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AVIATION SAFETY LETTER

IN THIS ISSUE...

TP 185E

Cover photo from Ryan Cecchini taken in Vernon, B.C. on November 14, 2023

Canada

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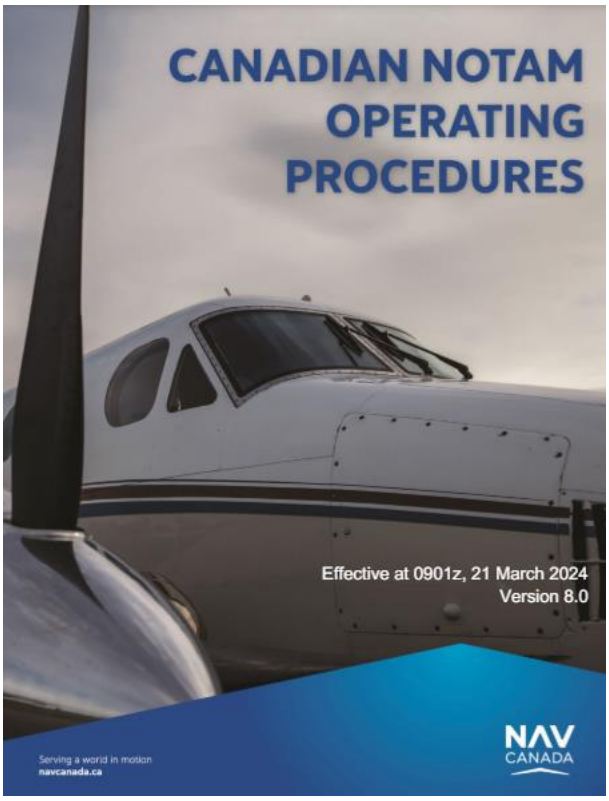
NAV CANADA Serving a world in motion navcanada.ca

So, You Want to File a NOTAM?

by Caroline Doucet, Manager AIM and IFP Standards and Procedures, NAV CANADA and Chris Rieken, Director, Operational Safety, NAV CANADA

A NOTAM—known as a "notice to airmen"—is an integral yet sometimes misunderstood safety element of aeronautical information available to pilots, Air Traffic Services (ATS) and other aviation stakeholders. The accuracy and integrity of information communicated through a NOTAM is critical to ensure the safe operation of a flight that may need to know a hazard or operational change described in the NOTAM.



Canadian NOTAM operating procedures cover page

The International Civil Aviation Organization (ICAO) defines a NOTAM as a "notice containing information concerning the establishment, condition or change in any aeronautical facility, service, procedure or hazard, the timely knowledge of which is essential to personnel concerned with flight operations."

NOTAM requests are submitted by various proponents to highlight pilot operational issues, such as unserviceable lighting on an obstruction near an airfield, a closed runway or the unavailability of a navigation aid. NAV CANADA published the Canadian NOTAM Operating Procedures (CNOP), available on the NAV CANADA Operational Guides Web site, which reflects the regulatory requirements contained in the *Canadian Aviation Regulations* (CAR) 803.01, among others.

Ideally, a NOTAM contains temporary information for a short duration of time and, for planned activities, is published with sufficient lead time for any potentially affected pilot, ATS unit or other aviation stakeholder to become aware of and act on the information.

A NOTAM is only as good as the information it contains

As a NOTAM originator, your role is crucial in ensuring the accuracy of the information. When requesting a NOTAM, whether by telephone or facsimile, it's important to provide accurate and legible information to NAV CANADA. NOTAM submissions are sometimes received with incomplete or inaccurate information that is

not readily apparent. Not only can this lead to delays in publishing, but more importantly, inaccurate information can also result in hazardous outcomes or a potential aircraft accident. The ATS staff will not make any assumptions regarding the intent of the NOTAM and will confirm the submitted information if there is any uncertainty.

The system used by NAV CANADA specialists to enter NOTAM information is designed to create a standardized format and, at times, the NOTAM cannot be created if certain information is missing. Therefore, it's important for NOTAM originators to be available for questions should a NAV CANADA specialist need to verify information to ensure a NOTAM will be published correctly. Common inaccuracies include time conversion, units of measurement, missing information and easily misinterpreted handwritten information.

