

CHAPTER 55 EXPERIMENTAL AIRCRAFT ASSOCIATION

DECEMBER 2008



Meetings are the 2nd Saturday of each Month

EAA Chapter 55 Hangar - Mason Jewett Airport – 643 Aviation Drive, Mason, MI 48854

Pres: Bill Bezdek 351-0448 Vice Pres: Bill Purosky 214-2729 Treas: Sharron Hacker 740-4647

Secr: George Moore 536-1034 Editor: Warren Miller 214-2656 (all Area Code 517) www.EAA55.org

Climb and Maintain Flight Level 55

ALERT ALERT ALERT The Transportation Security Administration is proposing a Draconian measure that has the potential to change the structure of our society. They are proposing detailed background reporting for everyone who flies as a crewmember in an aircraft weighing 12,500 pounds maximum gross takeoff weight and over. And pre-approval for passenger manifests for EACH FLIGHT. Specifically the TSA would:

Require every owner/operator to assign a security director to oversee flight operations and to set up a TSA-approved security program, with an audit of the security program initially and every two years thereafter.

Require fingerprinting, and multiple background checks of all pilots and flight crewmembers, to be repeated every five years.

Require every owner/operator to submit the passenger manifest **for each flight** and to receive TSA clearance for all passengers prior to the flight.

Prohibit firearms and other restricted carry-on items from the cabin area unless the aircraft has a TSA-approved storage area.

Require some non-commercial airplanes to carry a federal air marshal, when instructed to do so by the TSA.

Few of our aircraft fall in to this category, but this could just be the beginning. With this wedge in the door any moving vehicle could be next on the list, and the weight category could be lowered arbitrarily. Think busses, then motor homes, and then boats. Imagine where it could go from there. The personal freedoms our parents fought and died for are slowly being legislated away.

The TSA has extended the public comment deadline until 27 February 2009. Go to <http://www.eaa.org/govt/tsa.asp> to see the entire proposal and instructions for submitting your comments.

**Board of Directors Meeting
December 10, 2008 7:00 pm
Chapter Membership
Meeting
December 13, 2008
Breakfast 8-9 Meeting 9:30**

We are still in need one of you to volunteer to fill the remainder of Sharron's term as Treasurer. Come join the fun of helping run our Chapter!

We had our first planning meeting for our 2009 Mason Aviation Days. This time of year it is primarily securing commitments for exhibition aircraft, for schedules fill up long in advance. If any of you has seen unusual aircraft in your travels this past year you would like to see at MAD please call me.

See you at the meeting on Saturday, and our Christmas party later that evening.

Bill Bezdek, President

Breakfast Teams

| <u>December</u> | <u>January</u> |
|-----------------|------------------|
| Dave Courey | Kyle Bradford |
| Kevin Cozik | Lloyd Brown |
| Max Hall | Ken Drewyor |
| Dave Keller | Gordon Hempstone |
| Steve Meyer | Del Johnson |
| Pat Salow | Steve Kent |
| Joe Whitesides | Jim Sawyer |



November Cooks: Steve Houghton, Karen Merindorf and Tom Botsford

EAA Chapter 55

Board of Directors Meeting, November 5, 2008

BOD Members in Attendance: President Bill Bezdek, vice president Bill Purosky, secretary George Moore, David James, Al Spalding, Rick Dallas, Vickie Vandenberg.
Absent: Sharron Hacker, Charles Hacker.

Members in attendance: Doug Koons, Julie Spalding

President Bill Bezdek called the meeting to order at 7:26 p.m. EST (2426 Z).

Secretary's report: Vickie Vandenberg moved to accept the report as written; seconded by Bill Purosky, carried.

Treasurer's report: As our treasurer was absent, there was no report, but there were questions re: Newberry Scholarship fund as to the way the balance sheet reflected as to how much received and how much has been paid out. Also, question of liabilities was discussed. The need for a treasurer is now critical as Sharron and Charles Hacker will be leaving for their Florida home soon. Sharron has offered to assist the new treasurer in learning the duties of the new treasurer as long as she remains in Michigan, but that offer will end by the end of December.

Reports from other officers or committees:

Young Eagles: Doug Koons reported that we have flown 208 young people in 2008 and that three more will be flown on Wednesday November 5. Eight more on November 6 from Waverly Elementary School, teacher Michelle Harns to bring students for this event.

Newberry Scholarship: Selection of Newberry Scholarship recipient to be done in near future.

