



MILE HIGH
EXPERIMENTAL
AIRCRAFT
ASSOCIATION

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LAST MONTH: THE MINUTES FOR EAA CHAPTER 43, SATURDAY MAY 12, 1984 MAY'S MEETING STARTED AT 7:49 P.M. THE CHAPTER LIBRARY BOOK SUBJECT WAS BROUGHT UP AND THE MEMBERS DECIDED TO WAIT UNTIL THE JUNE MEETING TO VOTE.

L. DIMMICK DONATED QUITE A LOT OF BOOKS TO #43'S LIBRARY. THANKS BILL DAVIS HAS MANY MEMBERSHIP CARDS THAT HAVEN'T BEEN PICKED UP. I COULD MAIL THEM OUT, BUT WOULD RATHER SEE YOU AT THE MEETINGS. NEW BUSINESS, GENE HORSMAN IS WORKING ON HIS B05, ROY MANEELY REPORTED HE FINALLY GOT TO TRY OUT HIS NEW SKIS THE LAST SNOW OF THE YEAR. MARILYN SCHNEIDER REPORTED, THE BEECH BONANZA CONVENTION WILL BE JUNE 21, 22, 23 1984. MARILYN IS ALSO HANDLING THE SIGN PAINTING FOR THE EAA REGIONAL, SO GET HER THE INFORMATION. KIRBY WHITE ALSO GOT SEVERAL VOLUNTEERS FOR THE TROPHY COMMITTEE THAT HE IS HEADING. COFFEE BREAK AT 8:13 PM AFTER BREAK, GENE HORSMAN SHOWED A VIDEO CASSETTE OF A SPACE SHUTTLE MISSION AND ALSO RAN SOME SPACE MUSEUM SLIDES. GENE, BILL MANY THANKS. MEETING ADJOURNED AT 10:05 P.M.

ADDITIONS: PLEASE WELCOME AND ADD TO YOUR ROSTERS THE FOLLOWING NEW MEMBERS.
ED COLE
RALPH MOLSKI
TROY ANDERSON
LOUIS MOLLIANI
WALT CHARTIER

NEXT MONTH: JUNE 9, 1984 7:30 P.M. AT THE ROCKY MTN. ENERGY CENTER.

FOR SALE: LORAN C \$900.00 CALL RON DENIGHT AT 452-0458

FOR SALE: PARTS FROM A GRUMMAN AA-1B. COMPLETE SET OF UNDAMAGED WINGS. NOSE-BOWL UPPER AND LOWER, CANOPY, FIREWALL, INSTRUMENTS, AVIONICS. AIRCRAFT HAD ANOTHER AIRPLANE FLIP OVER ON IT IN A WINDSTORM. DEMOLISHED FROM COCKPIT AFT. CALL KELLY BARE AT 312-544-1348 (CHICAGO AREA)

FOR SALE: 1965 CESSNA 150E IN VERY GOOD CONDITION. ABOUT 2600 TOTAL HOURS. AND 490 HRS. ON ENGINE. IT WAS ANNUALLED LAST JULY. HAS USUAL VFR PANEL. FLYS BEAUTIFULLY. NEED TO SELL FOR \$6,500 OR MAY CONSIDER PARTNERSHIP. CALL JACK PINOVER 288-7520

AVIATION HAPPENINGS: JUNE 10, 1984 LOVELAND FLY-IN BREAKFAST 7AM-10:30AM
JUNE 30, 1984 MONTROSE FLY-IN 10:30AM ---
JUNE 15-17, 1984 EAA ULTRALIGHT CONVENTION, OSHKOSH WI.
JULY 28-AUG 4, 1984 OSHKOSH '84 EAA FLY-IN, OSHKOSH WI.

FROM THE EDITORS DESK: REMEMBER !!! THOSE WHO VOLUNTEER THEIR HELP TO THIS ASSOCIATION ARE JUST THAT, VOLUNTEERS. FROM THE PRESIDENT TO THE EDITOR, LIBRARIAN, COFFEE MAKER AND ALL THE REST, WITHOUT PEOPLE LIKE THEM YOUR EAA CHAPTER COULDN'T EXIST.

51% RULE COMMENTS NEEDED: We still receive an occasional complaint or remark from an applicant for an amateur built experimental certificate regarding the "major portion or 51% rule", especially when the FAA finds that the applicant has not met this requirement. These remarks come from designers and manufacturers of kits as well as from individual homebuilders.

We all know the "major portion or 51% rule" has considerable room for interpretation, and this is not all bad as it provides flexibility both for the amateur builder and for the FAA Inspector who is called upon to issue the experimental certificate for the aircraft.