Best practices for submitting a NOTAM

- **UTC or clearly state local time:** Applying the Coordinated Universal Time (UTC) or "Zulu" in aviation parlance can be tricky. The National Resources of Canada (NRC) Canada.ca Web clock provides the official times across Canada in UTC and local time. Any smartphone can provide time in UTC as well. Not sure about UTC? Clearly state the **local time zone** when submitting the requests and pay attention to the end date, which will appear in UTC in the NOTAM to avoid the premature expiration of the NOTAM.
- **Measurements in feet:** Aviation still uses feet for distances and altitudes! Ideally, provide the NOTAM request in feet, and be sure to add the unit of measurement, no matter what. When we think of a displaced threshold that shortens the take-off roll, the difference between meters and feet can be significant! Sometimes, this can be not readily apparent to ATS specialists. However, shorter displacements or lower altitudes make it more difficult to identify this error.
- **Use the online form**: Handwritten information can be difficult to discern, especially regarding aerodrome location indicators or taxiways. For example, *"Is this an 'O' as in Oscar or a 'D' as in Delta?"* Did you know that NAV CANADA offers NOTAM submission forms? Use this link to submit online: navcanada.ca/notamsubmissions.
- **Be available for clarity post-submission**: Runway surface condition (RSC) NOTAMs received with incomplete information, such as the depth of a contaminant, is a common occurrence. An RSC NOTAM originator should ensure they are available to verify or confirm any information. Otherwise, there may be a delay in the NOTAM being published, meaning a pilot may not have the latest information on a runway they are planning on using.
- **Submit with time to spare**: On occasion, NOTAM closing runways or taxiways for routine maintenance are submitted minutes before the work starts. This doesn't provide enough lead time for pilots to adjust operations, especially if they are already en route. Endeavouring to provide as much lead time as possible will help this planning. In general, submit between 24 and 48 hours before the effective date and time, but no less than 6 hours for planned events, outages and maintenance activities.

The completeness and accuracy of NOTAMs are a key part of keeping Canada's skies safe, and NOTAM originators are extremely important partners in achieving this. By providing accurate and complete information and verifying that the published NOTAM is correct, you will contribute to ensuring the safety of all users of the Canadian airspace system. △

TIPS AND TOOLS

Look Like Maverick, Wear Your Helmet!

by Patrick Lafleur, test pilot at Bell Textron, co-lead of the Rotary Wings Working Group (RWWG) and Serge Côté, Civil Aviation Safety Inspector, Flight Training, Evaluation and Examinations Rotorcraft Specialist, Transport Canada

Whether you ride a bicycle, a motorcycle or play any contact sports, you wear a helmet. It is for your protection, of course, but it's also very practical. So it makes total sense to wear one flying your helicopter. Helicopter helmets come in many different styles, colours and options, so they can be customized to your specifics needs and taste. They are also very affordable, if you consider all the consequences of a blow to your head like injuries, disabilities, sick leave and medical related expenses, as well as your responsibilities to your passengers for landing them safely after a bird strike or leading them to safety after an accident.

Credit: Patrick Lafleur

Because of its ability to take off and land vertically, a high percentage of helicopter accidents occur at low speed during the hovering phase. In a rollover situation, the main rotor blades strike the surrounding obstacles or the ground with such tremendous force that the shock felt by the occupants is brutal. Wearing a helmet will protect your head from hitting the instrument panel or any other part of the cockpit so you can quite possibly exit the wreckage and walk away.

