



EAA CHAPTER

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• A LOCAL CHAPTER OF THE EXPERIMENTAL AIRCRAFT ASSOCIATION — BOX 229, HALES CORNERS, WISCONSIN 53130 •

OF Lincoln Nebraska

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MARCH 1984 NEWSLETTER

---> THE PRESIDENT SEZ <---

MARCH MEETING: Our March 6th meeting will be held in the Duncan Aviation lunch room at 7:30 P.M. (Ask at the main desk for directions). **Ladies, this is your night!** I have asked the Nebr. 99's to come join us. Our speaker for the evening will be Dr. Miriam Haworth, a member of the 99's. Miriam will speak about the role of women in aviation, past and present. Maybe she can tell me what really happened to the beautiful Miss Amelia Earhart. Rumor has it that she was kidnapped by Howard Hughes and locked up in the Bruce Goose where he kept her as his mistress until she died. We all know that old "Howie" was a little different, but then again, he could afford to be.

Please come and bring some home made chip dip. The Chapter will supply the chips, crackers, and liquid refreshments. Let me tell you, I've thought extremely hard for a scheme to come up with some delicious home made food for us starving single guys, and this is it!

Those of you who have not yet paid your dues, please do so on or before the March meeting. We will be making a current membership roster to be handed out at the April meeting. Any past member whose name does not appear on the new roster **will be shot!** Don't think for a minute that you're going to drop out after sticking me with the job of being president.

Dr. Dwight Snyder will be our speaker for the April 3rd meeting. He owns the beautiful two tone blue Pitts you see at the Municipal Airport. Those of you that attended the Dick Joyce Memorial Airshow last August saw Dr. Snyder perform some super aerobatics with his Pitts. He will talk to us about keeping healthy, hypertension (high blood pressure), medication and flying, and 101 ways to cheat so that you can continue to pass your flight physical. Get yourselves prepared for this meeting. This is an opportunity for free medical advice! More about this in the April newsletter.

FLY IN - O'NEILL NEBRASKA: EAA Chapter 804, O'Neill Nebraska is hosting a fly-in on May 20. Details will follow about events, prizes, and program.

See you all at the meeting,
Jim Fix

Please take time here to note the following important date on your calendars. Saturday March 31st, 1984 at 8:00 P.M. at the Sheldon Art Gallery on the University of Nebraska campus, we will show the movie "Magnificent Men and Their Flying Machines". It's a very good general audience film with a lot of humor and flying involved. At our meetings we decided the fairest way to sell tickets is to send each member 5 tickets at \$2.00 each and have you pay our treasurer \$10.00 at the next meetings.

We need the money for the next state wide fly-in plus the picnics we'll be holding this summer. It beats selling Junk door to door plus you'll get a good evenings worth of entertainment for your money.

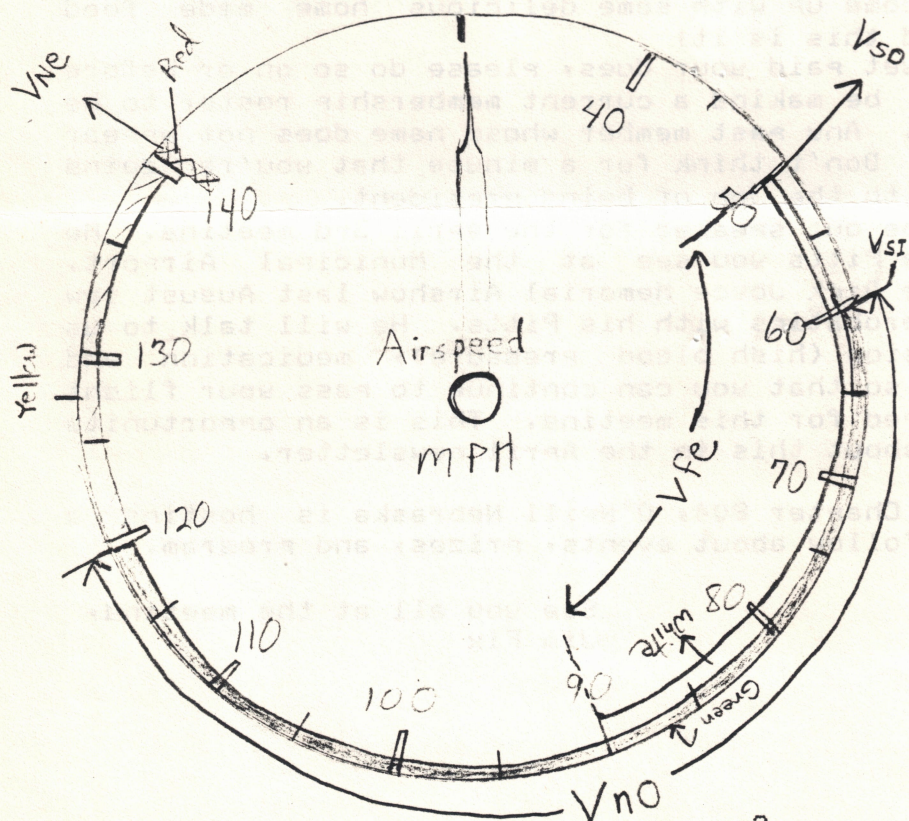
It was brought up at our last meeting about showing a film other than "The Magnificent Men and Their Flying Machines". Jim Fix and I conducted a rapid poll of some of our members and most of them decided the above movie would accomodate a wider audience than some of the old films about WW I and WW II. I thought about a double feature but the theater rents for \$50.00 an hour and we would eat up any profit we may gain in a hurry.