Recently, FAA developed an innovative concept whereby it could be determined whether or not a project would qualify as "Amateur Built" before it was started. Further, a designer or kit supplier could determine that the product would fit this criteria. This has been extremely helpful in specific cases where the new concept was applied, but many people do not know it exists and, therefore, cannot put it to use. The concept is in a trial status and receives its life in a document entitled FAA Notice N8130.39, issued 7/25/83. The information contained in this notice is available at your MIDO, GADO or FSDO.

The concept consists of breaking down the construction and assembly process into its various components and then giving weighted credit for having done the work and having used specific tools in this endeavor.

A check list was developed for two categories of aircraft - one of over 350 lbs. maximum empty weight and the other for aircraft up to 350 lbs. maximum empty weight. (The latter covered the introduction of ultralights into the amateur built category.)

After completing the check list, if the resultant number is over 50 the project qualifies. If 50 or less it is not within the basic requirement and hence will not be eligible for an experimental certificate in the amateur built category.

It is not mandatory for the FAA to use the check list if the inspector is satisfied that the 51% requirement has been met, but it is helpful in the event of a dispute.

Inasmuch as this trial period is scheduled to close 7/1/84, we would appreciate any comments you may have regarding its use, both pro and con, by June 10. Where possible please support your remarks with specifics so we can provide FAA with a constructive recommendation by the middle of June. Address your comments to: Charles Schuck, EAA Washington Representative, 708 MacArthur Ave., NE, Vienna, VA 22180.

STC'S: Many of you have probably already seen our news releases on auto fuel STCs indicating that they are now available for over 101 different aircraft models. However, with the increasing demand for auto fuel — some 5,000 owner-pilots now use it regularly — we have encountered some problems. Several of our members have contacted us and asked us to come to their aid as the result of either FBOs or airport managers prohibiting containers of auto fuel from being transported onto airports. One wonders how we have managed to safely obtain, transport and dispense auto fuel for use in our lawnmowers, snowmobiles, chain saws and powerboats. It often seems that aviation has not caught up to modern times.

10% LUXURY TAX ON AIRCRAFT: We have been in contact with Wisconsin Congressman, Jim Moody, regarding the amendment to the Tax Reform Act of 1983, which seeks to impose a 10% tax on personal use aircraft. We have pointed out to Congressman Moody that the aviation community is already in dire straits and that we pay taxes far in excess of what could reasonably be assumed our share. We have also told him that all of the principal aircraft manufacturers are suffering large staff lay-offs and that the very small amount of revenue which would be gained from such a 10% luxury tax cannot be compared to the tremendous additional burden it would place on those of us who fly, not only for recreation but provide a great number of community services. Unfortunately, Congressman Moody continues to support the Bill and its amendments "as part of a necessary deficit-reduction package to raise revenues and to cut Federal spending". Obviously, we disagree. We strongly encourage all of you to contact your Representatives in Washington to give them your views on this extremely important issue.

AIRPORT STATISTICS: The number of active landing sites in 1983 totalled 16,029 which is a gain of 198 over 1982. However, the number of airports opened to the public declined from 6137 in 1982 to 5987 in 1983. This is a decrease of 150 from the previous years. The number of airports restricted to private use increased by 348.

Of the total of 16,029 landing facilities 12,653 were airports, 2918 heliports, 392 seaplane bases and 66 stolports. Not included in these figures are 12 ultralight flight parks, 32 gliderports and 7 balloon ports.

677 airports are served by air carriers but only 400 have scheduled service.

Texas leads the nation in the number of landing sites with 1543 followed by Illinois with 909, California with 862, Pennsylvania with 720 and Ohio with 678.

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FLYING SAFETY UPDATE 88

Developing Good Flight Sense:

The Proof Is In The Discipline



Running out of fuel can not only ruin your day, but can ruin your aircraft as well. Be sure to consider your aircraft's fuel capacity and consumption rate under conditions of each flight.

As pilots, we all know that flying safely involves a good dose of old-fashioned horse sense, or, if you'll pardon the pun, just "plane" sense. Contrary to popular belief, common sense **can** be acquired; we just have to know how to develop it.

Applying common sense to our flying isn't necessarily difficult. It does, however, require a willingness on the part of the pilot to sharpen his flight sense and then a disciplined program for making the whole thing work.

How many pilots have operated an aircraft rarely or not at all during those cold winter months? There are probably quite a few. Preparing to fly on those first warm, balmy spring days after a long layoff can be a very trying experience for pilot and aircraft alike. Common sense dictates that you are rusty and that a couple of hours of dual with an instructor could remove those winter cobwebs from your piloting skills.

For example, how well do you know the aircraft you fly? Do you thoroughly understand its limitations, performance, systems, switches, emergency procedures, endurance and loading?