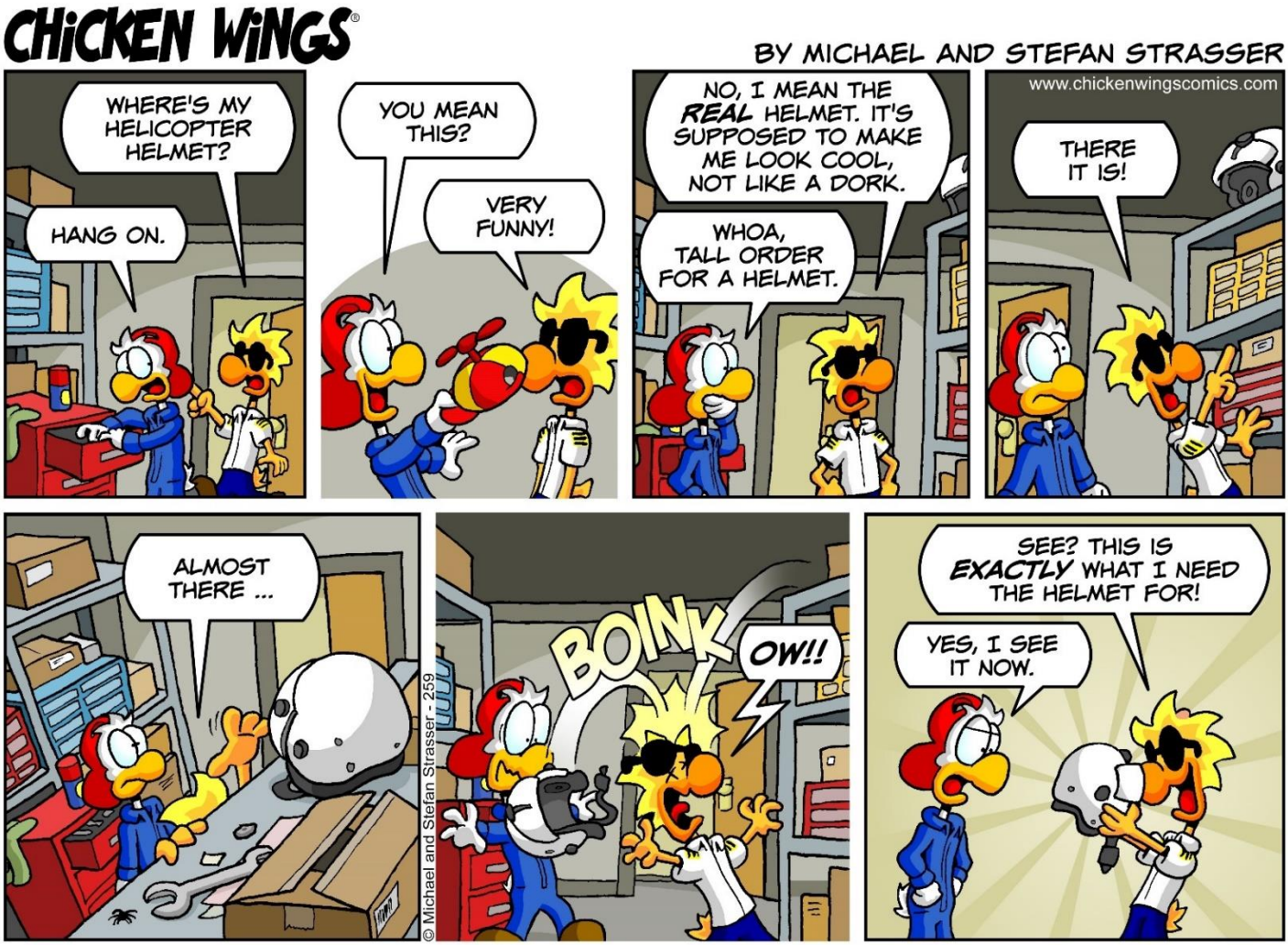
Also, helicopters mostly operate at lower altitude in bird territory. You have most probably seen birds up close during flight. It happens so fast, and every time, you're relieved for not having hit them. Because of the speed at which you're travelling in the air, you have very reduced or no lead time to avoid a strike. You're comfortably cruising and the next second, your windscreen shatters and a bird hits your face at 120 kt. Had you worn a helmet with the visor down, there are good chances that you had sufficient protection to overcome the shock of the situation, giving you the ability to put the aircraft on the ground and save the day.

Your flight helmet is a tool to protect your head, your eyes and your ears. It definitely makes your pilot's life easier. The integrated visors will provide physical protection on top as a visual aid in different lighting situations. They typically come with two visors, one shaded to be used in the sun and the other transparent or yellow to be used in low or flat light environments, enhancing visual cues to help provide good situational awareness. Today's helmets offer different types of hearing protection. I strongly suggest adding a supplemental hearing protection, like a

communication ear plug (CEP) kit or an active noise reduction system. The CEP kit provides a physical sound protection. The ear plugs will block noise while delivering precise communication through the integrated earphone transducer. The active noise reduction system will treat sound electronically to deliver a much more comfortable sound level to your ears while maintaining crisp and precise communication.

It is also strongly recommended that the flight helmet be connected to the aircraft with an intermediate intercommunication system cord, between the helmet cord and the airframe port, to permit a rapid egress. This will allow the cord to be disconnected in the direction of the egress. A direct-to-airframe port connection will typically take 31 kg (or 70 lb) of pressure to disconnect. Without an intermediate cord, in some emergency situations, it may be extremely difficult or impossible for the pilot to rapidly disconnect the intercommunication system cord.

The hardest part of the process will be to pick and choose the perfect helmet for you. Talk to pilots and instructors who own them, research the internet to select the preferable option for you and be diligent in the building and acquisition process, as this helmet will become your flight companion for many years to come. It will give you peace of mind and comfort to upgrade your flight experience while greatly enhancing your passengers', as well as your own, safety. △



Credit: Michael and Stephan Strasser

The 2023 David Charles Abramson Memorial (DCAM) Flight Instructor Safety Award

by Jane Abramson*, Founder and National Administrator*

The prestigious 2023 DCAM Flight Instructor Safety Award was presented to Ms. Nicky Godfrey by Mr. Adam Wright at the Air Transport Association of Canada's annual Canadian Aviation Conference and Tradeshow on November 15 at the Fairmont Queen Elizabeth Hotel in Montréal.

Adam Wright presenting Nicky Godfrey with the DCAM Flight Instructor Safety Award

Nicky Godfrey is a senior instructor and pilot examiner at Seneca college, School of Aviation in Ontario, and a first officer with Air Canada. The number of years and flying time she has dedicated to flight instruction is impressive.

- She is always upgrading an already remarkable record.
- Her dedication and mentoring to her students shines through.
- She is a strong supporter of the safety management system (SMS) culture.
- Her leadership, motivation, inspiration and passion for flying have been sought after.
- She is a pilot, an educator and a leader in the aviation industry.

