock the wheels. Also, remove ties, wrist watches, loose jackets or anything else from your person that could become entangled in the propeller or hinder movement.

Have only a qualified pilot or a person thoroughly familiar with the aircraft controls occupy the pilot's seat (not the passenger's seat). Just as important, discuss with this person in advance of the handpropping operation just what both persons will be doing and when.

The ignition switch should be off, the fuel off, the mixture at idle cutoff and the throttle closed. Face the propeller from the front and make certain that

your footing is secure.

Place one or both hands on the widest part of the propeller blade and slightly back toward the trailing edge. Be sure you don't wrap your fingers around the trailing edge as you pull the propeller through. A back spin of the propeller can result in damaged or severed fingertips. Stand so that your swing will tend to carry your body away from the propeller, and then position the blade diagonally for a comfortable swing. Check your Pilot's Operating Manual (PDM) for direction of prop rotation.

The person in the cockpit may then turn on the fuel, turn on the master switch, prime as required for a normal start, and set the throttle and mixture in normal start-up positions. The brakes should be held on, even though the parking brake also is set.

The ignition switch may be turned on just as the person doing the hand-propping forces the blade downward rapidly, pulling his hands down and away as the movement is completed, and simultaneously stepping back from the propeller arc.

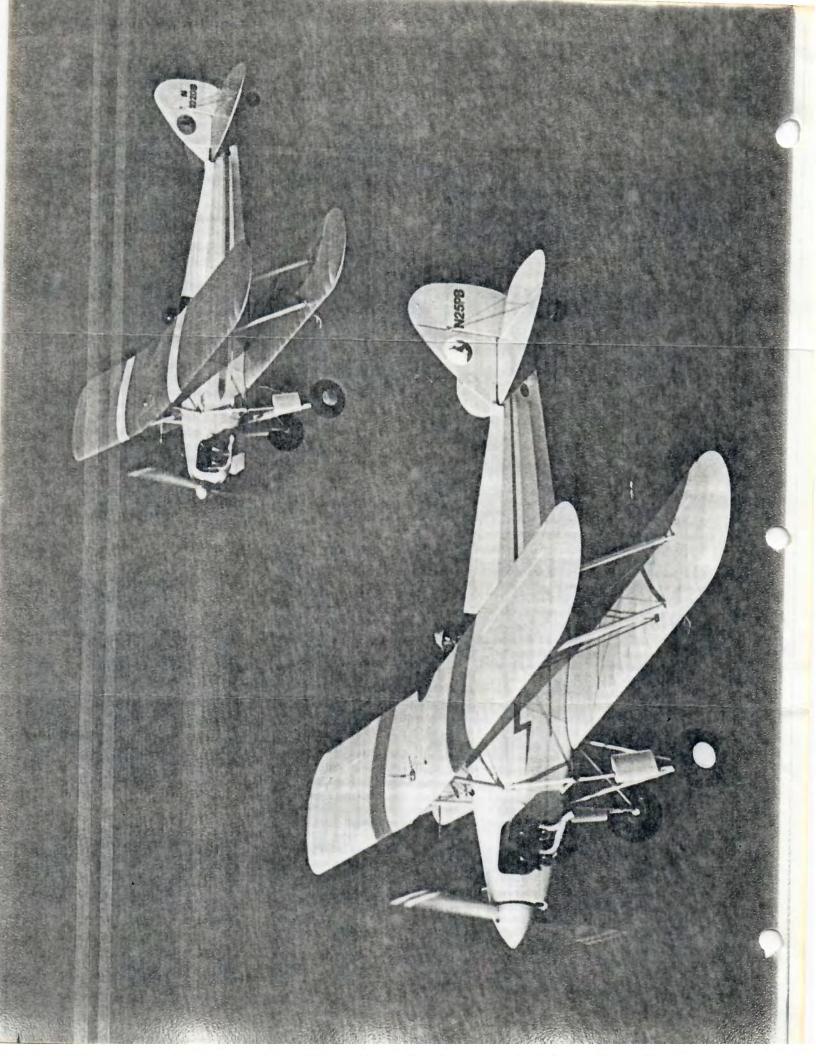
After startup, the person in the cockpit should quickly retard the throttle to idle. Be especially careful in removing the wheel chocks, since the turning propeller will be almost invisible. Long ropes tied to chocks help facilitate safe removal.

