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UPFRONT

6 Leading edge
Uniting ground and air in the wildfire fight

8 On the fly
De Caria leads Canadian North, FlightLab tests eVTOL control, GTAA autonomous inspection

12 Drone report
Competing for drone market share

14 Position report
Selling ghost flights and Qantas liability

34 ATAC Report
A full plate of aviation issues

BACK

36 Marketplace

38 On final
Major airlines hit by greenwashing litigation

From top:
Draganfly tests out package delivery technology. P. 12. Pilatus introduces an upgrade to its PC-24 jet. P. 16. (Photos: DraganFly, Pilatus)





COVER PHOTO: DASSAULT AVIATION



A Van's RV6A is dismantled by the new owners for transportation to Smoketown, Pennsylvania, prior to the November 15 closure deadline set by Buttonville Municipal Airport. (Photo: Phil Lightstone)

FEATURES

16 BUSINESS AVIATION POSITIONS
NBAA-EBACE serves as a barometer for where innovation in jet aircraft can take aviaiton in the near future
BY JON ROBINSON

18 DRONE DETECTION AT AIRPORTS
Why and how an RPAS pilot was fined for multiple incursions at Ottawa International Airport
BY SCOTT SIMMIE

20 HOW TO CLOSE AN AIRPORT
Important lessons learned as Buttonville Municipal Airport, CYKZ, shuts its doors for good
BY PHIL LIGHTSTONE

23 MRO DIRECTORY
Detailing the services of leading Maintenance, Repair and Overhaul operations for fixed- and rotary-wing customers across North America

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WINGS

Vol. 64, Issue 6

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Printed in Canada
ISSN 0701-1369

PUBLICATION MAIL AGREEMENT #40065710

Published six times per year (Jan/Feb, Mar/Ap, May/Jun, Jul/Aug, Sep/Oct, Nov/Dec) by Annex Business Media

SUBSCRIPTION RATES
Canada – 1 Year $ 34.50
(plus GST - #867172652RT0001)
USA – 1yr -$ 78.50 CDN (USD $60.50)
International – 1yr - $90.50 CDN (USD $69.50)
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By Jon Robinson |

Canadian wildfire conference

Uniting air, ground and fire agencies to help tackle their critical missions

In between key industry fall shows like NBAA, HAC, ATAC and CAS, the team at *Wings* and *Helicopters* hosted two of our favourite events over the course of four days in late October, including the second leg of Careers in Aviation in Calgary, AB, followed by the Canadian Wildfire Conference in Kelowna, BC, as well as an Appreciation Dinner for wildfire leaders with around 150 people.

The Canadian Wildfire Conference is an expanded program of the Aerial Firefighting Conference, hosted by our team for the past three years, including the previous two years at the beautiful new KF Aerospace Centre for Excellence. This renamed conference highlights our partnership with *Firefighting in Canada* and *Canadian Firefighter*, which are two leading brands under our parent company, Annex Business Media. The goal of this expanded partnership is to provide a unique national platform to unite leaders in ground and air wildfire suppression.

The expanded 2023 event featured 50 booths and multiple vehicles for wildfire suppression positioned on the KF Centre ramp. The static display included a Super Puma AS332 Firecat from Coldstream, Kodiak 900 from Daher, and a Coulson modified Boeing 737-300 owned by the Argentine Government of Santiego Del Estero. Just weeks away from delivery, the 737-300 was the largest airtanker in Canada with a payload of 15,141 litres.

The expanded wildfire program drew more than 350 attendees and, more importantly, a noticeable day of discussions between air, ground and government agencies. The day began with an interoperability panel featuring Michael Benson of Conair Group; Sean Rickards of Yellowhead Helicopters; Greg Adams of BC Wildfire Service; and retired Hope Fire Chief Tom DeSorcy. Topics ranged from labour issues and creating clearer communications to the prospect of developing a national wildfire force, which did not hold much weight with the panelists, who instead agreed support for additional capacity is key. The worst wildfire season in Canada's history could have been much more devastating if it was not for a lack of wildfires in the U.S.



> *Coulson Aviation* brought a modified 737-300 tanker to the Canadian Wildfire Conference just weeks before its delivery to *Santiego Del Estero in Argentina.*

The interop panel was followed by a session called *Deploying Resources for Structure Protection* with speakers Scott Cronquist of BC's Ministry of Forests and Brittany Seibert, Emergency Program Coordinator, City of Penticton. The afternoon featured a second panel discussion on innovation and tactics for wildfire suppression, featuring Wayne Coulson of Coulson Group; Thomas Hoppe of 43 Degrees North; and Mike King of White Saddle Air. The discussion ranged from fighting fires from the air at night – a unique capability in the world led by Coulson in the U.S. – to early warning systems and evolving Helco tactics.

Paul Fletcher and Hope Nelson of Drone Amplified finished up the sessions with a technical session on using IGNIS for aerial ignition. Our team would like to thank sponsors KF Aerospace Centre for Excellence, Perimeter Solutions, Safetek Profire, Airbus, Bell Textron Canada, Canadian Propeller, Conair Group, Consolidated Turbine Specialists De Havilland Aircraft of Canada, Motion, Vallfirest, Commercial Emergency Equipment and Portage Aircraft.

Two days earlier, the second leg of the Careers in Aviation Expo ran in Calgary in cooperation with the Emergency Services Career Expo, which is led by media properties under our parent company. The event garnered more than 225 pre-registrations and saw over 340 people attend with 60 exhibitors. Our team would like to thank sponsors Commissionaires, Porter Airlines, Lakeland College, CAE Diamond Aircraft, Alpine Helicopters, Alberta Aviation Council, Edmonton Police Service, NicheRMS365 and our industry partner, Calgary Police Service. | **W**

5

TOP DATA BURSTS... *in this issue*

1. Air Canada's passenger yield rose **13 per cent** on Atlantic flights. P. 8. **2.** Mordor predicts drone delivery will grow by **42 per cent** in five years. P. 12. **3.** A drone pilot was fined **$3,021** for intrusions at Ottawa International. P.18. **4.** Around **250 aircraft** had to find new accommodations because of Buttonville's closure. P.20. **5.** Consumer groups in 19 countries files a greenwashing complaint against **17 airlines**. P. 38.



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ON THE FLY

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8 THE LEAD
8 COMMERCIAL
8 BUSINESS AVIATION
9 HELICOPTERS
10 AIRPORTS
10 ELECTRIC PROPULSION

THE LEAD

DE CARIA NAMED INTERIM CEO OF CANADIAN NORTH

Canadian North, an Inuit-owned airline, on October 16 named Shelly De Caria, current VP for Sales, Marketing & Distribution, as Interim President and CEO of the airline, a leader in serving the remote and northern communities of Canada's Arctic. De Caria's appointment marks a historic milestone as she becomes the first Inuk to lead Canadian North. De Caria will also continue to lead her VP portfolio.

Born and raised in Kuujjuaq, Québec, Canadian North explains De Caria embodies its core values and commitment to community engagement. Before joining Canadian North, she contributed at Inuit Tapiriit Kanatami, advancing the rights and interests of Canada's Inuit population. At Canadian North, De Caria has been instrumental in developing a range of community investment programs impacting education, sport, nutrition, and mental health. Canadian North explains her leadership reflects a dedication to the communities it serves and a deep understanding of the unique challenges and opportunities in those regions.



Shelly De Caria becomes the first Inuk woman to lead Canadian North.

De Caria succeeds Michael Rodyniuk who had led Canadian North as the airline's CEO since July 2022. She joined Canadian North in 2013 and was named as one of *Wings*' Top 20 Under 40 recipients in 2021 at the age of 36.

COMMERCIAL

AIR CANADA PROFITS SOAR

Air Canada reported net income of $1.3 billion for its 2023 third quarter, which increased by $1.8 billion from the third quarter of 2022. The airline's operating income of $1.4 billion, and an operating margin of 22.3 per cent, improved $771 million from the third quarter of 2022. The Canadian Press noted that Air Canada advance ticket sales in the quarter ended September 30 increased by 55 per cent from the same period a year earlier to $4.5 billion; passenger revenues jumped 22 per cent year over year; and that yield – the average revenue per paying passenger flown one mile – rose 13 per cent on Atlantic flights and 11 per cent on Pacific flights last quarter versus the prior period.

"Our focus on growing our international network, building scale at our hubs and leveraging our solid partnerships is delivering strong results," said Michael Rousseau, CEO, Air Canada. He continued to thank employees for helping to safely transporting 12.6 million customers during the summer season. He also pointed to how the airline paid down debt in the quarter, which lowered Air Canada's leverage ratio to 1.4 from 5.1 at the end of last year, while liquidity stood at nearly $10 billion at the end of the third quarter.

LYNX EXPANDING TO MEXICO

Lynx Air in late October outlined plans to expand into Mexico, connecting Toronto Pearson International with Cancun International. Cancun will be Lynx's first destination in Mexico, with flights taking off from Toronto starting February 15, 2024. The expansion will be Lynx's third country in its network and Cancun will mark its 18 destination. Lynx took began to fly as an ultra-affordable airline for the first time in 2022.

BUSINESS AVIATION

TEXTRON NAMES FLYEXCLUSIVE FLEET LAUNCH CUSTOMER FOR CJ3 GEN2

Textron Aviation named flyExclusive as fleet launch customer for the newly introduced Cessna Citation CJ3 Gen2 for the light jet market. The CJ3 Gen2 is expected to enter into service in 2025. In 2022, flyExclusive, described as a premium private jet charter operator, announced a large-scale fleet modernization program that included an order of up to 44 new Textron Aviation aircraft, including up to 30 CJ3+ light aircraft. flyExclusive operates a fleet of Cessna Citation jets including Citation X, Citation Sovereign, Citation Excel/XLS, Citation CJ3/CJ3+ and Citation Encore/Encore+ models. (See page 16 for more.)



The Citation CJ3 Gen2 will offer standard seating for 10 occupants with its commercial entry into service scheduled for 2025.

SKYSERVICE AND FONTAINEBLEAU AVIATION FORM PARTNERSHIP

Skyservice Business Aviation reached an agreement to purchase interest in the Fontainebleau Aviation fixed-base operation (FBO) at Miami Opa-Locka Executive

PHOTOS: CANADIAN NORTH, CESSNA

Airport (OPF) and a new Fontainebleau FBO currently under development at Fort Lauderdale-Hollywood International Airport (FLL). This investment, which remains subject to customary approvals, expands Skyservice's operations in South Florida and provides for expansion of the Fontainebleau luxury brand within the private and business aviation sectors.

Skyservice holds one of the largest business aviation platforms in North America. With the addition of OPF and FLL locations, the company will encompass 12 airports across the continent. This includes Bend Municipal Airport and Redmond Municipal Airport in Oregon, Helena Regional Airport in Montana, King County-Boeing Field International Airport in Seattle, and Napa County Airport in California. In Canada specifically, Skyservice operates at Toronto Pearson International, Montreal-Pierre Elliott Trudeau International, Ottawa Macdonald-Cartier International, Calgary International and Vancouver International. Additionally, the company maintains two specialized facilities for heavy maintenance and avionics in Muskoka, Ontario, and Montreal.

The Fontainebleau Aviation FBO at OPF, the eighth-busiest U.S. airport near downtown Miami, provides premier services for business aviation travelers with approximately 350,000 square feet of hangar space, an executive terminal and office facilities. Fontainebleau Aviation's second location at FLL, the seventeenth-busiest U.S. airport, will include 80,000 square feet of private hangars and 35,000 square feet of private terminal and office space.

HELICOPTERS

FLIGHTLAB TESTS ELECTRIC FLIGHT CONTROL SYSTEM FOR CITYAIRBUS

Airbus Helicopters' demonstrator FlightLab tested an electric flight control system in preparation of a new human machine interface (HMI) that will equip CityAirbus NextGen, Airbus' eVTOL prototype. Airbus states this milestone represents an important step toward ushering in a new generation of electric powered urban air mobility aircraft. The company unveiled its fully electric CityAirbus NextGen in September 2021.

PHOTO: AIRBUS



Airbus FlightLab runs flight control tests for the eVTOL prototype CityAirbus NextGen, unveiled in 2021.

