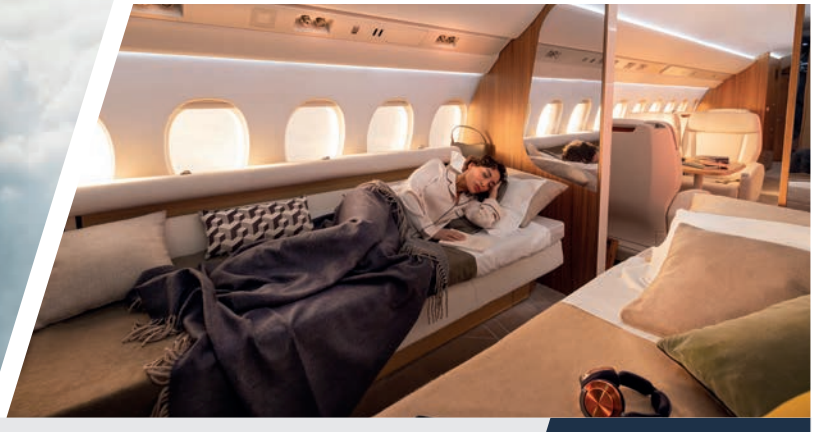
AIN
AVIATION INTERNATIONAL NEWS

JULY 2025 | Vol. 54 No. 7 | **AINonline.com**

$12.00

ADVERTISEMENT

ONE FLIGHT AND YOU'LL SEE WHAT 1000 HOURS PROVED.



Few demonstration roadshows have accrued as many miles and compliments as the Falcon 6X's. Since its entry into service, passengers and crews have praised its smooth, powerful performance, extra widebody comfort and quiet. Want more proof? Just call.

Falcon 6X

WWW.FALCON6X.COM | FRANCE: +33 1 47 11 88 68 | USA: +1 201 541 4591

DASSAULT AVIATION

AIN
AVIATION INTERNATIONAL NEWS

JULY 2025 | Vol. 54 No. 7 | AINonline.com $12.00

SAFETY: PARENTS OF DCA MIDAIR COPILOT SPEAK OUT

EVENTS: HAPPENINGS AT THE REVAMPED EBACE SHOW

AIRCRAFT: THE GOODYEAR BLIMP'S AIRSHIP TRANSITION

Special Report: Making Completions Fly

Cleared for Landing

The HondaJet Owners & Pilots Association's Proficient Pilot Program solves the overrun problem

PRAETOR 600
BY EMBRAER

DIFFERENT BY DESIGN.
DISRUPTIVE BY CHOICE.

+1 321 751 5050
embraer.com/praetor600

OCEAN REEF AIRPORT
Key Largo - FL

4,451 FEET
Short Runway

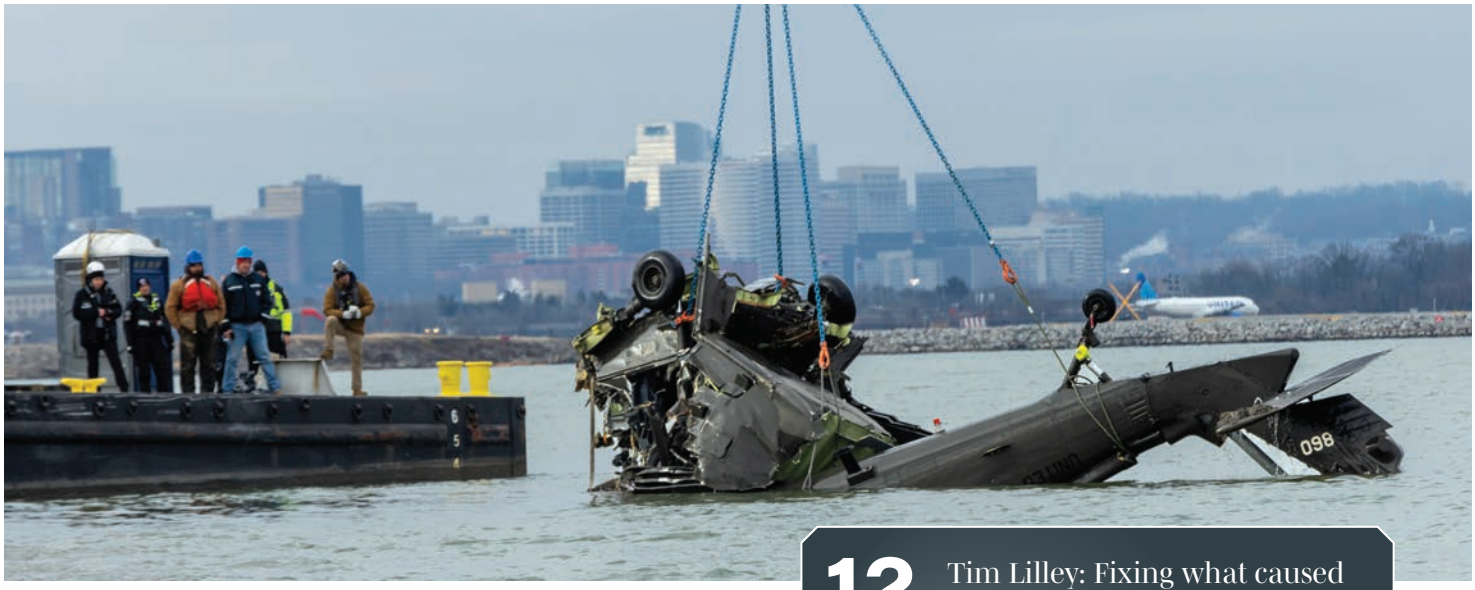
FLY FURTHER
THANKS TO FULL FLY-BY-WIRE

Now the only question is,
where do you want to go next?

Scan the QR code to see the mission

EMBRAER

In this issue



On the cover: HondaJet HA-420


SMARTER
AVIATION TRAINING
Leveraging data for safer outcomes
Our training goes beyond checking regulatory boxes. By collecting and analyzing critical data, we ensure pilots train more effectively for the right safety risk areas—and enhance overall industry safety.
Learn more about our data-enhanced training at FlightSafety.com
FlightSafety
INTERNATIONAL

Rolls-Royce conducted flight trials of its Pearl 10X on the company's 747-200 testbed in Tucson, Arizona.

Rolls-Royce's Pearl 10X completes major cert tests

BY KERRY LYNCH

Celebrating the 9,000th engine produced at its Dahlewitz site, Rolls-Royce continued to progress on its newest engine model, the Pearl 10X, accruing 3,400 test hours in the program.

Slated for Dassault Aviation's ultra-long-range Falcon 10X, the Pearl namesake has successfully completed all but one major engine certification test, Rolls-Royce reported. These have included initial maintenance interval, type test, medium bird strike, outdoor crosswind, and emissions. Remaining trials are scheduled in the coming months in support of Dassault's upcoming Falcon 10X flight-test campaign.

Collectively, Rolls-Royce's Advance2 demonstrator and Pearl 10X engine configuration have amassed the 3,400 test hours. They have included a flight-test campaign on Rolls-Royce's Boeing 747 flying testbed in Tucson, Arizona, that involved more than 25 flights and 36,000 nm over six months.

The company opened a 2,000-sq-m (21,500-sq-ft) production support facility in Le Haillan, France, near Dassault's final assembly line in Merignac, to support the flight test and production activities for the Falcon 10X.

Combining Rolls-Royce's Advance2 core with a high-performance low-pressure system, the Pearl 10X will produce a thrust of more than 18,000 pounds, placing it among the most powerful of its business engine models.

Meanwhile, as Rolls-Royce approaches approval for its latest engine model, it celebrated the milestone 9,000th engine produced at its Dahlewitz site. That engine, the Pearl 700, powers the Gulfstream G700.

Engines produced in Dahlewitz include the Pearl 10X, Pearl 15, Pearl 700, BR710, BR715, BR725, Tay 611-8/-8C, V2500, and Trent XWB-84. Dahlewitz is also home to its UltraFan demonstrator program.

The company said it anticipates a 7% to 9% increase in Rolls-Royce-powered aircraft in service for the remainder of the decade and believes flying hours will reach 120% to 130% of the 2019 levels in the short term.

Rolls-Royce has announced plans for a £30 million ($35.8 million) investment in the site and expects to recruit 100 more employees to support services for Trent 1000 engines.

News Briefs

FAA DIRECTED: LIFT SUPERSONIC OVERLAND FLIGHT BAN

The White House took a step to clear obstacles to supersonic overland flight with the June 6 signing of an executive order that directs the FAA to lift the ban within 180 days and release a final aircraft noise certification rule for such operations within two years. According to the administration, the order seeks to undo "decades of stifling regulations that grounded progress" on supersonic flight. It directs the FAA to establish an interim noise-based certification standard and to remove any other regulatory barriers to supersonic technology advancement within 180 days. In addition, the order calls for the FAA to follow with a notice of proposed rulemaking within 18 months.

VIVAJETS SECURES AOC

Nigerian business aviation company VivaJets has received its air operator certificate from the Nigerian Civil Aviation Authority. This expands its commercial operating rights across 34 African nations that have ratified the Yamoussoukro Decision, a treaty framework intended to liberalize air transport services and promote competitive aviation markets across the continent. The Yamoussoukro Decision is a precursor to the Single African Air Transport Market.

LAWMAKERS SEEK TO BAR HELOS IN NEW YORK CITY

U.S. House Rep. Jerrold Nadler (D-New York) renewed his efforts to ban helicopters in New York City, introducing a bill with Reps. Rob Menendez (D-New Jersey) and Nicole Malliotakis (R-New York) that would bar all nonessential helicopter traffic within a 20-mile radius of the Statue of Liberty. In introducing this latest bill, Improving Helicopter Safety Act (H.R.3196), the lawmakers noted about 30 helicopter crashes in the New York City area that have led to at least 31 fatalities since 1983.

More than 13,000 aircraft have connected with our 300 FBOs.

