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Flight Comment

ISSUE 2, 2026

CHECK SIX

Fatalism versus Prudence

DOSSIER

Canadian Army Flight Safety Program

LESSON LEARNED

Unauthorised Airfield Access

SCAN TO VIEW ONLINE

Canada

Photo: Cpl Samuel Martell

Cover – The CU-172 Blackjack.

Photo: Cpl Lauzier-Labarre

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Views on Flight Safety

by Lieutenant-General M.C. Wright, CMM, MMV, MSM, CD
Commander Canadian Army

Modernizing the Canadian Army: Aviation Safety as a Strategic Enabler

The Canadian Army is modernizing in a deliberate and ambitious manner to remain credible, adaptable, and ready for an increasingly complex global security environment. Because Army operations–especially those enabled by aviation–depend on precision, coordination, and risk management, flight safety is fundamental to preserving combat power, protecting personnel, and ensuring mission success.

Modernization encompasses more than advanced capabilities and improved digital systems. It also involves refining how the Army trains, sustains, and deploys its forces. It is not a single initiative, but a continuous transformation with no defined end-state. In aviation-enabled operations, flight safety is not merely a compliance requirement–it is a critical enabler of combat effectiveness and institutional resilience.

The ongoing transformation aims to increase operational tempo, strengthen interoperability with allies, and integrate new capabilities such as uncrewed aerial systems, advanced sensors, and networked command systems. These advances introduce additional complexity. Forces must operate more dynamically, often in contested or austere environments where the margin for error is reduced. Strong flight safety practices ensure that this complexity does not translate into unacceptable risk or degrade readiness and mission success.

Aviation capabilities are critical to the Canadian Army's ability to project power, sustain dispersed operations, and maintain situational awareness. Whether supporting domestic operations in challenging terrain or contributing to multinational missions abroad, Army aviation operates at the intersection of speed, precision, and risk. Flight safety enables these units to train harder, operate farther, and integrate more effectively with joint and allied partners. It builds confidence at all levels that crews and missions are prepared for the realities of modern conflict.

In this context, a strong safety culture reinforces the Army's professional ethos. Modernization is not only about new platforms or systems; it is about the mindset of personnel. A culture that encourages reporting, learning, and continuous improvement strengthens decision-making and operational discipline. It ensures that the Army captures lessons early, adapts quickly, and manages risks intelligently without sacrificing readiness. In this way, flight safety supports operational excellence rather than constraining it.

As modernization continues, the Canadian Army is aligning its practices with those of its closest allies. Interoperability requires shared standards, common practices, and mutual trust. A sustained commitment to flight safety underpins this alignment and ensures that Canadian Army aviation can integrate seamlessly into coalition operations, where reliability and predictability are critical.

Ultimately, modernization is about delivering capability that commanders can trust in demanding circumstances. That trust is built on performance–and performance depends on safety. By making flight safety a core element of modernization, the Canadian Army is not only reducing risk, but enabling more confident, agile, and effective operations in an evolving security environment.

The Canadian Army will continue to modernize with purpose, ensuring that safety remains not an afterthought, but a strategic advantage.

The Editor's Corner

by Major Courtney Douglass, DFS 3-3

Photo: DND

Welcome to the summer edition of *Flight Comment* magazine. This issue focuses on the integration of Uncrewed Aircraft Systems (UAS) into the Flight Safety community.

In the past year, the Canadian Army has experienced significant growth in the procurement and employment of UAS. With this modernization and transformation, ensuring that UAS operations are conducted safely and in full coordination with our allies and other airspace users has become increasingly important. As such, the Canadian Army Flight Safety Program has been formally endorsed by Commander of the Canadian Army, Lieutenant-General Wright, through Canadian Army Order (CAO) 22-17.

In his article, *The Canadian Army Flight Safety Program*, Director of Army Flight Safety Colonel Latreille outlines the program's key principles. He explains that the program relies on the collection, analysis, and dissemination of accident and incident data to drive continuous learning and preserve combat effectiveness. Central to this approach is a reporting culture in which personnel can identify hazards and report honest mistakes without the fear of disciplinary action. However, this trust is always balanced by accountability, and reckless behaviour or intentional non-compliance is never tolerated.

The origins of these principles can be traced to 1918 when they were first introduced within Canadian military aviation. At the time military aviation was still in its infancy, and the air service was experiencing significant personnel and aircraft losses because of accidents. In his article, *Fatalism and Prudence*, Colonel (Ret'd) Shelley explains how the British Royal Flying Corps recognized the need to develop an effective program to collect, analyze, and disseminate information on accidents in order to identify and implement preventive measures. As the program matured it led to procedural changes, improvements in equipment and materials, and a substantial reduction in accidents. These hard-won lessons were later incorporated into the flight safety practices of the Royal Canadian Air Force (RCAF). The article serves as a reminder that the advances achieved in safety have been earned through decades of experience and sacrifice, and that a professional flight safety program focused on learning, prevention, and continuous improvement can deliver lasting results.

In the article *Cutting Corners*, we explore normalized deviance and how individuals, groups, and organizations can gradually come to accept unsafe behaviours, processes, or conditions as normal. These deviations often creep in unnoticed until they become part of the culture. Whether an organization is well-established or newly created, highly technical or relatively straightforward, no one is immune. In high-risk industries such as aviation, the consequences can be catastrophic. The Challenger and Columbia space shuttle disasters remain powerful examples of what can happen when warning signs are ignored and deviations become normalized.

Finally, we always like to recognize the contributions of our members through the Directorate of Flight Safety (DFS) Commendation, Good Show, and For Professionalism awards. These awards recognize occasions when things go right and reinforce the behaviours and decisions that contribute to a strong safety culture. Take the time to recognize your personnel, share lessons learned through positive actions and outcomes, and submit award nominations to dfs.dsv@forces.gc.ca.

I hope you enjoy this edition of Flight Comment.

ON TRACK

Stepping Down into Trouble: A Case for Continuous Descent

by Capt. Joseph Yorke and Capt. Michael Bottoms,
RCAF Barker College

On a winter night in Instrument Meteorological Conditions (IMC), a crew briefed the approach: cross the Final Approach Fix (FAF), descend to the first step down, level, then repeat for the next fix. Workload spiked, the instrument scan narrowed, and the aircraft stayed in cloud. The aircraft was still in icing conditions, just lower than before and with less obstacle clearance margin. By the time they reached Minimum Descent Altitude (MDA), they had spent longer in the icing layer than if they had chosen to conduct a Continuous Descent Final Approach (CDFA).

For decades, many crews have flown non-precision approaches using the traditional "dive and drive" method; descending early to step down altitudes in hopes of breaking out sooner. It feels logical to want to get out of cloud and icing quickly, but in today's operational reality, that logic often fails.

Why Step-Downs May Backfire

When ceilings are at or near published minima, descending early to each step-down altitude grants no visibility benefit: you remain in cloud until you reach the actual cloud base. Step-downs introduce level-offs, configuration changes, and trim adjustments inside the final segment, behaviors consistently associated with higher workload and increased Controlled Flight Into Terrain (CFIT) risk. The Federal Aviation Administration (FAA) Advisory Circular 120-108/108A explicitly notes that step-downs inside the FAF increase pilot workload/potential errors, and that traditional "dive-and-drive" approaches can result in extended low-altitude flight in IMC. Operations at these lowest permissible limits have been associated with multiple aviation incidents and accidents.

TERPS, Required Obstacle Clearance, and What Step-Downs Really Mean

Terminal Instrument Procedures (TERPS) are built around an obstacle clearance surface (OCS) and a Required Obstacle Clearance (ROC) buffer. In level final segments of non-precision approaches, typical ROC values are 250 ft. These altitudes are protective limits defined by underlying obstacles. Guidance is plain: step-down fixes inside the FAF are included to avoid an obstacle; descent below those altitudes is only authorized when the requisite vertical guidance is available. Charting policy further clarifies that step-down altitude restrictions inside the final approach segment apply to MDA-based minima, not to approaches with vertical guidance to a Decision Altitude (DA)/ Decision Height (DH) (e.g., ILS, LPV, LNAV/VNAV). This is because obstacle clearance on these approaches are predicated on following the published vertical path.

The Icing Logic: Situation-Dependent, Often Counterproductive

The common justification for step-downs of "getting out of ice sooner" is highly situation-dependent. In widespread stratiform IMC near minima, level-offs do not always reduce ice exposure but may actually extend time spent in the icing layer. Unless reliable reports indicate icing diminishing at a specific lower altitude or ceilings are comfortably above minima, the net effect is more time in cloud and less obstacle margin. EUROCONTROL's SKYbrary analysis echoes the FAA: The additional configuration changes make stabilisation more difficult and reduce margin from CFIT threats.

Stabilized Descent Technique for Lower Workload

A Continuous Descent Final Approach (CDFA)/ Stabilized Constant Descent Angle (SCDA) replaces the stepdown with a single continuous descent, usually approximating 3 degrees. It removes the low-altitude level-off, simplifies energy management, and sets a clear continue/ go-around decision at a Derived DA. Regulators and safety bodies strongly encourage the technique: the FAA's AC 120-108A recommends CDFA for non-precision approaches; Transport Canada's AC 700-028 promotes CDFA/SCDA and even coordinated chart depiction of constant-angle profiles; the International Civil Aviation Organization (ICAO) Doc 8168 defines CDFA as consistent with stabilized approach procedures; and the European Union Aviation Safety Agency (EASA) guidance describes CDFA as the safest technique for non-precision approaches when flown stably. Civilian regulators have authorized some operators to treat MDAs as DAs when using this technique. THIS IS NOT AUTHORIZED FOR RCAF AIRCRAFT. Rather, we must respect the "do not descend below" nature of MDAs, and thus when using

Photo: S1 Proulx

Photos: Sgt Gaudreault

this technique, we must create a derived DA by adding a Standards and Evaluation Team (SET) sanctioned safety margin to the MDA.