Pilots should **periodically** reread the pilot operating handbook for the aircraft they fly. Know the aircraft systems — how to operate them and what to do in the event of a system malfunction or failure. Know how to conserve fuel. And review the procedure to follow after an engine failure. Above all, know and remember how your aircraft performs in high temperatures and when loaded to maximum allowable gross weight.

When an emergency occurs in flight, there is little time to decide the proper action to be taken. You must have an established plan of action and a thorough knowledge of your aircraft **before** an actual incident occurs.

Preflight planning goes a long way toward helping develop common sense into common practice. A few moments spent prior to **each flight** affords the pilot an excellent opportunity for a thorough preflight inspection that includes an equally thorough preflight weather briefing.

Carelessly performed or disregarded preflight inspections have been the contributing cause of many accidents. Flights have been started, but sometimes not completed, because fuel or oil tanks were not checked, fuel caps were left off or loose, pitot systems were covered or blocked, gust locks were left on, wheel skirts jammed with

mud, engine coolers blocked by birds' nests, wings and other surfaces covered by frost, snow and ice.

But there are other preflight considerations, too. Be sure to consider your aircraft's fuel capacity, consumption rate, range versus wind conditions of each flight, and give careful thought to endurance and fuel reserves well above the minimum required by the FAR's.

Review routing, minimum altitudes along the flight path, navigation aids, notices to airmen, alternate airports in the area, destination airport runway lengths, and the like. Learn as much as you can about your destination airport **before** you depart.

Performance and flight characteristics of your aircraft are determined, to a large degree, by its maximum weight. Never exceed your aircraft's maximum weight. An aircraft loaded beyond gross weight may be uncontrollable, or may not even fly at all.

Know your useful load — the difference between empty weight and maximum gross weight — and remember that this weight **includes** the weight of the oil and fuel, baggage and passengers. **Don't forget that some aircraft will exceed their gross weight limits if all seats are occupied and full fuel is carried.**

Just as important as not exceeding the aircraft gross weight is to load the aircraft properly. Center of gravity limits are becoming more and more critical with larger capacity aircraft. Know how to determine the C.G. location for various loads and configurations of **your** aircraft.

Required runway lengths for landing and taking off may vary considerably with changes in field elevation, outside air temperature, aircraft load, and runway surface. To avoid running out of runway, consult your pilot's operating handbook for the distances required to make a takeoff or landing **under the conditions that exist at the time of the operation.** Many pilots add a safety factor of, say, 25 percent, just to be sure.

With regard to fuel range, remember that mixture, power, and RPM settings vary fuel consumption considerably. Fuel gauges may be inaccurate. Think of your aircraft's endurance in terms of the actual fuel used, versus the flight time. Remember a headwind or a tailwind can significantly **shorten** or lengthen the actual fuel range. And **always** provide for fuel reserves.

Hundreds of aircraft have run out of fuel in the traffic pattern or in sight of the airport.

According to the NTSB, many other accidents caused by pilot error involve pilots who do not know their aircraft's operational numbers. Too fast, too slow, stall/spin, below engine-out speed, exceeded structural limit speed, loss of control in turbulence, out of center of gravity limits, field too short for aircraft load and conditions, landed fast, or stalled on approach are just a few of the accident causes attributed to pilots who just didn't know "the numbers" for their aircraft.

To examine more closely just one of those factors, remember that speed control and using the correct speeds directly affect both your longevity and that of your aircraft. High speeds in turbulence or rough air may damage or destroy the aircraft structure. Too slow a speed may cause a stall, spin, or undershoot on landing. Knowing your best engine out-glide speed and best climb speed may mean the difference between your making the airport or ending up in the trees.

Among the more important speeds to memorize include the various stall speeds, recommended approach speed, best rate and angle of climb speed, best glide speed, maneuvering (rough air) speed, maximum never exceed speed, and gear and flap extension speeds. And remember, stall speeds increase measurably with angle of bank and weight increases.

Of course, one of the most important elements in developing good flight sense is you. Establish a set of safe standards and limitations to which you can confidently adhere. And then stick to them, modifying the limitations only as you gain confidence and experience.

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FLYING SAFETY UPDATE 87

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WEATHER BRIEFINGS

The Spring season is well known in most areas of the country as a time of potentially threatening weather conditions, with thunderstorms and fast-moving squall lines leading the list. Pilots must be alert not only to existing adverse weather conditions, but also to those that could likely develop during the course of a flight.

What this means is that the weather briefing that is essential at all times before and during a flight is absolutely critical when potentially threatening conditions exist or are forecast.