The pilot controls have been considerably simplified, explains Airbus, thanks to the enhanced piloting assistance provided by the electric flight control system. Marking what the company describes as a first in the helicopter industry, one single piloting stick replaces the three conventional pilot controls (cyclic, pedals, collective) and is able to control all aircraft axes. Using the single stick, the pilot is able to perform all maneuvers: take-off and landing, climb, descent, acceleration, deceleration, turn, and approach.

The single stick takes up less space, explains Airbus, offers improved visibility to the pilot and is combined with a revised HMI which uses simple displays, providing a selection of information specifically tailored to eVTOLs. After the success of the flight test campaign, Airbus



Helicopters notes it is working on finalizing the details of this new system before new tests are conducted in the framework of Vertex, a project conducted in partnership with Airbus UpNext that will advance autonomy by managing navigation and simplifying mission preparation.



The Greater Toronto Airports Authority trials first of its kind autonomous vehicle.

AIRPORTS

GTAA ADOPTS AUTONOMOUS AIRFIELD INSPECTION VEHICLE

The Greater Toronto Airports Authority showcased a cutting-edge autonomous perimeter inspection solution that aims to keep airport runways, taxiways and security fences safe. This vehicle is part of what Toronto Pearson describes as its unwavering commitment to invest in technology that enhances the safety, security, and sustainability of the airport.

The proof-of-concept solution demonstrated by Honda, Illuminex AI, Genwave Technologies, Cisco and Eagle Aerospace would alert the Greater Toronto Airports Authority (GTAA) to potential safety or security issues.

"Toronto Pearson is proud to be a leader when it comes to investing in technology that will enhance the efficiency of our operations," said Brian Tossan, Chief Technology Officer, Greater Toronto Airports Authority. "Airports are constantly under pressure to ensure the safety of passengers, airplanes and operations, and we are always working with industry-leading partners to make sure we're investing in a safe and efficient airport for everyone."

YVR AND PAFN UNVEIL PAPER PLANES CAFÉ

Vancouver International and Pacific Autism Family Network unveiled Paper Planes Café, described as an inclusive and accessible coffee bar and the first of its kind at a Canadian airport. The staff at Paper Planes Café will include a team of individuals of different abilities from the neurodiverse community. The team will prepare and serve an array of coffee, hot drinks, and quick snacks for the millions of passengers who travel through YVR as well as thousands of employees and guests. Through the café, YVR and PAFN will deliver a training program for up to six months for all staff focused on tangible skills and expertise typical to the restaurant and service industry, such as barista talents, food preparation, and customer service. At the end of the training, staff will also be supported with their job search in the community.



ELECTRIC PROPULSION

WISK AERO EXPANDS EVTOL PLANS IN LOS ANGELES

Wisk Aero completed what it refers to as the first public eVTOL flights and discussions with local and city officials. In October, Wisk became the first electric vertical takeoff and landing (eVTOL) air taxi company to fly in the greater Los Angeles Area with the launch of test flights at Long Beach Airport. Wisk says the test flights provided the opportunity for it to conduct autonomous flight operations in a complex, real-world commercial airport environment, alongside other passenger airline operations. The company concluded its flight program at the Long Beach Airport with the first public demonstration of an eVTOL air taxi flight in the Los Angeles region during Long Beach's Festival of Flight. The multi-transition flight was conducted using Wisk's 5th Generation (Cora) autonomous, eVTOL aircraft.

The company also hosted the Mayor of Long Beach and local and state officials from the Los Angeles region, including Orange County, and Boeing leadership, for a discussion regarding the future of Advanced Air Mobility within the region. "Autonomous flight is possible today and it's happening now in LA," said Brian Yutko, CEO of Wisk. "Los Angeles is a target launch city for many in our industry and we are extremely proud to be the first air taxi company to fly in LA – and to have done so with an autonomous aircraft." In July of 2023, Wisk completed what it describes as the world's first public demonstration of an autonomous eVTOL fixed-wing aircraft during AirVenture in Oshkosh. | **W**

PHOTO: GTAA

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By Scott Henderson |

Canada competes for commercial drone market share

How domestic companies are making an impact in the RPAS world

Billions – This is what is at stake as Canadian companies compete in the global drone and drone services markets. The size of the global drone market in 2022 was $30.6 billion according to Drone Industry Insight's *2023 Global Drone Market Report*. The same report forecasts that this market will grow to $54.6 billion by 2030. Mordor Intelligence reports the drone delivery market alone is expected to grow by 42 per cent to $11.7 billion in the next five years (all numbers are in US dollars).

The rapid growth of the drone industry over the past decade has been led by a surge in innovation, research, and commercialization worldwide. Countries are jockeying for position in this sector and Canada is emerging as a Top 10 competitor.

With the spoils of victory increasingly lucrative, what is Canada doing to develop its industry? There are several factors that position Canadian drone companies favourably on the global stage.

First, Canada boasts a rich ecosystem of academic and research institutions, many of which are at the forefront of drone technology research. Institutions such as the University of Toronto, the University of British Columbia and the University of Waterloo have all made notable contributions to drone technology advancements. Academic collaborations with industry stakeholders have led to breakthroughs in areas like autonomous navigation, battery technology and advanced sensing.

Second, Canada has a supportive regulatory framework. Aviation is one of the most regulated industries in the world due in large part to safety concerns. Transport Canada, the primary regulatory body for drones in the country, has taken a proactive approach to legislation. For example, in June of this year, Canada was among the first countries to propose to allow Beyond Visual Line of Sight (BVLOS) operations, a crucial component for the evolution of the commercial drone sector.



> *Draganfly was founded in Sasktatoon* and we have a strong ENGINEERING TEAM THERE.

Transport Canada announced it was seeking industry input on the proposed amendments and the 90-day consultation period is closed with comments now available online. The transport minister at the time, Omar Alghabra, said, "The proposed regulations, with a focus on mitigating safety risks while also supporting economic growth and innovation, would provide direct benefits to Canadians and unlock significant economic opportunities in Canada."

Another advantage for Canada is there is not a singular primary focus on drone missions. There is a huge diversity of applications and technologies catering to each sector where Canada represents. From forestry and agriculture to urban planning and infrastructure inspection, the versatility of Canadian drone solutions allows penetration in multiple markets. Drone Delivery Canada is pioneering logistics, for example, as Calgary's Aerium Analytics is providing innovation in environmental monitoring.

To be competitive globally, Canadian drone companies have sought partnerships both domestically and internationally. Draganfly caters to several markets with a business strategy aimed at establishing a strong footprint on the global stage and within North America. This year it is opening a manufacturing facility in Saskatoon to accommodate a growing demand for its UAV systems and components.

"With two new facilities to be fully functional along with our integrated Texas AIR Operations center, we are prepared for the increased growth in the unmanned aerial industry," said Cameron Chell, president, and CEO of Draganfly. "Draganfly was founded in Saskatoon and we have a very strong engineering team there that we are committed to."

Over the years, Draganfly has nurtured a relationship with community stakeholders, ensuring that its growth directly contributes to the regional economy. This leads

PHOTOS: DRAGANFLY

to another Canadian advantage: A strong entrepreneurial environment. Canada's start-up scene, especially in tech hubs like Greater Toronto, Vancouver, and Montreal, is vibrant and supportive. Incubators, accelerators, and venture capitalists are available to provide necessary financial backing and mentorship to budding drone companies.

Safety is paramount in aviation and Canadian drone companies have a reputation for an emphasis on safe and ethical operations. Potential privacy and security concerns associated with drones has led companies to invest significantly in safety measures and data protection to not only ensures compliance with local regulations but to also build trust with clients and partners worldwide.

Canadian drone companies are also active participants in global forums and conferences. The country also has several geographical and climatic advantages. Its vast landscapes and diverse climatic conditions offer an unparalleled testing ground for drone technologies. Urban settings, dense forests, icy terrains or agricultural lands all ensure drones developed in Canada are adaptable to various conditions, making them more marketable internationally. Lastly, there is a strong focus on training and education as Canadian institutions offer specialized courses and certifications in drone piloting, maintenance and operations.

It has been exactly a decade since Amazon billionaire, Jeff Bezos, went on 60 Minutes and infamously declared drone delivery would be available in four to five years. That didn't happen. However, the assembly line automobile first introduced in 1913 didn't achieve its exponential growth until the 1920s. In 1919, in the U.S., there were 6.7 million registered motor vehicles but by 1929 there were over 23 million.

According to the Drone Industry Insight report, Asia is the fastest growing market, with Europe and North America close behind. The United States and China lead all countries with markets estimated to be over $5 billion and $4 billion, respectively. Japan, Australia, Canada, Great Britain, France, India, and Germany have markets between $800 and $300 million (Statista.com).

The global drone industry, driven by technological advancements and diverse applications, is growing exponentially. Each countries' growth trajectory will depend on their evolving regulatory landscapes, public perception, and technological innovations. Previously, due to high costs and technical sophistication, drones were mainly for military use. New technologies have developed, prices have come down and the capabilities of drones and drone services, in addition to the market, has led to the exponential growth.



Draganfly's relationship with community stakeholders ensures its growth contributes to the region.



Draganfly is opening a manufacturing facility in Saskatoon to accommodate a growing demand for its UAV systems and components.

The global drone and drone services are now providing several innovations and are transforming many markets with the largest being military and defense, delivery and supply chain, agricultural, construction, oil and gas, mining, emergency response, security, environmental monitoring, and film and entertainment. Industry improvements include drones helping farmers optimize crop yields and ensure sustainable farming practices, as drones equipped with multispectral sensors can detect things thing humans cannot. In construction, provision of a bird's-eye view facilitates efficient and cost-effective surveying, 3D mapping, monitoring and structural inspections.

More and more, firefighters, first responders, and search -and-rescue teams are deploying drones for surveillance enabling quicker response. More advanced firefighting drones equipped with sensors can even predict where wildfires will start. In energy and mining production drone systems more efficiently provide pipeline and rig inspection and environmental monitoring. In hazardous areas, drones reduce the risk to human lives.

While the above sectors represent the largest markets currently, the potential for drones is vast and new markets continue to emerge. Canada's ascent in the global marketplace is a result of cutting-edge research, a supportive regulatory environment, diverse applications, and a strong emphasis on safety and ethics. Well positioned to lead and innovate as the industry evolves, Canada will continue to be a key player in the global marketplace. | **W**



By Volodymyr Bilotkach |

Selling ghost flights

Booking customers on cancelled service, how could Qantas do that?

Fining Qantas A$600 million ($529 million in Canadian funds) if it is found to have knowingly sold so-called "ghost flights" would be fair, according to the Australian Competition and Consumer Commission.

The commission in August 2023 launched action in the Federal Court alleging Qantas engaged in false, misleading or deceptive conduct by selling tickets on flights that had already been cancelled, and not informing passengers of cancellations in a timely manner.

The regulator's charges against the airline, which last month reported a record $2.2 billion profit, have precipitated the early exit of longtime chief executive Alan Joyce, who quit this week two months ahead of schedule. This court challenge will certainly add to the workload of his successor, Vanessa Hudson.

Qantas has acknowledged that service standards might have slipped as the airline was struggling to recover after the pandemic. The nature of the oversights that led to the airline's errors will determine the airline's liability – both to the consumer regulator and to individual claims for compensation.

Importantly, the case also points to the need for greater regulatory protection of the airline's passengers, in line with other jurisdictions.



Production of Qantas' first A220 began in 2023 on a domestic renewal focused on 29 AIRCRAFT.

How did Qantas get in this mess?

The short answer, most likely, is that the carrier did not handle flight cancellations promptly due to the sheer volume of work and labour shortages as it sought to resume operations following the end of pandemic restrictions. (Qantas on October 30, 2023, filed its defence with the Federal Court in response to claims made by the Australian Competition and Consumer Commission in August 2023. The airline points to a difficult post-COVID restart with staff shortages and supply chain challenges, coinciding with huge pent-up demand and subsequent delays and cancellations. The airline rejected the notion of ghost flights because people who paid for a flight were given a flight, or a refund – "This was not a case of fee for no service.")