A Short Example

Imagine you're inbound on a winter night with stratiform IMC and light icing forecast from 4000 ft down to 1000 ft. Ceilings are near published minima. Traditional logic suggests descending early through the steps to exit icing, but when ceilings sit near minima, this rarely helps. A better option might be to stay above the cloud until your altitude coincides with the Continuous Descent Angle (CDA) chart published on the procedure, then execute a single, stabilized CDFA/SCDA straight to MDA. This minimizes time in icing, reduces workload, and preserves the obstacle clearance margin TERPS intended for you. Instead of trading away vertical protection for a benefit that may never materialize, you make one controlled descent through the layer and arrive at MDA ready to make a clear visual/go-around decision.

Nuance: When Step-Downs May Help

If ceilings are well above minima, or credible PIREPs indicate that icing decreases below a known layer, a cautious descent to a stepdown altitude may reduce exposure provided you remain strictly within the published limits. However, because these altitudes are almost always obstacle-driven, descending to them in marginal weather trades away vertical margin for uncertain gain. One technique many crews have used effectively to gain the advantages of both stability and reaching MDA sooner is to fly an SCDA/CDFA profile until the final stepdown fix, then momentarily increase the rate of descent (within the confines of their fleet's stabilized approach criteria if applicable) to reach MDA slightly earlier, providing more time to potentially break out. This technique is especially useful for helicopter crews, SAR crews, etc. using the approach primarily to exit cloud rather than proceed to the runway.

The Way Forward: Rethinking Our Way of Training

In our warrior spirit culture, many communities are rightfully applying the "train like you fight" mentality, which, while reasonable and appropriate for the tactical battlefield, may mean that non-tactical tasks are glossed over or even omitted. Tactical training remains essential, but it is of little value if crews cannot safely reach or return from the fight in less-than-ideal weather. Certainly, in some communities and some circumstances there are convincing arguments for conducting non-precision approaches using the dive and drive technique. Those circumstances do not nullify the very many situations where a stabilized descent would be more appropriate. Training needs to encompass both techniques. If instrument approaches are not part of your normal routine, consider adding them. All RCAF installations with aviation assets, including Final Approach and Takeoff Areas (FATOs), have instrument procedures. Consider conducting an instrument approach when recovering to home base, even in Visual Meteorological Conditions (VMC), and even under Visual Flight Rules (VFR). Consider formally implementing instrument approach training as part of mission recoveries during simulator scenarios.

Key Takeaways

- Stabilize by the FAF and favor CDFA on non-precision approaches; avoid chasing step-downs in marginal IMC.
- Treat step-down altitudes as obstacle-driven limits, not targets to "get lower."
- Use reliable weather intelligence before descending early for icing.
- Remember TERPS Required Obstacle Clearance (ROC) values are finite; small deviations and level-off overshoots can consume the entire buffer.
- There is no single technique that applies to every scenario; be familiar with multiple methods and choose the one that best fits the conditions and operational intent.

Make instrument approach training part of your regular routine so that you can be proficient at both the CDA and the "dive and drive" non-precision approach techniques.

Editor's Note:

Individual fleet Standard Maneuver Manuals (SMMs) and Aircraft Operating Instructions (AOIs) should always take precedence.

Fatalism versus Prudence: Flight Safety Culture at the Dawn of the RCAF

by Col (Ret'd) Chris Shelley, C.D.

Chris Shelley joined the Canadian Forces in 1973. After graduation from Royal Military College he trained as a pilot, flying some 3800 hours with 424 Squadron and 408 Squadron on CH135 and CH146 aircraft. He flew on operational deployments in Central America (1990) and Bosnia (2001). He commanded 408 Squadron and 1 Wing before serving as Director of Flight Safety from 2006 to 2008. Retired since 2008, Chris retains a lively interest in aviation history and flight safety.

June 1917, Camp Rathbun, Deseronto, Ontario. Three flight cadets lounged on the sunny hangar line, watching Curtis JN-4 Canuck trainers carrying out circuits on the landing ground. One Canuck lined up for its final approach, its engine coughing as the pilot cut the throttle for the glide down to the grass. Surely this was one of their fellow cadets on a solo, as the approach was unsteady, almost hesitant. Twenty feet above the grass, the engine roared to life and the nose came up for an apparent overshoot. However, the student had left it too late, and the craft fell off on its right wing nosing into the ground with a crunch. The startled flight cadets leapt to their feet as the camp ambulance, "Hungry Lizzie," roared out to the wreck, alarm bells clanging. The cadets looked at each other and shook their heads. That was the fourth crash today, and it was only 1600 hours! And this one looked as if it might trigger yet another funeral parade. Not for the first time, they wondered whether becoming a pilot would be the best way to contribute to the war effort.

Canada made an immense contribution to the British Empire's war effort during the First World War. While Canada's government chose to form distinct Canadian army and naval units, it decided not to create air units. Rather, it permitted 23,000 Canadians to join the British Royal Flying Corps/Royal Air Force (RFC/RAF) and the Royal Naval Air Service (RNAS), serving in British units under British command. Canadians became enthusiastic flyers, such that almost 40% of combat aircrew were Canadian by war's end. Not only that, but when the RFC created an extensive training organization in Canada in 1917, it drew large numbers of Canadian recruits looking to gain their wings. By November 1918 this RFC/RAF Canada training scheme was commanded largely by Canadians, and two-thirds of the instructors and most support personnel were Canadians. Thus, when the Royal Canadian Air Force (RCAF) was formed on 1 April 1924 it would draw many members from among those who had learned to fly in Canadian skies. The flight safety culture of the newborn RCAF would be created from their experiences, and aspects of that culture resonate today. Canadian aviators brought their innovative solutions to the challenges of creating and running a large training program with them into the RCAF of 1924.

How did Canadians get this experience? By 1916, the combination of combat losses and increasing demands for aerial support led the British War Office to grow aircrew training output. Capacity for expansion in the United Kingdom was limited, so it asked Canada for permission to operate an aviation training scheme in Ontario. The Canadian government consented, if Britain paid all the costs. The first training flights took off in February 1917, and training grew rapidly thereafter. By November 1918 RFC Canada had established five training wings at aerodromes in Ontario, three technical schools, had built over 2,000 Curtiss JN-4 Canuck training aircraft in Toronto, and created a depot that repaired 130 aircraft each month. By its termination in November 1918,

Photos: James Crookall, City of Vancouver Archives

the training scheme had graduated 3100 pilots and observers, 7400 mechanics and ground support personnel, and employed thousands of men and women.

What did Canadians learn from hosting and operating the RFC Canada training program, and how did this benefit the RCAF? First, Canadians saw how flying training benefitted from transformations in methodology, efficiency and safety. At program launch in early 1917 attitudes toward combat operations and training were similar. Flying was hazardous, death frequent and so fatalism prevailed. The aerodynamic riddle of the spin had only just been solved in 1916, and aircraft remained frail and unreliable. Experience improved combat survivability, yet even the best died with a frequency that made survival seem random. High casualty rates in training and combat were accepted by most as the price to be paid for victory. Yet developments in training methodology and safety by November 1918 would turn those attitudes on their heads.

Canadian flying training began in February 1917. At its start, the program was extremely haphazard, dangerous, and inefficient. There was little in the way of an established syllabus, instructor training was non-existent, and the JN-4 Canuck training aircraft was frail, unreliable, and underpowered. Instructors did little more than demonstrate a few basic manoeuvres to students, warn them to stay away from dangerous situations such as spins, and then send them solo. Communication between the two cockpits was limited to commands shouted over the engine noise or through primitive signals using the controls, limiting the usefulness of air lesson plans. Students were let loose to discover flying for themselves after as little as four hours dual instruction. Students were encouraged to carry out stunts such as hedge hopping, touching down on the roofs of moving trains, buzzing motorists or any aerial manoeuvre they could coax out of their underpowered trainers. With no definite standard for attaining wings beyond staying alive, the wash-out rate was low at approximately four percent. As a result, graduates sent to England for advanced flying training and operational employment in RFC squadrons were ill-prepared and fell prey to accidents or enemy action with astonishing rapidity.

The first ten months for RFC Canada were costly with a fatality rate of one per 1500 flying hours. Aerodromes often experienced a dozen crashes per day, and the station ambulance, nicknamed "Hungry Lizzie" by the trainee pilots, received a steady diet of aircrew casualties. Although many aircraft could be repaired on station, 130 required depot-level repair each month, and material wastage was high. By 1918 the RFC realized that it could ill afford such inefficiencies. Change was needed and it came rapidly. The first change was to redefine the syllabus so that pilot training became logical and systematic. The second was to standardize the training of instructors so that instruction would be consistent across all training wings. The third was to collect, analyse and disseminate information on accidents so as to form effective preventive measures.

The training syllabus was revised so that student pilots now would be shown and allowed to practice all the manoeuvres of which the JN-4 Canuck trainer was capable, in a logical progression, rather than just discovering the thrill of flight for themselves. Although the Canuck was underpowered and slightly unstable, it was discovered that through skilful management of energy and smooth control inputs it could perform almost any manoeuvre required of a service aircraft. Instead of being told to avoid certain dangerous manoeuvres, the student was instead shown how to perform all approved sequences and then provided the opportunity to practice them solo. The installation of voice tubes allowed clear communications

Continued on next page

between instructor and student. These changes led to graduates who were confident in their abilities and who could move on to higher powered combat aircraft once sent overseas for employment.

The other half of instructional reform was to improve instructor training. This need was driven by two factors. First, prior to 1918 instructors coming into the program were given virtually no training on how to instruct, which led to wide variations in the quality of instruction and output. Second, as the training scheme expanded, a high percentage of each graduating class had to be streamed into instructors to handle the increasing number of students. These graduates lacked the experience necessary to instruct, and so further tuition was needed to make them effective. Thus, early in 1918, instructor training was formalized along the lines of the British "Gosport System," modified for Canadian conditions and the limitations of the JN-4 Canuck. RFC/RAF Canada termed this the "Armour Heights System," so named because instructors were trained at the Armour Heights aerodrome north of Toronto. The changes were reinforced by forming standards section to ensure that instructional quality remained high across all training wings. The results were rapid and positive.