A good weather briefing begins with developing an awareness of the overall weather—the “big picture”—before attempting to get a detailed weather briefing. You can watch a good television weather report, tune in to “AM Weather,” sponsored by AVEMCO, listen to a Transcribed Weather Broadcast (TWEB) or Pilot’s Automatic Telephone Weather Answering Service (PATWAS), if these are available in your area.

When you’re ready for a detailed briefing, you should call your local flight service station. Area airports will have the phone number, if you don’t, or you can look it up in the telephone book under United States Government/Department of Transportation/Federal Aviation Administration/Flight Service Station. If no FSS is listed, look for National Weather Service listings under the Department of Commerce/National Oceanic and Atmospheric Administration.

Make sure your planned route of flight is worked out and your flight plan *partially* completed *before* you make the telephone call. For your preflight briefing, provide the briefer with the following information:

- Your qualifications, e.g., student, private, commercial, and whether you’re instrument-rated.
- The type of flight contemplated, VFR or IFR.
- The aircraft’s N-number. If you don’t know it, give the pilot’s name.
- The aircraft type.
- The departure point.
- Your proposed route of flight.
- Your destination.
- Your proposed flight altitude(s).



Receiving a good weather briefing can oftentimes alert the pilot to the presence of threatening conditions as the photo above illustrates.

- Your estimated time of departure (ETD).
- Your estimated time en route (ETE), or, alternatively, your estimated time of arrival (ETA) leading the list.

Request that the briefer provide you with a weather briefing (some individuals call an FSS for other reasons), and then *listen* to the briefer. The briefer will be following instructions contained in the FAA’s *Flight Service Handbook*, which prescribes procedures and phraseology.

The briefer will advise you of any adverse weather conditions along your proposed route of flight. When a VFR flight is proposed and actual or forecast conditions make VFR flight questionable, the briefer will describe the conditions and may advise you that “VFR flight is not recommended.” If this occurs, or if you feel that the weather conditions are clearly beyond your capabilities (or that of your aircraft or equipment), you should consider terminating the briefing. This will free the briefer to handle other incoming calls.

The briefer will usually summarize weather reports and forecasts. After the conclusions of the initial briefing, if there is *anything* that you do not understand about the weather briefing, let the briefer know. For example, if the briefer uses an abbreviation that you do not understand, ask him to explain it. If the briefer talks too fast, ask him to speak more slowly.

The amount of detail in your weather briefing will depend upon how complicated the weather situation really is. Remember, if the weather situation is “iffy,” expect and *insist* upon a detailed weather briefing. It is both your legal responsibility and your prerogative as a pilot to do so.

At a minimum, your briefing should include:

- Weather synopsis—expect a brief statement as to the cause of the weather (e.g., fronts or pressure systems) that might affect your proposed route of flight.
- Adverse conditions—significant mete-

rological and aeronautical information that might influence you to alter your proposed route of flight, or even cancel your flight entirely (e.g., hazardous weather, thunderstorms, turbulence, low ceilings or visibilities, runway closures or NAVAID outages).

Expect the briefer to emphasize reports of temperature inversions, low-level windshear, thunderstorms, or frontal zones within 50 nautical miles of your departure and arrival airports.

● Current weather—when your proposed time of departure is within two hours, a summary of the current sequence weather for your departure airport, en route, and destination airport will be given, if available. Of course, it’s your prerogative as a pilot to also request pilot reports (PIREPs) covering your route of flight.

● The En Route Forecast—expect the briefer to summarize en route weather conditions along your proposed route in a logical order, i.e., departure, climbout, en route, and descent.

● Destination Terminal Forecast—the destination forecast for your planned ETA will be provided, including any significant changes within one hour before or after your planned time of arrival.

● Winds aloft—winds and temperatures, as necessary.

● Notices to Airmen (NOTAMs)—“Current” NOTAMs pertinent to your proposed route of flight will be provided. Information on military training routes and operational areas, however, along with *published* NOTAMs and Special Notices, *must be specifically requested*.

Here are a few weather “Don’ts” for all pilots:

● *Don’t fly in or near thunderstorms.* Scattered thunderstorms may be safely circumnavigated, but do not try to fly through or under one.

● *Don’t continue VFR into IFR weather conditions at any time, unless you are IFR-rated and have appropriate Air Traffic Control clearance.* Wait it out, or turn around if you find en route weather lowering to marginal VFR or IFR conditions.

● *Don’t proceed “on top,”* hoping to find a hole at the other end, or hoping to get ATC to “talk you down” if you get caught on top.

● *Allow more margin for weather at night.* Scud and lower clouds don’t show up very far ahead, particularly when it’s a really dark night.

● *Don’t fly into areas of rain when the air temperature is near freezing.* Ice on the windshield and on the wings can make for poor flying conditions.

And finally, if you do get caught in weather, tell a FSS or ATC facility. They will do their utmost to help you.

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