Has yours?

CAA negotiates the best jet fuel prices from preferred FBOs throughout the US and beyond. So you enjoy more savings, more freedom, and more control. Save 30% on average. Try it for 3 months free.

APPLY TODAY!

CORPORATE AIRCRAFT ASSOCIATION®

caa.org

90 DAYS FREE
NO CARD
NO CATCH

DOWNLOAD THE NEW CAA Jet Fuel App

Available Now on iPhone and iPad in the App Store
(Android coming Fall 2025!)

Quick fuel price quotes • Preferred FBO locations • Exclusive savings

CAA provides the lowest price on jet fuel offered to Part 91 aircraft at the CAA Preferred FBO.

Williams International building turbine engine factory in FL

BY MATT THURBER

Williams International plans to invest more than $1 billion to build a high-volume aviation gas turbine engine manufacturing plant at the Shoal River Industrial Park in Crestview, Florida. The facility will open in 2026, with another section slated to come online in 2028 and the final one in 2035/2036. The state of Florida chipped in $3.2 million from the Florida Job Growth Grant Fund, and the development is expected to generate more than 330 jobs.

"Northwest Florida is proving itself to be a rising hub for aerospace activity and an essential part of Florida's expanding aerospace ecosystem," said Space Florida president and CEO Rob Long. "Williams International's expansion in this community is a stellar example of how new opportunities for innovation and investment are being built in every corner of the state—reinforcing all of Florida as the global and interplanetary center for aerospace commerce."

Phase one of the Williams International plan in Florida includes a 250,000-sq-ft facility, and the final portion in 2035/2036 will enclose 500,000 sq ft. This will add to the company's existing plants in Pontiac, Michigan, and in Ogden, Utah. The latter is also being expanded.

Williams International manufactures military and civil turbine engines, including the FJ33 and FJ44 series for business jets such as the Cirrus Vision Jet, Beechcraft Premier, various Cessna CitationJets, and Pilatus PC-24.

The new Williams International facility in Florida will cover 250,000 sq ft, and plans call for expanding that with 500,000 sq ft in the 2035/2036 timeframe.

News Briefs

WASHINGTON STATE ENACTS 10% AIRCRAFT LUXURY TAX

Washington state Gov. Bob Ferguson (D) signed Bill 5801 that includes a 10% "luxury" tax on the sale of "noncommercial" aircraft that exceed $500,000 in purchase price. A similar tax also applies "for the privilege of using within the state as a consumer any noncommercial aircraft if its value exceeds $500,000." The taxes are slated to go into effect with newly completed transactions starting April 1, 2026. Although the term "noncommercial aircraft" is meant to apply to those flown in general and business aviation operations, according to the state's definition of "commercial," there are no such aircraft as "noncommercial."

AEROLÍNEAS EJECUTIVAS INKS DEAL FOR 12 CESSNA CITATIONS

Textron Aviation has finalized a purchase agreement with Mexican business aviation provider Aerolíneas Ejecutivas (ALE) for up to 12 Cessna Citations. The aircraft—a mix of Citation Latitudes, CJ3 Gen2s, and CJ3 Gen3s—will be operated through ALE's fractional ownership program, Mexjet. ALE is expected to take delivery of four aircraft—two Latitudes and two CJ3 Gen2s—next year. The company's jet card program was the first prepaid fractional product introduced in Mexico.

REPORT FORECASTS STRONG FBO MARKET GROWTH

A report from business market researcher The Insight Partners predicts the global FBO market will nearly double to nearly $41.5 billion annually by 2031. While North America has the highest saturation of FBOs, it is Asia-Pacific that is expected to see the highest growth rate, in step with increases in international air passenger and cargo traffic. According to the report, there are 71 FBOs in the region, including more than 20 in Australia and another 15 in mainland China.

THE ULTIMATE FLEX

A worldwide network, now with even more field and airborne support teams near you.

Gulfstream™

Leonardo taps rising demand for VIP helicopters

BY CHARLES ALCOCK

@ EBACE 2025

Leonardo is capitalizing on rising demand for corporate and VIP helicopters, with multiple orders announced during EBACE 2025.

The Italian helicopter manufacturer marked the opening of the EBACE show in Geneva with an order for three more AW109 Trekkers from its long-time distributor for the UK and Ireland, Sloane Helicopters, as the Northampton-based company approached its 109th sale of the light-twin helicopter. At the same time, Sloane and Leonardo celebrated the 30-year milestone of their partnership.

Slated for delivery in 2027, the booking for three VIP-configured helicopters comes in addition to the five AW109 GrandNews that Sloane ordered during the recent Verticon in March in Dallas. Under the Sloane partnership, more than 100 Leonardo commercial helicopters have been delivered to operators in the UK and Ireland.

In addition, Leonardo Helicopters' Indian distributor, Universal Vulkaan Aviation (UVA) is adding a pair of AW169 light twins to its inventory. The companies also announced the orders during EBACE 2025.

New Delhi-based UVA's partnership with Leonardo was launched at the 2024 EBACE show. It has previously placed orders for three AW169s, an AW139, and an AW109—all in a VIP/corporate configuration. According to UVA director Harinder Commar, India's rising economy is driving demand for helicopters from corporations and wealthy individuals. During an event to sign the contract, he told reporters that private rotorcraft charter flight activity is also increasing, especially in states such as Uttar Pradesh, where some operators are logging as many as 600 hours each year.

The Italian group was the only in-production aircraft manufacturer exhibiting at the new-format EBACE show in Geneva, where it displayed the AW109 Trekker multirole helicopter on the convention show floor. It is seeing healthy demand for its AW139 and AW169, with all models boosted by the relaunch of its Agusta VIP helicopter brand in 2021.

According to Leonardo VVIP and corporate unit senior sales and marketing manager Manuela Barbarossa, orders in this sector have been increasing over the past five or six years. "The market is reacting significantly to the need for individuals and businesses to have point-to-point travel connections," she told **AIN**.

Leonardo promoted new Agusta VIP-branded cabin interior concepts for its helicopters at EBACE 2025.

News Briefs

OTTO'S LIGHT JET PROMISES MIDSIZE SPECS, COMFORT

Otto Aviation last month launched the Phantom 3500, a clean-sheet light business jet slated for certification in 2030. To facilitate laminar flow, the 3,200-nm twinjet will not have any cabin windows, except for the one required for the emergency exit. Instead, passengers' view of the outside world will be on 42-inch 4K monitors mounted on the cabin walls, four on each side. The company expects to complete preliminary design review in October. Items with long lead times have already been ordered, including the landing gear from Mecaer and FJ44 engines from Williams International, for arrival by the end of next year. Aircraft assembly, systems-level testing, and first flight are expected in 2027.

GARMIN EXPANDS NAV DATABASE TO SOUTH PACIFIC

Garmin has added South Pacific coverage to its Garmin Navigation Database, including Australia, New Zealand, and surrounding countries. Previously, the database had been available to aircraft owners and operators in the Americas and Europe. The company is offering the database on a range of its products, including integrated flight decks, navigators, flight displays, and portables. Updates can be purchased individually or through bundle options or OnePak subscriptions.

FORMER NTSB VICE CHAIR SUES FOR REINSTATEMENT

Former NTSB vice chair Alvin Brown filed a federal lawsuit challenging his removal from the board in May, saying it undermines the independence of the agency. The Brown v. Trump et al lawsuit seeks to restore Brown to his position on the board and prevent political interference with NTSB. Brown was confirmed to the Board on March 8, 2024, for a term expiring on Dec. 31, 2026.

START LIGHTER
START FASTER
START SMARTER

Certified Lithium-ion Aircraft Batteries

Cut aircraft battery weight and increase your useful load. True Blue Power® batteries save up to 85 pounds per battery. Less weight means you'll have more passengers, more cargo, more fuel, and more design flexibility. Even better, you'll protect your engine and extend component life with faster and cooler engine starts, plus access real-time state-of-charge data, on demand. **Start LIGHTER, start FASTER and start SMARTER every time.**

trueblupowerusa.com/GETSTARTED

TRUE BLUE POWER®

BARRY AMBROSE

GAMA: Genav deliveries rise across all segments in Q1

BY CURT EPSTEIN

First-quarter business aircraft deliveries climbed across the board from a year ago, according to the latest report from the General Aviation Manufacturers Association (GAMA). Total billings for airplanes soared by more than 25%, to $5.04 billion, while rotorcraft increased by 12.4%, to $770 million, versus first-quarter 2024.

Business jet deliveries rose by 11% year over year (YOY), totaling 141 in the quarter. Gulfstream saw the largest jump, with deliveries of its flagship G700 ramping up. In fact, the Savannah airframer handed over 50% more aircraft in the first quarter than it did a year ago, including nine more in its large-cabin range.

Embraer rose by 28%, with gains in its Phenom and Praetor 600 lines, while Bombardier exceeded its first-quarter 2024 Global deliveries by three, for a 15% increase.

Honda Aircraft doubled the number of HondaJet deliveries from a year ago to four in the first quarter, but Cirrus and Pilatus were both one unit off the pace set last year for their SF50 Vision Jet and PC-24 business jets, respectively.

Textron Aviation jet deliveries were down by nearly 14% from the 36 Citations handed over in the first three months of 2024, with Latitudes, Longitudes, CJ4s, and CJ3s seeing one- or two-unit decreases in the latest quarter. Dassault Aviation only reports delivery totals at mid-year and year-end.

In the bizliner class, Boeing had no BBJ deliveries in either the recent or year-ago first quarters, while Airbus shipped one ACJ in first-quarter 2024 and none in the first three months of this year.

TURBOPROPS SOARING

The business turboprop segment, led by Textron Aviation, saw a strong first quarter in terms of deliveries. The Wichita-based OEM more than doubled its output of Grand Caravans from 10 in first-quarter 2024 to 21 in the same period this year. It was followed by Piper, which, with the certification of its M700 Fury last year, saw its YOY deliveries improve from three turboprop singles in early 2024 to 10 in the most recent first quarter.