OLD BUSINESS:

Bill Bezdek indicated the need for help in storing the outdoor picnic tables in the storage hangar following the General Membership meeting. Also, Bart Smith needs help in raking leaves to the curb at his property.

Chapter 55 Young Eagle of the Year Award to be presented.

Membership: Vickie Vandenberg—no new members. Member renewal form to be filled out by members who normally do not attend our meetings.

Christmas Party: Julie Spalding indicated a budget of \$1583.19 total, already approved. Also, approval from EAA National for this event to be completed. Reservations must be done by November 24. Cost for the dinner is \$15 for each individual.

Hangar Lease: one for the builders' hangar and one for the storage hangar are in process as directed by David James.

New furnace: Now installed. It is imperative that all members be aware of the correct order in shutting down the furnace when the building is not in use. Laminated instructions to be posted next to the thermostat to ensure that wiring or relay box not be damaged

by incorrect procedure. The proper procedure is as follows:

When shutting down the furnace, first turn the thermostat to lowest temperature, then WAIT UNTIL THE FURNACE CYCLES COMPLETELY OFF, then go out to the furnace location to shut off the switch to the furnace. Shutting off the furnace switch must be done last.

Bill Purosky indicated that our new chairs cost was \$1777.00.

Winch for storage hangar: Old one repaired and functioning. This has saved us the cost of a new one.

NEW BUSINESS:

Budget 2009 pending.

Election of officers: Vickie indicates that there are only four people listed with one more needed for board of directors. Election day is the general membership meeting, November 8, 2008.

NEW TREASURER DESPERATELY NEEDED TO REPLACE SHARRON HACKER: Now a critical issue. Continuance of our Chapter is at risk. Without a treasurer we cannot continue to conduct the business of Chapter 55. **Yes, it is that important!**

Chapter Strategic Planning—Member Survey: Vickie Vandenberg. The future of direction Chapter 55 will take as to activities and responsibilities is at stake. Vickie noted that there are no young members coming into our chapter. Bill Bezdek noted that young people today are taken up with text messaging, computer games, etc., and therefore exhibit little or no interest in becoming active members. What does this mean for the future of our local EAA organization? What are the issues most important for our present members?

MAD 2009 COMMITTEE: Members so far are Bill Bezdek, Vickie Vandenberg, Al Spalding, and Doug Koons, but the more members on this committee, the better. Need volunteers for this most important function. Bill Bezdek has already booked Dave James Helo and Bruce Koch's BT 13. Dawn Patrol and MAD dates and info sent to Michigan Aeronautics' calendar. Whether MAD should be two days or one day remanded to MAD committee to meet beginning December 3, 2008. BOD also looked at reason some events were more successful than others. Major attraction has been an air show and also presence of military heavy iron, i.e., B17, Corsair, B25, C47, etc. However, an aerobatics show will not be done for 2009. It is also understood that we can no longer depend on financial help from Capitol City Airport Authority that now limits what this chapter can do to attract people to our MAD events.

DAWN PATROL: Sunday, June 14, 2009

Aero scholars: Do we participate, or not? Decision deferred.

Use of our meeting room/facilities: CARDS (RC model airplane organization). It was discussed that it was more

important to build community support than to try to pick up additional revenue from renting our facility. It was suggested that one of their members could also be a member of our organization and that time donated to MAD by one of more of their members to assist us be accepted in lieu of rental fee.

Al Spalding moved that we change the BOD meeting time from 7:30 p.m. to 7:00 p.m. Motion seconded and carried by a vote of 5 yah to 1 nay.

Meeting adjourned at 9:30 p.m. EST (0230 Z).

EAA Chapter 55

General Membership Meeting, November 8, 2008

President Bill Bezdek called the meeting to order at 9:30 EST (1430 Z). Thirty-nine members present. **Guests:** Ralph Gregus, Steve Zelle, and Zach Reeve.

Secretary's report: Accepted as written. George Moore reminded members of the critical need for someone to fill the position of treasurer to replace Sharron Hacker who has resigned as treasurer. George emphasized the critical nature of filling this position.

Young Eagles: Doug Koons reported that we have flown 218 young people this year. Some discussion followed regarding 2009 season whether to have individual dates of three events or fly the 6th graders from Mason Elementary School. It was also suggested that we fly 4th graders instead, but Doug explained the difficulties of doing that with several 4th grade classes, instead of dealing with one larger class of 6th graders. Logistics seem to limit our efforts to the 6th grade.