The consumer regulator's allegations relate specifically to May and June 2022. Australia lifted many of its COVID-related travel restrictions in March and travellers entering the country after July 6 were not required to show proof of vaccination. The airline was trying to bring its planes back into service and hire or retrain its employees, and generally was struggling to get back to more or less normal operations.

In its statement, the competition watchdog noted the carrier cancelled nearly one in four flights scheduled during that period; and for two out of three cancelled flights it either continued selling tickets or failed to inform the passengers – sometimes for extended periods of time – or both.

Flight cancellations are a normal part of an airline's operations. However, the usual cancellation rate is less than two percent, less than a tenth of what Qantas experienced in May and June 2022. What is unusual is that Qantas did not immediately remove cancelled flights from its booking system. This is something I have never heard of.

One also suspects the airline has had enough practice with schedule adjustment during the pandemic to know better. There are clearly gaps in the carrier's management. It has lessons to learn from this debacle.

What is Qantas' liability?

The question of the extent of the airline's liability is not straightforward. Obviously, a business willingly selling a product or service it has no intention to deliver is at fault, and has to face consequences.

At the same time, a business selling a product that has defects it is unaware of,

PHOTO: AIRBUS/QANTAS

despite doing its best to prevent such defects from occurring, will face certain costs (such as those associated with a product recall) but may be spared sanctions.

The onus will be on Qantas to demonstrate it made an honest mistake rather than a lapse of judgement. But considering the scale of the problem, the airline faces a very difficult task here.

Individual claims pending

As well as a potential fine, Qantas should brace for a flood of claims from individual passengers who bought a ticket for an already cancelled flight or were not informed in a timely manner.

Timing will be of the essence here. If a passenger incurred expenses assuming the flight was operating when it had already been cancelled, such as making a non-refundable hotel reservation, there is a case to request compensation for such expenses.

Otherwise, the standard policy will apply: The airline is not usually responsible for any non-refundable and uninsured expenses a passenger incurs prior to the flight cancellation.

Closing the regulatory gap

The regulator should, however, also take a closer look at the existing air passenger rights in Australia.

Currently, the consumer is entitled to replacement or refund if an airline does not provide services "in a reasonable time" – that is, in the event of a lengthy delay or a flight cancellation. However, the definition of reasonable time and the specifics of the compensation policies are left to the airlines.

In other parts of the world, actions have been or are being taken to strengthen customer protection. For instance, in the European Union, lengthy delays that are the airlines' fault lead to the carriers paying out cash compensation as well as the cost of accommodation and meals.

Similar regulations were proposed in the United States earlier this year.

Perhaps, if stronger consumer protection rules had been in place in Australia in 2022, Qantas would have managed the aftermath of flight cancellations more diligently. | **W**

This article was originally published by The Conversation. *Volodymyr Bilotkach, an Associate Professor at Purdue University. has published over 35 papers in scholarly journals, and a book titled "Economics of Airlines". He is a Co-Editor-In-Chief of the Journal of Air Transport Management and teaches intensive courses for IATA Training.*







Dassault's Falcon 6X in late August 2023 earned type certification from the European Aviation Safety Agency, followed by the Federal Aviation Administration.

AVIATION INNOVATION

THE NBAA BAROMETER OF JET POSITIONING

BY JON ROBINSON

The Las Vegas Convention Center and nearby Henderson Executive Airport played host to the 2023 NBAA Business Aviation Convention & Exhibition where industry optimism for business and private aviation continued to soar. The world of private jets is driven by innovation with an endless introduction of upgrades and enhancements to engines, structures and avionics, not to mention the sector's relative booming business of clean-sheet designs.

The most recent edition of NBAA-BACE looked beyond pure jet tech to better understand two of the sector's most important dynamics, including the arrival of flying Advanced Air Mobility (AAM) vehicles and environmental progress toward the ICAO-led 2050 net-zero flight targets. NBAA served as a platform to launch a new initiative, called Climbing. Fast., in an effort to affirm the sector's net-zero carbon emissions commitment. SAF was made available at all three Las Vegas-area airports during the show.

The electric propulsion advances incorporated into most AAM vehicles could become the most important piece for aviation to reach the 2050 emissions targets and, for the first time ever, an electric air taxi soared over the NBAA's annual aircraft display. Volocopter, ahead of its ambitious plan to provide commercial VoloCity air taxi rides at the 2024 Olympic Games in Paris, ran daily demonstration flights of its 2X multirotor air vehicle at HND. VoltAero, Wisk and other AAM pioneers were also on hand at the Las Vegas Convention Centre, which held more than 800 NBAA exhibitors.

New aircraft introductions at NBAA included Textron Aviation's Cessna Citation CJ3 Gen2, Honda Echelon and Embraer Phenom 100EX, in addition to convention debuts of the Airbus ACJ220, Beechcraft Denali and Bombardier's certified pre-owned Challenger 300. As the largest event in business aviation, NBAA is a barometer on the status of jet innovations that will help drive the near future of aviation.

The cockpit of the Citation CJ3 Gen2 will hold 4.5 inches of extra legroom for the pilot and a Garmin G3000 avionics system with autothrottle technology, as well as an optional Enhanced Vision System. The CJ3 Gen2 will offer standard seating for 10 occupants, with an option for eight passengers with additional storage. Customers can choose between a fixed side-facing seat, a refreshment centre for expanded cabinet storage, or a folding side-facing seat to carry an additional passenger or additional luggage. The CJ3 Gen2 includes an externally serviceable lavatory. It is expected to be rated for a max range of 2,040 nm and max payload of 2,135 lbs when it enters into service in 2025. At NBAA, Textron also noted the Citation M2 Gen2 will include Garmin autothrottles beginning in mid-2025.

A mock-up of the Falcon 10X (showcasing its latest extensive floor plan), a Falcon 8X and a Falcon 2000LXS were on display at HDN, but the extra widebody twinjet Falcon 6X stands to become Dassault's newest aircraft to enter into service, having earned in August 2023 type certification from the European Aviation Safety Agency and the Federal Aviation Administration (FAA). The Falcon 6X program was launched in 2018 and made its maiden flight in March 2021. Dassault describes the jet design being as much for everyday tasks as for long-haul flights (5,500 nm or 10,186 km), connecting Los Angeles to Geneva.

The 10X will become the company's penthouse in the sky, designed for flights lasting more than 15 hours, with a top speed of Mach 0.925 and a range of 7,500 nm (13,890 km). With a cabin altitude of 3,000 ft when flying at 41,000 ft, it will be powered by two Rolls-Royce Pearl 10X engines with a combined thrust of over 35,000 lbs.

Addressing the pending crunch of environmental progress with research, Bombardier at NBAA provided an update of its EcoJet project, outlining progress in its second test phase and unveiling new images of an 18-foot-wide demonstrator, which is twice as large as the first prototype that flew in 2022. The business jet maker explains its EcoJet research project aims to reduce aircraft emissions by up to 50 per cent through a combination of aerodynamic, propulsion

PHOTO: DASSAULT AVIATION



As part of a new stage of the EcoJet research project, Bombardier is flying an 18-foot-wide test vehicle designed as a blended wing body aircraft, with the goal of reducing business jet emissions by up to 50 per cent.

and other enhancements. The research into EcoJet technologies began 15 years ago and the project has materialized into a family of Blended Wing Body test vehicles.

Bombardier at NBAA also celebrated the September delivery of its 150th Global 7500 jet. Since its entry into service in December 2018, the Global 7500 fleet has surpassed 100,000 flight hours. The Global 8000, introduced in 2022, will hold a range rating of 8,000 nm and reach a top speed of Mach 0.94. Performance enhancements on the Global 8000 will be retrofittable for 7500 operators when the aircraft enters into service in 2025.

Beginning with new aircraft deliveries in 2024, Pilatus is extending the payload-range capability of the PC-24 jet to achieve a maximum range with six passengers of 2,000 nm (3,704 km). The new PC-24 features a 600 lb (272 kg) increase in full fuel payload and maximum payload capacity. This enables operators to increase the PC-24's maximum range by 200 nm (370 km) with six passengers on board. The PC-24 now offers a full fuel payload of a single pilot plus 1,315 pounds (596 kg) and features a class-leading maximum payload capacity of 3,100 pounds (1,406 kg). At the PC-24's maximum take-off weight, balanced field length at sea level is only 3,090 feet (941 metres), allowing the use of very short and even unpaved runways.

Gulfstream recently announced the G700s range has increased to 7,750 nm (14,353 km) at Mach 0.85, gaining 250 nm (463 km) over original projections. The G700s maximum operating speed has also increased to Mach 0.935 from Mach 0.925, giving it the highest speed rating in the Gulfstream fleet. In September, the all-new G700 and G800 Rolls-Royce Pearl 700 engines earned FAA certification, bringing the aircraft program another step closer toward entry into service. The G800 can travel 8,000 nm (14,816 km) at Mach 0.85, described by Gulfstream as the longest range in business aviation. The clean-sheet G500 has also been certified for steep-approach operations by the FAA. The G500 proved its low-speed handling and short-field capabilities in 2021 with landings at London City Airport in England and Lugano Airport in Switzerland. The aircraft seats up to 19 and sleeps up to eight and can fly 5,300 nm (9,816 km) at Mach 0.85. It has a maximum operating speed of Mach 0.925.

At NBAA, Embraer introduced its entry-level Phenom 100EX and displayed its light Phenom 300E, midsize Praetor 500, and super-midsize Praetor 600 at HDN. The plane maker also introduced a new autothrottle feature that will be available for the single-pilot-friendly Phenom 300E in the third quarter of 2024. The Phenom 100EX business jet builds on the Phenom 100 series, which has been in service since 2008 with more than 400 aircraft in operation. Embraer states the Phenom 100EX is the first in its class to feature a Runway Overrun Awareness and Alerting System (ROAAS), Powered by two Pratt & Whitney PW617F1-E engines with 1,730 pounds of thrust each, the Phenom 100EX is capable of speeds of up to Mach 0.70 and a four-occupant range of 1,178 nm (2,182 km) with NBAA IFR reserves. Embraer states the jet, capable of flying at 41,000 ft (12,497 m), is currently sold out in 2024 with the next available date for delivery in 2025.

Honda Aircraft at NBAA revealed HondaJet Echelon as the official name of its new light jet, which was first introduced as the HondaJet 2600 Concept in 2021. The plane maker aims to set a new paradigm by offering a mid-sized jet experience in the light jet category. The aircraft is designed to be the world's first single-pilot light jet capable of nonstop transcontinental flight across the U.S. It is expected to hold one crew plus 10 passengers with an NBAA IFR Range of 2,625 nm, max cruise speed of 450 KTAS. Early build processes of the Echelon are scheduled to begin in 2024 with first flight planned for 2026. | **W**

PHOTO: BOMBARDIER



DRONE DETECTION

SPECIFICS OF HOW AND WHY AN RPAS PILOT WAS FINED FOR INCURSIONS AT OTTAWA INTERNATIONAL AIRPORT

BY SCOTT SIMMIE

A drone pilot has been hit with fines totalling more than $3,000 for two unauthorized and potentially dangerous flights at the Ottawa International Airport, CYOW. The flights took place in December of 2022 and involved the drone flying in close proximity to active runways while aircraft were landing. The flights were detected – and the pilot located – by the YOW Drone Detection Pilot Project. InDro Robotics supplies the core technology for that system, which has been in operation some two and half years.

In fact, the system allowed police to be directed to the location of the pilot while he was flying the drone from inside his car at a hotel parking lot.

"The individual was quite surprised that a police cruiser pulled up – and expressed ignorance about flying in the vicinity of the airport," says Michael Beaudette, Vice President of Security, Emergency Management and Customer Transportation with the Ottawa International Airport Authority.

"He said he wasn't aware he couldn't fly there." He was about to be educated.

Airport intrusion

The system at YOW is capable of detecting the location of active DJI drones up to 40 kilometres away. It is also designed to pick up on other brands of commercial drones flying at closer proximity to the airport by identifying their unique radio frequency signatures.