Epic Aircraft doubled the number of its E1000 GX singles it handed over in the first quarter to six, while Pilatus bested its first-quarter 2024 total for PC-12s by three, to 11.

Daher delivered just one Kodiak utility aircraft (a Model 900) in the first three months, compared with five in the same

continues on page 56 ›

News Briefs

SPIKE AERO RESURRECTS SUPERSONIC BIZJET DESIGN

The Spike Aerospace Spike S-512 supersonic business jet, which was never built nor took flight, has been resurrected by company founder, president, and CEO Vik Kachoria. When Spike was last actively pursuing development of the S-512, plans called for first flight in 2021 and deliveries beginning in 2023. The jet was expected to fly at up to Mach 1.6 with 22 passengers and have a range of 6,200 nm. Now, according to Kachoria, "The silence is over. Spike Aerospace has returned, ready to reshape the future of flight. Over the past few years, we sharpened the Spike S-512 Diplomat concept, expanded our leadership, and refocused our strategy. Now that work shifts from drawing board to runway as we pursue low-boom supersonic travel."

KENNY DICHTER REENTERS CHARTER MARKET WITH REAL JET

Kenny Dichter, who founded Wheels Up and innovated jet cards through Marquis Jet, is stepping back into private aviation, this time with a charter brokerage platform that will provide access to business aircraft operations without membership fees or long-term commitments. According to Dichter, the company's Real SLX platform creates an "ecosystem," with hospitality, unique experiences, and other curated benefits, in addition to private aircraft options.

JET OUT LAUNCHES REGIONAL BASE AT SCOTTSDALE AIRPORT

Jet Out has launched operations at its newest base in Scottsdale, Arizona, marking the third regional location for the Milwaukee-based fractional aircraft provider. Its base at Scottsdale Airport (KSDL) is expected to reach full operational capacity by October. Jet Out will base two Citation CJ4 Gen2 twinjets in Scottsdale, supporting up to 16 co-owners per aircraft.


From any perspective,
The Million Air Experience is unequaled
MILLION AIR
www.millionair.com

Tim Lilley: Fixing what caused the DCA midair collision

BY MATT THURBER

The father of one of the pilots who died in the crash wants something positive to come from the tragedy.

In a candid and heartfelt session at the most recent Air Charter Safety Foundation Summit, Flexjet captain Tim Lilley and his wife Sheri introduced the audience to their son Sam, one of the pilots at the controls of the PSA Airlines (American Airlines Flight 5342) Bombardier CRJ700 that crashed after colliding with a U.S. Army Black Hawk helicopter while on final approach to Runway 33 at Ronald Reagan Washington National Airport (DCA) on January 29.

During the session, "Learning from Tragedy—Enhancing Safety through Accountability and Modernization," Tim shared how he and Sheri learned that Sam was flying as first officer on the CRJ and perished along with the 64 passengers, the captain, and the flight attendant. The three crew members on the helicopter were also killed.

Coincidentally, Tim himself retired from the Army as a Black Hawk pilot, and he shared some insights and critiques of helicopter operations in the busy airspace around Washington, D.C. Lilley spent 20 years in the Army, followed by 15 years flying an EMS helicopter, and now is an Embraer Praetor captain at Flexjet.

"It's kind of therapeutic for us to tell this story," he began. "When you lose a child and it happens to be in your line of work, it really hits home.

"I spent 20 years flying Black Hawks in the Army, and four of those years flying in and out of the Pentagon, so I've flown these routes, literally hundreds of times, probably two or three times a week, for four years straight."

SAM'S JOURNEY

Although he had planned to become a pilot, Sam ended up in marketing after graduating from college. "He called me up one day and said, 'Dad, marketing is not for me. I want to be a pilot like you,'" Tim said. "I was so proud, and I was so happy. Once he decided he wanted to be a pilot, he pursued it aggressively. In just a few years, he was flying for a regional airline.

"He had a great life ahead of him. He had just proposed, and they were going to get married in the fall. We really loved Lydia."

THE PC-12 PRO IS HERE!

Featuring the Garmin G3000® PRIME with the largest touchscreen displays in its class, professional has been redefined – introducing the brand-new PC-12 PRO.

Crafted in Switzerland

pilatus-aircraft.com

He shared his and Sheri's experience learning about the accident. "I was in Teterboro on a trip, and I had a five o'clock show in the morning. I come out of the shower, and I'm watching the news. I see, oh, man, there's been an aircraft accident. It doesn't take me long to figure out it's PSA, who my son flies for.

"Automatically, I want to talk to Sam about this accident. When aviation stuff happens, we talk about it. So, I start texting him, 'Hey, you know what happened?' No answer. He only doesn't answer my text usually if he's asleep or he's flying. He turns his phone off when he's flying. Maybe he's out flying. I called my wife, and I said, 'Hey, I know he's out on a trip.' I didn't know what his actual legs were. 'Do you know where Sam's at? What happened?'"

Sheri Lilley picked up the story. "When [Tim] called me that night and said, 'Where is Sam?' I said I know he's on a trip because I had looked at a wedding venue earlier that day for him and Lydia. I texted her, 'Where is Sam?' She said, 'I told you he's on a trip. He'll be home tomorrow.' She was thinking I was pressuring her about putting the deposit down on the venue I had looked at for them that day.

"Tim had actually called me at that point. We were on the phone, and I then texted her. I was like, I'm just going to have to ask her if he's flying into [Washington] D.C. We knew the flight number. I knew that flight started in Wichita. It was one nonstop a day from Wichita. So, I said to Lydia, 'Is Sam in D.C.?'

"Immediately my phone rang with her calling. As soon as she joined the call, she was terrified. She knew something was up. I said, 'Honey, a plane has come down in D.C.' And she said, 'I just talked to him this afternoon. He was in Wichita.' And we knew."

A CARING TEAM

Although post-accident care for families has improved, in the immediate aftermath of the accident, the Lilleys received no communication. "Unfortunately, a lot of the emergency response did not work out," Sheri recalled. "We were not notified by PSA or American for several days. We're still not certain why that happened."

The first notification was from the medical examiner, letting them know that Sam's body had been recovered. "We were in NTSB briefings in D.C., and they were still trying to track us down to notify us," she said.

Flexjet stepped in, asking Fireside Partners to work with the Lilleys. "[That was] a great gesture that Flexjet made, bringing them in to take care of us," Sheri said. "Fireside walked us through that process and helped us understand everything that was going to happen. They were great at handling people who were in shock."

Flexjet also sent people to help, as did PSA. "Their director of flight ops was right there with us every day. That personal touch meant a lot to us, having the president of PSA call us on the telephone. All sorts of American [Airlines] executives were reaching out to us, and that was really critical."

Sheri had some advice for aircraft operators on emergency response planning: "When you put together your emergency response, you've got to think about who those family members are going to want to hear from, who do they have relationships with?"

Tim Lilley immediately called Flexjet and said he couldn't take the trip he had been scheduled to fly. Flexjet's chief pilot quickly offered any help needed. The company arranged for a car to drive Lilley to Washington, D.C., and sent a Challenger to pick up family in Savannah, Georgia. A Flexjet care team met everyone when they arrived in D.C.

"That care team is so invaluable," Tim said. "We're all in shock. We have no idea who to talk to, what to do. We don't even believe it's true. It takes a while to get that information to really sink in, that this really happened. It happened to somebody that we really, really love, and so that care team is so important. If you're in a smaller organization, and you don't have the resources to put together a care team, it's well worth your while to add somebody like Fireside or band together with other operators to put a care team together."

THE ACCIDENT

The PSA/American Airlines Flight 5342 CRJ used the callsign "Bluestreak." Sam, with 2,500 hours of flight time, was flying as first officer and was on the list for the next captain upgrades. The captain had about 4,000 hours, including 3,000 in the CRJ, according to Lilley. "So far, we haven't found any evidence that the Bluestreak was anywhere but

Sheri and Tim Lilley said that talking about the loss of their son Sam is therapeutic.

Castle & Cooke AVIATION

Nonstop excellence.
Nonstop elegance.

KVNY - Van Nuys, CA
818-988-8385

PHNL - Honolulu, HI
808-548-2948

LEARN MORE

Fuel ▪ Ground Handling ▪ Catering ▪ Hangar Storage ▪ Customs

CastleCookeAviation.com

AVFUEL

the place they were supposed to be flying, exactly the way they were supposed to fly."

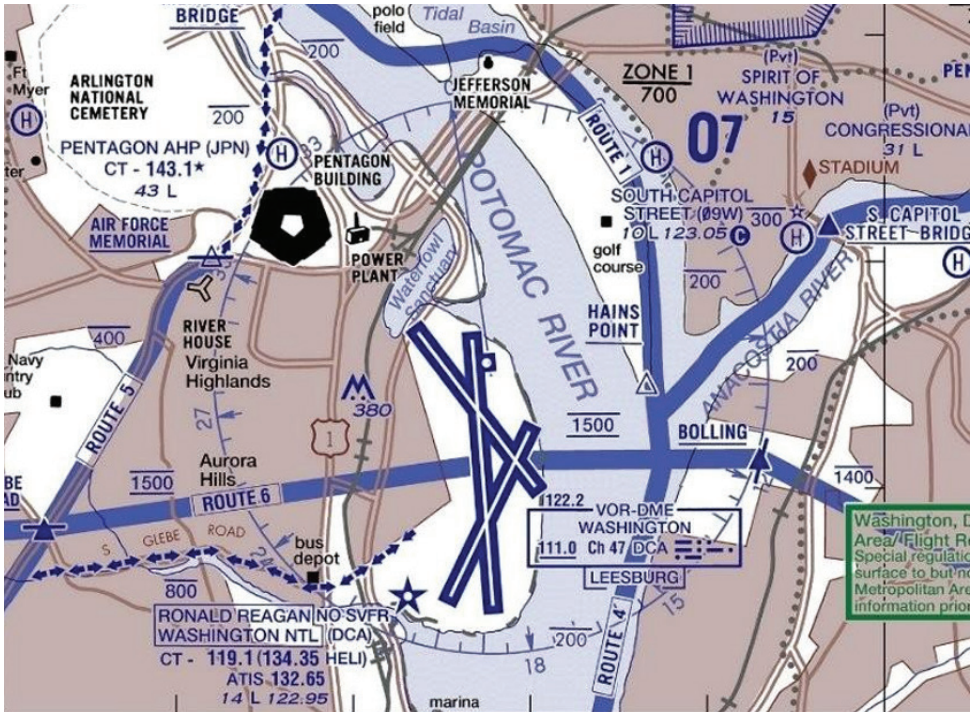
PAT (Priority Air Transport) 25 was a Lima-model Army Black Hawk. "They were doing a checkride, so an annual eight-part evaluation," he said. "They're going to put the NVGs [night-vision goggles] on and do maneuvers and emergency procedures training, then fly the route back to their base and do some traffic patterns.