Membership Survey: Vickie Vandenberg developing form to be filled out by each member to indicate the direction Chapter 55 should go.

Furnace: We now have a functioning new furnace.

Winch for Storage Hangar: Old one repaired and working.

Christmas Party: December 13, cost per person is \$15.00. Hor d'oeuvres at 6:00, dinner at 7:00 p.m. Vickie Vandenberg urged us to pay for the party and also to pay membership fee of \$25.00 ASAP to avoid complications which arise when sending out written reminders.

MAD 2009 PLANNING COMMITTEE: First meeting Wednesday, December 3, 2008 at 1900 hours.

NEW BUSINESS:

Use of our facilities: CARDS (RC model airplane club) has found another place, so will not be meeting at our meeting room. President Bezdek reminded us that the meeting room and its new appointments with new tables and chairs is available to members for whatever social gatherings, i.e., weddings, graduations, parties, etc.

Chamber of Commerce Event: December 4, 2008 at 6 o'clock p.m. check with Tom Botsford or call the Chamber of Commerce

for details.

Flight Test Cards: Al St. George reminds us that for those anticipating a first flight of their homebuilt, the test cards (2) are now available. See Al St. George.

Election of BOD members for 2009: Doug Koons was nominated as the 5th member of the Board of Directors. Dick Bacon moved that the entire slate of candidates be accepted. The five BOD members are: Rick Dallas, David James, Al Spalding, Vickie Vandenberg, and Doug Koons. Motion seconded and carried. Acceptance of entire slate of these five candidates was also carried.

Meeting was adjourned at 10:17 a.m. EST (1517 Z)



Al St. George introduced Mr. Steve Zelle who presented and explained his labor in compiling an extensive list of privately owned airports in Michigan. These airports are listed mainly as emergency landing fields. His book sells for \$24.00.

TIDBITS ~ December 2008

By Vickie Vandenberg

MASON AVIATION DAYS 2008 – VIDEO:

Doug Klein of Mason Area Chamber of Commerce sent me the following link to enjoy a short video filmed at MAD 2008 - <http://www.youtube.com/watch?v=riEZtJiCWBw>

MASON JEWETT AIRPORT – SNOW POLICY:

CRAA has recently provided information to owners and tenants of M-J with regard to their snow removal policy for the 2008-2009 winter season. CRAA will NOTAM the runway closed when they believe approximately 2" (two inches) of snow has fallen at M-J airport. Complete details are published in their letter dated 11/20/08 that will be posted in the terminal building.

AOPA NEWS:

Each of us should be a part of the Airport Watch. And, it is crucial to GA that we diligently monitor what is happening in our state & national capitals. A couple of items in the AOPA ePilot Volume 10, Issue 49 dated 12/5/08 caught my eye and I would like to share:

PILOT VIGILANCE NEEDED DURING PRESIDENTIAL TRANSITION

The recent tragic events in India (where local citizens noted suspicious activity) and a reported subway threat to New York

underscore the possibility of a terrorist attack on the US. Both terror attacks on the World Trade Center and the attacks on the bus and subway system in London happened shortly after new administrations came into power. "This is a time for all Americans to exercise heightened vigilance," said Craig Spence, AOPA VP of security. "General aviation pilots already have a program in place that they can follow--AOPA's Airport Watch." Read more at www.aopa.org

MICHIGAN LAWMAKERS URGED NOT TO RAISE AVIATION FUEL TAXES

AOPA is asking Michigan legislators not to increase aviation fuel taxes by changing the tax calculation from three cents per gallon to 3% of the wholesale price of a gallon. At current fuel prices, the proposed calculation method could double the amount of fuel tax pilots pay. In a Dec. 1 letter to the chairman of the House Committee on Transportation, AOPA warned that increasing the fuel tax, which is levied in addition to a 6% sales tax on aviation fuel, aircraft, and aircraft parts, would further increase the cost of flying at a time when aviation is already suffering from high fuel prices and a slumping economy. Read more at www.aopa.org

SPEAKING LAWMAKERS...TSA 2008-0021.:

The comment period for TSA legislation has been extended to Feb 27, 2009. EAA, AOPA, and many other organizations are working to compile a more complete analysis of the legislation, which contains broad range ramifications for large aircraft security, aircraft operator security and airport operator security. Visit EAA.org for further updates.

PROFLIGHT TRAINING ACADEMY:

A new training center opened in July. Situated on the east side of Jackson County Airport, Proflight Training Academy offers Private to ATP training, along with bi-annuals. Additional services include aircraft rental (Cessna 172), discovery flights, scenic flights and special event flights. Also, training in a non-motion simulator will be available soon. For more info visit www.proflightacademy.com or call 888-97LEARN.