Finally, in early 1918 a defined methodology was developed to classify and analyse accidents. This systematic analysis of the data resulted in changes to procedures and material that produced a marked fall in the number of accidents. Standardized message formats were introduced to notify higher headquarters of occurrences. Aircraft damage assessments were standardized, creating a classification system that would continue, with modifications, through to the present day RCAF:

Category A: The machine is written off and used as salvage;

Category B: Two or more longerons are broken [depot level repair];

Category C: One longeron is broken [depot level repair]; and

Category D: Undercarriage or planes [wings] are broken and repairable by wing.

(Note: No Category E existed, as virtually every flight had accident potential back in 1918).

Headquarters required that all accidents be investigated by the senior instructor's staff at each training wing. A list of cause factors was approved in April 1918, and while primitive by today's standards these proved useful in formulating preventive measures, and the accident rate fell quickly. There was even an emphasis on what today would be termed Human Factors, indicating a sophisticated understanding of the importance of the human element in aviation safety:

Cause Factors (1918)

1. Aeroplane defect, whether engine failure, breaking [material failure], or faulty rigging;
2. Error of Judgement, whether due to poor instruction or not;
3. Loss of Head, [ie: panic];
4. Brain Fatigue;
5. Fear;
6. Physical Illness;
7. Unavoidable;
8. Disobeying, whether Rules of the Air, Instructions for the Flight; or Standing Orders; and
9. Weather.

Investigations assigned Primary and Secondary cause factors to occurrences, and these results fed into statistical reports that helped leadership determine problem areas and where improvements could be made. Implementation brought dramatic results. Crashes fell from 240 per month in June 1918 to 162 in October 1918. The fatality rate fell from one per 1760 flying hours in July 1918 to one per 5300 hours by October 1918, despite increases in the scope and difficulty of the training syllabus. This Canadian rate compared favourably to the rate at British training wings, which averaged one fatality per 1170 hours, showing how far the Canadians had come. Exactly how much more the statistics might have improved is impossible to know, as the Armistice of 11 November 1918 brought a rapid halt to all Canadian-based training operations.

Peacetime brought disappointment to aviators as the Canadian government refused to fund a Canadian air force in peacetime. While a few distinctly Canadian squadrons had existed in England post-war, they were disbanded in 1919 when the Canadian government refused to pay for them. England offered to gift the entire Canadian-based training infrastructure to Canada along with hundreds of surplus training and combat aircraft, but this too was refused as being too costly to maintain. The Canadian government took only the aerodrome at Borden and a small number of training and patrol aircraft thought suitable for peacetime use. The remaining assets and over one thousand JN-4 training aircraft were salvaged and sold by British authorities to recover money spent on the training scheme. Yet one thing that could not be sold off was the hard-won knowledge Canadian aviators had gained from running the program. That was available to Canada, and at bargain rates!

By 1920 public pressure for a coherent air policy led the government to assign all aviation related matters to the Air Board, newly organized under the Department of Defence, and operating under the strictest economy. As ex-RFC/RAF officers were the only persons with the requisite experience, to them fell the responsibility of managing both civil and military aviation. A small Canadian Air Force was created on the cheap under the Air Board, envisioned as a kind of air militia to be mobilized in the unlikely event of another war. Thus, a handful of full-time staff in Ottawa

managed the tiny budget allotted as well as the aerodrome at Borden, Ontario. The Air Board created an Air Force Association, not as a veterans' club, but as a reserve of qualified pilots and other specialists, organized by province, that could be called upon as needed, at minimal cost to the taxpayer. Membership was voluntary, but reserve officers were expected to undertake 28 days of training once every two years at Borden to maintain flying status. Additionally, any persons obtaining licenses at civilian schools were obliged to enrol in the reserve and to commit to the bi-annual training period. Borden was staffed by instructors and technicians on rotating six-month contracts, a system that allowed more reservists to compete for a chance at full-time employment. While the leadership of the CAF was specific about wanting reservists with combat experience, they looked also for instructors trained in the latest methods, those of the Gosport or Armour Heights system. Using such personnel would ensure air training was up to date and professional.

Leaders set out a clear vision for the future of military aviation in Canada that stressed the importance of quality instruction, flying discipline and safety. Air Commodore Tylee, the air force commander, laid out expectations at a national conference of the Air Force Association in 1920:

> "It is absolutely necessary for us to cut down casualties and crashes. We have no money this year to replace a lot of broken machines. Further, it is peace time, and it would do the Air Force and aviation a great deal of harm if we have many flying training casualties."

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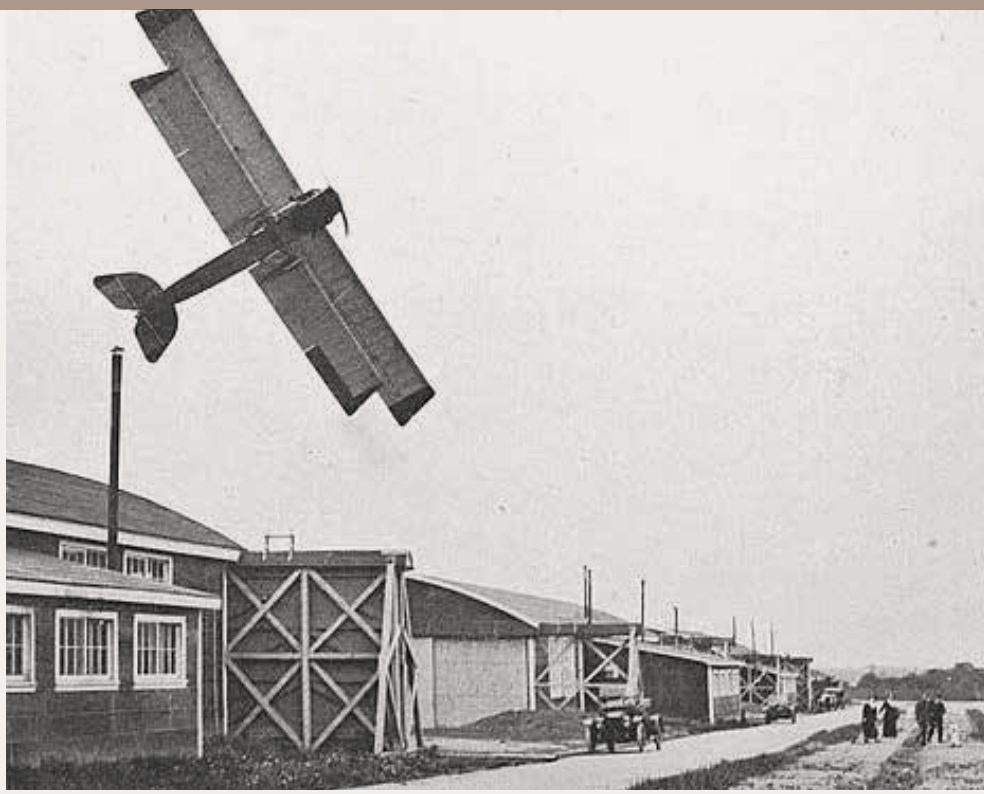

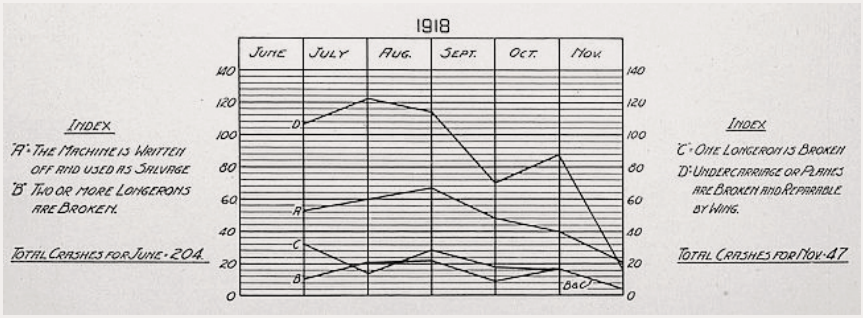

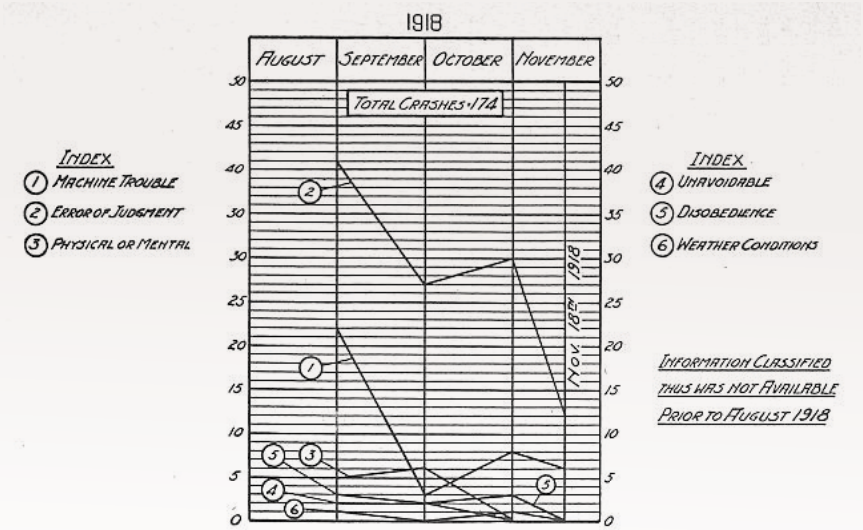

Photos: Aviation in Canada, 1917-1918, by Lt. Alan Sullivan, Toronto, 1919.
Downloaded from Project Gutenberg, https://www.gutenberg.org/ebooks/58887. Public Domain as of 2019 in Canada

Colonel Biggar, Chair of the Air Board reinforced the point: ""Dangerous flying must not be engaged in. . .also, stunting is forbidden. . .When you start killing the public, you kill flying." Clearly, if Canadian Air Force was to be means by which the government built the public's confidence in the future of Canadian aviation, it had to be exemplary in its training, operations and safety. Thanks to the deep well of experience available in its personnel, it would succeed.

The Air Board and the Air Force meant what they said. Air training at Borden resumed using the best practices developed in Canada in 1918. Resources were husbanded to preserve capability. Combat aircraft soon fell into disuse for lack of spares, while trainers and utility aircraft were maintained for the valuable contribution they could make to aviation growth in Canada. The Air Board worked hard to demonstrate the value of aviation to the government and the public. Inevitably, accidents occurred, but when they did investigation and prevention was taken seriously in both military and civil spheres.