"The most experienced person in that aircraft was the crew chief. He had about 1,200 hours riding around in the back of the aircraft. The Army's been saying that [it was] a highly experienced crew. I have a problem with that statement. If that's the highly experienced crew that the Army has, what the Army has is a retention problem. Over the last decade, the average experience of an Army aviator has dropped 300 hours, and even the instructor pilot had less than 1,000 hours. The person taking a checkride, who was qualified as a PIC [pilot-in-command], had about 450 hours. They were both good, honorable people serving their country and doing what they had signed up to do. But there were a lot of reasons they got set up for failure, and a lot of that had to do with the culture of the unit they were in."

Tim displayed an image of the Baltimore-Washington helicopter route chart showing Route 1 and 4, which PAT 25 was supposed to follow.

"One of the things that it says about Route 4 is [it's] along the east bank of the Potomac River. The NTSB pointed out that there's nowhere on this map that says how wide that route actually is. Are you on the route if you're on the east bank or if you're in the middle of the river? I don't know, but the way I learned it, you fly it with one wheel over land and one wheel over water. Apparently, that's not the standard that they maintain anymore. There are a lot of things that are still unknown."

The CRJ was cleared for the Mount Vernon visual, Tim said. "About the time they get to Wilson Bridge, they're asked if they can circle to land, Runway 33. My son was the pilot monitoring, because he answers the radio and says, 'We can do 33.' As they're coming, they're circling, doing 33. They're very close to on the proper glide path, and they're configuring, as best I can tell. They were doing everything right.



The Black Hawk was following Route 1 then Route 4, which intersects the Runway 33 approach.

"I don't have a complete transcript, just excerpts of what the NTSB told us that they said. For instance, I'm not for sure if they made their 500-foot stabilized call. They did hear an audio '500 feet' [from the avionics], and they were configured and ready to [land]. They did get a 'traffic, traffic,' I believe it was like 17 seconds before impact. And I don't know what the conversation in the cockpit was for that, but one second before impact, there's an expletive, which I believe is my son saying, 'Oh, fudge, the helicopter,' and the controls go to a full-scale deflection. I don't know if Jonathan [the captain] pulled the yoke back or if Sam did, because just the time amount that they had to try to survive that thing. But it was too little, too late. It didn't help."

PAT 25 had been following Route 1, then 4, starting at 1,300 feet at Cabin John and stepping down until the helicopter should have been at 200 feet at the Memorial Bridge.

"When they get to Key Bridge, you're supposed to be at 300 feet or below. Then there's a conversation in the cockpit where the instructor pilot says, 'We're at 400 feet,' and the pilot flying says, 'We're at 300 feet.' So, there's some kind of disagreement, and we still don't know exactly why, whether they had a different perception, or whether their altimeters were reading differently. In the Army, the altimeter error allowed is 70 feet. You could technically have a legal altimeter, and you could be reading 100 feet different. We don't know if that's the issue. The NTSB has said that the pressure altitude readings that were in the data are corrupted and not usable. They're trying to get to the bottom of that. We do know that the radar altimeter was working quite well.

"So, they have this conversation, but then they don't resolve it. And as they get to Memorial Bridge, the instructor says, 'We're at 300, we need to be at 200,' and the other pilot says, 'I'm getting down to 200.' About this time, they call Memorial Bridge, and the air traffic control tower gives them the traffic. They say, 'Your traffic is a CRJ, just south of Wilson Bridge, 1,200 feet, circling to land, 33.'

CYBER SECURITY IS ~~NOT~~ A TOP PRIORITY

Gogo leads the way in aviation cybersecurity with monitoring and protections built into every layer of our connectivity infrastructure

gogo

Thanks to low-earth orbit (LEO) satellite constellations, including that operated by Gogo Galileo partner Eutelsat OneWeb, broadband internet connection is today possible anywhere on Earth, just as it is in the air. A scientist working in Antarctica, an African farmer, and a business jet cruising at 50,000ft therefore share previously unimaginable connectivity possibilities.

They have something else in common too. Because they are connected, they are vulnerable to cyberattacks. Geographical isolation is no more a defense against cyberattack than altitude. Without a consistent, deliberate, and robust cybersecurity effort, the scientist, the farmer and the principal in the jet are just as vulnerable to cyberattack as a teenager using their phone to go online in a busy coffee shop. If the internet is visible to the aircraft, its data is visible to the internet.

Flight departments operating under the misapprehension that aircraft are safe from cyberattack because they connect at altitude should expect to suffer a cyberattack – it really is a case of when, not if. But what does a cyberattack mean? Inconvenience? A principal angry because their video call was compromised? Yes, and so much more too. In 2023 alone, eight billion data records were compromised globally. On average, almost four months elapsed before a data violation was noticed and each breach cost an average of around US$4.45 million, excluding the intangible cost of reputational damage. If the financial exposure of cyber events were an economy, it would be the third largest in the world.

Some breaches are never detected.

Meanwhile, Gogo's powerful cybersecurity blocks approximately 10,000 attempted malware attacks on customer assets every day. Those threats are constantly evolving and yet many flight departments, operators, and owners still don't believe a cyber event will affect them. Implementing cybersecurity really ought to be as routine as fastening your seatbelt for taxi and take-off.

The bad actors engaged in cyberattacks employ a variety of tools and techniques, ranging from relatively simple deception to high-tech AI. Their intention is to compromise IT systems, and access, steal, and otherwise manipulate critical data. Another notable development in the cyber security sphere is the increase in nation-state-sponsored cyberattacks. Carried out for espionage and to sabotage critical infrastructure, they can influence geo-political events.

Bad actors easily exploit a lack of cyber awareness through social engineering. This common strategy uses cheaply acquired online software to manipulate user behavior. Phishing is the most well-known social engi-

neering threat, using fraudulent emails to appropriate personal data and giving rise to clickbait scams, give-away frauds, and cloned accounts. A simple technique, it relies upon clever tactics and slick graphics to trick users into sharing valuable information.

UNDER ATTACK

Another commonly held cybersecurity misconception is that smartphones and tablets connected to the internet are less vulnerable to cyberattacks than laptops. This is not true. Phones, in fact, provide bad actors with a new information-gathering platform. In a technique known as Smishing, they use fake texts to extract data that can be collated and used for bad intent.

Vishing is another threat on the rise. It uses publicly available digital recordings, AI, and a little background research to generate convincing fraudulent phone messages in which voices and speech patterns are emulated.

At the same time, deep-fake scams are on the rise. In these, simple computer viruses and trojan horses have transformed into highly sophisticated ransomware, spyware, and advanced persistent threats (APTs), while malware is designed to disrupt operations and steal data and funds.

AI THREAT

It should come as no surprise that just as AI is creating new ways of sourcing information, resolving problems, and supporting commercial growth, bad actors are optimizing it for nefarious purposes. AI-driven Phishing, for example, is adding new capabilities and techniques to this well-known threat. Previously, detecting a fake email through grammatical mistakes or unnatural language was possible, but generative AI creates flawless and contextually relevant emails. Additionally, vocal forms now enable interactive deceptive conversations with chatbots posing as vendors or regulatory personnel, so good they are difficult to distinguish from regular callers.

AI can automatically collect and cross-reference data from flight logs with public profiles, industry databases, and other readily available sources, helping target attacks. Bad actors can also create Deepfake audio and video impersonations of key personnel – CEOs and directors of maintenance, for example – and use them to make fraudulent requests.

Automated AI can even launch efficient large-scale attacks against entire aviation organizations, create polymorphic malware that evades detection in aircraft systems and ground-based networks, and find and exploit weaknesses in flight management systems, communication networks, and ground infrastructure, as well as being used for password cracking.

Yet, with each new development comes an equal and opposite development in cybersecurity. AI can provide defense and is spawning new cyber management options. It can detect threats early and initiate rapid response and remedial action. Behavioral analytics can be used to identify anomalies in flight data and network traffic. AI generates powerful defense mechanisms when combined with human knowledge and expertise. The evolution of AI in cybersecurity reflects the constant cat-and-mouse game played between the good and bad actors.

PROACTIVE DEFENSE

Cyber awareness, vigilance, and education drive a good cyber strategy. Organizations and operators must actively educate their staff, suppliers, and passengers about how to reduce cyber events. They must recognize that the cyber landscape is dynamic and implementing and modifying appropriate technologies, policies, procedures, and controls to implement cyber-specific policies within standard operating procedures (SOP) is an effective way to mitigate risk.

Cybersecurity is being discussed across the aerospace industry, and guidelines are being created. IATA has prepared a useful cybersecurity resource exploring the risks and solutions for aviation. The FAA is issuing new mandates to encourage cyber awareness, plus regular security updates while implementing network security solutions for aviation, and the US National Institute of Standards and Technology (NIST) released version 2.0 of its Cybersecurity Framework in the summer of 2024. These updated guidelines provide a great template for aviation to follow and are worth reviewing by any operator or owner wanting to set up cybersecurity management protocols.