HONORARY STUDENT MEMBERS:

At the June BOD meeting, Chapter 55 initiated the Honorary Student Membership whereby we welcome young persons who wish to become active in our chapter - free of charge. An application is available at the hanger. Do you know of a young person that you could mentor, provide transportation to meetings or events, etc??

YEAR-END TAX DEDUCTIONS / NEWBERRY AVIATION SCHOLARSHIP FUND:

Do you need a tax write off for 2008? The Newberry Aviation Scholarship Fund is a 501(c) 3. Contributions can be made directly to the fund. Checks should be made payable to: EMU Foundation and mailed to: Attn: Mary Cooperwasser, EMU Foundation, 1349 S. Huron Street, Ypsilanti MI 48197. Please reference that the monies are for the Newberry Aviation Scholarship Fund. It would also be helpful to the chapter if you would send a copy of your cover letter &/or check to our Treasurer.

EAA55 – CHAPTER APPAREL:

Sports Stop Sportswear, 124 W. Ash Street, Mason (just north of the post office) is the only place to purchase your EAA Chapter 55

apparel. They have our "Chapter 55" logo on file. You can bring in your own hat, shirt, jacket etc; or you can order from their many catalogs. The logo can be embroidered for as little as \$7.00.

DIGITAL SPORT AVIATION:

Have you had a chance to check this out on the EAA website? The entire archive of *Sport Aviation* magazine from 1953 through 2006 (including the early *Experimental* newsletters typed at the Pobereznny house) is available at the "EAA Members Only" website. It is all searchable by date, keyword, and subject.

Young Eagles

By Doug Koons

Nothing for this month.

Notes from Cape Juby

By Terry L. Lutz, Chapter 55 Flight Advisor

Many years ago, on a snowy evening in late November, I joined the ILS in a Lear 24D and flew the approach with weather at minimums into Lincoln, Nebraska. We pulled up to Duncan Aviation for fuel and to hangar the airplane for the night. When the airplane was safely inside, I heard one of the ramp guys poking fun at what was written on the side of the airplane: "Variable Stability In-Flight Simulator".

Sure, it sounds contradictory. Simulators are generally regarded as big boxes on hydraulic stilts bolted firmly to the ground. They simulate being in the air. So if you are in the air, how could you be in a simulator? The airplane, N101VS, was expertly modified by Calspan Corporation to give it the stability and control characteristics of any other airplane. The in-flight environment provides a measure of stress and workload, which for flight control development simply can't be duplicated in the box.



In flight simulation is nothing new to Calspan. They flew the first variable stability airplane in 1949. It was a F4U-5 Corsair with the rudder split into an upper and lower half. The upper half was controlled by the normal control system, and the lower half was controlled by an early analog computer system. It was a one-axis system along the yaw axis. The first 3-axis variable stability control system was flown on a Beech D-18, using vacuum tube electronics.

Over the years, Calspan became the “Skunk Works” for flight control system design. They developed two variable stability airplanes for the US Air Force that was used to develop control systems for just about every airplane from the X-15 to the B-2 bomber.

The first was a USAF T-33A. It was modified so that the front cockpit was the evaluation cockpit, equipped with both a standard center control stick, and side stick controller. Control system electronics were carried in a nose fairing from an F-92, which fit nicely on the front of the airplane. The safety pilot rode in the rear cockpit, which had all the variable stability controls.

With these modifications, the airplane became an NT-33A. At one time, the rear sections of the wing tip mounted fuel tanks were fitted with hydraulic actuators, and would open with upper and lower petals to dramatically increase drag. In that configuration, it was used to simulate the handling and descent rate characteristics of the X-15.

The second airplane began life as C-131B S/N 53-7793, and with the change to turbo propeller engines, it became a C-131H. It was modified by Calspan to become a 6-degree of freedom in-flight simulator. The NT-33A was a 3-degree of freedom in-flight simulator, using the pitch, roll, and yaw axes.



Calspan modified the C-131H with vertical surfaces above and below the wings. Used together and with rudder, the airplane could move sideways without yawing. They could also be used in a “snow plow” mode to increase drag. The flaps were modified so they moved up as well as down. Used together with the elevator, the airplane could heave vertically up and down, without changing pitch attitude. The NC-131H became TIFS, which is short for Total In-Flight Simulator. (As an interesting note, the “N” designation means that the airplane is permanently modified and will Never be returned to the original configuration.)