Photo: Col (Ret'd) Chris Shelley

Upon notification of an accident, whether civil or military, the Air Board called out air reserve officers to investigate. The Court of Inquiry process gave a formal way to document and address the deficiencies that came to light as aviation grew, and the process of collecting information, analysing occurrences and recommending changes to procedures or regulations gave rise to a tradition that would find a home in the early RCAF.

One early investigation arising from an aerial stunt flying accident in Saskatoon in 1920 proved influential for Canadian air policy. 1920 was the dawn of the barnstorming era, when pilots across North America made a precarious living by executing dangerous aerial circus acts using the abundant supply of surplus training aircraft. In this occurrence, an American pilot fell to his death while trying to climb from one airborne JN-4 to another via a ladder trailed from the leading aircraft. The stunt pilot lost his grip on the ladder during the ascent and fell off, suffering fatal injuries. The Court of Inquiry recommended that such stunting be banned in Canada, and this was duly endorsed by the Air Board and incorporated into Air Regulations. This prohibition meant Canada avoided the many stupid and costly accidents involving stunt fliers at county fairs and circuses south of the border.

By 1924 the Canadian government accepted that a permanent air force was needed to provide military aviation requirements in Canada and so authorized the creation of a permanent force. But as shown above, the RCAF of 1924 was not created out of thin air. At its birth the RCAF benefitted from Canadian aviators and specialists who had mastered combat abroad and training operations at home. From this base in 1920, the hard work of the air militia gave the nation confidence that a permanent air force was a practical proposition. Canada had maintained critical expertise at minimal cost while gaining further institutional experience in aviation safety, accident investigation and air training. The new RCAF employed not only veterans but also trained a new generation of aircrew and technical personnel who would be the future of Canadian air power.

Thus, the RCAF began its life with a solid base of doctrine and experience that stood it in good stead during the lean years of the 20s and 30s. Canada would have to fight once again for freedom in the Second World War, but the RCAF at least had a solid basis of doctrine and experience upon which to base its rapid expansion to a world-class air force. These traditions of discipline, professionalism and the resolute pursuit of safe and effective aerospace operations continue today and as uncertainty about Canadian security increases, it is good to remember how aviators met these challenges in the past as the air force looks to grow once more.

A Poor Aviator Lay Dying

(First World War Traditional to the tune of "My Bonnie lies over the Ocean")

A poor aviator lay dying
At the end of a bright summer's day
His comrades had gathered about him
To carry his fragments away. . .
"Take the cylinders out of my kidneys,
And the connecting rod out of my brain,
From the small of my back take the crankshaft,
And assemble the engine again."

DOSSIER

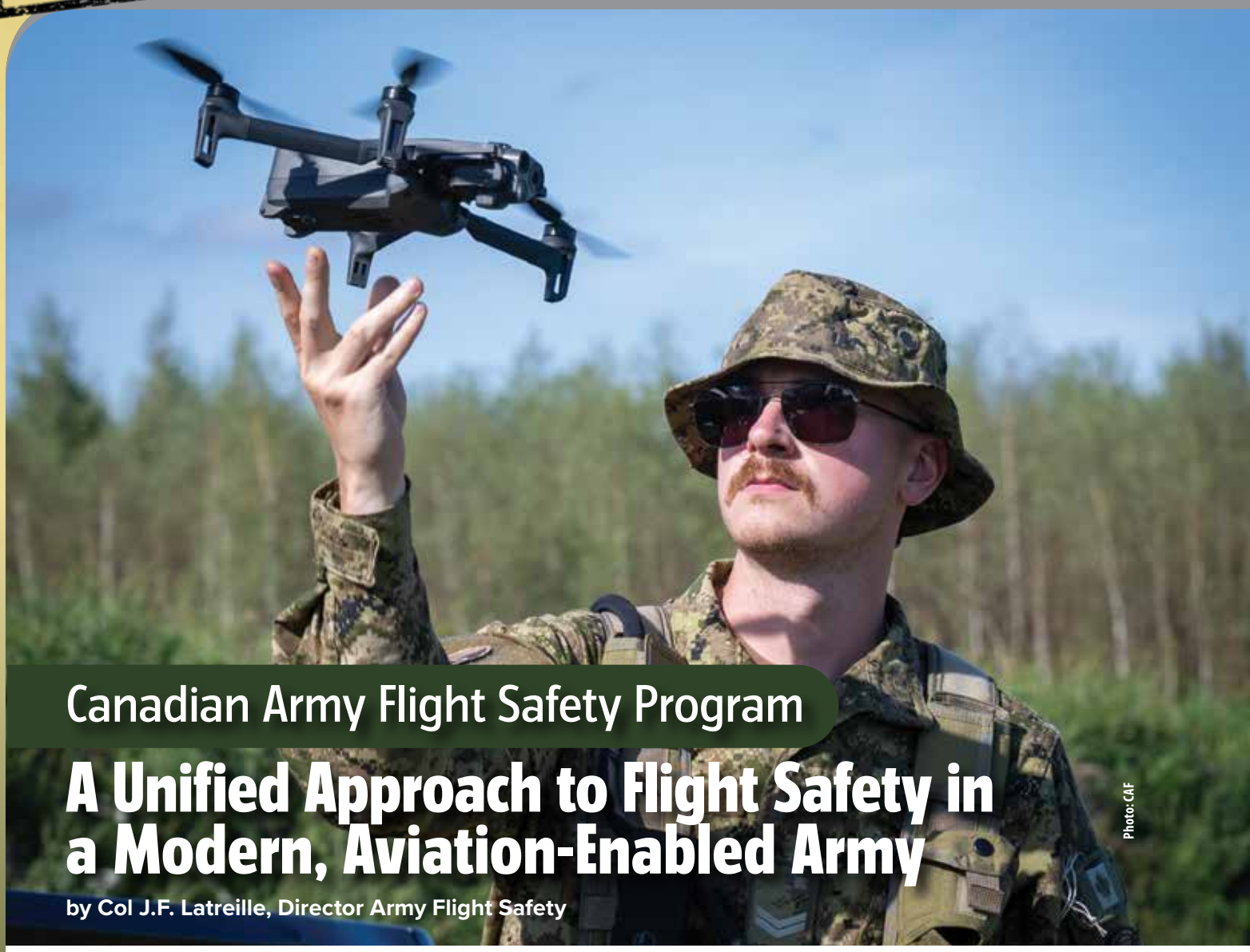

Photo: CAF

Canadian Army Flight Safety Program

A Unified Approach to Flight Safety in a Modern, Aviation-Enabled Army

by Col J.F. Latreille, Director Army Flight Safety

The Canadian Armed Forces are undergoing rapid transformation. New capabilities are emerging, technology is advancing, and operations are becoming increasingly complex. This evolution is particularly evident within the Canadian Army, where the widespread integration of Uncrewed Aircraft Systems (UAS) has reshaped how land forces observe, sense, and operate. More Army units now conduct, control, or support aviation-enabled activities than at any other point in history. With this expanded reliance on airborne capabilities comes a responsibility long familiar to the Royal Canadian Air Force (RCAF), but now formally institutionalized for the Army: ensuring that all aviation-enabled operations are conducted safely, legally, and in accordance with the DND/CAF Airworthiness Program.

While Flight Safety itself is not new to the Army—units have trained Flight Safety Officers (FSOs), used the Flight Safety Information Management System (FSIMS), and participated in Formation-level Flight Safety Assurance Visits (FSAVs) for years—the absence of a formally endorsed, Army-wide program limited coherence across the force. Practices, awareness, and reporting varied between formations, reducing the Army's ability to consolidate information, identify systemic hazards, and drive enterprise-level learning. The Canadian Army Flight Safety Program (CA FSP), approved by the Commander of the Canadian Army through CAO 22-17, now addresses this gap directly. Developed in close coordination with the Directorate of Flight Safety (DFS) and fully aligned with CAF

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Photo: Cpl Lapointe

Airworthiness governance, the CA FSP formalizes, unifies, and elevates Flight Safety activities already taking place across the Army.

At the tactical level, this matters. Consider a combat team employing a micro-UAS during collective training. A destroyed or missing UA, an airspace violation, personnel injuries related to aviation activities or a near miss with a crewed aircraft will be reported through FSIMS as part of a standardized, protected Flight Safety reporting and investigating process. That information contributes not only to unit-level corrective action, but also to Army-wide awareness, allowing similar units to identify trends, adapt procedures, and mitigate risk before an incident occurs elsewhere. The CA FSP turns individual experiences into institutional learning.

A core component of this program is the formal adoption of Just Culture, a principle long championed within the RCAF and now explicitly embedded across the Army. Just Culture ensures that personnel can report hazards and honest mistakes without fear that privileged Flight Safety information will be used for disciplinary or administrative purposes. At the same time, it maintains the essential distinction that reckless behavior or intentional non-compliance remains a matter for the chain of command–not the Flight Safety system. This balance is fundamental. Transparency and trust are prerequisites for effective safety reporting, especially in dynamic operational environments.

Equally important is the independence of Flight Safety investigations. Conducted under the authority of the Director of Flight Safety as the Airworthiness Investigative Authority, these investigations are privileged, protected processes focused solely on identifying causes and contributing factors. Their purpose is to generate preventive measures, not to assign blame. This independence encourages candor, supports organizational learning, and preserves the integrity of the Airworthiness Program. As the Canadian Army's use of UAS continues to expand, this investigative independence ensures that operators, supervisors, and commanders can participate openly in processes designed to prevent recurrence and strengthen system resilience.

Implementation of the CA FSP is now underway across the Army. Units newly engaged in aviation through emerging UAS capabilities are establishing local Flight Safety Programs, appointing trained FSOs, FSNCMs, and Flight Safety Representatives, and integrating standardized hazard and occurrence reporting through FSIMS. Formation-level Flight Safety Assurance Visits provide oversight and mentorship as these programs mature. Throughout 2026, the emphasis remains on training, education, and reinforcing every member's role in maintaining aviation safety, even in demanding tactical environments.