Gogo also offers constantly updated cyber awareness courses for aviation IT professionals, crew, and passengers, while its Aviation CyberThreat Awareness course is

designed specifically for business aviation professionals, owners, and operators. It navigates the complexities of security and cyberthreat prevention from an aviation perspective, identifies common risks, defines attack methodology, and describes current cybersecurity concerns within aviation. Modules relating to data protection during international travel are complemented by information on using personal devices before, during, and after a flight.

Three cybersecurity service levels are also available. The entry-level actively monitors threats by proactively observing live flight data behavior. Human experts work with AI and refined machine reading technology at Gogo's network operations center (NOC) to evaluate data transmission. If the system notes discrepancies, remedial activity follows.

The second-level Advanced Encryption service is purpose-built for business aviation, using Gogo router platforms and infrastructure to apply proprietary technology to create an optimized, secure, accelerated tunnel through which encrypted, anonymized data passes from the aircraft to the ground and back. The system effectively protects the entire aircraft network.

The third level creates a Private Network, transforming the aircraft cabin into a secure corporate workspace. The data never touches the public internet, effectively making the aircraft as safe as an office while also giving visibility into the network for threat monitoring.

Gogo's training teaches that personnel training, combined with simple, rigorously applied techniques, is key to cyber vigilance.

The single top recommendation is to always use passwords to protect cabin Wi-Fi. It is not uncommon for operators to leave cabin Wi-Fi unprotected to avoid inconveniencing passengers; it has even been known for principals to request that passwords are removed to reduce connection times. The financial and reputational ramifications significantly outweigh the inconvenience of entering a password.

Likewise, on the ground, external Wi-Fi should only be logged onto if access is via a password; using a virtual private network, VPN, for an encrypted connection when travelling provides another layer of security. Other basic but nonetheless vital precautions against cyberattacks include plugging devices into unfamiliar docking stations or never using a USB drive unless its origin and ownership are assured.

Even an organization taking every cybersecurity precaution must make an additional effort to more fully insulate itself against risk. Aviation operations involve a long and complex supply chain, including FBOs, MROs, ground services and multiple suppliers. It is dangerous to assume that others operate with similar levels of cyber awareness and data sharing with third-party suppliers should be minimized until their cyber protocols have been established.

Visit www.gogoair.com for further cyber security information.

"The transmission where they said circling to land is not on the cockpit voice recorder of the Black Hawk. It is on the CRJ. It is on the tower tapes. So, either the Black Hawk stepped on it, or for some reason, they didn't get the circle to land [transmission]. They did get the 33. [It was] very unfortunate they didn't call back and go, 'What again?'"

A STRANGE REQUEST

Lilley then raised an issue that has been the subject of much discussion in the safety community, which was PAT 25's request for visual separation.

"So [PAT 25] said, 'Traffic in sight, request visual separation.' I've been flying for 40 years, professionally. I have never once asked for visual separation. I don't know any other place it's ever done. But talking to all the guys that fly these routes now, that's their standard. As soon as they get told there's traffic, they ask for visual separation. Why did they learn to take that shortcut? It had become a cultural norm to take that shortcut, because if they didn't, they'd have to do what we used to do when we got to Hains Point. If somebody was on approach to 33, we either had to turn and go down Route 6, or we had to hold at Hains Point.

"As they pass Hains Point, the air traffic control tower is starting to get a traffic warning. You can hear it in the air traffic control tapes, that they call out to the Black Hawk, 'Confirm you have the CRJ in sight, pass behind the CRJ.' Again, the instructor pilot steps on that transmission [blocks the transmission by transmitting at the same time as another transmitter], and he doesn't hear all of that transmission. He doesn't hear, 'Pass behind the CRJ.' He doesn't ask for clarification. He says to the pilot who's taking the evaluation, 'They want us further to the east.'

"[The route is] supposed to be along the edge of the river. They were more like in the middle. ADS-B information from the CRJ plotted [it] as it actually was. It doesn't look like the edge of the river to me."

Tim questioned the Black Hawk crew's request for visual separation. "The radar altimeter on the Black Hawk at impact: 278 feet. We don't know for sure what the barometric altimeter said. We know the radar altimeter said 278 feet. Fourteen feet is the altitude of the airport, so we're talking pretty close. MSL [mean sea level] and radar altimeter are going to be pretty darn close to each other.

"The last five seconds, the Black Hawk is flying. They don't flinch. The instructor pilot says we need to be further to the east. They don't turn east. They just continue straight ahead."

Just before the collision, the Black Hawk instructor said the helicopter should be further east.

Discussing the likelihood that the pilots of PAT 25 were using night-vision goggles (NVG), Tim explained how he was trained to fly with the device. "One of the NVG 101 [training protocols] is to have your head out of the cockpit, constantly, scanning. Nobody was looking out that window...The Black Hawk crew made no evasive maneuver, so they could not have been looking out the window...

"When we talk about getting back to the basics, that is what we're talking about. You've got to look out the window when you're in a high-traffic area," he said. "Whatever they were looking at, I don't know."

The Black Hawk was 6.5 miles from the CRJ when PAT 25 asked for visual separation. With NVG, Tim explained, "All you're going to see of another aircraft—because they're at 200 feet in an area of lots and lots of man-made light—from six and a half miles away, is a light, and you're going to assume, is that my aircraft? You can't tell how far away it is, because an NVG limitation is your depth perception is gone. So you're seeing all these lights, you see one light, and are you going to make an assumption that's the one you're looking for? It's kind of a crazy idea, but again, it became the cultural norm.

"You also have a 40-degree field of view, so you need to be scanning. When they're told again, 'Confirm you have the aircraft in sight,' what do they do? They come back and say, 'Affirmative, request visual separation.' It was the way they had been programmed.

"They didn't have the aircraft in sight. There was an aircraft that had just taken off. They may have thought that's what they were looking for. There was another one on approach to [Runway] 1 that was pretty far out. You may think that's the guy that you're looking for."

INTOLERABLE RISK

He then pointed to a recurring issue with traffic proximity. "The NTSB took a three-year look back, and they called

it intolerable risk. We had at least one TCAS RA [resolution advisory] per month during that three-year look back, and in those TCAS RAs, two-thirds of them were at night, and most of them were between airplanes and helicopters. The helicopters were above the route, at least half of them.

"Eighty-five times in those three years, there was a lateral separation of less than 1,500 feet and less than 200 feet vertical. All this data was in ASIAS [the FAA's Aviation Safety Information Analysis and Sharing database]. They talk about aviation regulations being written in blood. Let's write aviation regulations in data, in analytics. Let's write it in a way where we can keep the accident from happening before it happens."

He summarized his experience flying these routes and how that has changed. "Asking for visual separation, I don't know how it became [standard]. The air traffic controllers became used to that and started letting them take that route. We know in 2018, there was a near miss there under almost the exact circumstances, except it was during the day. This became a training event for the air traffic controllers, but apparently nobody learned that maybe we should not put aircraft on Route 4 when somebody's on approach to 33.

"If the Black Hawk was exactly where it was supposed to be, it would be flying down Route 4. If the CRJ was exactly on glidepath to 33, there would be 75 feet between the 200-foot maximum [altitude for that route] and the glidepath. The tail rotor of the Black Hawk sticks up about 17 feet when you're in straight and level flight. That leaves us 58 feet of clearance. That's insane. The wake turbulence alone would cause a hazard. That's just unacceptable."

The risks of this kind of operation weren't mitigated properly, he explained. "I haven't been able to see the actual risk analysis. I've been told by several pilots and I've seen a whole bunch of experts [say], 'This was a low risk because of something we did every day.' Well, guess what? Just because it's something you do every day doesn't make it a low risk. You can't have it be super challenging and difficult and low risk at the same time. There was a bunch of risk mitigation that could have taken place that wasn't taking place."

> "'This was a low risk because of something we did every day.' Well, guess what? Just because it's something you do every day doesn't make it a low risk."

Tim recalled in the 1980s two Black Hawks collided. "The outcome of that safety investigation said, 'We need to have four crew members on a Black Hawk every time it flies NVGs.' But only three were on that aircraft. Now they tell me, NVG visual acuity has increased dramatically since then. But they're still 40 degrees [field of view]. We knew we could mitigate risk by putting an extra guy. We didn't do it."

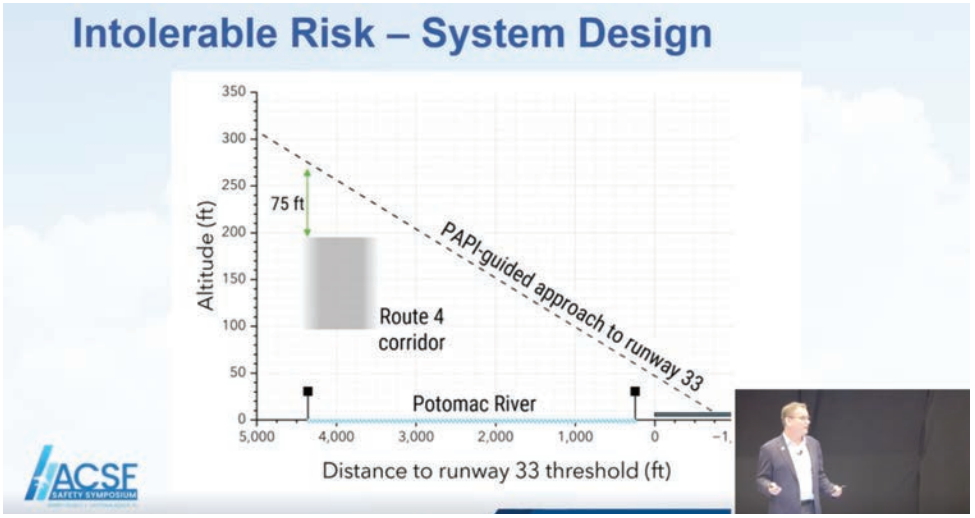
Another factor in this accident may be that the Black Hawk's ADS-B Out was switched off. "Come to find out they weren't using ADS-B Out at all in Class B airspace," he said. "The NTSB checked some of the aircraft. Some of them didn't even work. The ADS-B Out didn't even work on that particular aircraft that was flying that day; [it] hadn't transmitted in 700 days.