In her acceptance speech, she comments:

> "A great flight instructor not only teaches the fundamental flight skills and background knowledge, but also instills a sense of responsibility, discipline, safety and dedication in their students."

To preserve the historical record of the award, the recipient's name is engraved on the trophy and entered in the official logbook, both of which are on permanent display at the Canada Aviation and Space Museum in Ottawa. Thanks was given to the museum for their custodianship of the trophy.

Acknowledgement was given to the DCAM sponsors: Air Transport Association of Canada; Essential Turbines; Flight Safety International; Hamilton watches; Wings magazine; Seneca College; and Lost Aviator Coffee Company.

Nominations can be made at any time throughout the year up to September 14.

Our mission: raising the profile of flight instructors by recognizing and honouring exceptional instructors in Canada who have made a significant contribution to the advancement of Canadian aviation safety. △

INSTRUCTOR'S CORNER

Potholes and Rollovers: Understanding Va and Vno

by John Picone, PPL/INRAT Ground School Instructor, Brantford Flight Center

Turning to a page in the manual, the car salesman excitedly pointed out two newly developed features of the car I was interested in purchasing. "Now, as it says here on page 44, if you drive at or below this speed—48 km/hr—no matter how treacherous the pothole you hit, you will not damage the suspension or cause the steering to go out of alignment. Just drive at or below this speed." He continued, with a voice of cautious tone: "Now, hit a pothole above this speed and, well, a wheel could fall off." He pointed to the digital speedometer on the instrument panel. "And just to remind you that you better be on smooth pavement when you go above this speed; once you hit 49 km/hr, the numbers on the speedometer are in yellow, which means caution!"

Airspeed indicator

Credit: Wikipedia

After expressing my amazement, I asked about the other newly developed feature. "This one's even better," he smiled. "It has to do with a sudden change of direction in the event of an emergency, like swerving to avoid a deer that's just jumped in front of you." Living in the country, I was quite interested in this feature and invited his explanation. "Well," he continued, "If you drive at or below this speed—60 km/hr—you can make a sudden turn, and the car is guaranteed to not roll over." He drew my attention to the manual: "You'll notice there's a list of rollover speeds. The heavier you are, the faster you can go. So, if you're on the way to the airport with passengers and some luggage, you can swerve to miss that deer at a faster speed and not wind up in the ditch. But once you drop them off: SLOW DOWN!"

These are, of course, imaginary safety features of an automobile, but they serve to illustrate the concepts that underlie two V-speeds when we fly: Vno—Normal Operating/Maximum Structural Cruising Speed—and Va—Maneuvering Speed. I find these automobile images help my ground school students understand the important limits of Vno and Va.

Prior to learning about and understanding the significance of these speeds, the class has learned about load factor and G-forces and the impact these have on an aircraft's stall speed. This is a necessary context.

"Those nice, white, pretty, puffy clouds you see on a summer's day usually mean there are potholes in the sky," I tell my class (more on that when we study meteorology). We can often predict turbulent air, but sometimes we cannot, especially in the world of general aviation, where sophisticated on-board weather radar is usually not found in the array of cockpit instruments. The proficient pilot, however, would be aware of conditions that could lead to turbulence, especially CAT—clear air turbulence. I emphasize the importance of checking PIREPs to become aware of potentially turbulent conditions. Aviators in mountainous regions need to be particularly vigilant.

In January 1964, the B-52 Stratofortress pictured here unexpectedly encountered severe turbulence at 14 000 ft ASL over New Mexico. The stresses caused by the turbulence were too much, exceeding load factors, and the tail fin was sheared off. Fortunately, the crew was able to safely land the plane several hours later.

B-52 with tail fin was sheared off
Credit: Wikipedia

A key difference between these two speeds, Vno and Va, is found in their very definitions. While the "no" in Vno is conveniently remembered as "n"ormal "o"perating speed, the definition most commonly given is "maximum structural cruising speed." The key word here is "cruising." If we return to the car analogy, the pothole speed applies to the car *cruising* along a road. Presumably in somewhat of a straight line. Va, by contrast, offers another image in its definition: "design *maneuvering* speed." This connotes some change in direction. For the automobile, it suggests turning; in the airplane, it implies movement around any axis: roll, pitch or yaw.

Respect for both of these speeds will keep the pilot from bending, breaking or cracking something on the aircraft.

The part of the definition of Va that befuddles many students is the explanation that if a pilot flies at or below the maneuvering speed, "the plane will stall before it breaks." That is to say that the aircraft will stop flying before a load factor that will overstress its structure is imposed on it. An understanding of this will also help the student grasp why it is that Va decreases as weight decreases and vice versa. Rookie pilot logic says "If I'm lighter, I should be able to go faster!"