Put simply, the CA FSP clarifies expectations and responsibilities for Army personnel. Operators gain a trusted, protected pathway to report hazards and learn from occurrences. Commanders receive better visibility of aviation risk within their formations. Units benefit from consistent standards, shared lessons, and a governance framework that supports aviation-enabled operations at every level.

For our RCAF colleagues, the CA FSP provides clarity and coherence by formally integrating the Army's Flight Safety activities into the same governance framework that has underpinned RCAF aviation for decades. This alignment strengthens joint airspace management, shared safety responsibilities, and operational integration across the CAF.

As the Canadian Army continues to modernize and expand its use of aviation-enabled capabilities, one principle remains unchanged: Flight Safety is foundational to operational success. The pace of modernization, proliferation of UAS, and increasing complexity of the battlespace demand a disciplined, enterprise-level approach to aviation risk. Through a formally endorsed Flight Safety Program grounded in Just Culture and supported by independent investigation, the Army ensures that capability growth does not outpace safety governance. Army aviation will continue to expand–and with the CA FSP firmly in place, it will do so safely, credibly, and sustainably.

Photo: DND

Photo: Cpl Alonso

DOSSIER

When Cutting Corners Becomes the Norm

by Chris Acord, Workplace Safety Division, Directorate of Analysis and Prevention, U.S. Army Combat Readiness Center, Fort Rucker, Alabama

Photo: Cpl Charest

How Normalizing Deviance Can Lead to Disaster

The old adage, "familiarity breeds contempt," rings eerily true when considering the dangers of normalizing deviance. Coined by sociologist Diane Vaughan, this phenomenon describes the gradual process where individuals, groups or organizations tolerate unacceptable behaviors, practices or conditions as normal. Like a thief in the night, normalization of deviance creeps in silently and dulls the sense of wrongdoing. Normalizing deviance often masquerades as efficiency, cost-cutting or simply "the way things are done around here." But this insidious drift toward accepting substandard practices as the new normal can have catastrophic consequences, particularly in high-risk industries like aerospace, healthcare and the military.

The Dangers of Accepted Deviance

The true danger of normalizing deviance lies in its subtlety. Initially, deviations might seem minor and inconsequential. Examples include skipping a procedural step due to a time crunch, deferring a minor maintenance procedure because "it's never caused a problem before" or bending the rules on driver training due to competing priorities. These seemingly insignificant acts, when repeated and uncorrected, erode safety margins and pave the way for disaster.

The longer these deviations go unchallenged, the more ingrained they become in the organizational culture, making them even harder to eradicate. Dr. Robert Figlock of Advanced Survey Design, LLC, aptly warned senior military leaders in 2005, *"When cutting corners becomes routine, and routine violations become the norm, then they may not be seen as violations at all to a newcomer who perceives, 'That's the way it's always been done around here.' The practice becomes the rule, rather than the exception to the rule. Over time, the correct rule is lost. With so much on-the-job training (OJT) conducted in the fleet to train new personnel, routinely cutting corners is a setup for future calamity."* In other words, as deviations become ingrained in organizational culture,

they become harder to eradicate, lulling teams into a false sense of security and increasing the likelihood of sending a chaplain and a casualty notification officer to visit the next of kin.

Organizational Culture: The Breeding Ground

Organizational culture plays a crucial role in either fostering or preventing the normalization of deviance. A culture that tolerates shortcuts, prioritizes production or time over adhering to safety procedures, or discourages open communication about risks creates fertile ground for deviance to take root. For example, factors such as:

- **Production pressure or OPTEMPO:** When ineffective planning and time management create unrealistic deadlines and performance goals that incentivize cutting corners.
- **Overconfidence in experience:** Highly skilled or experienced personnel may believe their expertise allows them to bend rules safely, leading to increased risk-taking.
- **Allowing unwritten practices to become standard:** When deviations go unaddressed by supervisory personnel, it sends a message that they are acceptable, which causes individuals to continue deviating without fear of repercussions.
- **Rationalization of behavior:** Once established, deviance becomes the accepted norm, making it harder for individuals to recognize and challenge unsafe practices. People justify deviations by thinking, "We've always done it this way," or "Nothing bad has happened before," dismissing potential dangers.
- **Absence of catastrophic failure:** Organizations often respond only after a major failure or disaster occurs. In the absence of such an event, deviations continue unchecked.

Photo: Sgt Carbonneau

- **Stifling communication:** A culture where individuals feel uncomfortable reporting safety concerns or challenging unsafe practices allows deviance to flourish.

Case Studies: When Deviance Turns Deadly

History is replete with examples of mishaps where normalized deviance played a significant role, including:

- **Challenger Space Shuttle Disaster (1986):** Engineers had expressed concerns about the O-rings' performance in cold temperatures, but these concerns were overruled due to launch schedule pressures and a history of seemingly successful launches despite O-ring erosion. This normalization of the known risk ultimately led to the tragic loss of the shuttle and its crew. (Astronaut Mike Mullane – Normalization of deviance – IAFF – Part 1 at: https://www.youtube.com/watch?v=Ljzj9Msli5o)
- **Columbia Space Shuttle Disaster (2003):** Foam shedding from the external tank during launch had become a normalized occurrence, despite its potential to damage the shuttle's thermal protection system. This acceptance of a known risk ultimately led to the disintegration of Columbia upon re-entry over the southern states.
- **BP Texas City Refinery Explosion (2005):** Cost-cutting measures and a lax safety culture contributed to numerous safety violations becoming normalized, culminating in a catastrophic explosion that killed 15 workers and injured 180. (BP Texas

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City 10-Year Anniversary Safety Message: https://www.youtube.com/watch?v=hcKM4xWywLE)

The U.S. Army, like the organizations in the above-listed case studies, is not immune to cultural factors that cause mishaps. To proactively address this, the U.S. Army Combat Readiness Center developed the interactive "Dirty Dozen" poster series (https://safety.army.mil/MEDIA/Safety-Brief-Tools), identifying the 12 most cited mishap causes from fiscal years 2020-2024. This resource empowers commanders to analyze their units' specific risks, understand their potential impact and develop targeted strategies to prevent dangerous practices from taking root.

Combating Normalization of Deviance: Best Practices

Organizational leaders play a vital role in preventing normalization of deviance. Key initiatives include:

- **Cultivating a strong safety culture:** This is the cornerstone of a resilient and responsible organization, built on a foundation of trust and shared values. These, in turn, are essential for prioritizing the well-being of its people and the sustainability of its operations.
- **Encouraging open communication:** Create a reporting culture where individuals feel comfortable raising safety concerns without fear of reprisal. Anonymous reporting mechanisms may be used to promote a level of comfort.
- **Enforcing accountability:** Address deviations promptly and consistently, regardless of their perceived severity. This demonstrates that safety rules are not negotiable.
- **Promoting continuous learning:** Don't let complacency set in. Regularly review procedures, conduct safety audits, review near-miss incidents to identify potential areas of concern, and encourage employees to identify potential hazards and suggest improvements.
- **Leading by example:** Leaders must demonstrate their commitment to safety through their actions and decisions. They must be willing to challenge unsafe practices, even if it means delaying production.
- **Just culture:** Implementing a just culture model helps create a learning environment where individuals feel safe reporting errors and near misses without fear of blame, fostering continuous improvement and preventing the normalization of deviance.
- **Reward adherence:** Recognize and reward individuals and teams that consistently prioritize safety and ethical behavior.

By understanding the mechanics of normalization of deviance and proactively implementing preventive measures, organizations can create a culture of safety and responsibility, protecting the Army's most valuable asset – its people.

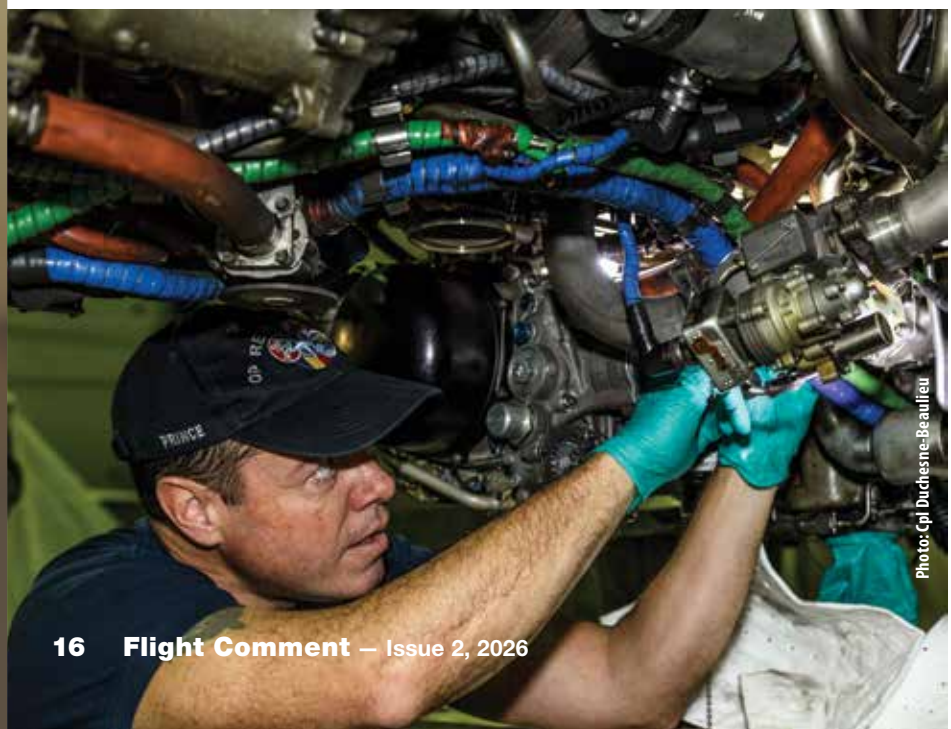
Photo: Cpl Duchesne-Beaulieu

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Photo: Maj Hatta

Unauthorised Airfield Access:
When Assumptions Replace Authorisation

by Capt Gary Lacoursiere,
DFS 2-5-4, UAS, Air Weapons
and Maintenance Investigator

Aviation organizations devote significant effort to preventing runway incursions involving aircraft, vehicles, and pedestrians. Most personnel understand the hazards associated with entering a manoeuvring area without authorisation. With almost 20 years of flight line experience, I thought I understood this. Yet incidents continue to occur, often not because of malicious intent, but because of a chain of assumptions, misunderstandings, and informal decision-making. One such occurrence happened during the 2006 Manitoba International Airshow at Portage La Prairie. It illustrates how quickly normal operations can drift outside established procedures.