On December 20, the system generated an alert. Someone was flying a DJI Air 2S drone, which weighs 595 grams, adjacent to the airport.

Flight one: The flight began at 10:07 am and the drone and pilot were detected at the parking lot of the World Fuel Services building. The drone remained at ground level for five minutes; at 10:12 the operator and drone were detected near the hotel immediately adjacent to the airport – a likely indicator the pilot was in a vehicle and on the move. The drone began increasing in altitude, reaching a height of 873 feet – nearly 500 feet above the altitude allowed by Transport Canada in areas where drones are permitted. The flight lasted nearly 17 minutes, during which a helicopter arrived at the airport.

"Our Airport Operations Coordination Centre (AOCC) quickly checked to see if there had been any approvals granted for drone activity in the immediate vicinity of the airport and confirmed that there were none," explains Beaudette. "They then notified the Airport Section of the Ottawa Police Service of the detection, who were then dispatched to the general area where the drone had been active. However, by that time the flight had been terminated."

Flight two: The pilot was detected in the parking lot of the Fairfield Inn & Suites by Marriott Ottawa Airport. This flight began at 11:35, climbing initially to an altitude of 200 feet before increasing to 507 feet Above Ground Level. Lasting 6.85 minutes, the drone landed at 11:41. While that drone was in the air, a Jazz Q400 landed on Runway 25 at 11:36.

"When we received an alert of the second flight, we were able to track the drone flight in real time and pinpoint the exact location of the pilot," says Beaudette. "The Ottawa Police Service cruiser approached the pilot as he was sitting in his car piloting the drone and ordered him to land it immediately."

It's no surprise these flights were of great concern to authorities at the airport. "Both flights took place without prior notification to, or approval by, NAV Canada," says Beaudette. "The drone was operating within 350 metres of an active runway and during the first flight, the drone was also operating in very close proximity to a helicopter that was manoeuvering in the area."

Know the regs and penalties

As the saying goes, "Ignorance is no excuse for the law." In other words, being unaware of regulations provides zero legal cover. Police took the pilot's information, which was passed along to Transport Canada.

That's because it's TC, not local law enforcement (with the exception of local bylaw infractions), which is responsible for enforcing rules that govern drones. And in Canada, those rules are found in Canadian Aviation Regulations (CARS), Part IX. (If you're a drone pilot and haven't read these yet, it is highly recommended.)

The pilot violated multiple sections of CARS. And each of those comes with a financial penalty. Here are the sections violated, and the fines assessed:

CAR 900.06 – No person shall operate a remotely piloted aircraft system in such a reckless or negligent manner as to endanger or be likely to endanger aviation safety or the safety of any person. (Penalty assessed: $370.50)

CAR 901.02 No person shall operate a remotely piloted aircraft system unless the remotely piloted aircraft is registered in accordance with this Division. (Penalty assessed: $370.50)

CAR 901.14(1) Subject to subsection 901.71(1), no pilot shall operate a remotely piloted aircraft in controlled airspace. (Penalty assessed: $456.00)

CAR 901.25(1) Subject to subsection (2), no pilot shall operate a remotely piloted aircraft at an altitude greater than (a) 400 feet (122 m) AGL; or (b) 100 feet (30 m) above any building or structure, if the aircraft is being operated at a distance of less than 200 feet (61 m), measured horizontally, from the building or structure. (Penalty assessed: $456.00)

CAR 901.27 No pilot shall operate a remotely piloted aircraft system unless, before commencing operations, they determine that the site for take-off, launch, landing or recovery is suitable for the



Part of the YOW drone detection system, which uses multiple technologies.

PHOTO: INDRO ROBOTICS, OTTAWA INTERNATIONAL AIRPORT

N AT AIRPORTS



The above Google Earth image shows where the system detected the drone pilot. During the second flight, police located the pilot mid-flight and ordered him to bring the drone to the ground.



The blue and red lines indicate the drone's path; you can see at the top right the maximum altitude was more nearly 900 feet AGL, and the drone was at that height for roughly a third of its time in the air.

proposed operation by conducting a site survey that takes into account the following factors:
(a) the boundaries of the area of operation;
(b) the type of airspace and the applicable regulatory requirements;
(c) the altitudes and routes to be used on the approach to and departure from the area of operation;
(d) the proximity of manned aircraft operations;
(e) the proximity of aerodromes, airports and heliports;
(f) the location and height of obstacles, including wires, masts, buildings, cell phone towers and wind turbines;
(g) the predominant weather and environmental conditions for the area of operation; and
(h) the horizontal distances from persons not involved in the operation. (Penalty assessed: $456.00)

CAR 901.47(2) Subject to section 901.73, no pilot shall operate a remotely piloted aircraft at a distance of less than:
(a) three nautical miles from the centre of an airport; and
(b) one nautical mile from the centre of a heliport. (Penalty assessed: $456.00)

CAR 901.54(1) Subject to subsection (2), no person shall operate a remotely piloted aircraft system under this Division unless the person:
(a) is at least 14 years of age; and
(b) holds either
(i) a pilot certificate – small remotely piloted aircraft (VLOS) – basic operations issued under section 901.55; or
(ii) a pilot certificate – small remotely piloted aircraft (VLOS) – advanced operations issued under section 901.64. (Penalty assessed: $456.00)

Add that all up? It comes to $3,021.00. Those are pretty significant consequences for the pilot.

YOW was pleased to see that Transport Canada took this incident seriously. And Michael Beaudette hopes this incident can be used to raise awareness.

"Firstly, to remind drone operators that Transport Canada has regulations regarding drones operating near airports and aerodromes to ensure the safety of the public both in the air and on the ground," he says. "Secondly, that individuals who are not aware of, or do not respect these regulations can be detected and held accountable, as in this case, subjected to fines that could be in the thousands of dollars."

Of course, these flights would likely have gone undetected were it not for YOW's Drone Detection Pilot Project. This ongoing project, you may be aware, recorded multiple illegal flights during the so-called Freedom Convoy protests in Ottawa, and was put to use during U.S. President Joe Biden's 2023 state visit.

"It has opened our eyes as to how many drones are active in the National Capital Region, particularly, in and around our approach paths of our runways and in the immediate vicinity of the airport itself," says Beaudette.

"It has also led to collaborative efforts between Transport Canada, NAV Canada and multiple Class 1 airports to become better aware of this issue and to develop contingencies to respond to incidents such as the one we experienced in Dec 2022."

InDro Robotics, like other Canadian professional operators, has a healthy respect for the CARS regulations. They are there for a reason, and not following the regs can lead to serious consequences. In fact, we wrote at length about a collision between a York Regional Police drone and a Cessna at the Buttonville Airport.

"There can be no question that drones flying near active runways poses a significant – and completely avoidable – threat," says InDro Robotics CEO Philip Reece, who is also a licensed private pilot.

"The regulations are there for a reason: To protect the safety of crewed aircraft, as well as people and property on the ground. InDro is proud to be the core technology partner of the YOW Drone Detection Pilot Project – and this incident is a perfect reason why." | **W**

IMAGES: GOOGLE EARTH, INDRO ROBOTICS

HOW TO CLOSE AN AIRPORT

LESSONS LEARNED AS BUTTONVILLE SHUTS ITS DOORS FOR GOOD

BY PHIL LIGHTSTONE



A Beechcraft King Air and Socota Tampico undergoing maintenance in a heated hangar at Buttonville.

PHOTO:PHIHL LIGHTSTONE

An airport closure rarely happens in Canada. In 2009, the Toronto Buttonville Municipal Airport (CYKZ) announced its plans to sell the airport to property developers. On May 31, 2023, the airport management formally announced that it would be permanently closing the airport on November 30, 2023. Roughly 200 to 300 aircraft will be looking for new accommodation. The announcement on May 31, including a hard date, was unexpected but not surprising for many operators and tenants. Aircraft left at Buttonville near the end of November may be faced with the challenge and cost of being trailered out of the airport. In an email, airport management notes: "While the terminal and offices will be open until the end, we are recommending that your final departure from the field should be between October 31 and November 15, 2023."

Buttonville Airport, located at the junction of Highways 404, 407 and 7, has been operated as a private aerodrome since its founding in 1953. Created by Fred Gilles as a grass strip it became an official airport in 1963 when it was purchased by Michael Sifton. Buttonville is a hive of activity for General Aviation (GA), flight training (FTU), Business Aviation (BA) and commercial operators, both transient and resident on the field. Ornge provides air ambulance services with a fleet of 20 aircraft and helicopters and is frequently seen on the ramp at Buttonville transporting ambulatory patients to hospitals in Greater Toronto from northern communities. During its 2021/2022 fiscal year, Ornge flew 8,851 missions, many into Buttonville based on population density.

There are roughly 300 jobs tied to Buttonville, either directly or indirectly. Of the 35 airport staff, six have moved onto new opportunities, with the remainder committed to staying on until the airport closes. Interestingly, three of the six have returned on a part-time basis. Fifteen years ago, the airport management reshaped the staff creating a team focused on delivering outstanding customer satisfaction. Robert Seaman, VP of Airport Operations, explains, "Our airport environment became a training ground for new entrants into the aviation industry. Over the past 15 years we implemented policies and procedures which provided an objective view to staff deliverables while ensuring the highest quality of customer service. This approach encouraged and developed managers and supervisors, providing them with both tools and guidance."

With there being so few airport closures in Canada there is no real playbook for an operator to follow. A lot of detailed planning goes into the closure process, beginning with providing an appropriate amount of notice to the tenants. From the tenant's perspective, especially a large maintenance shop, the process of moving an existing business, must provide business continuity planning in order to deliver services to the shop's customers. Critical to a successful move, is the minimization of chaos and loss of critical components. Akin to an IT move, ensuring that their customer's technical logbooks are not lost during the move is critical to avoid future liability.

Transport Canada has confirmed that from a regulator's perspective there is no playbook and that few airports have closed in Canada over the past decade. "With the lack of a published playbook, our team at Buttonville focused on two main categories, fuel and runways," Seaman says. "Our biggest concern is the liability issues surrounding a pilot landing at Buttonville in December. Once the airport is closed, there will be no emergency services on the field." A pilot who may not have read the closure

NOTAM and landing on a contaminated runway might be operationally challenged resulting in an accident (especially operating at night). In this case, activating their ELT or placing a 911 telephone call will get the attention of first responders.

There are standards and regulations that airport operators must abide by within the Canadian Aviation Regulations (CARs) and TP312 to address marking and lighting of closed movement areas on the airport. Transport Canada (TC) will ensure that the Buttonville airport meets the applicable regulatory requirements throughout the closure process. The closure process includes issuing a Notice To Airmen (NOTAM) for the closure of the airport,



the removal/deactivation of airside lighting, painted markings and signage to ensure that the airport does not visually present as a functioning airport, and the eventual surrendering of the airport's certificate to TC. Closing the runways, taxiways and aprons requires: All lighting to be removed; reflective closed markers "XXX" are painted onto the runways; airport markings are removed from the aprons, taxiways and runways. The airport management's approach to removing the airport markings may be to grind them off, as they feel that the November cold weather makes painting them off impractical. The cost to *grind off* the markings could be as high as $30,000. The plan is to begin with closing runway 03/21 in early November with 15/33 in late November.

NOTAMs will be issued communicating the closure of the runways and airport (critical to transient pilots, who hopefully will read or it will be communicated by Flight Services). It is expected that the airport owners will begin tearing the runways up in late December 2023.

From a fuel replenishment perspective, the challenge is to balance orders with sales to limit the amount of unsold fuel at time of the airport closure. Buttonville's management moved to half orders of 100LL during the first week of October. While fuel sales were up in August (3,000 litres of 100LL and 5,000 litres of Jet-A), Buttonville has begun planning its fuel purchases for November to ensure that they have minimal fuel as they close in on November 30. From an aircraft owner/operator's perspective, ensuring that they have clean fuel is critical to ensuring that they do not have an engine failure during flight. Critical to the closure of the airport are the removal of the in-ground and above-ground fuel tanks.