"When the FAA gave the Department of Defense the waiver to fly in Class B without the ADS-B Out operating, the waiver said this would not be used as an everyday waiver. This is going to be an exception, not the rule, but the Department of Defense decided that wasn't good enough. They almost never used ADS-B. I talked to a lot of Black Hawk pilots in the last two months. About half of them couldn't even tell me how to turn ADS-B on."

Further, the pilots were not wearing the head-up display (HUD), Tim added, noting that with the HUD, "They don't have to scan inside as much. They had the HUD available and didn't wear it."

The mission could have been flown at a time when traffic flow at DCA was much lower, he pointed out. "If they went late enough, there would have been no traffic at all."

He emphasized that risk mitigations were not taken. "They were above the route altitude. They didn't scan. They had communication failures. The [instructor



Tim Lilley can't understand how Route 4 was allowed to be so close to the Runway 33 glidepath.

WORLD FUEL
TRIP SUPPORT

YOUR TRIP HINGES ON TIMELY COMMUNICATION.

When things are smooth, communication matters, and when they aren't, it becomes crucial. For more than 25 years, our unwavering commitment to providing customers with reliable and timely information has set World Fuel Trip Support apart.

Trust your mission to a team
that knows what's ahead.

GO CONFIDENT.

aviation.wfscorp.com

pilot], he knew that they weren't on altitude because he said so. He knew that they weren't on the route where they should have been because he said so. But he didn't intervene.

"We had been lucky so many times flying those routes. We had accepted risk and normalized [it]. It said dangerous acts are okay."

Regarding the air traffic controller communications, he raised the issues of stepped-on transmissions and that the lone controller in the DCA tower was monitoring two frequencies. "It would be great to go to one frequency, because the CRJ never hears the Black Hawk's transmissions," he said. "They hear the tower talking to the Black Hawk, but not the Black Hawk talking to the tower. The air traffic controller never tells the CRJ about the Black Hawk, and they only learn it by hearing the 'traffic, traffic' [callout] and then seeing it [at] the last second.

"Now they could hear half of the transmission, so they had an idea there was somebody out there somewhere, but they didn't have any idea where. Of course, the air traffic controller could have deconflicted that traffic when they were getting the traffic alert, and all they said was, 'Confirm you have the CRJ in sight.'

"The air traffic controller may not even have been trained to understand that when you're looking through NVGs and you're trying to look for traffic, you're not going to know if it's a CRJ or if it's a King Air, because all you see is a light moving around in the sky. [The Black Hawk pilots] obviously didn't see the CRJ at all. They were looking at something else."

CHANGE THE ARMY?

Tim said he was not sure how to initiate change in the Army. "How are we going to fix this stuff? I can't just let my son's death be an oopsie. His legacy has to be that we're going to try to change some things."

He met with Transportation Secretary Sean Duffy. "He's trying hard to help us. The very next day, he got on TV and laid out his plan to modernize [ATC] and to increase ATC staffing. We talked a lot about daily data analysis, and the FAA is now working on a program where AI is going to find these hot spots before they become death spots. We're going to figure out where that next accident is going to happen and avoid it from happening."

The DOT also updated the routes, Tim noted. "Route 4 is all but closed now; it can only be flown by air ambulance and it can be flown by law enforcement, but they're going to shut down landing [on Runway] 33 and departures from [Runway] 15 during that time."

As for the FAA, he added, "The FAA's position has been, 'We know we screwed up. We know we can do better, and this is how we're going to do better.' One of the things the families asked for was a review of the tower at DCA. I mean, there's been fist fights there. The staffing levels have been difficult," Tim said. "There's a lot of issues with DCA, but the FAA is working hard to actually fix them."

However, he added: "The Army, on the other hand, not so much. The Army's idea has been delay, defer, deny. They haven't made any commitment to change anything they've done wrong. They won't admit they did anything wrong. The only thing I've got them to commit to is some training."

[Brigadier] General [Matthew] Braman testified before Congress that every commander is held responsible for the risk decisions that they make, he reminded. "I don't find that to be true. Nobody's been held accountable in the Army yet, but we're trying to fix that."

The number of senior aviators has decreased dramatically, he said. "It's like having your teenager teach your other teenager how to drive. They might figure it out, but they just don't have that deep knowledge to be able to pass it on.

"The Army has decreased their standards. Because they just can't keep enough aviators, they're willing to put people through flight school and graduate those who just can't do the job."

He stressed that "I've made a lot of mistakes" and that he's not pointing the finger at those who made them. "I'm just saying on this night, all those mistakes lined up, and it caused a catastrophic accident. It never had to happen. I heard that there was a white paper written years ago describing this exact scenario. Nothing was done about it."

The Defense Department's safety reporting systems are not compatible with the FAA's, he pointed out. "If that data could combine, then everybody will have the same information. We've got to be able to communicate between the civilian and the military side."

Meanwhile, efforts have been made to ask for help from Congress. "They're going to need a lot of money...to upgrade the air traffic control system. I think it's super important. I don't know if that would have kept this accident from happening, but it's going to keep the next one, hopefully, from happening. We are literally working with Flintstones technology when [we need] the Jetsons age."

He left Air Charter Safety Foundation Summit attendees with a few thoughts: "Safety is not proprietary. Everybody in here and all of our competitors, we all need each other to step up and be safe, but we also need to pass this information to everybody else."

Further, pointing to emergency action plans, he said, "No matter what size operator you are, you've got to plan for the very worst thing to happen. No matter how safe we are, an accident is going to happen. When it does happen, it is so important that you have a plan, that you protect the lives that can be protected. You take the lessons learned from that accident, and you push them out just as fast as you can.

"The NTSB is going to take probably at least a year before we get the final thing on this accident. However, there's stuff that we know right now. Let's fix what we know right now."

Dubai Airshow

17 - 21 November 2025
DWC, Dubai Airshow Site

Be where business aviation **accelerates**

With a dedicated focus, high-level buyers, and decision-makers in attendance, this is your space to stand out, build connections, and drive growth in a booming region.

www.dubaiairshow.aero
#DubaiAirshow

Book your space

Strategic partners

مطارات دبي DUBAIRPORTS Connecting the World

هيئة دبي للطيران المدني Dubai Civil Aviation Authority

United Arab Emirates Ministry of Defence

DAEP

وكالة الإمارات للفضاء UAE SPACE AGENCY

Supporting partners

dans دبي لخدمات الملاحة الجوية DUBAI AIR NAVIGATION SERVICES

شرطة دبي DUBAI POLICE

Aljundi الجندي

United Arab Emirates Ministry of Interior
Gen. Command of Civil Defense
Directorate Gen. of Dubai Civil Defense

Emirates

nation shield

Business aviation asserts role in European recovery

BY CHARLES ALCOCK

DAVID MCINTOSH

EBACE 2025's Association Village brought together various groups to counter discriminatory practices by EU leaders.

@ EBACE 2025

The unfolding crisis for Europe's stagnating economies present an opportunity for business aviation to recast itself as part of the solution rather than part of perceived problems. EBAA takes some encouragement from politicians who now appear more focused on how they can reverse the continent's decline in the face of hostility from the new U.S. administration and political fragmentation among its member states.

However, EBAA officials see European Union (EU) leaders somewhat paralyzed by political polarization and failing to take strategic decisions at a time when they are urgently needed. This in turn blocks paths to progress on issues critical to business aviation, such impractical restrictions on tankering fuel and reversing onerous taxes such as those recently imposed on charter flight passengers in France.

"We have European Commissioners focusing on the question of what needs to be done to bring Europe back on track and competitive, but too many people in the administration are stuck in the old times, and so the commission is only making baby steps with the changes," EBAA secretary general Holger Krahmer told **AIN** on the eve of EBACE 2025.

For EBAA, the key to unlock progress is increasingly based on a more ground-up approach to lobbying. It is urging its member companies to engage more directly with national governments over issues that directly impact them.

"Our members face a lot of very specific challenges because there are still a lot of irrational decisions being taken," Krahmer explained. "Our message is not just to complain. We need to organize ourselves and apply more resources at a national and international level. We have to do more than some other groups because we're not seen as a priority and it is easy [for decision makers] to exclude us."

NATIONAL ASSOCIATIONS LEAD GRASSROOTS CAMPAIGNS

This grassroots approach inspired EBAA to add the Association Village as a part of the new format for EBACE. It brought together the growing number of national associations from countries including France, Germany, Austria, Ireland, the Netherlands, Italy, Malta, Spain and the UK. IBAC was also part of this cluster, along with Women in Corporate Aviation and The Air Charter Association.

The group's chief operating officer, Robert Balthus, cited the threat of reduced business aircraft access to Dublin Airport in the wake of a proposed reduction in the maximum number of passengers using the main terminal each year as a prime example of how local lobbying can be the most effective approach.

"This threatened to impact non-scheduled flights, like ours, and so we were to be punished for [restrictions on] a building we're not even using," he told **AIN**. The Irish Business Aviation Association successfully led efforts to get the government to rethink its plans, with letters highlighting the economic impact on major events being hosted by Ireland such as the next Ryder Cup golf tournament.

The imperative for EBAA member companies to remain alert to new threats to their operations and business models has become all too clear from the impact of France's new "solidarity tax" which has increased passenger tariffs by up to 300%. The tax was imposed from March 1 and with very little warning to a charter sector that now views it as an existential threat.