The biggest modification to TIFS was the evaluation cockpit mounted below and ahead of the standard nose. Access was via a tunnel along the right side of the airplane. Once inside, the evaluation cockpit became any airplane you wanted it to be. For example, if you are in a B747 at slow airspeed and put a roll input into the controls, the pilot will feel side force as the airplane rolls. This is because the cockpit is far ahead of the center of gravity and above the center of the roll axis. The TIFS direct side force surfaces provide a perfect simulation of this effect.

Another example is the Concorde. Most supersonic airplanes must pump fuel aft when they go supersonic, to change the center of

gravity. The cg shift allows the elevons to fair perfectly with the airflow to reduce drag at cruise. But what if you could not pump the fuel back forward again when slowing to subsonic speeds for landing? TIFS verified that the airplane could be safely landed in that configuration before the Concorde test pilots attempted it.

TIFS was used for simulations of the X-29, B-1, YF-23, and B-2, plus numerous other flight control and systems programs. During space shuttle simulations, the gear doors were removed to allow the gear to be extended at the speeds close to what the Shuttle would use. Shuttle astronauts flew approaches and simulated landings. The feel of the tires touching the ground could be simulated with a “bump” programmed into the TIFS flight control system, to simulate the exact height the cockpit would be on a real Shuttle landing.

In the 1990s, a test program to determine if pilots could land an airplane with a digital terrain display was proposed. The required video displays that were too large for the previous nose design, so a new evaluation nose was fabricated by Scaled Composites (Burt Rutan’s company).

USAF programs began to dwindle in the late 1990s, and the TIFS Program Manager, Steve Markman, arranged for the airplane to be flown by Calspan under a program called a Cooperative Research and Development Agreement. It was registered by Calspan as N937VS, and continued to serve the aerospace industry on programs such as the B-787 and with assistance to the NTSB during investigation into the American 587 A-300 accident.

With research work drying up in the last few years, Calspan decided to return the airplane to USAF. It was accepted for entry into the National Museum of the USAF at Wright-Patterson AFB. On November 7, 2008 TIFS was flown for the last time from Niagara Falls International Airport to Wright Field, where the USAF Museum staff accepted it.

Pictured in the pilot’s seat of TIFS is Steve Markman.



He was in attendance for the final landing of the airplane he had known, managed, and loved from 1978 until his retirement from government service in 2004. He is the author of the book “Out of the Blue – Memoirs of a Baffled Bureaucrat”, which chronicles his years at Wright-Patterson AFB. Steve volunteers at the Restoration Division, where he is busy working to restore the most storied B-17 ever, the “Memphis Belle”.

So what time is the 10:00 coffee? Hope to see a few of you folks at Meijer in Mason on Dec 19th, but until then, keep in mind those cold weather procedures for safe flying and don't forget to lend a hand or help shovel some snow for one of your fellow pilots. BTW, the 10:00 coffee starts at 9:30!

From the Flight Surgeon Color Vision Testing Changes

**By Gregory Pinnell, MD
Senior AME/ Senior Flight Surgeon USAFR**

In a new FAA aero medical policy, those airmen who fail their initial color screening will find a new procedure for eliminating the color vision restriction from their medical. In the past, airmen who failed the color screening in their AME's office were allowed to do alternate color vision testing through their eye care professional. This could remove the color vision restriction on a permanent basis. The light gun testing through the FSDO was the other way to remove the restriction.

This has changed. The FAA now has in place a rather complex method of waiving color vision deficiencies that involves various types of testing depending on the class of certificate you hold. If you have questions or would like additional information, please contact us at www.OK2FLY.com and we can help guide you through which options are best for you.

CLASSIFIED

CHAPTER 55 - CLASSIFIEDS:

FOR SALE

Deluxe travel/camper van. 1996 Roadtrek 210. 74K, \$17,500. Has it all. Fully equipped & ready to go. Contact Ted Lakin 517 676-5873.