We'll start with a couple of givens: first, doubling the angle of attack doubles the load factor. In other words, if I suddenly pull back on the stick and increase my AoA from 3° to 6°, I will experience a load factor of 2, or 2 Gs. Next, we're going to say that the airplane in our lesson stalls at 16° angle of attack (the critical angle of attack for most small aircraft is between 15° and 18°). Let's also give our aircraft a weight of 3000 lbs and a cruising speed of 120 KIAS. To maintain level flight at this weight and speed, the AoA is 3°. Finally, the maximum rated load factor is +4 Gs. Beyond this load factor, the manufacturer—Mr. Cessna or Ms. Piper—tells us in the POH that the structure of the aircraft experiences stresses that are dangerous; something could bend, break or crack.

Now, if I were to really yank back on the stick and effectively quintuple the angle of attack from 3° to 15°, I will impose on the aircraft a load factor of 5: more than the maximum rated load factor of 4. But I would still be flying because the critical angle of attack is 16°. Something could bend, break or crack.

What if I slow down to 100 KIAS? Now, to maintain level flight at 3000 lbs, I need to increase my angle of attack to, let's say, 4.5°. This time, I suddenly pull back on the stick and quadruple the AoA from 4.5° to 18°. Do I also quadruple the "weight" and impose a load factor of 4? Not quite! The plane would stall at 16°, 2 degrees before I got to four times the load factor. Falling forward in the stall, the stressful loading on the wings is relieved *before* reaching the critical load factor of 4, thus preserving the structural integrity of the aircraft.

Now, the question of weight. Let's say I land and say goodbye to 300 lbs worth of passengers and their baggage before taking off again. At 100 KIAS, weighing now 2700 lbs, level flight only needs 3° AoA. Ah… now we're back to the same problem we had initially. Solution: slow down even more. The generally accepted formula is 2% change in weight (increase or decrease) = 1% change in maneuvering speed. 300 lbs is 10% of the pre-unloading weight of 3000 lbs. So, we reduce our speed by 5% from 100 KIAS to 95 KIAS. This will necessitate an increase in AoA to, let's say, 4.5°. And we know that's safe.

The class has already learned that the stalling speed of an aircraft increases by a factor of the square root of the load factor. If the load factor is 2 (as in a 60° banked turn), then the stall speed is multiplied by 1.41, the square root of 2. We can use this same concept to understand how Va is calculated for an aircraft. Let's say that the stalling speed of an aircraft is 55 KIAS and the maximum rated load factor, as in the example above, is 4. At this maximum load factor, the stalling speed would double; the square root of 4 is 2. Therefore, the maneuvering speed of the aircraft would be 110 KIAS: the stalling speed of 55 KIAS times 2. In other words, if the aircraft is flying at or below 110 KIAS–Va should it encounter a sudden gust of wind that quadruples the load factor, it will stall before it exceeds its maximum rated load factor of 4.

The important test question has to do with a change in weight on a multi-leg cross-country flight. Examiners routinely ask students to recalculate weight and balance to determine a revised center of gravity when fuel has been burned off and the aircraft payload changes. The same applies to a revised maneuvering speed.

For example, a Cessna 172N departs with a take-off weight of 1950 lbs. The Pilot Operating Handbook (POH) indicates that the maneuvering speed at this weight is 89 KIAS. The plane flies for 3 hours, burning 10 GPH (6 lbs per USG). After landing, 50 lbs of baggage is unloaded, as well as the rear passenger, who weighs 160 lbs. Before taking off again, the proficient pilot calculates the new maneuvering speed. Recall that 2% weight = 1% speed.

Loss of weight in fuel: 3 x 10 x 6 = 180 lbs + 50 lbs luggage + 160 lbs passenger = 390 lbs total weight loss.

Now we need to determine by what percentage the take-off weight has been decreased.

390 ÷ 1950 x 100 = 20%. So, if the weight has been decreased by 20%, then the maneuvering speed decreases by 10%. Taking off on the second leg of the cross-country flight at a weight of 1560 lbs, the new Va is 89 – 10% = 80.1 KIAS. And in the case of Va, we always round down; that's the safest.

Student pilots' awareness of the change in maneuvering speed (Va2) when aircraft weight configurations change is essential knowledge, as is the skill to determine it.

Failure to respect this could cause a new pilot to be really stressed out! △

Automotive Gasoline (MOGAS) Use in General Aviation Aircraft

by the Maintenance Airworthiness Working Group, part of the Transport Canada General Aviation Safety Program

Approval

Automotive gasoline, known as MOGAS, is a less expensive, readily available alternative to specific aviation fuel such as 100LL, and the limited or non-existent availability of 80/87 and 100/130 fuels. The use of MOGAS in your type-certified aircraft must be supported by a Supplemental Type Certificate (STC) authorizing its use in both the aircraft and the engine. If there is no STC available for your aircraft and engine configuration, the use of MOGAS is prohibited. There are several STCs available for purchase that cover a wide range of aircraft/engine combinations supporting the use of MOGAS.