"Even the French companies don't fully understand how the tax works, and it has nothing to do with [funding] sustainability," Balthus said. "The way it is being applied means they could come after other operators [from outside France]."

EBAA is now trying to mitigate the disruptive impact of EASA's new Part IS digital security regulations on business aviation. As is so often the case in Europe, the rules were formulated with large airlines in mind and do not align well with all aspects of non-scheduled operations.

ANTI-TANKERING POLICY IS ANTI-BUSINESS AVIATION

Fast forward to 2025, and EBAA is fighting another rearguard action to try to amend the disruption caused by the European Union's rules intended to block the tankering of fuel for flights in and out of airports in its jurisdiction. EASA and the European Commission only consulted with two industry associations when drafting the rules, completely excluding business aviation.

"It's completely bonkers, but we're stuck with the anti-tankering rules for at least another year, and we need to be sure we can get this regulation back to what it was intended for," Balthus concluded.

The Brussels-based group is telling its members that more resources will be needed for this more complex role, which was reflected in the topics covered by the EBACE show conference program. Part of the financial commitment is covering the ongoing joint case being contested in the European Court of Justice by EBAA and Dassault Aviation to challenge the European Commission's refusal to include business aviation in the EU Taxonomy policy that is an enabler of investment in environmental sustainability.

The court is still gathering legal arguments, with EBAA pressing for a public hearing that Krahmer said could shine a light on what the group views as discrimination. A ruling is expected later this year.

FRENCH BIZAV GROUP PRESSES FOR REVERSAL OF CHARTER TAX

French business aviation leaders are pressing their government for a U-turn to reverse high passenger duties imposed on private charter flights in March. According to Charles Aguettant, president of EBAA-France, France's Prime Minister François Bayrou has acknowledged the so-called "solidarity tax" was ill-conceived, sparking hope that the industry group can persuade the administration to accept alternative proposals.

France's burdensome tax on charter passengers was the subject of an EBACE panel session.

With France's government needing to close a €40 billion deficit in its 2026 budget, whether the administration will reverse its policy of targeting wealthy travelers remains to be seen. However, during the EBACE show in Geneva, Aguettant told **AIN** that complexities around requirements for operators flying from French airports to collect the duty have resulted in a fiscal yield of just €5 million to €10 million—well short of the planned €100 million to be raised—but costing operators customers deterred by the bloated costs of charter flights.

France's 2026 budget is due to be settled in September or October, and EBAA-France aims to hold direct talks with senior government figures by then. The group has already lobbied the departments of economy, budget, and transportation.

The news from France was part of an update provided during an EBACE 2025 conference session on taxation challenges facing business aviation. This included details of luxury taxes being applied in Spain and Italy. **C.A.**

New leadership looks to reinvigorate AfBAA

BY KERRY LYNCH

@ EBACE 2025

Under new leadership, the African Business Aviation Association (AfBAA) is taking on a busy agenda to expand its reach throughout Africa and more formally structure the organization.

AfBAA confirmed Krimson Aviation founder, chairman, and CEO Dawit Lemma as the chair of the organization and Craig Middleton as vice chair, following the departure of Bestfly co-founder and executive director Alcinda Pereira on May 1. Also, the association outlined plans to renew AfBAA's mission, vision, and goals as it seeks to work with 40 different civil aviation authorities across the continent and represent a range of aviation operations and diverse membership and their needs.

"We know our members rely on us to lobby on their behalf, identify common issues that need resolving, and act as a single voice with regulators, industry, and international organizations, so identifying the main concerns and creating a strategy to resolve them is at the top of our list," the association said.

Lemma, who has been involved with AfBAA since its inception in 2012, told **AIN** that his plans aren't necessarily to reinvent the wheel—several initiatives had previously been in the works—but to reenergize the association. "I'm grateful that the blueprint was already set previously, and now it's a matter of just refining and optimizing," he said.

These efforts come as the association strives to rebound after Covid. Membership had fallen from roughly 150 before the pandemic to 50 now, as many smaller companies went out of business or struggled financially, Lemma noted.

"We had all the big names, everybody who was anybody. However, there were not many Africans. That's something I'd like to change. I'd like to see more Africans." It came down to the fact that it was cost-prohibitive for struggling companies.

DAVID MCINTOSH

> "I can genuinely say that this is one of the greatest privileges of my entire career because now I'm at the helm of the [AfBAA]."
>
> — Dawit Lemma
> Krimson Aviation founder, chairman, and CEO; chair of AfBAA

"You have to realize that a membership fee can be a person's salary, so you have to have context and structure the membership fees and everything else, such as attending a conference, so that the cost is relevant."

According to Lemma, one of the key initial steps under the new leadership is creating a governance committee that will be run by a professional secretariat and define essential processes for a streamlined environmental, social, and government policy. He said the organization at one point had a secretariat, but that was something that had fallen by the wayside.

"We never had a governance committee, I think it's something that you need," Lemma said. "It's not just about your bylaws and your governing documents, but it's about being responsible socially, environmentally, and having a real purpose—who we are, what we are accomplishing, and why we are accomplishing it. Integrity is one of the key elements of governance."

The board also plans to reach out to members to establish what they want to

NBAA|BACE®

OCTOBER 14-16, 2025 · LAS VEGAS, NV

LEARN MORE

nbaa.org/2025

focus on and is building on its existing committees, bringing back dormant ones, and creating new ones. These committees will focus on areas such as training, safety management, workforce, operations, and infrastructure improvement.

RAISING AFBAA'S PROFILE

In addition, AfBAA is planning to step up marketing and communications activity locally, nationally, and internationally. "AfBAA has been relatively quiet on this front, and we want to build momentum again by raising the profile, adding new AfBAA events, and showcasing the benefits of doing business with African aviation companies," Middleton said.

AfBAA is introducing North, South, East, and West chapters to enable members to have closer ties with the association as it looks to strengthen communications with its membership and draw in new members. "We are a huge continent, and with these cardinal chapters, we can learn, share, and evolve business aviation together as we meet these differing regions' needs," he added.

This was a concept previously launched in the 2016 and 2017 timeframe, starting in Ethiopia, which had its own events and membership. But because the association can't have 54 chapters, Lemma said he believes regional chapters may be more effective.

"Each region has its own nuances. It's difficult to be representative for the whole continent if you don't have a regional context and regional representation," he said. "You tend to find that issues the Kenyans have with their civil aviation authorities are very similar to the issues that Tanzanians have. There's that cultural context, and I think that will allow us to be relevant in the regions but also help grow our membership."

Lemma is hoping to capitalize on his own multicultural background to expand the organization globally. Born in Ethiopia, he grew up in Zambia and Geneva, and was educated in the U.S.

A licensed pilot and mechanic with multiple international ratings, he returned to Ethiopia more than a dozen years ago to boost business aviation representation in Africa. "I felt that Africa needed more experience in business aviation," he said. "Outside of South Africa, Northern Africa, and Nigeria, it's very unknown. Ethiopia is the prime example with a well-recognized global airline, but with no idea of what business aviation was."

Lemma had already been affiliated with AfBAA but formally joined upon his return to the continent. As he became more involved, he became responsible for events and membership, and eventually as an honorary member and then a full member of the AfBAA board of directors. He noted how he enjoyed remaining active in the association rather than just attending meetings.

A GLOBAL VOICE

Lemma also became proactive and reached out to international organizations such as the International Business Aviation Council to provide AfBAA with a greater global voice. This is an area he plans to build on, he told **AIN**. But importantly, he believes this experience, coupled with his knowledge of Africa, helped prepare him for the role of chairman.

"Africa is not one country. It's 54 countries. It's a lot to manage in terms of different cultures, different languages, so I think that perspective helps. But I also really want AFBAA to engage with the rest of the world...to have a relationship with other associations such as the EBAAs, the NBAAs, and the MEBAAs," he said.

"I can genuinely say that this is one of the greatest privileges of my entire career because now I'm at the helm of the [AfBAA]. I get to help guide, lead, and actually be part of the story. Moving forward with purpose, integrity, and ambition are things that I want to be able to instill."

EBACE NUMBERS QUICK TAKE

Since its partnership ended with NBAA last year, EBAA went it alone in the most recent EBACE, which ran May 20-22 in Geneva. Here a few metrics of EBAA's solo event.

2 While there was not a static display this year, there were two vendors that brought aircraft to display at their stands—Leonardo brought an example of the AW109 Trekker and Swiss start-up SmartFlyer brought its hybrid-electric SF-1.

180 The exhibition attracted about 180 companies and organizations, including Tier 1 suppliers such as engine makers and a range of other service providers displaying their wares. Most aircraft manufacturers opted out of this year's event, however.

39 The EBACE convention floor hosted three stages that simultaneously hosted leaders across industry who delved into a range of topics. Almost 40 such sessions were held.

8 The number of cities that EBAA was believed to have been considering for the 2026 edition of EBACE. During EBACE, EBAA said it would announce the location on June 30. An informal **AIN** poll of potential locations—London, Paris, Geneva, Barcelona, Milan, Frankfurt, Vienna, and Dublin—found most favored Paris and Barcelona, with Milan next in line.

Corporate Angel Network (CAN) provides cancer patients free seats on jet and turboprop business aircraft to treatment throughout the United States.

Thanks to the generous support of our partners, CAN has coordinated more than 69,000 patient flights. Can you spare an empty seat or donate to our mission? The space you fill may well be in your heart.

CAN

Cancer Patients Fly Free.

107 Mill Plain Road, Suite 204 | Danbury, CT 06811 | (914) 328-1313 | corpangelnetwork.org

Special Report

2025 completions market reflects a new generation

BY SARAH ROSE

When VIP Completions president Ben Shirazi picks up the phone, he's in good spirits. "It's been a minute," he said with a laugh. "But everything is great, thank God."

His packed schedule isn't surprising. Demand for private jet completions is booming, fueled by a younger, tech-savvy class of owners who want their aircraft to reflect their modern lifestyles and tastes.