The Situation

At the conclusion of the airshow, the Duty Controller observed a civilian vehicle operating on the outer runway. The vehicle involved was a 1976 Corvette Stingray that had been parked on the ramp throughout the day. The airshow static display contained fewer aircraft than originally planned. To improve the appearance of the static display, several performing aircraft were positioned along the boundary separating the static display area from the performers' ramp. The Corvette was parked in this vicinity and had become a familiar presence to airshow personnel.

The driver was an RCAF Aviation Systems Technician (AVN) Sergeant assigned as Deputy Crew Chief of the servicing crew supporting the airshow. The crew was supervised by a Warrant Officer and reported through a designated Ramp Boss, a Captain. The Sergeant possessed a current ramp defensive driving qualification and was authorized to operate vehicles on the ramp.

At the conclusion of flying activities and after completion of the airshow on Sunday afternoon, the Sergeant asked the Ramp Boss whether it would be possible to drive the Corvette down the runway. The request was motivated by a previous experience at another Base, where permission had been granted for a similar activity. Permission was not granted. The Sergeant later stated that no individual ever authorized the activity. However, he was left with the impression that the airport was effectively uncontrolled.

Escalation of Risk

Following the discussion, the Corvette was driven briefly on the ramp. During this period, the Ramp Boss suggested performing "donuts" with the vehicle around a visiting European helicopter. At least two supervisors immediately intervened and clearly stated that no such activity would occur. The vehicle was subsequently parked. The driver then offered to take two individuals for a ride on the highway. Instead of proceeding directly to the exit, however, the vehicle drove down the taxiway to the outer runway. The driver conducted a high-speed pass along the runway, returned, exchanged passengers, and repeated the process.

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The Sergeant later stated that he believed the control tower was closed, the airport was uncontrolled, and that maintaining a visual lookout for aircraft would provide adequate safety. Those assumptions proved incorrect. The control tower remained operational, and a Snowbird aircraft was airborne conducting a test flight. Although the Corvette's presence on the runway did not ultimately interfere with aircraft operations, the potential for conflict existed.

Human Factors Analysis

This event did not result from a single poor decision. Rather, it emerged from a series of contributing factors that collectively normalized increasingly risky behaviour.

Familiarity Breeds Comfort

The Corvette had been present on the ramp for most of the day. Personnel became accustomed to seeing it in operational areas. As familiarity increased, the distinction between an authorized vehicle and a personal vehicle became blurred. Humans naturally become less sensitive to hazards that remain present without causing problems. What initially appears unusual gradually becomes accepted as normal.

Ambiguity Is Not Permission

The driver requested authorisation from the Ramp Boss and did not receive it. However, an assumption was made that an authorisation was not needed because the airshow had concluded and the runway appeared inactive. A common precursor to safety occurrences is the substitution of personal judgement for formal authorisation. Operational procedures exist specifically to eliminate the need for individuals to make independent assessments.

Authority Gradient and Shared Responsibility

Several individuals were aware of discussions concerning unusual vehicle operations. Supervisors successfully intervened to prevent one unsafe activity, the proposed "donuts."

Unfortunately, once that immediate hazard was addressed, supervisors may have perceived the risk as having been managed. When multiple people observe developing risk situations, there can be an unconscious assumption that someone else is responsible for taking further action. This phenomenon, often described as diffusion of responsibility, can create gaps in supervision.

Assumptions About Airfield Status

Perhaps the most significant factor was the belief that the airport was uncontrolled and inactive. In aviation operations, assumptions about the status of a runway are inherently dangerous. Runways exist for aircraft operations, and access procedures remain in effect regardless of how quiet the airfield may appear. The presence of an operational control tower and an airborne Snowbird aircraft demonstrate the limitations of relying solely on visual observation. Airfield activity is not always visible from ground level.

Lessons Learned

This occurrence offers several important lessons for aviation personnel:

- **Authorisation must be explicit.** If permission has not been granted, the answer is no.
- **Airfield status must never be assumed.** Personnel should confirm operational status through established channels rather than relying on appearance or local perception.
- **Personal vehicles do not belong on manoeuvring areas.** Even when authorized on ramps or static-display areas, additional permissions are required before entering operational surfaces.
- **Early intervention matters.** Supervisors successfully prevented one unsafe activity. Similar intervention at subsequent stages may have prevented the runway incursion entirely.
- **Past experience is not precedent.** Approval granted at one location or under one set of circumstances does not establish authority for future activities elsewhere.

The 1976 Corvette Stingray and the Snowbird aircraft never came into conflict and no disruption to flight operations occurred. Nevertheless, the event serves as a reminder that aviation safety is often determined not by outcomes, but by decisions. Aviation history contains many examples of occurrences where assumptions, informal permissions, and perceived inactivity created conditions for more serious consequences. In this case, the runway remained clear, the aircraft remained separated, and the event ended without damage or injury. The lesson is straightforward: ***when operating on an airfield, authorisation is never implied, and assumptions are never a substitute for clearance***. The absence of an accident should not obscure the presence of risk.

Editor's Note

While all Flight Safety investigations are conducted external to the Chain of Command (CoC) and no information can be shared with the latter, in this case the CoC later chose to conduct an independent, disciplinary investigation. This resulted in charges being laid and the driver being found guilty of Conduct to the Prejudice of Good Order & Discipline under Section 129 of the National Defence Act (NDA).

Photo: Cpl Steve Wong

DFS Commendation

Outstanding professional long-term performance and dedication in the field of Flight Safety.

Major Jillian Bristow

Maj Bristow has demonstrated exceptional and sustained commitment to the Flight Safety program throughout her career, both at squadron and wing level. She initially served as a Unit Flight Safety Officer (UFSO) at 430 Squadron, where she actively contributed to fostering a strong and collaborative flight safety culture within the unit.

She later deployed as UFSO for the Griffon fleet in Afghanistan from 2010 to 2011. In a demanding operational environment, she provided consistent and effective flight safety support to aircrew and maintenance personnel, ensuring adherence to flight safety principles while balancing operational requirements. Her professionalism and sound judgment contributed directly to the safe conduct of air operations in a high-risk theatre.

Following her deployment, she continued her service as UFSO at 417 Squadron, where she once again demonstrated strong leadership and a high level of responsibility. She maintained elevated flight safety standards while promoting a climate of trust that encouraged reporting and proactive risk management.

Since July 2021, Maj Bristow has served as the Wing Flight Safety Officer (WFSO) at 3 Wing. From July 2021 to April 2022, the Flight Safety Section was staffed by only two members–herself and Sgt Craig Newman–despite a sustained workload. Throughout this period, she ensured full continuity of flight safety operations, effective support to wing units, and diligent oversight of all flight safety files, demonstrating exceptional resilience, organization, and professionalism.

Maj Bristow was selected to attend the most recent NATO Flight Safety Course in Latvia, a clear indication of the confidence placed in her expertise at the international level. In addition, throughout her tenure as WFSO since July 2021, she has been regularly called upon to participate in various working groups, where her operational experience, sound judgment, and in-depth knowledge of the Flight Safety program provided significant value to collaborative efforts and outcomes.

Through the depth and consistency of her commitment, the breadth of her expertise, and her positive influence on the Flight Safety program, Maj Bristow has made a significant contribution to the preservation and enhancement of aviation safety. Her professionalism, dedication, and leadership fully merit the DFS Commendation.

DFS Commendation

Outstanding professional long-term performance and dedication in the field of Flight Safety.

Major Corey Csada

Major Csada is awarded the Director of Flight Safety Commendation in recognition of his exceptional long-term performance and sustained dedication to the Canadian Armed Forces Flight Safety Program. Through more than nine years of service in senior Flight Safety appointments, Major Csada made enduring contributions that significantly enhanced operational safety, risk management, and Flight Safety culture at both the unit and Wing levels.


Photo: CAF

Major Csada served as the Unit Flight Safety Officer (UFSO) at 2 Canadian Forces Flying Training School for four years and one month, followed by five years and five months as the Wing Flight Safety Officer at 15 Wing Moose Jaw. Throughout these roles, he demonstrated professionalism, technical competence, and an unwavering commitment to identifying hazards, mitigating risk, and strengthening the credibility and effectiveness of the Flight Safety Program.

While serving as UFSO, Major Csada played a pivotal role in identifying and resolving a critical physiological safety issue involving anti-G trousers. Multiple reports of asymmetric inflation and several ALOC/GLOC occurrences prompted a comprehensive and methodical investigation. Major Csada pursued an evidence-based approach, including testing the G-pants to destruction, which revealed the trousers in use were of an incorrect series and lacked adequate reinforcement at key body bend points. This deficiency resulted in crushed air tubing and significantly reduced G-protection during high-G manoeuvres.

Major Csada's findings directly led to the procurement of appropriate G-pants, improvements to Anti-G Straining Manoeuvre training, and support to the G-pants Risk Assessment and Risk Management process. His actions corrected systemic deficiencies in both equipment and training, substantially reducing risk to aircrew and improving operational safety across the training system.

As Wing Flight Safety Officer at 15 Wing, Major Csada continued to demonstrate outstanding leadership and dedication. He provided expert advice to the chain of command, supported and guided Flight Safety investigations, mentored Unit Flight Safety Officers, and consistently reinforced the non-punitive principles of the CAF Flight Safety Program. In addition, he delivered Flight Safety lectures during ground school, directly influencing new aircrew by instilling strong safety principles early in their flying careers.

Major Csada's sustained service, analytical approach, and commitment to Flight Safety excellence have had a lasting and positive impact across multiple organizations. His actions exemplify the values and ethos of the CAF Flight Safety Program and make him eminently deserving of the Director of Flight Safety Commendation.