However, most gasoline sold in Canada is required to be blended with alcohol (ethanol). Current ethanol percentages in automotive fuel range from 5% to 10%, depending on how much has been mandated by the province you are getting the fuel in. This poses a problem to MOGAS users, as the use of fuel blended with alcohol (ethanol) is prohibited.

The two primary sources of MOGAS STCs are the Experimental Aircraft Association (EAA) and Petersen Aviation. Both STC holders prohibit the use of automobile gasoline containing alcohol. The bottom line is, unless approved by an STC, the use of automotive gasoline containing alcohol is prohibited.

Transport Canada Publication TP 10737, Use of Automotive Fuel (MOGAS) In Aviation, also indicates the use of fuel containing alcohol, other than trace amounts used for fuel de-icing, is prohibited.

Failure to adhere to the instructions contained in a MOGAS STC could have a detrimental effect on the operation of the aircraft.

Owners of ultra-light and amateur-built aircraft should determine if using fuel containing alcohol can be used in their airframe and engine configuration. Owners of aircraft in the owner maintenance category are reminded the aircraft was a type-certified aircraft to begin with and should also determine if using fuel-containing alcohol can be used in their airframe and engine configuration.

Effects

The use of automotive fuel containing alcohol has created some issues. Materials that were considered ‘fuel resistant’ before alcohol was added to MOGAS may no longer be fuel resistant. Alcohol present in automobile gasoline may have the following negative effects when used in your aircraft:

- susceptible to vapour lock, more so at higher altitudes,
- hygroscopic, meaning it absorbs moisture more readily,
- corrosive and is not compatible with rubber seals and other materials used in the aircraft,
- problems with chemical compatibility with non-metallic parts such as composite fuel tanks,

- reduces the amount of energy content in fuel. Automotive gasoline with ethanol has less of the energy of automotive gasoline without ethanol,
- although alcohol in fuel increases the octane rating, as it absorbs moisture in the fuel, some may be drained off during a "sump check," thereby decreasing the overall octane rating, and
- lower octane ratings in MOGAS could cause detonation and mechanical damage to the aircraft.

Fuel leaks and a wet appearance on fuel lines are evidence that the alcohol content in the fuel is not compatible with your aircrafts fuel system.

Fuel testers bottles
Step 1: Add water to water fill line
Step 2: Add gasoline to gas fill line
Step 3: Shake well & let it sit for up to 5 min
Credit: Steve McLeod

Testing

If you are unsure that the automotive gasoline available for use in your aircraft contains alcohol, there are testers available for purchase.

However, a simple test can also be performed without using a formal test apparatus.

1. Using a non-tapered glass or chemical resistant plastic container, mark ten equally spaced volumes.
2. Add one part water to the container (up to the first mark).
3. Add nine parts automotive gasoline (fill to the top mark).
4. Shake thoroughly and let stand for ten minutes, or at least until the fuel is clear and bright again.

Fuel testers
Credit: Steve McLeod

If alcohol is present, it will absorb the water you added to the container. It will appear as though the water volume increased above the first mark. This is a clear indication there is alcohol in the gasoline. If the water level does not change, it is an indication there is no alcohol present. Your Gasohol Aircraft Fuel Tester can be used for this purpose.

Fuel testers
Credit: Steve McLeod

Conclusion

Aircraft owners who use MOGAS must ensure the automotive fuel available to you does not contain alcohol, unless the approval to use MOGAS authorizes it (STC). In the case of ultra-light, amateur-built or owner-maintained aircraft, owners should also determine if using fuel containing alcohol can be used in their engine and airframe configuration. In all cases, if automotive fuel containing alcohol cannot be used, the aviation gasoline (Avgas) grade recommended by the aircraft and or engine manufacturer must be used. △

Psychological Safety in Aviation

by Stuart McAulay, Aircraft Maintenance Engineer

How much longer should we consider the resulting effects on well-being before we normalize mental health as an accepted maxim of aviation? Many areas of the industry are actively confronting the stigma associated with mental health, while others are merely dancing around it. Persistent efforts from those invested in sincere change continue to open doors for those still contemplating the human investment as the adaptive workplace matures around them. Our proudly diverse and safety-conscious workplaces must consider the weight of such hesitation in order to see the human effects from inaction in real time. Mental health is no longer a dormant catchphrase to be overlooked in favor of preserving our old ways just as though nothing has changed when determining truly productive work environments.

Credit: iStock

Psychological safety in the workplace is a proven concept whose time has surely come. We already believe in the concept of physical safety to rightfully protect one another from harm or risk of harm. Psychological safety is the obvious partner to the physical realm as we remain vulnerable to various forms of mental injury from familiar workday habits and interactions. The threat of psychosocial harm leading to mental illness exceeds the threat of becoming physically injured due to our everyday working conditions. We can certainly attest to mental injury resulting from poor supervision, bullying, prejudice and toxic cultures, but we can also assume greater responsibility in reversing the norm, starting from the top down. We can now begin to interpret the positive effects of exercising psychological safety as a more personal approach in our daily commitments to safe and efficient air travel.