A large problem is the amount of stuff (junk) accumulated over the past 50 plus years. Ten years ago, Buttonville's management started a campaign to clean things up including the removal of six neglected aircraft. On August 1, airport staff began chipping away at inventorying the site. Previous tenants had left stuff in the hangars, including a bottle of Shell aviation oil manufactured in 1994. While inspecting the airport, the staff began finding lots of abandoned stuff (kitchens, clothing and dumped motorcycles found between hangars). To date, two dumpsters of metal have gone out, with a tremendous amount of time spent separating the things found on the property. Dealing with chemicals is another issue requiring proper remediation and reclamation including a few oil reservoirs and two underground tanks. The airport is reported to be spending millions of dollars dealing with oil and fuel spilled from aircraft crashes and over half a century of pilot-mechanics' behaviour. It is believed that there is a 500 gal fuel tank buried below the main terminal building. The main terminal building and hangars (north side) may be demolished in early December.

Part of the logistics of closing an airport, begins with inventorying all assets and determining their value. Desks and office supplies are not as much of an issue as aircraft tugs, fueling equipment, snowplows, man-lifts and other heavy equipment. In this case, management has created an inventory of the airport's operations equipment and is focusing on selling the hardware in one lot. With a long list of activities, which must be completed by November 30, the management team must balance the prioritization of these



activities, while striking a balance between deadlines, airport safety and the delivery of services to tenants and transient aircraft.

Transport Canada has reviewed the communications plan by NAV Canada which was published on August 10, 2023. NAV Canada's Aeronautical Information Circular 16/23 has identified the closure of the Buttonville Municipal Airport and the communication plan to pilots and aircrew. The AIC advises: CYKZ will cease operations on November 30; NAV Canada's assessment that the removal of services facilitated by NAV Canada equipment at the airport will begin on October 5; Canada Air Pilot (CAP) approach and departure procedures will remain until November 30; the LOC/DME will be unserviceable on October 5; and LWIS system will be decommissioned on October 23; and the airport will close on November 30 at 0901 UTC. The Flight Information Centre (FIC) remote communications link (123.15 MHz) was decommissioned in early October. Removal of the Class E control zone will be implemented following an Aeronautical Study. NAV Canada has left behind its portable control tower.



Call Levaero Aviation, your nearest Authorized Pilatus PC-24 Sales Centre for further information on +1 905 6722000.

Levaero AVIATION

Foremost in the minds of the airport management is the relocation of tenanted aircraft. Five years ago, the current airport manager began a process to move all tenanted aircraft onto new Aircraft Accommodation Agreements. This process had two outcomes: Updating the aircraft owner's contact information and right sizing rental revenue. After the closure announcement most of the commercial operators sprang into action quickly finding alternative hangar space. Some of the GA aircraft owners acted on securing alternative aircraft parking. However, there is a large number of aircraft, which, as of mid-October, have yet to secure parking at regional airports. In mid-October, Canadian Flyers (a Flight Training Unit) began limiting student rental aircraft to ensure that the aircraft have sufficient time remaining (before maintenance) allowing the aircraft to be flown to their new home base.

Once November 30 rolls around, the airport will be closed from a Transport Canada perspective, with the airport operator (TorontAir Inc.) surrendering the airport's operating certificate. For those aircraft which are still at the airport on December 1, their wings will be removed and the aircraft trailered off the property. At some point, Cadillac Fairview will start a demolition process, removing the hangars, terminal building, control towers and other buildings.

A lot of aviation specific infrastructure will be removed from the airport inclusive of the Transport Canada's original ILS installation and NAV Canada's localizer technologies. TorontAir is expected to turn over a clean property to Cadillac Fairview, which will require cleaning up the property before November 30. The removal of aviation specific technologies inclusive of airport lighting, prior to the closure date, will impact aircraft flying in and out of the airport. Critical to the safe aircraft operations, is the utilization of notices which will keep pilots abreast of the timelines. While aircraft operating out of Buttonville should be plugged into the communications structure, transient aircraft may not. Hopefully, pilots will use good airmanship skills and check NOTAMs prior to launching into Buttonville. The airport will continue to operate as an airport of entry (AOE) until closure.

The last day of the airport's operation will see emotions running high for staff, tenants and pilots alike. With the move away from stick and rudder to AI enhanced computer augmented aircraft, the next generation of aviators may lose the romance experienced with flight. Regional airports like Buttonville are a meeting place where the love of flying is shared and reinforced. | **W**

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BRITISH COLUMBIA

SKYSERVICE BUSINESS AVIATION INC. 5360 Airport Road South Richmond BC V7B 1B4 Tel: 778-561-5095 Toll Free: 888-759-7591 Website: www.skyservice.com Email: maintenancesales@skyservice.com Personnel: Paul Weeks, Vp Of Maintenance Patrick Canuel, Director, Business Development Maintenance Glenn Williams, Director, Business Development Maintenance Pedro Carvalho, Director, Business Development Maintenance	■	■	■	■	■	■	■	■	■	■	■		■	■		■		Skyservice is Canada s leading facility for Maintenance, Repair and Overhaul (MRO) services for business and commercial aircraft. For over 37 years, we have been providing Airframe Maintenance, AOG support, Non-Destructive testing (NDT), Avionics, Pre-Purchase Inspections, Interior Refurbishment, Exterior Paint, Aircraft Parts and Repair and more, to both Canadian and International clients. As Authorized Service Facility for Bombardier, Authorized Warranty Facility for Gulfstream, Authorized Service Center for Falcon/Dassault and HondaJet as well as an approved aircraft maintenance organization by TCCA, FAA, BDCA, HK-CAD, 2-REG, Aruba, CAAS and EASA, we understand aircraft. Our certified and trained technicians set-us apart and guarantees quality, thoroughness, and service excellence. Choose Skyservice for your next MRO decision.
KF AEROSPACE 5655 Airport Way Kelowna BC V1V 1S1 Tel: 250-491-5500 Fax: 250-765-1489 Website: www.kfaero.ca Email: mro@kfaero.ca Personnel: Kevin Kolenc, MRO Planning Manager; Bryan Akerstream, Director of Business Development; Gregg Evjen, Chief Operating Officer	■				■			■		■			■	■				KF Aerospace is Canada's largest commercial Maintenance, Repair and Overhaul (MRO) provider with over 53 years of innovative aircraft solutions for corporate, commercial and military customers worldwide. With 1200 highly skilled staff across Canada, KF specializes in a wide range of aviation services including: maintenance, engineering and modifications, air cargo operations, military pilot training, and aircraft leasing. Our MRO facilities in Kelowna, BC and Hamilton, ON support 19 lines of concurrent maintenance and are industry recognized for their quality and on-time delivery.
WESTERN PROPELLER 124-7080 River Rd. Richmond BC V6X 1X5 Tel: 604-273-4561 Fax: 604-273-0215 Website: www.westernpropeller.com Email: info@westernpropeller.com Personnel: Chad Sloane, President; Rob Heath, Prm; Brian Camenzind, Maintenance Supervisor	■				■			■		■				■	■	■	■	For over 75 years Western Propeller has been Canada s #1 Component MRO shop specializing in all makes & models of Propellers, Governors, Wheels & Brakes and more. We are Transport Canada & EASA Certified with in house NDT capabilities. We stock new and used propellers, governors, wheels & brakes for outright purchase or exchange in our two full service MRO facilities located in Vancouver & Calgary to service the Canadian market as well as our international partners. Calgary Office - Bay Q 1003 55th Ave NE.

MANITOBA

	Accessories	Airframes	Auxiliary Power Units	Avionics	Composite Repair	Engineering Services	Engines Services	Fixed Wing	Hot Section Inspection	Inspection Services	Instruments	Interior Services	Maintenance Plans	Painting	Recip. Overhaul	Turbine Overhaul	Other Services/Root/Misc.	Description
CANADIAN PROPELLER LTD. 462 Brooklyn St. Winnipeg MB R3J 1M7 Tel: 204-832-8679 Fax: 204-888-4696 Toll Free: 800-773-6853 Website: www.canadianpropeller.com Email: dwills@canadianpropeller.com Personnel: Maurice Wills, Prm & President Debbie Wills, Vp And Bd	■				■			■		■			■	■				Specialized support, MRO, sales and exchange of propellers, governors and components. MT Propeller distributor. NDT services. On wing maintenance and 24/7 technical and AOG support. Metal and composite propellers, turbine and reciprocating governors. Servicing across North America and worldwide. Western & Central Canada s Factory Authorized Service Centre for Hartzell & McCauley & MT Propellers. ** DASH 8 & ATR Blades & Component, MRO*** Hamilton Sundstrand - EASA Certified. AOG & 24/7 Technical Support: 1- 800- 773-6853 or 204-293-1522
PROPWORKS PROPELLER SYSTEMS 53 Bannister Rd. Winnipeg MB R2R 0P2 Tel: 204-837-4961 Fax: 204-779-3085 Toll Free: 888-679-2965 Website: www.propworks.ca Email: mhudec@propworks.ca Personnel: Mike Hudec, Manager Jim Ross, President	■				■				■								■	Propeller and governor overhaul and repair. Full service propeller and governor overhaul facility. Transport Canada & EASA approved. Factory trained technicians. Avia, Dowty, Hartzell, Hamilton Standard, Hamilton Sundstrand, McCauley, MT Propeller, Sensenich propellers. Authorized MT Propeller Service Centre. Authorized BLR Aerospace Dealer.

MICHIGAN

DUNCAN AVIATION 15745 S. Airport Rd. Battle Creek MI 49015 Tel: 269-969-8400 Fax: 269-969-8432 Toll Free: 800-525-2376 Website: www.DuncanAviation.aero Email: webmaster@duncanaviation.com	■	■	■	■	■	■	■	■	■	■	■	■	■	■			■	Duncan Aviation is a full-service business aircraft MRO supporting the aviation needs of business class aircraft. Services include airframe inspections, engine maintenance and overhauls, major retrofits for cabin and cockpit systems, full paint and interior services, engineering and certifications, engine and avionics AOG service, and preowned aircraft sales and acquisitions. Duncan Aviation also has international aircraft components experts available 24/7/365 at +1 402.475.4125 who can handle any aircraft system problem with immediate exchanges, rotables, loaners or avionics/instrument/accessory repairs and parts.

NEBRASKA

DUNCAN AVIATION 3701 Aviation Rd. Lincoln NE 68524 Tel: 402-475-2611 Fax: 402-475-5541 Toll Free: 800-228-4277 Website: www.DuncanAviation.aero Email: webmaster@duncanaviation.com	■	■	■	■	■	■	■	■	■	■	■	■	■	■		■	■	Duncan Aviation is a full-service business aircraft MRO supporting the aviation needs of business class aircraft. Services include airframe inspections, engine maintenance and overhauls, major retrofits for cabin and cockpit systems, full paint and interior services, engineering and certifications, engine and avionics AOG service, and preowned aircraft sales and acquisitions. Duncan Aviation also has international aircraft components experts available 24/7/365 at +1 402.475.4125 who can handle any aircraft system problem with immediate exchanges, rotables, loaners or avionics/instrument/accessory repairs and parts.

NOVA SCOTIA

IMP AEROSPACE & DEFENCE 693 Barnes Road Enfield NS B2T IK3 Tel: 902-873-2250 Website: www.impaad.com Email: info@impaad.com Personnel: Jason Kenny, Jason.kenny@impaad.com		■		■	■	■	■	■	■	■	■	■	■	■	■	■	■	A global leader in Military, Missionized and Commercial aircraft IMP Aerospace & Defence is one of Canada s largest aerospace and defence organizations as well as a Platinum member of Canada s Best Managed Companies. Solving complex issues facing your fleet is our specialty, which is why we have earned our distinction as trusted to partner around the world; providing world-leading capabilities within engineering solution, maintenance, product manufacturing, integration and training. With over 2,400 engineering and technical support staff at operations across Canada, IMP Aerospace & Defence focuses on delivering solutions across the space, air, land and sea sectors.