Remember that in order to make this fair, all members need to give Jerry Muhle, our treasurer, \$10.00 at the next meetings for your 5 tickets. I'll appreciate everyone's cooperation in this fund raiser to benefit our Chapter. Thank you!

Last year when I renewed my flight instructor certificate, they gave us the following information. It is a very wise practice to fill out the enclosed form for your aircraft and keep it handy. If you can't fill in the blanks using your memory, then look up the information in your airplane's operators manual.

Many people don't realize all the information located on the airspeed indicator. If you fly a large variety of aircraft it is very important you know what the color coding tells you. You should also know your "V" speeds and what they mean. On a single engine airplane the information depicted by the color coding is as follows; V_{SO} , V_{SI} , V_{FE} , V_{NO} , and V_{NE} . What you must memorize as it's not displayed visually on the airspeed indicator are;

- V_X - Best angle of climb speed
- V_Y - Best rate of climb speed
- V_A - Maneuvering speed



- V_{SO} - stall speed gear & flaps dn. Slow end of white arc
- V_{SI} - stall speed gear & flaps up. start of green arc
- V_{NO} - normal operating range green arc
- V_{FE} - flap extension speed, white arc
- V_{NE} - Never exceed speed, red line

The yellow line is a caution area where you should operate only in smooth air. You should know your V_A or maneuvering speed which may be located somewhere in the yellow arc on some but by no means all aircraft. Check the operators manual to be sure.

Aircraft Make and Model: _____

What is the total fuel capacity? _____ How many tanks are there? _____ What is the capacity of each tank? _____

What is the total usable fuel capacity? _____ (gal.)

What is the correct fuel grade? _____ Color? _____

Where are the fuel drains located? _____

When are they drained? _____

What is the recommended grade and type of oil? _____

What is the minimum operating oil level? _____

What is the aircraft empty weight? _____

What is the useful load? _____

What is the maximum aircraft takeoff gross weight? _____

What is the maximum aircraft landing weight? _____

What is the center of gravity range? _____
(Use maximum gross weight and work sample weight and balance)

What is the recommended short field approach air speed and configuration? _____

What are the recommended soft field take off and landing procedures? _____

What is the recommended normal approach airspeed? _____

What is the best rate of climb speed (V_Y)? _____

What is the best angle of climb speed (V_X)? _____

What is the maneuvering speed (V_A)? _____

What effect does reducing gross weight have upon maneuvering speed? _____

What is the maximum speed for landing gear extension? _____

What is the stall airspeed in landing configuration (VSO)? _____

What is the stall airspeed in landing configuration with a 60° bank? _____

What is the maximum crosswind component for your aircraft (20% VSO)? _____

What is the purpose of flaps? _____

1. What is the minimum control speed with the "critical engine" inoperative (V_{mc})? _____

2. What are the unsafe gear indications? _____

3. What is the procedure for emergency gear extension? _____

4. How do you detect carburetor ice? _____

In the event of carburetor ice, what do you do? _____

5. What is the power setting, fuel consumption and true airspeed for the following:

a. 65% power, 7,500 feet, standard temperature.

Manifold Pressure: _____ RMP: _____

Fuel Consumption: _____ TAS: _____

6. What would be the indication of alternator or generator malfunction on your aircraft? _____

7. Where is the alternate static source on your aircraft located? _____

8. What changes in pilot-static instruments would you expect if you were using "alternate static source"? _____

9. Describe the "Go Around" procedure: _____

10. What is the minimum runway length for takeoff in your aircraft? _____

Max. gross weight, no wind, sea level, standard temperature? _____

Max. gross weight, no wind, 5,000 ft., 100° temperature, 50 ft. obstacle? _____

11. When are your passengers required to have their seatbelts fastened? _____

12. What aircraft documents must be onboard during flight? _____

13. What are the basic VFR weather minimums for flight in a control zone? Ceiling _____

Visibility _____

14. VFR cruising altitudes are required above what minimum altitude? _____

15. What inspections are required on your aircraft? _____

As you look at the picture of the airspeed indicator, you will notice that V_{so} - stall speed with gear and flaps down is 50 mph. This is where the white line begins. V_{si} - stall speed with gear and flaps up is 60 mph. This is where the green arc begins. The white arc extends from V_{so} or 50 mph to 90 mph, maximum flap extension speed or V_{fe} . This is the high end of the white arc. It tells you that you shouldn't lower your flaps until the airspeed is 90 mph or lower. The green arc or V_{no} means normal operating range. The slow end of the green arc or V_{so} indicates your stall speed with gear and flaps up. The yellow arc indicates the caution range and it is advisable to stay in the yellow arc only if the air is smooth. At the top of the yellow arc you'll find a red line. This represents V_{ne} or never exceed speed unless you want your next of kin to collect on your life insurance policy.

Those "V" speeds not indicated by a color or line on the airspeed indicator are V_a , V_x , and V_y .

V_a - Maneuvering speed - The maximum airspeed at which full deflection of the controls will not result in structural failure. The airplane will stall before damage occurs. Beyond V_a , should you run into severe turbulence, structural damage could occur.

V_x - Best angle of climb speed - This is the speed at which you will gain the most altitude in a given **DISTANCE**. Used mainly on short field takeoffs to clear that 50 foot tree off the end of the runway.

V_y - Best rate of climb speed - This is the speed at which you will gain the most altitude in a given **TIME**. Used primarily after takeoff to climb up to cruise altitude in the shortest time.

Many people tend to overlook the importance of the color coding on the airspeed. For your own benefit it would be of value to learn about the airspeed indicator and the "V" speeds. If you have questions about it or if I've thoroughly confused you, corner me at the meeting and I'll attempt to explain it to you more clearly.

Jeff Clausen