It is essential that the propeller always be treated as live. Never stand in, or pass through, the propeller

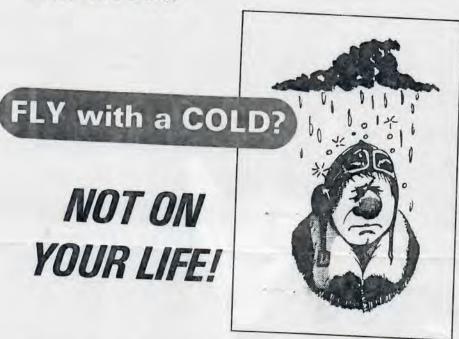
It also should be remembered that even the slowest movement of the propeller can cause a primed cylinder to fire. Therefore, when turning the propeller slowly for correct positioning, the technique for actually attempting a start must be used.

Even though your chances of an accidental encounter with a rotating propeller are, fortunately, slim, the mere thought of the damage that can be done - both to person and property - is more than enough to warrant extra precautions.

Treat your propeller with the same caution you would a pet tiger. You just never know when it might turn on you.







If you've seen one of the movie adaptations of the H. G. Wells classic, "War of the Worlds," you'll recall that the Martian pilots of the flying saucers devastating the Earth were finally conquered. Not by military firepower or even an atom bomb. But by the common cold.

While the alien intelligence in Wells' book were fatally susceptible to cold germs, we human beings rarely succumb to colds. That's not to say, however, that a cold that's a mere discomfort on the ground can't become a serious menance to a pilot—and his passengers—in the air.

All of us no doubt remember the warning of our instructor: "Don't fly with a cold." But while most of us have heard these words, we may not know why it's sound advice.

If you have a cold, you're likely to feel tired, worn out, drowsy or irritable. You may be in some discomfort and, possibly, pain. All of these conditions, individually or together, work to make you an unsafe pilot in the air.

Colds can cause even greater problems to the pilot. Swollen lymph tissue and mucous membranes are apt to block sinuses, as well as the ears. This can cause disabling pain and pressure vertigo during descent, which in turn may result in loss of control of the aircraft.

Additionally, infection of the inner ear by various cold and flu-like viruses can produce severe vertigo, which could easily make straight-and-level flight impossible.

If you fly an unpressurized aircraft, you are almost sure to encounter the problem of ear discomfort during ascent or descent. The following is a layman's discussion of how pressure affects your

ears and will illustrate the potential danger here.

As your aircraft gains altitude, the atmospheric pressure decreases and so does the pressure in the external ear canal. The middle ear, being a closed cavity, stays at ground-level pressure.

When the pressure in the middle ear exceeds that of the external ear canal, your eardrum starts to bulge out somewhat. The middle ear is sensitive to this change and requires only a slight excess of pressure to open the eustachian tube, so that gas may pass by this route through the nose or mouth.

In this way, pressure is equalized on both sides of the eardrum. You may be aware of this pressure change by alternating sensations of ear fullness or "clearing."

During descent, however, conditions within the ear are reversed. As the surrounding air pressure increases, the middle ear—which has adjusted itself to the reduced pressure at altitude by the process just described—is at a lower pressure than the external ear canal. Consequently, the outside air forces the eardrum to bulge inward.

This condition is more difficult to relieve, since air must be introduced back up the eustachian tube to equalize the pressure. The partial vacuum in the middle ear also tends to collapse, rather than inflate, the walls of the eustachian tube.

If you have a cold, the tissue around the nasal end of the eustachian tube will probably be swollen, and you can expect ear problems to be aggravated in flight. The best advise is to stay on the ground.

If you must fly, do so at lower altitudes. This precaution may prevent a

perforated or painful eardrum. A perforated eardrum generally heals rapidly. In some cases hearing is impaired permanently, or the middle ear becomes infected and causes prolonged disability.

Incidentally, don't count on cold remedies and prescriptions to make it safe for you to fly with a cold. They will not. Some medicines specifically state on the label that usage will cause drowsiness. Others caution the user to refrain from operating of any kind of machinery or equipment. Medications such as aspirin, cold tablets, cough mixtures and laxatives can jeopardize safe flight by their subtle or unpredictable effects on the pilot.

Dangers that may accompany pilltaking include drug allergies that could disable the pilot and unexpected side reactions, such as nausea or vertigo, even if the pilot has never before suffered such side effects.

High-altitude flying or "G" forces have been observed to change the effect of some medications. And, two drugs taken at the same time occasionally cancel each other, render each other more potent, or cause a side reaction not experienced with either medication alone.

Remember, too, that the pilot who flies while ill, or while taking disqualifying medication, in in violation of the Federal Aviation Regulations. When in doubt, check with your local FAA medical examiner.



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