ONTARIO

	Accessories	Airframes	Auxiliary Power Units	Avionics	Composite Repair	Engineering Services	Engines Services	Fixed Wing	Hot Section Inspection	Inspection Services	Instruments	Interior Services	Maintenance Plans	Painting	Recip. Overhaul	Turbine Overhaul	Other Services/Root/Misc.	Description
chartright	■	■		■	■			■	■	■	■	■					■	Chartright is a Transport Canada Approved Maintenance Organization (AMO #196-92) with an approved FAA Supplement. As a leading maintenance provider to business jets in Canada, Chartright has maintenance facilities in Toronto and Kitchener and are capable of performing maintenance on a wide array of fixed and rotary wing aircraft offering a full array of services from line maintenance servicing to heavy inspections, avionics, and structures. Chartright also maintains the largest fleet of Bombardier aircraft in Canada capable of handling any of your heavy maintenance requirements. Whether it's a 96-month inspection on your Challenger, or a 120-month inspection on your Global, contact us to discuss your maintenance requirements and benefit from the value that Chartright delivers to its customers. Looking for a new aircraft? Chartright can provide in-depth expert analysis, records review, and pre-purchase inspections to ensure you are making an informed purchase.
CHARTRIGHT AIR GROUP 2450 Derry Road East, Hangar 3 Mississauga ON L5S 1B2 Tel: 905-671-4674 Toll Free: 800-595-9395 Website: www.chartright.com Email: mro@chartright.com Personnel: Constantine Tsokas, Senior Vice President Wilson Rodriguez, Vice President, Maintenance Mark Bakker, Heavy Maintenance Manager																		
FLIGHTLINE TRAINING SERVICES																	■	As an Approved Maintenance Training Organization, Flightline Training Services was established on the principle that affordable high quality technical training is the key to a higher standard of aircraft maintenance, increased safety and lower operating costs for the operator. The aircraft technician is provided with an industry leading training syllabus that promotes safe and effective maintenance practices. Our goal at Flightline Training Services is to exceed expectations by tailoring courses and services to meet your training needs.
FLIGHTLINE TRAINING SERVICES 200 B First Gulf Blvd Brampton ON L6W-4T5 Tel: 416-579-5013 Website: www.flightlinetraining.com Email: phyl@ftsc.aero Personnel: Phyl Durdey Ceo, Jean-luc Trudel Senior Director Of Operations Approved Maintenance Training Organization																		
Flying Colours Corp.	■	■		■	■	■	■	■		■		■	■	■			■	Flying Colours Corp. is a global leader in all aspects of aircraft MRO. Headquartered in Peterborough, ON., Flying Colours supports a range of aircraft types from mid-size to ultra-long-range models, including Bombardier, Dassault, Embraer, and Gulfstream types. Our team of experts is dedicated to providing the highest quality standards in everything we do. We specialize in heavy maintenance and repairs, special mission modifications and design engineering, avionics installations and upgrades, completions, refurbishments, executive conversions and exterior paintwork. We are a Bombardier Authorized Service Facility and Bombardier Preferred Completion Centre. For requirements on other aircraft models, please get in touch. Flying Colours is a proud member of the Flexjet family.
FLYING COLOURS CORP. 901 Airport Rd Peterborough ON K9J 0E7 Tel: 705-742-4688 Fax: 705-742-8861 Website: www.flyingcolourscorp.com Email: info@flyingcolourscorp.com Personnel: Scott Duncan, Richard Dabkowski, Spencer Hoggarth																		
HOPE AERO GOOD TO GO.	■				■					■			■					Hope Aero specializes in the sales and service of propellers, governors, wheels, brakes and Honeywell Dynamic Balance Equipment and Non-Destructive Testing. Key personnel includes: Joel Chlan, David Hope, Emily Hope, Gabriel Marcucci, Jasper Megelink, Chris Howick, Craig Grant, Lynda Hannam, Steven Ferhens, Cody Taferner, Christina Taferner, Brandon Davison, Darren Howard and Bruce Kentner.
HOPE AERO PROPELLER & COMPONENTS, INC. 7605 Bath Rd. Mississauga ON L4T 3T1 Tel: 905-677-8747 Fax: 905-677-5935 Toll Free: 800-268-9900 Website: www.hopeaero.com Email: goodtogo@hopeaero.com																		
INNOTECH-EXECAIRE AVIATION GROUP		■	■	■		■	■	■	■	■		■	■	■		■	■	Since 1955, Innotech-Execaire Aviation Group has been serving customers a comprehensive range of MRO services for a variety of aircraft models including Bombardier Challenger & Global platforms as well as the Cessna Citation family of jets. We are your Citation Jet Experts! Maintenance & Inspections | Avionics Installations | Interior Refurbishments. Textron Authorized Service facility for all Citation Jets, Transport Canada, FAA, & EASA approved facility, Fully trained & qualified AMEs, Avionics Technicians & In-house skilled trades, Fully capable and qualified to support both in-production and aftermarket activities FANS, ADS-B/C, CPDLC, Connectivity, IFE, CMS, Non-Destructive Testing, Honeywell Channel partner | Collins Aerospace Dealer, World-class aircraft interior refurbishments.
INNOTECH-EXECAIRE TORONTO Toronto Pearson International Airport, 2450 Derry Road East, Hangar 7 Mississauga ON L5S 1B2 Tel: 905-677-2484 Fax: 905-673-8733 Toll Free: 888-483-7070 Website: www.innotech-execaire.com Email: info@innotech-execaire.com Personnel: Logan Brown Sales Director | Aircraft Maintenance & Technical Services Mobile: (905) 867-7401 Tel: (905) 677-2484 Ext. 2231 Logan.brown@execaire.com																		

ONTARIO

		Accessories	Airframes	Auxiliary Power Units	Avionics	Composite Repair	Engineering Services	Engines Services	Fixed Wing	Hot Section Inspection	Inspection Services	Instruments	Interior Services	Maintenance Plans	Painting	Recip. Overhaul	Turbine Overhaul	Other Services/Root/Misc.	Description
Levaero AVIATION	**LEVAERO AVIATION** 2039 Derek Burney Dr Thunder Bay ON P7K 0A1 Tel: 807-475-5353 Fax: 807-475-5405 Toll Free: 844-538-2376 Website: www.levaero.com Email: info@levaero.com		■		■		■	■	■	■	■	■					■		Levaero Aviation delivers a full complement of turnkey and mission-specific solutions to the aviation marketplace and is the exclusive Authorized Pilatus Aircraft Sales & Service Centre for Canada. Levaero Aviation is an accredited dealer member of the International Aircraft Dealer Association (IADA), the global standard of aircraft brokerages. Headquartered in Thunder Bay, Ontario, with a National Sales office based in Toronto, Ontario, Levaero provides its customers with leading aircraft brokerage expertise and extensive MRO capabilities.
skyservice	**SKYSERVICE BUSINESS AVIATION INC.** 1004 Airport Road Gravenhurst ON P1P 1R1 Tel: 888-759-7591 Website: www.skyservice.com Email: maintenancesales@skyservice.com Personnel: Paul Weeks, Vp Of Maintenance Patrick Canuel, Director Business Development Maintenance Glenn Williams, Director Business Development Maintenance Pedro Carvalho, Director Business Development Maintenance	■	■	■	■	■	■	■	■	■	■	■	■	■	■		■	■	Skyservice is Canada s leading facility for Maintenance, Repair and Overhaul (MRO) services for business and commercial aircraft. For over 37 years, we have been providing Airframe Maintenance, AOG support, Non-Destructive testing (NDT), Avionics, Pre-Purchase Inspections, Interior Refurbishment, Exterior Paint, Aircraft Parts and Repair and more, to both Canadian and International clients. As Authorized Service Facility for Bombardier, Authorized Warranty Facility for Gulfstream, Authorized Service Center for Falcon/ Dassault and HondaJet as well as an approved aircraft maintenance organization by TCCA, FAA, BDCA, HK-CAD, 2-REG, Aruba, CAAS and EASA, we understand aircraft. Our certified and trained technicians set-us apart and guarantees quality, thoroughness, and service excellence. Choose Skyservice for your next MRO decision.



ONTARIO

		Accessories	Airframes	Auxiliary Power Units	Avionics	Composite Repair	Engineering Services	Engines Services	Fixed Wing	Hot Section Inspection	Inspection Services	Instruments	Interior Services	Maintenance Plans	Painting	Recip. Overhaul	Turbine Overhaul	Other Services/Root/Misc.	Description
skyservice	**SKYSERVICE BUSINESS AVIATION INC.** 6120 Midfield Road Mississauga ON L4W 2P7 Tel: 905-678-5682 Toll Free: 888-759-7591 Website: www.skyservice.com Email: maintenancesales@skyservice.com Personnel: Paul Weeks, Vp Of Maintenance Patrick Canuel, Director, Business Development, Maintenance Glenn Williams, Director, Business Development, Maintenance Pedro Carvalho, Director, Business Development, Maintenance	■	■	■	■	■	■	■	■	■	■	■	■	■	■		■	■	Skyservice is Canada s leading facility for Maintenance, Repair and Overhaul (MRO) services for business and commercial aircraft. For over 37 years, we have been providing Airframe Maintenance, AOG support, Non-Destructive testing (NDT), Avionics, Pre-Purchase Inspections, Interior Refurbishment, Exterior Paint, Aircraft Parts and Repair and more, to both Canadian and International clients. As Authorized Service Facility for Bombardier, Authorized Warranty Facility for Gulfstream, Authorized Service Center for Falcon/Dassault and HondaJet as well as an approved aircraft maintenance organization by TCCA, FAA, BDCA, HK-CAD, 2-REG, Aruba, CAAS and EASA, we understand aircraft. Our certified and trained technicians set-us apart and guarantees quality, thoroughness, and service excellence. Choose Skyservice for your next MRO decision.
voyageur AERO TECH	**VOYAGEUR AVIATION CORP.** 1500 Airport Road North Bay ON P1B 8G2 Tel: 705-476-1750 Website: www.voyav.com Email: info@voyav.com Personnel: Chas Eveson Vice President, Maintenance And Engineering Chas.eveson@voyav.com Georges Dubytz - Director, Engineering Georges.dubytz@voyav.com Aaron Brodhagen - Mro Sales Manager Aaron.brodhagen@voyav.com Conor Sheridan - Vice President, Commercial Aircraft Programs Conor.sheridan@voyav.com Carl Kumpic - Vice President, Defence And Government Programs Carl.kumpic@voyav.com Gary Gilbert - Vice President, Avparts Gary.gilbert@voyav.com	■	■		■	■	■	■	■		■		■	■				■		Voyageur Aviation is a Canadian licensed air operator, approved maintenance organization (AMO), design approval organization (DAO), parts supplier, and aircraft lessor. We provide customers with all levels of heavy maintenance services from standard checks to aircraft modification. Voyageur offers in-house design and certification services, including sensor integration and Supplemental Type Certificate (STC) approvals for aircraft modifications, reconfigurations, and obsolete components. Our 200,000 sq. ft. maintenance and parts inventory facility in North Bay, Ontario is home to all MRO, design engineering, and parts support activities backed by our in-house structure, composite, avionics, and accessory shop which boasts top-notch component repair and overhaul services including Dash 8-400 landing gear. We evolve the ordinary into the extraordinary, continuing to deliver innovative solutions to customers with unique aviation requirements.

QUEBEC

INNOTECH-EXECAIRE AVIATION GROUP	**INNOTECH-EXECAIRE MONTREAL** 10225 Ryan Avenue Dorval QC H9P 1A2 Tel: 514-420-2900 Website: www.innotech-execaire.com Email: info@innotech-execaire.com Personnel: Logan Brown Sales Director I Aircraft Maintenance & Technical Services Mobile: (905) 867-7401 Tel: (905) 677-2484 Ext. 2231 Logan.brown@execaire.com		■	■	■		■	■	■	■	■		■	■	■		■	■	Since 1955, INNOTECH-EXECAIRE AVIATION GROUP has been serving customers a comprehensive range of MRO services for a variety of aircraft models including Bombardier Challenger & Global platforms as well as the Cessna Citation family of jets. Maintenance & Inspections I Aircraft Paint I Avionics I Installations Interior Refurbishments. Center of Excellence for Bombardier Challenger & Global business jets, Transport Canada, FAA & EASA approved facility, Fully qualified AME s, Avionics Technicians & In-house skilled trades, OEM production support & in-production and aftermarket activities, State-of-the-art paint shop having painted over 225 aircraft to the highest quality standards since its inception in 2009, STC approved for KU/KA system installations on Bombardier Global aircraft, FANS, ADS-B/C, CPDLC, Connectivity, IFE, C
M1 Composites TECHNOLOGY	**M1 COMPOSITES TECHNOLOGY INC** 2460 Michelin Laval QC H7L 5C3 Tel: 450-686-8864 Website: www.m1composites.com Email: info@m1composites.com		■			■	■		■		■		■		■	■			M1 Composites serves the commercial and military the aerospace industry with engineering, certification, manufacturing, and repair of advanced composite and sheet metal structures including: nacelles, flight control surfaces, radomes, interiors, and more. M1 Composites is ISO9001/AS9100/AS9110 certified, a Transport Canada Approved Maintenance Organization (AMO 23-12), Design Approval Organization (DAO 14-Q-01), and Canadian Controlled Goods Program (CGP) accredited.