Regardless of how we naturally evolved to this point, the onus is on all of us to play a critical role in our ever-changing needs within the workplace. We have been affected by a significantly disruptive world pandemic. We are facing new financial challenges and an array of health concerns, all within the raw context of an increasingly complex economy. This modern dilemma has also caused us to further open our eyes to systemic mental health issues that have perpetuated many underlying stressors all along. The irony in the undeniable mantra of profit over people has caused many organizations to also realize the financial strain from their own unmitigated mental injuries,

staff turnover and burnout of frequently undervalued workers. This is just as true in aviation as it is in other fields, where well-meaning people are negotiating a daily balance of acceptable work conditions with a healthy personal life. The days of tolerating this difficult trade-off have now given way to expecting a more dignified existence.

As long as human beings remain integral to our operations, we ought to heed the time-tested principles necessary to retain employees who are just doing their best to be human. There are excellent mental health resources available these days, just as there are industry champions who clearly lead by example. The key to a mentally aware organization is education and a commitment to illness prevention. The three phases of a mental health program should include prevention, intervention and accommodation, and leaders must be prepared to offer guidance into each phase relative to each situation. There may also be an unrealized business case for actively promoting wellness and making it easier for employees to enter a safe space for personal concerns. Peer-to-peer programs are another proven means for open conversation and mentorship. Simple yet sincere gestures are often all it takes to make a difference for someone who doesn't feel heard. The development of good corporate programs affords employees the ability to step out in confidence knowing that real support is always available to them. Clearly, both the organization and the individual have a shared responsibility with psychological safety, but the decision-makers are the ones who must really initiate the cultural change towards a brighter future. △

Submission of *Aviation Safety Letter* (ASL) articles

Do you have an aviation safety topic you are passionate about? Do you want to share your expert knowledge with others? If so, we would love to hear from you!

Credit: iStock

General information and guidance

The ASL's primary objective is to promote aviation safety. It includes articles that address aviation safety from all perspectives, such as safety insight derived from accidents and incidents, as well as safety information tailored to the needs of all holders of a valid Canadian pilot licence or permit, to all holders of a valid Canadian aircraft maintenance engineer (AME) licence and to other interested individuals within the aviation community.

If you are interested in writing an article, please send it by e-mail to TC.ASL-SAN.TC@tc.gc.ca in your preferred language. Please note that all articles will be edited and translated by the Transport Canada Civil Aviation (TCCA) Aviation Terminology Standardization Division and will be coordinated by the ASL team.

Photos

In order to captivate our readers' interest, we recommend that you include one or two photos (i.e., photo, illustration, chart or graphic) for each article, if possible. Please send us your photos as an e-mail attachment (preferably as a jpeg).

We look forward to receiving your articles. △

Enhancing Aviation Safety Together Through Collaborative Analysis Groups

by Aviation Safety Policy and Intelligence, Civil Aviation, Transport Canada

During the 2020 Canadian Aviation Safety Collaboration Forum, aviation stakeholders agreed to work with Transport Canada Civil Aviation (TCCA) on the development of a proof of concept for the joint management of safety risks in the Canadian aviation system. In considering that airlines (CAR Subpart 705) are required to have risk management processes as part of their Safety Management System (SMS), the Collaborative Analysis Group (CAG) proof of concept would focus on airline operations and begin working with airline operators to identify, prioritize and work together to mitigate safety risks within Canada's Air Transportation System.

In April 2022, the TCCA/Industry CAG was launched with the creation of the CAG Steering Committee, responsible for proactively coordinating the group's safety risk management activities.

Over the past few years, the 705 CAG Steering Committee has met frequently as it progressed through each step of its six-step safety risk management process. The experience has contributed to strengthening aviation safety through stakeholder engagement, informed decision-making and the sharing of knowledge and experience.

Undertaking efforts in the CAG has been a shared commitment built upon trust and transparency between industry and regulator stakeholders where safety intelligence is shared, when possible, enabling more responsive actions facing Canada's aviation community.

Furthermore, the CAG is a key component of Canada's State Safety Program (SSP) and supports Canada's compliance with the International Civil Aviation Organization's (ICAO) Annex 19 Safety Risk Management standards and recommended practices. CAG efforts also align with the safety collaboration and shared objectives in the Global Aviation Safety Plan (GASP).

The implementation of CAGs is a gradual process; the concept has the potential to be extended to other sectors within Canada. Furthermore, TCCA is committed to continuing to work diligently with the aviation community to establish an environment conducive to sharing aviation safety intelligence, data analysis and mitigations. Cultivating a healthy, robust and positive safety culture, consistently improving aviation safety and sharing best practices are all part of the journey. We are deeply committed to the CAG and look forward to enhancing safety within the aviation community.