For Professionalism

For Commendable Performance in Flight Safety

Captain Brian Fahy

On 3 November 2025, while conducting pre-flight preparations for a proficiency flight on a CH139 Bell 206 helicopter C-FTHX, Captain Brian Fahy demonstrated exceptional diligence and professionalism that directly contributed to the safety of personnel and the preservation of a valuable aviation asset. While performing a thorough walk-around inspection of the aircraft, Captain Fahy identified a critical discrepancy in the engine compartment: the B-nut connecting the PC line to the elbow fitting at the compressor scroll was found to be loose.

Recognizing the potential severity of this condition, Captain Fahy immediately assessed the implications of the defect. The PC line provides the fuel control unit with a vital reference pressure used to determine the engine's operating state and regulate fuel flow accordingly. If the PC line were to become disconnected or experience a sudden loss of pressure during flight, the fuel control unit could interpret this as a command to rapidly reduce fuel flow. Such a failure would likely result in an abrupt loss of engine power to idle and could potentially lead to a complete engine flameout.

By detecting the loose B-nut Captain Fahy prevented a potentially dangerous situation from developing. His careful attention to detail and commitment to conducting a disciplined inspection ensured the defect was identified and rectified before the aircraft departed the ground. As a result, the risk of an in-flight power loss event was eliminated, safeguarding both personnel and equipment.

Photo: CAF

Captain Fahy's actions reflect the highest standards of airmanship, technical awareness, and professional responsibility. His vigilance and methodical approach to aircraft inspection exemplify the principles of the Royal Canadian Air Force Flight Safety Program and highlight the critical importance of disciplined pre-flight procedures.

Captain Fahy's exemplary actions and dedication to flight safety make him most deserving of the *For Professionalism* Award.

For Professionalism

For Commendable Performance in Flight Safety

Captain Jarrod Hanson

On 18 October 2025, Capt Hanson demonstrated exceptional professionalism and situational awareness that prevented a potentially catastrophic mid-air collision near Netook airport (CFK6). Serving as Launch Control Officer during glider operations, Capt Hanson observed a serious traffic conflict developing between Scout 5, a tow aircraft returning from an air tow release, and a commercially registered Cessna 150.

At approximately 2200Z, Scout 5 was descending eastbound to join a left-hand circuit for Runway 19, while the Cessna 150 was traveling southbound at a similar altitude on a direct track toward the aerodrome. This scenario presented a significant hazard, as both aircraft were converging at circuit altitude with no apparent communication from the Cessna. Recognizing the imminent risk, Capt Hanson immediately transmitted a traffic advisory to Scout 5 on the aerodrome frequency. Acting on this warning, the Scout pilot visually acquired the Cessna and executed an evasive maneuver. The Scout pilot later estimated the aircraft passed within 50 feet vertically and approximately ½ to 1 mile horizontally, underscoring the severity of the situation and the importance of Capt Hanson's timely intervention.

Capt Hanson's actions did not end once the immediate danger was resolved. After ensuring Scout 5 landed safely, Capt Hanson took deliberate steps to identify and address the underlying hazard. By monitoring and broadcasting on multiple air traffic frequencies, Capt Hanson was able to determine the location of the Cessna and confirm it was inbound to a nearby aerodrome. Demonstrating persistence and commitment to flight safety, Capt Hanson then drove to that aerodrome to speak directly with the pilot, gathering critical information for the subsequent investigation. This initiative revealed that the pilot had not monitored the correct frequency and was unaware of published NOTAMs warning of intensive glider activity at CFK6–factors that contributed to the dangerous situation.

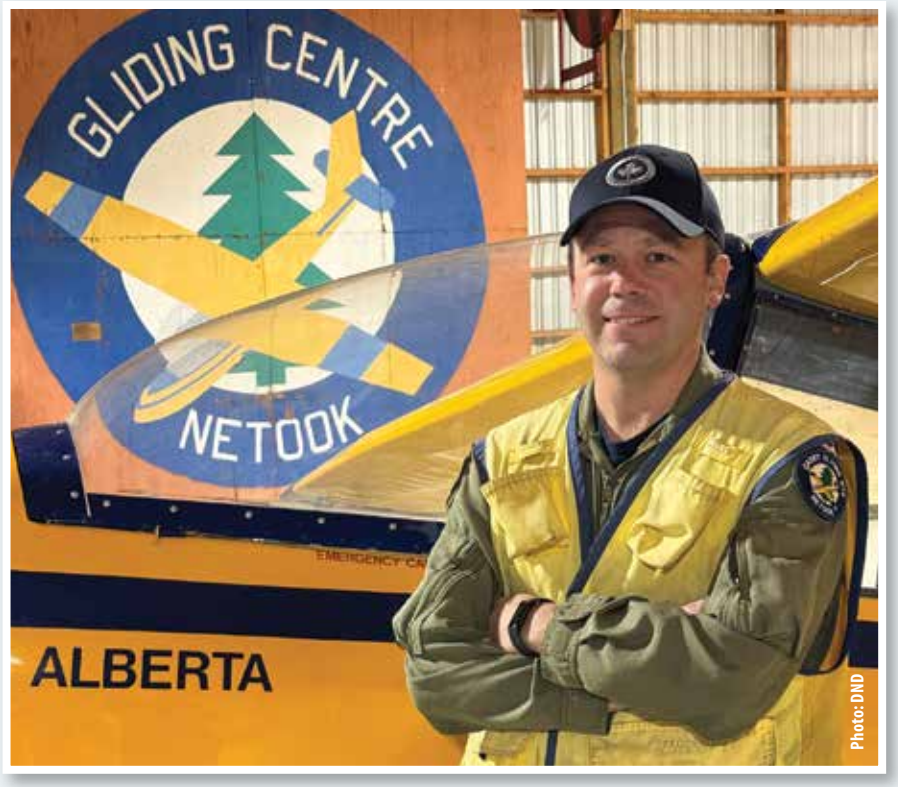

Photo: DND

Capt Hanson's proactive measures were instrumental in preventing a serious accident and reinforced the importance of vigilance in uncontrolled airspace. His sound judgment, quick thinking, and dedication to safety exemplify the highest standards of professionalism. His persistence through multiple radio attempts, frequency changes, and personal engagement reflects a commendable level of professionalism and adherence to flight safety principles. This event underscores Capt Hanson's dedication to Flight Safety and they are a deserving recipient of this *For Professionalism* award.

For Professionalism

For Commendable Performance in Flight Safety

Second Lieutenant Adam Targui

Photo: Cpl Curtis

On 25 August 2025, while returning to Moose Jaw following a low level navigation mission, 2Lt Adam Targui demonstrated exemplary professionalism, airmanship, and composure during an unexpected airborne conflict that carried significant risk. Operating as the student pilot under instruction in a Harvard II, he was participating in a demanding phase of flight: rejoining the circuit during busy single runway operations, while simultaneously monitoring multiple radio frequencies and maintaining situational awareness in a congested airspace shared with civilian traffic. Despite the inherent workload, 2Lt Targui upheld a disciplined lookout and a calm, focused approach to his duties.

As the aircraft repositioned for an eight mile initial, air traffic control provided traffic information, but no indication was available for a second aircraft operating east of the control zone. This unknown aircraft was not visible on radar and was not emitting a transponder signal, creating a hidden hazard. While the instructor pilot was coordinating radio calls during this task intensive phase, 2Lt Targui was in control of the aircraft and the first to visually acquire the conflicting aircraft, noting it at the two o'clock position and slightly below. He did not hesitate, he turned the aircraft to separate from the traffic and clearly identified the threat and called it out with assertiveness and precision.

His timely warning provided the instructor pilot with the situational awareness required to take prompt evasive action. The instructor took control and initiated a climbing turn that increased separation from the unknown aircraft, which passed an estimated 300 to 500 feet from the Harvard II–well within the range of a potential mid air collision. The Flight Safety investigation later assessed that the crew's lookout and rapid response were "excellent and may have prevented a mid air collision," highlighting the critical role of 2Lt Targui's vigilance and communication.

2Lt Targui's attention to detail, assertiveness, and timely communication directly contributed to the safe conclusion of a hazardous situation. For his vigilance, composure, and exemplary airmanship, 2Lt Targui is highly deserving of the Flight Safety *For Professionalism* Award.

For Professionalism

For Commendable Performance in Flight Safety

Master Corporal Jean-François Denis

MCpl Denis distinguished himself through his professionalism and vigilance by identifying a critical anomaly within the fighter squadrons at Bagotville. During an investigation, he discovered that the functional tester AN/AWM-103A (serial number UFB223), used to simulate a live firing scenario to verify full weapon system functionality, bore a calibration label that had expired on December 21, 2023.

Acting without delay, he went to the routine maintenance office to affix a CF 942 label prohibiting the use of the equipment, thereby preventing any operational risk associated with the expired calibration.

His keen sense of observation also enabled him to notice the absence of entries in the Data Management System (DMS), compromising the tracking of interventions on affected aircraft. This discovery highlighted a significant gap in equipment management, leading to the immediate implementation of essential corrective measures.

To preserve the operational availability of the fleet and maintain a high level of readiness for the Alert Zone (AZ), MCpl Denis organized a meeting with the SAMEO and the maintenance officer. Together, they developed an action plan to prioritize testing on spare aircraft for the AZ as well as on aircraft equipped with live missiles, thereby ensuring continuous availability of aircraft for NORAD missions. Within less than a week, the entire Bagotville fleet underwent thorough inspections.

Seeking to strengthen equipment management in a sustainable way, MCpl Denis implemented a new procedure to use the EMR number instead of the serial number for AN/AWM-103A testers in the support documentation (Support Works) of DMS CF-349. A maintenance bulletin was drafted and distributed, including to the squadrons at Cold Lake, in order to standardize the procedure across the fleet and ensure rigorous tracking of weapon system tests.

Thanks to his initiative, dedication, and attention to detail, MCpl Denis made a significant contribution to improving maintenance protocols and the safety of air operations. His actions reinforced Canada's air defense posture, ensuring increased aircraft availability for NORAD missions. His exemplary professionalism highlights his essential role within the Canadian Armed Forces.