QUEBEC

	Accessories	Airframes	Auxiliary Power Units	Avionics	Composite Repair	Engineering Services	Engines Services	Fixed Wing	Hot Section Inspection	Inspection Services	Instruments	Interior Services	Maintenance Plans	Painting	Recip. Overhaul	Turbine Overhaul	Other Services/Root/Misc.	Description
PremierAviation		■		■	■				■		■		■					Premier Aviation is a full-service provider of airframe heavy maintenance (MRO). Located at the Jean-Lesage International Airport in Quebec City (YQB), we are certified to maintain a wide variety of regional types of aircraft, such as, but not limited to ATR, DeHavilland and Embraer. Thanks to our five (5) maintenance lines, our team is more than ready to welcome and maintain your aircraft to the highest industry standards.
skyservice	■	■	■	■	■	■	■	■	■	■	■	■	■	■		■	■	Skyservice is Canada s leading facility for Maintenance, Repair and Overhaul (MRO) services for business and commercial aircraft. For over 37 years, we have been providing Airframe Maintenance, AOG support, Non-Destructive testing (NDT), Avionics, Pre-Purchase Inspections, Interior Refurbishment, Exterior Paint, Aircraft Parts and Repair and more, to both Canadian and International clients. As Authorized Service Facility for Bombardier, Authorized Warranty Facility for Gulfstream, Authorized Service Center for Falcon/Dassault and HondaJet as well as an approved aircraft maintenance organization by TCCA, FAA, BDCA, HK-CAD, 2-REG, Aruba, CAAS and EASA, we understand aircraft. Our certified and trained technicians set-us apart and guarantees quality, thoroughness, and service excellence. Choose Skyservice for your next MRO decision.

PREMIER AVIATION
800, 8e Rue de L'A roport
Quebec City QC G2G 2S6
Tel: 418-800-1325
Fax: 418-948-8616
Toll Free: 888-578-3369
Website: www.premieraviation.ca
Email: sales@premieraviationqc.ca
Personnel: Sylvain Perron, President & Ceo
Jc Tewfik, Vp Marketing, Sales & Services
Philippe Perron, Director Marketing & Customer Services

SKYSERVICE BUSINESS AVIATION INC.
9785 Ryan Avenue
Montreal QC H9P 1A2
Tel: 514-420-2405
Toll Free: 888-759-7591
Website: www.skyservice.com
Email: maintenancesales@skyservice.com
Personnel: Paul Weeks, Vp Of Maintenance
Patrick Canuel, Director Business Development, Maintenance
Glenn Williams, Director Business Development, Maintenance
Pedro Carvalho, Director Business Development, Maintenance

UTAH

DUNCAN AVIATION	■	■	■	■	■	■	■	■	■	■	■	■	■	■			■	Duncan Aviation is a full-service business aircraft MRO supporting the aviation needs of business class aircraft. Services include airframe inspections, engine maintenance and overhauls, major retrofits for cabin and cockpit systems, full paint and interior services, engineering and certifications, engine and avionics AOG service, and preowned aircraft sales and acquisitions. Duncan Aviation also has international aircraft components experts available 24/7/365 at +1 402.475.4125 who can handle any aircraft system problem with immediate exchanges, rotables, loaners or avionics/instrument/accessory repairs and parts.

DUNCAN AVIATION
262 South 3800 West
Provo UT 84601
Tel: 801-342-5600
Fax: 801-342-5506
Website: www.DuncanAviation.aero
Email: webmaster@duncanaviation.com

ALBERTA

HELICOPTERS

EAGLE WORLDWIDE FLEET MANAGEMENT		■		■	■	■	■			■	■	■	■	■			■	Eagle Copters Ltd. is your one-stop-shop for Helicopter Maintenance. With many service offerings including but not limited to; Overhauls, New & Used Part Sales, Helicopter Sales & Leasing, and Airframe Upgrades. Since our beginnings in 1975, Eagle has successfully transitioned from a small, family business, to a global team of experts with a network of affiliates in North America, and South America with capabilities spanning multiple OEM platforms. To learn more about our company and our service offerings, please visit our website, or contact our Sales team.
RSI																	■	Canadian Distributor of all ZOK products. ZOK is a effective, non hazardous, environmentally friendly solution for compressor washes for all gas turbines

EAGLE COPTERS LTD.
823 McTavish Road NE
Calgary AB T2E 7G9
Tel: 403-250-7370
Website: www.eaglecopters.com
Email: sales@eaglecopters.com

REED SERVICES INC
8 Valley Creek Cres NW
Calgary AB T3B 5V2
Tel: 403-247-2770
Fax: 403-247-2035
Website: http://reedserv.com
Email: l_toscano@reedserv.com

BRITISH COLUMBIA

		Accessories	Airframes	Auxiliary Power Units	Avionics	Composite Repair	Engineering Services	Engines Services	Fixed Wing	Hot Section Inspection	Inspection Services	Instruments	Interior Services	Maintenance Plans	Painting	Recip. Overhaul	Turbine Overhaul	Other Services/Root/Misc.	Description
HELIWELDERS	**HELIWELDERS CANADA LIMITED** Building 47, Unit #1, 21330 56th Avenue, Langley Airport Langley BC V2Y 0E5 Tel: 604-530-5225 Fax: 604-530-5226 Website: www.heliwelders.com Email: jasmin@heliwelders.com Personnel: Jasmin Hart, General Manager Jasen Gerein, Director Of Operations Eric Hicks, Exec. Vp Sales & Marketing	■	■		■	■	■	■			■		■		■			■	Heliwelders is a Transport Canada, FAA, & EASA regulatory approved facility. In addition, we are a Fully Authorized AIRBUS "D Level", maintenance facility. We carry out maintenance, structural repairs, composite repair, avionics, and paint for Airbus, Sikorsky and Bell Aircraft. We specialize in major inspections, and structural repairs to Airbus AS350/H125, AS355, EC130/H130, EC135/H135, EC145/H145, Bell 205, 206, 212, 412, & 407, Sikorsky S61 & S92 Helicopters. This includes full Interior refurbishments, and in-house paint capabilities. Heliwelders is also an OEM approved SAFRAN Certified Maintenance Center (CMC) for Arriel & Arrius Level 1&2 engine support. Our wholly owned subsidiary, Nampa Valley Helicopters, located in Meridian, Idaho, is a fully authorized AIRBUS "D Level" AS350/H125, AS355, & EC130/H130 Dynamic Component overhaul facility. Nampa carries a large inventory of rental and exchange AIRBUS Dynamic Components to support the global helicopter markets, including Canada.
SELECT HELICOPTER SERVICES LTD.	**SELECT HELICOPTER SERVICES LTD.** 200 - 6220 Lapointe Drive Kelowna BC V1V 2S2 Tel: 250-765-3317 Website: www.selecthelicopter.com Email: info@selecthelicopter.com Personnel: Marty Luksts, Founder; Dana Washington, Quality Assurance Manager / Sales; Dell Luksts, PRM / Production Manager	■																■	Highly qualified, reliable and always on time. At Select, we specialize in repairing and overhauling helicopter hydraulic components and cargo hooks, so you can get back in the air with confidence. We can support the hydraulic flight controls and hydraulic components on your Bell lights and mediums, Airbus H125 (AS350)/AS355, UH-1 fleet and cargo hooks/equipment manufactured by Onboard Systems, Dart, Mechanical Specialties and Cargo Aids. Your helicopter components deserve a superior level of specialized care. We work meticulously with great attention to detail, ensuring lasting quality and value.

CALIFORNIA

RSI ROTORCRAFT SUPPORT, INC.	**ROTORCRAFT SUPPORT, INC.** 67 D Street, Fillmore CA 93015 Tel: 818-997-7667 Fax: 818-997-1513 Website: www.rotorcraftsupport.com Email: sales@rotorcraftsupport.com Personnel: Phillip Difiore - President and Director Of Maintenance; Jeffrey Teubner - Vice President Quality And Technical Operations; Veronica Lozano: Sales Representative ; Chris Cancelosi - Sales Representative; Matthew Roach - Sales Representative; Keys Miller - Business Development Manager	■	■	■	■	■	■	■			■	■	■	■	■			■	Rotorcraft Support, Inc. is a full-service helicopter maintenance, repair and overhaul (MRO) services provider located in the historic city of Fillmore, California in Ventura County. Founded in 1986, we have built a reputation for excellence, reliability and safety. We are a Certified Repair Station and an Authorized Service Center for the major helicopter OEM's including; Airbus Helicopters, Bell, Enstrom Helicopter, Leonardo Helicopter, MD Helicopters, Robinson Helicopter, Rolls Royce Helicopter Engines, Safran Helicopter Engines, Schweizer and Sikorsky Aircraft. Our services include: maintenance, repairs, avionics, parts, upgrades, refurbishment and completion, component overhaul and exchanges, structural repair, non-destructive testing, aircraft shipping and DAR import and export. Rotorcraft Support, Inc., 67D Street, Fillmore, CA 93015 www.rotorcraftsupport.com, P: 818-997-7667 Certifications: FAA: YT2R331L, EASA 145.5629

IDAHO

NAMPA VALLEY HELICOPTERS	**NAMPA VALLEY HELICOPTERS INC.** 1870 West Franklin Road Meridian ID 83642 Tel: 208-362-0851 Fax: 208-362-9726 Website: www.nvhelicopters.com Email: chris@nvhelicopters.com Personnel: Chris Rekemeyer, Manager, Support Services Troy Atkinson, General Manager, Director Mro	■	■			■		■						■				■	Nampa VALLEY HELICOPTERS INC. (NVH), is a wholly owned subsidiary of HELIWELDERS CANADA LTD. NVH is a fully authorized Airbus "D Level" MRO facility, specializing in the Repair & Overhaul of the AIRBUS AS350/H125, AS355, & EC130/H130 Series Dynamic Components. NVH carries a large inventory of Rental and Exchange Components to support our global customers. Please ask us about DUNLOP & SAMM Servo, Starter Generators, & VEMD's Exchanges. NVH also provides AIRBUS Surplus Inventory & Rotables Sales. Our Parent company, HELIWELDERS CANADA LTD., is also a SAFRAN Approved Arriel 1&2, and Arrius Certified Maintenance Center (CMC). NAMPA VALLEY HELICOPTERS INC. Certifications include FAA, and EASA regulatory approvals. We also offer logistics support, including shipping assistance for our customers located outside of the USA. Please ask us for details.

PROFICIENT IS CAPABLE.