For more information and updates, we invite you to visit the newly launched CAG Web site. Here, you'll find information about this partnership, ongoing initiatives and the group's overarching goals.

Related links

- International Civil Aviation Organization (ICAO) Annex 19
- Guidance Material for Implementing a Collaborative Safety Team (CST)
- State Safety Program (SSP)
- ICAO Global Aviation Safety Plan △

Participate in the Carleton University CANFLY Study!

The Advanced Cognitive Engineering (ACE) Lab at Carleton University specializes in research regarding aviation safety. The ACE Lab uses online, virtual reality and full-scale flight simulation to investigate foundational principles of cognition and human—machine integration. The ACE Lab is seeking licensed/permitted pilots to participate in an upcoming study that will be of interest to the aviation community. There are now two ways to participate!

Option 1: In person

Those who live within driving distance of Carleton University have the option to attend in person at the ACE Lab and participate in the laboratory virtual reality flight simulation experiment and complete the online CANFLY assessment at the ACE Lab.

Option 2: Remote

Those who cannot attend in person have the opportunity to complete just the online CANFLY portion of the study from the comfort of their home or office.

To find out more:

Interested pilots should contact the ACE Lab at acelabresearch@gmail.com or follow check out the study webpage. △

HAPPY SUMMER HOLIDAYS!

Photo submitted by Victor Veiga

Transport Canada's Air Taxi Safety Campaign

In response to the Transportation Safety Board's report Raising the Bar on Safety: Reducing the Risks Associated with Air-taxi Operations in Canada, Transport Canada's Civil Aviation branch launched an air taxi safety campaign to address this recommendation:

Credit: iStock

> "An important step in raising the bar on safety in air-taxi operations is getting clients, passengers, crews, and operators not to accept unsafe practices even when there seems to be a sufficient safety margin, and to speak up to prevent them from happening. This requires strategies, promotion, and education tailored to the sector to change values, attitudes, and behaviours and create a culture where unsafe practices are considered unacceptable.
>
> Therefore, the Board recommends that the Department of Transport collaborate with industry associations to develop strategies, education products, and tools to help air-taxi operators and their clients eliminate the acceptance of unsafe practices.—TSB Recommendation A19-02"

Although there are regulations for air-taxi operations, there are non-regulatory alternatives that can be used to positively influence safety within the sector, with the goal of reducing the acceptance of unsafe practices.

This campaign will focus on building a positive safety culture, strengthening relationships, encouraging collaborations and providing free access to safety guidance materials, tools and resources by visiting our website.

The goal of the air taxi safety campaign is to develop strategies that will reduce accidents and incidents in the air-taxi industry by promoting a positive safety culture through safety promotion and awareness initiatives where unsafe practices are unacceptable.

We will create a series of working groups based on the following themes:

- Clients (Educate on illegal operations, regulations and limitations)
- Human factors (CRM, threat and error management, decision-making)
- Operating pressures (overloading, maintenance, scheduling, financial, weather)

These working groups are a way for Transport Canada to actively engage with the aviation community, support best practices, and reduce the risks in the air taxi sector.

If you would like to be added to our ATSC mailing list, we will send you updates on the campaign such as new educational materials, tools, articles and initiatives.

Subscribe to receive email updates regarding the air taxi safety campaign or join a working group. △

Civil Aviation Documents Issued Recently

Civil Aviation Safety Alerts (CASAs)

Document No	Issue number	Subject
CASA 2024-06	Issue 01 2024-05-29	Operation of Aircraft with a Special Certificate of Airworthiness-Limited in Actual or Proposed CAR 702 Aerial Work
CASA 2024-05	Issue 01 2024-05-06	Potential Risk of Interference of 5G Signals on Radio Altimeter
CASA 2024-04	Issue 01 2024-05-14	Loose Bolts and Missing Sealant at the Fuel Boost Pump Canister to Wing Rib 6 Interface
CASA 2024-03	Issue 01 2024-04-22	Inboard flap spigot tube and mid and outboard flap corrosion
CASA 2024-02	Issue 01 2024-03-15	Documentation Required for Installation of Parts Associated with Grandfathered FAA STC Design Approvals Under the FAA-TCCA IPA

Advisory Circulars (ACs)

Document No	Issue number	Subject
AC 903-001	Issue 02 2024-06-03	Remotely Piloted Aircraft Systems Operational Risk Assessment
AC 302-019	Issue 02 2024-05-03	Methodology for the Identification of the Aircraft Group Number
AC 571-024	Issue 05 2024-04-17	Documentation Required for the Installation of Parts onto Canadian Registered Aircraft

Threat and error management...

it's **your** responsibility!

canada.ca/air-taxi-safety

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