For Professionalism

For Commendable Performance in Flight Safety

Corporal Nicolas Daunais-Caron

On 5 March 2026, Cpl Daunais-Caron, of 430 Squadron, distinguished himself through exceptional professionalism, keen vigilance, and technical expertise while conducting a scheduled 25-hour inspection on CH146 Griffon aircraft no. 470, in the course of his duties as an aircraft structures technician (ACS).

During the inspection, Cpl Daunais-Caron demonstrated a remarkable level of attention to detail as well as rigorous adherence to the inspection procedures associated with aircraft structural inspections. While performing a routine tactile check of the aft section of the aircraft, he detected an abnormal structural response when light pressure was applied to the aircraft skin. This subtle deformation, not visible to the naked eye, suggested the presence of an internal structural issue that could easily have gone unnoticed during a standard inspection.

Rather than dismissing the anomaly, Cpl Daunais-Caron continued his analysis methodically, in accordance with established maintenance and flight safety procedures. Demonstrating sound judgment and excellent situational awareness, he recognized that the localized depression could indicate possible damage to the internal structure. To confirm his assessment, he used a borescope to inspect the internal area of the aft section. This inspection revealed the presence of a crack in a critical structural metal component of the aircraft's aft assembly.

Photo: CAF

The diligence, technical competence, and commitment to flight safety demonstrated by Cpl Daunais-Caron reflect great credit upon himself, his unit, and the Canadian Armed Forces. His actions serve as a model of professionalism and underscore the essential role that attention to detail and methodical maintenance practices play in preserving flight safety.

For Professionalism

For Commendable Performance in Flight Safety

Corporal Shawna Pinard

During an engine build-up, Cpl Shawna Pinard, an AVN Technician employed in the 407 Sqn Engine Bay, identified a tube and spring assembly–an integral component of the engine anti-ice system responsible for directing hot bleed air to the intake–lodged in the upper right section of the nacelle. Recognizing this as abnormal, they immediately informed their supervisor, prompting a thorough review of the component's installation history. A subsequent borescope inspection confirmed that the assembly was missing from its correct installed position.

This omission created a critical gap in the lower shrouded duct anti-ice system, resulting in insufficient bleed air flow and degraded anti-icing performance, a system essential to the safety of flight. The upper intake is a seldom-removed component, and one with which few technicians have direct experience. Despite having only recently attained Level A release qualifications in 2024, Cpl Pinard demonstrated technical acumen and professionalism well beyond their level of experience.

Cpl Pinard's decisive actions identified and mitigated a previously undetected fault in a critical aircraft system, ensuring the continued airworthiness of the engine and preventing potential risk to Flight Safety. Cpl Pinard is a deserving recipient of the *For Professionalism* Award.

Photo: MCpl Pomarenski

For Professionalism

For Commendable Performance in Flight Safety

Aeronautical Engineering Test Establishment (AETE)

On 8 October 2025, during a night proficiency sortie from Ottawa, the AETE CH146 helicopter crew consisting of Mr. Paul Francis, Maj David Parker, and MCpl Stephen Huntington encountered an unexpected burning plastic odor and visible smoke approximately one to two minutes after the cabin dome lights were energized. Correctly assessing the smoke as originating from an internal electrical source near the glareshield, the Aircraft Captain directed an immediate land as soon as possible and transitioned the crew to night vision goggle operations over unlit terrain. To retain essential aircraft controllability while managing a suspected electrical fire, the crew selected Emergency Load, preserving SAS, one autopilot channel, and VHF1 while losing cockpit and cabin lighting and intercom capability. Despite the significantly increased workload, the crew demonstrated exemplary crew resource management (CRM): the Pilot Monitoring illuminated the Pilot Flying's instruments with a flashlight, and the Flight Engineer improved ventilation, coordinated the back end, and assisted in navigation.

Under NVGs, the crew identified a suitable harvested field and executed a controlled off airport landing without injury or damage. When smoke reappeared during a brief restoration of electrical power on the ground, the crew initiated an immediate emergency shutdown and egress. The Flight Engineer then secured the aircraft, isolated the electrical system, and conducted an on-scene inspection that confirmed no active fire.

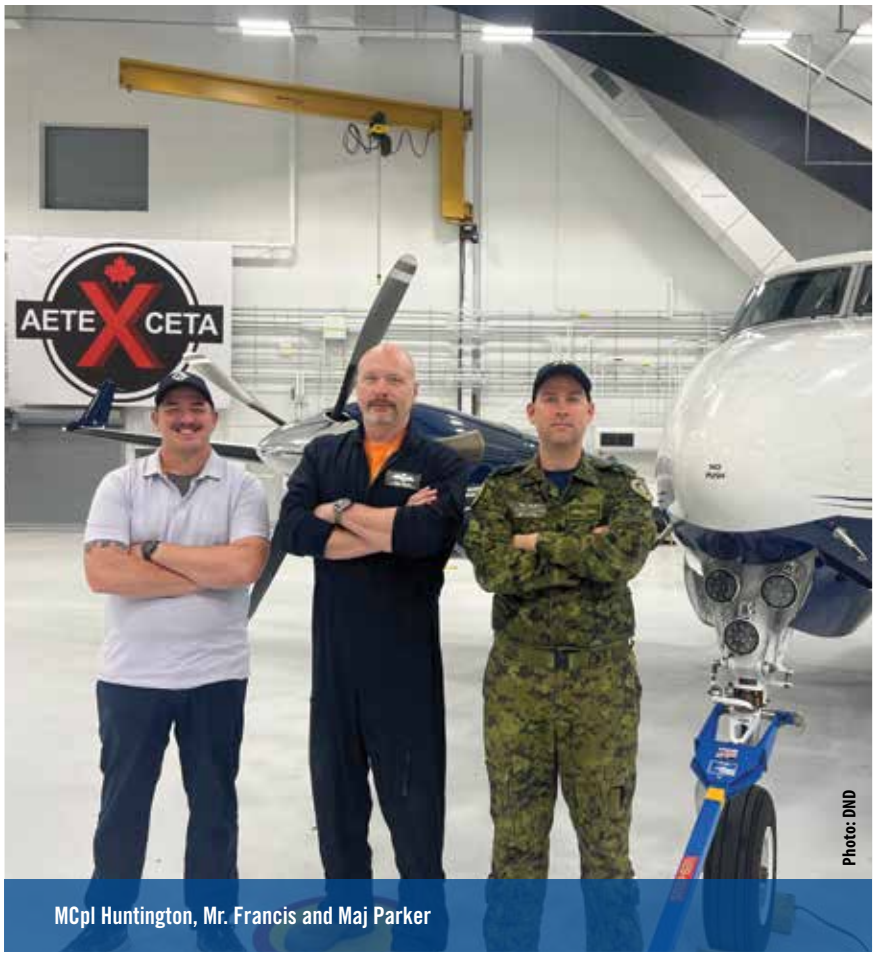

Photo: DND

MCpl Huntington, Mr. Francis and Maj Parker

The crew's rapid assessment, disciplined coordination, and calm, professional execution under conditions of degraded systems, darkness, and suspected electrical fire directly contributed to the safe recovery of all personnel. Their actions reflect great credit upon themselves and exemplify the highest standards of professionalism and airmanship. For these actions, Mr. Francis, Maj Parker, and MCpl Huntington are deserving of the *For Professionalism* Award.

From The Investigator

TYPE: CF188 Hornet
LOCATION: Bagotville, QC
DATE: 4 May 2026

The occurrence flight was an air-to-ground training mission flown in the military airspace north of 3 Wing Bagotville.

The planned Close Air Support scenario intended to simulate an air-to-surface weapon using the Sniper Advanced Targeting Pod system. To accomplish this, a moving ground object was selected for the training scenario, which was not a designated laser target. During this, the combat laser non-eye-safe mode was inadvertently engaged for a short duration, instead of the planned eye-safe laser mode. The change in laser mode was undetected by the crew during flight and was only noticed after landing in the course of the mission debrief, and was immediately reported.

There was no damage, and there were no injuries reported.

The investigation is focusing on materiel & systems, and human factors.

Photo: 4 Wing Imaging

From The Investigator

TYPE: SZ23 Glider (C-GFMC)
LOCATION: Netook, AB
DATE: 7 June 2026

The accident flight was part of the Air Cadet Gliding Program in support of the spring glider familiarization flying operations. The glider crew consisted of a Civilian Instructor pilot and a cadet passenger.

The pilot was conducting their 5th passenger familiarization flight of the day from grass Runway 32, using the winch launch procedure. The first four flights proceeded normally with winds progressively decreasing to near calm by the time of the occurrence flight. During the initial climb portion of the launch, the glider was intentionally released from the winch tow rope and the take off sequence was aborted. Following the successful release, the glider adopted a nose-low attitude and impacted the ground with high energy.

The aircraft sustained very serious damage. One occupant suffered minor injuries, while the other sustained serious injuries.

The investigation is ongoing and is focusing on materiel, environmental, and human factors.

Photo: Capt Smith

Epilogue

TYPE: O-1 Superdog (C-FTGE)
LOCATION: Saint-Jean-sur-Richelieu, QC
DATE: 25 April 2025

The occurrence flight was an Annual Proficiency Check on the O-1 Superdog, a tow-plane used in support of Air Cadet Gliding Program operations. This specific flight was a training flight in preparation for the upcoming gliding season. Part of this preparation also meant that the aircraft had recently completed its winter maintenance cycle and had been returned to service.

Shortly after takeoff, smoke entered the cockpit, and the engine began running rough. An emergency was declared and the pilots continued a right-hand turn and landed immediately following a modified circuit. With increased engine vibration on the landing roll-out, the aircraft was manoeuvred clear of the runway, and shutdown.

The aircraft sustained minor damage that was isolated to the engine. Both pilots sustained minor injuries due to smoke inhalation.


Credit: Adjum Myon, DSV

The cause of the malfunction was that the number 1 cylinder connecting rod bolts were under-torqued. Accordingly, the investigation focused on materiel and human factors.

Determining the cause of the under-torqued connecting rod bolts, and maintenance procedures for re-assembling the connecting rod and engine were explored. The preventive measures recommend updating maintenance procedures.


Credit: Capt Bertrand, RCSU(E) UFSO


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