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ADVANCED COMPOSITE STRUCTURES INC. 43 Muir Rd. Winnipeg MB R2X 2X7 Tel: 204-982-6565 Website: www.acs-composites.com Email: sales@acs-composites.com Personnel: Bruce Anning, VP of Technical Operations; Slobodan Oravec, GM					■									■			■	Since 1988 Advanced Composite Structures (ACS) has been a world leader in Rotor Blade and Composite Structure repairs. ACS's success can be attributed to a comprehensive and ongoing research and development program resulting in new and enhanced repair procedures. ACS strives to provide customers with "Sound-Solid-Solutions" and focuses on fixing problems not symptoms. ACS provides repairs on components such as: helicopter rotor blades, cowlings, fairings, door and floor panels, radomes, ailerons, elevators, rudders, flaps, flight controls, engine nacelles, landing gear doors and interior panels.
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NOVA SCOTIA

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IMP AEROSPACE & DEFENCE 693 Barnes Road Enfield NS B2T IK3 Tel: 902-873-2250 Fax: 902-873-2249 Website: www.impaad.com Email: info@impaad.com Personnel: Jason Kenny, Jason.kenny@impaad.com		■		■	■	■	■		■	■	■	■	■	■	■	■	■	A global leader in Military, Missionized and Commercial aircraft IMP Aerospace & Defence is one of Canada's largest aerospace and defence organizations as well as a Platinum member of Canada's Best Managed Companies. Solving complex issues facing your fleet is our specialty, which is why we have earned our distinction as trusted to partner around the world; providing world-leading capabilities within engineering solution, maintenance, product manufacturing, integration and training. Specifically illustrated by our CSH SAR In Service Support (ISS) Program, IMP Aerospace & Defence services as the prime contractor to Canada's fleet of Cormorant Search and Rescue (SAR) CH-149 helicopters providing all aspects of support to this critical fleet on behalf of the Department of National Defence. With over 2,400 engineering and technical support staff at operations across Canada, IMP Aerospace & Defence focuses on delivering solutions across the space, air, land and sea sectors.

ONTARIO

	Accessories	Airframes	Auxiliary Power Units	Avionics	Composite Repair	Engineering Services	Engines Services	Fixed Wing	Hot Section Inspection	Inspection Services	Instruments	Interior Services	Maintenance Plans	Painting	Recip. Overhaul	Turbine Overhaul	Other Services/Root/Misc.	Description
CHARTRIGHT AIR GROUP 2450 Derry Road East, Hangar 3 Mississauga ON L5S 1B2 Tel: 905-671-4674 Toll Free: 800-595-9395 Website: www.chartright.com Email: mro@chartright.com Personnel: Simon Lareau, Rotary Manager And Leonardo Service Centre Manager	■	■		■	■				■	■	■						■	Chartright is a Transport Canada Approved Maintenance Organization (AMO #196-92) with an approved FAA Supplement. Chartright has maintenance facilities in Toronto and Kitchener and are capable of performing maintenance on a wide array of fixed and rotary wing aircraft offering a full array of services from line maintenance servicing to heavy inspections, avionics, and structures. Chartright is an authorized Leonardo Helicopters Service Centre. Contact us to discuss your next maintenance event.

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		Accessories	Airframes	Auxiliary Power Units	Avionics	Composite Repair	Engineering Services	Engines Services	Fixed Wing	Hot Section Inspection	Inspection Services	Instruments	Interior Services	Maintenance Plans	Painting	Recip. Overhaul	Turbine Overhaul	Other Services/Rod/Misc.	Description
Helitrades	**HELITRADES INC** 18 Terry Fox Drive Vankleek Hill ON K0B1R0 Tel: 613-678-3027 Website: www.helitradesinc.com Email: gerry@helitradesinc.com Personnel: Gerald Tom, Director Of Maintenance.	■	■			■				■		■		■			■		With two locations in Canada, Helitrades Inc has been proving quality workmanship and outstanding customer service to the aviation industry for more than 40 years. The Helitrades Vankleek Hill, Ontario facility is a Bell approved Customer Service Facility for Structural Repair, Field Maintenance and Dynamic Component repair/overhaul. Helitrades location in Ontario is an Authorized Service Centers for Robinson Helicopters. Helitrades is also a Woodward HRT approved Licensed Repair Facility in North America for the hydraulic component repair/overhaul.
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A FULL PLATE

The new Transport Minister, the Honourable Pablo Rodriguez, was handed by his predecessor a full plate of issues to deal with that are critical to the air transport industry of Canada. The two-year maximum delay before the next election doesn't leave the Minister much time to successfully deal with these problems, and he will be hard pressed to challenge the department to review any of its current and unreasonable stances on many of them.

The ICAO Audit report that will be released shortly has the potential to be a major blow to the department. Not only will it uncover the department's non-compliance with approved ICAO standards on many fronts, but it could also jeopardize Canadian carriers access to certain jurisdictions which may be embarrassing given that Canada is the home of ICAO headquarters in Montreal.

While not a problem for the southern part of the country, the new Approach Ban proposed regulations present a sizeable challenge to Northern and remote routes where navigation and weather reporting services and airport landing aids such as approach lighting are minimal. The current proposal is problematic and would require significant investment in impacted areas to ensure the effectiveness of an Approach Ban. ATAC strongly recommends that the new Approach Ban regulations be only implemented for approaches at the major airports, while the required infrastructure is installed at the remaining airports especially those in the remote and northern areas of Canada.

The government's sought-after March 31, 2024 deadline for allowing the broad use by telecommunication companies of 5G frequency radio signals including on runway approach paths and near runway ends, is totally unrealistic. The equipment, its certification and installation of facilities required for transitioning to safe implementation of 5G operations cannot possibly be achieved by then. A more realistic deadline needs to be set that doesn't jeopardize air transportation and those reliant upon it.

Sustainable Aviation Fuel (SAF) is a promising solution for reducing aviation CO_2 emissions, an objective that ATAC has supported for many years. The challenge lies in the absence of infrastructure in Canada to produce and distribute SAF. Furthermore, the very high cost of SAF will have a major impact on air travel in Canada. Federal and provincial governments need to invest in SAF production and the distribution infrastructure in Canada, especially in smaller urban centers and in Northern and remote regions, if SAF is to be available and have an impact on reducing CO_2 emissions throughout Canada.

Canada, like the rest of the world, is facing a serious shortage of pilots and aircraft maintenance engineers. Government needs to work with industry to overcome this HR crisis. A major obstacle in recruiting talent to piloting is the cost of training. ATAC is drawing up a government loan guarantee program which will help attract people with limited access to the funds required, to consider aviation as a career.

Given the crippling shortage of pilots, ATAC is asking the government to ease up on regulations which exacerbate the problem. The implementation deadline of December 2022 of the new fatigue risk management regulations for smaller operators could not have come at a worse time. To impose an increase of 30% of pilots at a time when carriers can't even find sufficient crews to maintain their current level of service in terms of routes and frequency shows a disconnect with reality or worse, an indifference to the consequences on air service to Canadians.

Another obstacle faced by the aviation industry is obtaining student visas and work permits for foreigners wishing to come to Canada for flight training and possible employment. Furthermore, foreign student training is an important source of revenue for flight training organizations and has helped them develop world leading standards in terms of capital investments and best practices. If the government is going to limit foreign student visas for people wishing to come to train in Canada, then it needs to compensate by investing in Canadian flight training infrastructure capacity.

New Air Passenger Protection Regulations (APPR) are outrageous, and the result will be diminished service and higher costs for air travel in Canada. The result might well be short term gains politically but most definitely will have long-term losses to air service for the Canadian population, and again mostly affect those in Northern and remote communities who require it as an essential service. The new proposed regulations need to be taken back before it is too late.

Finally, the government has indicated that budget cuts in the order of $8.2 billion over five years are expected to begin in 2024-25. How much is Transport expected to cut? What services are to be cut, or most likely, what new fees and charges will once again be imposed on our industry?

The Minister has a lot on his plate. A constructive dialogue needs to be established with industry if we are to salvage, let alone improve, air service to Canadians.



John McKenna
President and CEO
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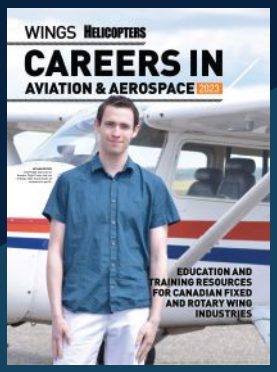

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Calum Maclaren | *guest columnist*

Perfect moving targets

Why major airlines are being hit by anti-greenwashing litigation

A wave of anti-greenwashing litigation is seeking to hold major players in the aviation industry to account for sensational claims of being sustainable, low-carbon or contributing to net zero. While the industry has faced legal backlash in the past, the dramatic proliferation of these cases could hurt major airlines.

It's not hard to see why the aviation industry has provoked the ire of climate activists. Flying is responsible for a staggering five per cent or so of human-induced global warming and its climate impact is still growing at a rate far greater than almost any other sectors. In this context, a profusion of "green flying" and "sustainability" advertising campaigns has turned the industry into an emblematic example of the debate between growth and sustainability.

The rise in greenwashing litigation can in part be attributed to the relative ease with which cases can be brought. It's simply a lot easier to attack an airline's advertising compared to other activities that might be targeted by strategic climate litigation.

Consumers can use legal mechanisms such as commercial practice or consumer protection regulations, as happened in a recent greenwashing complaint to the European Commission filed by consumer groups in 19 countries against 17 airlines.

It's an effective form of climate action due to the power exerted by advertising on public perception and social norms. The UN's Intergovernmental Panel on Climate Change (IPCC) has underscored the importance of reducing demand for flying in the first place, something significantly hindered by adverts that downplay its environmental impact. A report by Greenpeace and think tank the New Weather Institute claimed, that in 2019, airline advertisements influenced 34 million tonnes of CO_2 equivalent emissions worldwide.

This litigation is also buoyed by the demonstrable falsehoods that riddle the sustainability strategies of these companies. The pillars upon which their net-zero strategies rest vary from the broadly ineffective to the dangerously fraudulent and facilitate growth in a sector in dire need of reduction.

Airlines all rely on some form of carbon offsetting – planting trees, for instance, to "offset" the carbon emitted by the planes – or sustainable aviation fuel or carbon capture and storage, in order to *mitigate* their climate impacts.



> *The group asserts* that flying responsibly is impossible now and KLM seeks FLIGHT SALES.

Thus far, there have been six climate change-related cases brought against major airlines (four in Europe, one in the U.S. and one in Brazil). These cases are buttressed by numerous legal complaints taken through the European Commission or the UK and U.S. advertising standards boards which have already successfully ordered Ryanair, Lufthansa and Etihad to pull ad campaigns. In each of these three cases, authorities found that terminology like "protecting the future", "sustainable aviation" or "low-emissions airline" amounted to wilful misleading of consumers and breached advertising regulations. A recent case taken by Dutch campaigners against airline giant KLM is the most daring example yet. Climate action group FossielVrij argues that KLM's *Fly Responsibly* campaign constitutes misleading advertising under EU consumer law.

The group asserts that flying responsibly is impossible at present and that KLM seeks company growth and increased flight sales, when it should be reducing emissions by reducing the number of flights. KLM said its "communications comply with the applicable legislation and regulations", but has dropped the Fly Responsibly campaign.

Interestingly, this case builds upon a ruling of the Dutch Advertisement Code Commission and indicates the snowballing trend inherent in anti-greenwashing litigation, wherein cases rely upon precedent. The recent 19-country complaint by the European Consumer Organization could provide the strongest foundation to date for future litigation.

Delta Airlines is also facing a class action suit brought by a California resident who alleges, that by marketing itself as "carbon-neutral," Delta has grossly misrepresented its environmental impact. This points to a growing understanding of the ineffectiveness of carbon offsetting, a net-zero tactic adopted by almost every major airline.

A Delta spokesperson said the case is "without legal merit" as the airline has "transitioned its focus away from carbon offsets" toward decarbonizing its own activities. These cases might result in companies simply pulling their green campaign while maintaining their existing corporate framework and growth models. Recent research suggests that any climate-related case taken against a major emitting company will affect the firm's value (on average by 0.057 per cent following the filing of a case, and by 1.5 per cent with an unfavourable decision).

In reality, these early cases are merely scratching the surface of what's possible. Once these cases enter the public conversation, a growing understanding of consumer protection is bound to follow. In many jurisdictions, significant damages can be awarded against companies for misleading advertisement. The UK's Competition and Markets Authority, which is currently investigating claims of greenwashing in other sectors, will soon be able to fine companies 10 per cent of their global turnover for non-compliance. | **W**

This article was originally published by The Conversation. *Calum Maclaren is a PhD Candidate in Climate Litigation at the University College Dublin.*

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