Telex ProCom 200 noise-canceling headphones with boom microphone. New in original box. Must attach plugs for your particular radio to plain wires. Price negotiable. Contact Bartlett Smith 517-676-2146

Burning barrels; 55-gallon drums like new. \$5.00 each. Contact Dave Groh 517-676-4416

Generator; Generac 4000w. \$350.00. Contact Greg Hover 517-676-5126

Two Lots (approx .40 acres each) in Sugar Springs Residential Community approx. 10 miles north of Gladwin MI. Located on

3500 ft. grass airstrip with many extras. Both for only \$15,900.00 Contact Doug Simons 517-626-6790

Wicks one-inch seat cushions, blue, with front map pocket. Set of 2, like new. \$120.00. Contact Patrick Salow 517-565-3178

New surplus hardware. Save 30%-50% on hose clamps, Dzus, continental rocker hose clamps, spark plugs, prop clamp bolts, and much, much more. Contact Dave Groh, Yesteryear Aviation 517-676-4416

Avon Products & Natural Beauty Soaps. For a copy of the latest brochure, contact Deanna McAlister 517-596-2506 or visit www.naturalbeautysoaps.net/deanna

FOUND

Vivitar camera in case; left at rented house in Oshkosh. Contact Vickie Vandenberg 517-589-5051

Notebook Portfolio & brochures. Left in Dave James aircraft after flight to Oshkosh. Contact Vickie Vandenberg 517-589-5051

WANTED: copy of Flying Magazine - February 2006 issue. Contact Fred Honhart as he needs this issue to complete a set to donate to the library.

FREE TO GOOD HOME: Sporty's Electronic E6B Flight Computer. Like new. Retail value \$90.00; will give to anyone who would like to check it out. Contact Vickie Vandenberg 517-589-5051

FREE: Collection of EAA Sport Aviation magazines, 1959 thru 2000. Organized in boxes by years w/some indexes by Bergeron. One condition-entire collection must go. Contact Bart Smith 517-676-2146

WILLING TO LOAN: Jigs & Fixtures for a Zenith 701. Contact Chuck Hacker 517-740-9222

PLACE YOUR AD HERE! Contact Warren or Vickie for the next edition!

**REMEMBER THE CHRISTMAS PARTY
SATURDAY, DECEMBER 13, 2008**

It's that time of year again

Prepare your plane for winter flying with the right oil

BY BEN VISSER

① In one of my past columns I mentioned the work done by ConocoPhillips to reduce rusting in an aircraft engine by adding a quart of anti-rust oil, qualified under Mil-C-6529C, to a normal oil change when a plane is going to be stored or used very little.



VISSER'S VOICE

I have received several questions about that column ("A new way to fight rust: Not flying as much or getting ready to store your engine for winter?" Aug. 29 issue, also available online at GeneralAviationNews.com), so I thought I would list my storage/winterization recommendations for all aircraft.

I've divided my recommendations into three categories: Winterization or storage for extended periods of time with either no flying or very little flying; winterization or storage with some flying but periods of inactivity; and winterization with normal flying. ②

If you are going to store your engine over the winter or for an extended period of time, I recommend doing a complete oil change with a Mil-C-6529C oil. Run the engine, if possible, and drain the old oil, then change the filter and install the anti-rust oil. I would then start the engine

③ and run it for a few minutes to ensure that the oil covers all of the engine parts. If you are going to do long-term storage, I recommend you follow the engine manufacturer's other recommendations, as well.

You can buy Phillips Anti-Rust Oil 20W-50 from your local dealer or go to Phillips66Aviation.com; or you can buy Aeroshell Oil 2F, which is a single-grade oil qualified under the Mil-C-6529C specification, at Aeroshell.com.

If you are going to fly your plane some over the winter, but expect it to sit for several weeks at a time, I recommend that you change the oil and filter in the fall and add just one quart of a Mil-C-6529C oil to the oil change. This should give your aircraft greatly improved anti-rust protection. You can use either the Phillips or the Aeroshell product with any brand or grade of oil qualified under the Mil-L-22851/SAE J-1899 or Mil-L-6082/SAE J-1966 specifications. I do not recommend doing this at every oil change,

because the engine cleanliness may be sacrificed.

The final case is for people who fly regularly during the winter. Here, I recommend just changing your oil in the fall and using your normal oil. You may wish to change to a lower viscosity grade or to a multi-grade oil if you are in a colder climate, especially if your aircraft may occasionally be started without benefit of proper pre-heating facilities. The most critical step is to ensure that your engine oil temperature gets up to around 180°F during flight. This is necessary to ensure that the water in the oil is boiled off during flight. If your oil temperature is low and never gets into the green, you may consider adding a quart of Mil-C-6529C oil to your winter oil change. ④

Ben Visser is an aviation fuels and lubricants expert who spent 33 years with Shell Oil. He has been a private pilot since 1985. You can contact him at Visser@GeneralAviationNews.com.