Veta Traxler, director of completions at West Star Aviation, sees this generational shift as a defining trend reshaping the industry from the ground up.

"There are definitely younger and younger owners coming into the market," Traxler confirmed. "Mostly from the tech business sector—people selling companies and becoming wealthy much sooner than before."

VIP Completions

This rapid wealth accumulation has compressed what used to be a gradual progression of aircraft ownership. Instead of starting with small jets and moving up to larger ones, many of these new owners jump straight into large, complex airframes.

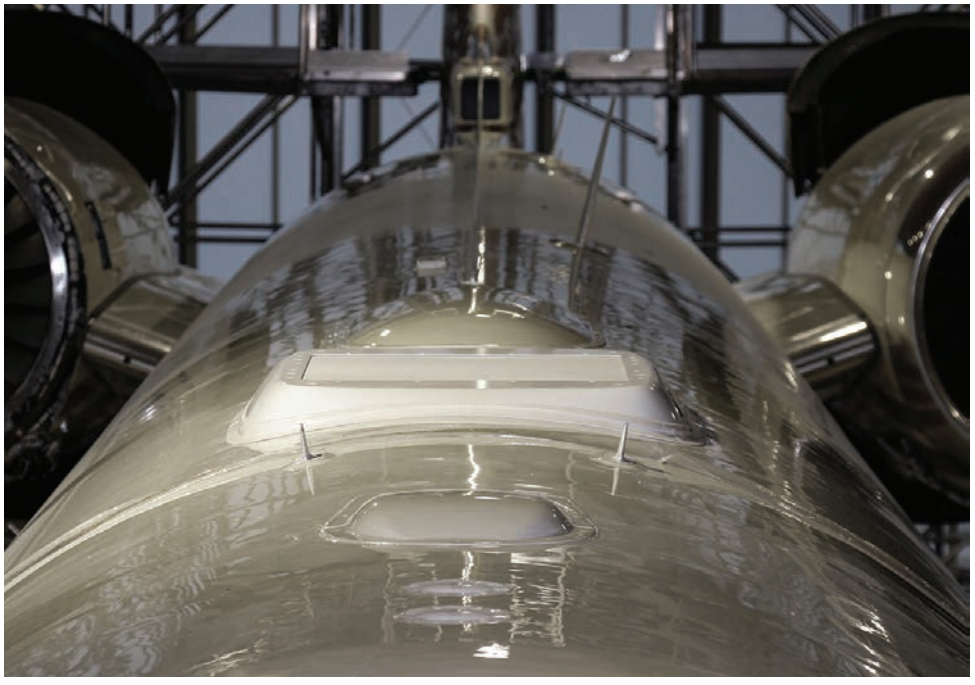
Shirazi said he is seeing the same pattern among those entering the business aviation market. "It's more and more private entrepreneurs and families than corporations now," he explained. "It's always been our niche, but it's even more pronounced."

This shift means completions companies are increasingly catering to individuals who view their aircraft as personalized extensions of their lifestyle rather than purely business tools.

The change in ownership demographics brings new preferences and priorities. For one, the younger generation demands connectivity and entertainment options that mirror their digital lives. "Almost every client now wants Starlink," Shirazi said, referring to the satellite internet service made famous by entrepreneur Elon Musk. "Even if they have the last best version, they want this newer option—it's much faster and more usable."

The pressure is on competitors like Gogo and Viasat to match Starlink's performance. "They're trying to undercut Starlink on price," Shirazi noted, "but at the end of the day, it's going to cost about the same—and it won't be as fast."

> "Almost every client now wants Starlink. Even if they have the last best version, they want this newer option—it's much faster and more usable."
>
> — Ben Shirazi
> VIP Completions president



Demand for fast and reliable airborne connectivity has led to a major move to Starlink terminals, with dealers reporting big backlogs for installations such as on this AMAC Aerospace project.

VIP Completions has already retrofitted a range of legacy airframes with Starlink airborne connectiviety, and more installations are already in the pipeline for its customers.

Traxler echoes this enthusiasm for Starlink. "People want reliable, fast internet," she said. "They're already streaming Netflix, Amazon, and other platforms on board. It's not about just watching movies anymore—it's about staying connected like they would at home or on their yacht."

AMAC Aerospace recently boasted working on five Boeing 747s at one time at its Switzerland headquarters in Basel, projects that included Starlink upgrades on a few of them.

This shift toward streaming and digital content has rendered many traditional onboard systems obsolete. "All those antiquated DVD libraries and conference room setups are usually removed during a full completion," Shirazi explained. "We layer in Apple TV with a media server or streaming capability. As Starlink gets more popular, the onboard entertainment experience becomes seamless and customized."

At the systems level, integration has become a dominant theme. Cabin management systems (CMS) are now expected to tie everything together—lighting, entertainment, climate, and communications—all controlled via intuitive interfaces on smartphones and tablets. These interfaces often mimic those found in smart homes, further reducing the learning curve for tech-savvy owners and their guests.

Traxler pointed out that this means the focus has shifted away from large screens and shared viewing experiences toward individual, high-quality audio and connectivity on their smart devices. "People aren't watching the same thing anymore," she said. "They're on their tablets, headphones in. But music is still a shared experience, so audio systems and speakers have become a top priority."

Indeed, the in-flight sound system has emerged as a key feature, replacing bulky

West Star sees a move away from stark whites, blacks, and grays toward warmer earth tones as demonstrated by this Bombardier Global Express.

screens and antiquated entertainment racks. Owners want crisp, immersive audio that complements their digital devices and streaming subscriptions. "The sound system is usually at the top of the list after Starlink," Traxler confirmed.

Beyond technology, the design language of completions is also evolving to match new tastes. Shirazi described the new look as akin to an "Apple Store vibe"—bright, airy interiors with natural materials and clean, matte finishes. "We're seeing more matte-finished woods, natural stone sinks, and bright color palettes that make the cabins feel open and inviting."

A recent VIP Completions project, a Falcon 7X designed in collaboration with the architectural firm ARRCC, exemplifies this trend. "It was one of the most beautiful aircraft we've delivered," Shirazi said. "Very modern, with an amazing LED ceiling panel we'd never done before." The client, who had worked with ARRCC on their ultra-luxury South Florida home, wanted that same seamless design experience extended to their aircraft.

For West Star, such moves come with caveats. "In the past, we worked with RH—formerly Restoration Hardware—on an aircraft," Traxler said. "A lot of the materials and design choices were pulled from their catalog. But with FAA certifications, there's only so much flexibility. You can't really deviate from engineered seat designs, for example."

Traxler noted that natural materials and textures are in vogue, but she noted a subtle departure from previous trends. "You see a move away from stark whites, blacks, and grays toward warmer earth tones—beiges, warmer grays, patina metals, and cork accents," she said. For example, in one recent Bombardier Global 5000 project, West Star incorporated cork bulkheads and tabletops, lending a tactile, organic feel to the cabin.

Both completions experts observe a move away from the rigid, squared-off architectural forms and ultra-minimalist interiors popular in the past decade. "Curved forms are trending for 2025," Traxler explained. "You're seeing quilted patterns evolve into more fluid, curved shapes rather than sharp diamonds. Textured walls and layered materials are popular, adding depth and movement."

This layering and complexity is a shift from the minimalistic ethos that dominated in recent years. Instead of sleek surfaces and clean lines alone, designers are incorporating patterns, tactile materials, and warm tones to create inviting, lived-in spaces that still feel contemporary to the owners.

So, are those 1990s-style wood-grain countertops gone for good, never to be heard from again?

Traxler laughed. "I'd never say never. Trends come back around eventually—the '90s are back in fashion, after all—but for now, wood grain countertops are rare. You're more likely to see stone or synthetic wood flooring, which combines durability with a modern look."

She pointed to warm neutrals and earthy tones overtaking the once-dominant black, white, and gray interiors. "The dark, cool palettes are out. It's more about warmer grays, beiges—colors that mimic what you'd find in nature."

This advisory role a completions firm takes—part design guide, part project manager, part educator—is now central to the completions process. For first-time aircraft owners in particular, the sheer number of decisions required can be overwhelming. From layout configuration to material

selection, from connectivity options to certification requirements, each choice has long-term implications for usability, safety, and resale value.To navigate this, completion teams have become deeply consultative. Many now offer 3D renderings and even virtual walkthroughs to help clients visualize every element before physical work begins. This digital-first approach not only accelerates decision-making but also allows for early refinements that can save significant time and cost later in the process.

AMAC Aerospace has met this rise in demand by growing its facilities, including expanding its engineering building in Basel, upgrading its design studio, and acquiring next-generation firms like Kreative Engineering Services.

At the heart of this is understanding the customer's needs, expectations, and lifestyle, AMAC Aerospace said. This includes working with customers to strike the right mood with the color palette and fabric choices. The Kreative Engineering Services acquisition will help AMAC Aerospace provide an expanded level of customization, as it offers end-to-end services.

AMAC Aerospace's design team provides an end-to-end, holistic approach to completions .

AMAC's expertise in large aircraft conversions offers enormous flexibility for interior layouts.

"Many of these younger clients are new to aviation, so part of our role is guiding them through regulations, materials, and design possibilities while respecting safety standards," West Star's Traxler said.

Though sustainability isn't yet a top demand across the board, it's becoming more common to see recycled or eco-conscious materials woven into cabin designs, particularly in carpets, upholstery, and surface laminates. This shift is less about overt eco-branding and more about aligning with broader lifestyle values among younger owners.

Many completions firms are proactively sourcing sustainable materials and offering them as part of their standard catalog, even when clients don't ask for them directly.

However, both Shirazi and Traxler acknowledge that the conversation around sustainability hasn't radically changed client demands yet. Shirazi noted, "Clients are conscious about sustainability, but they're not insisting on leather alternatives or green-certified fabrics. They're opting for minimalist designs and trusting vendors to follow best practices."

Shirazi shared that one of the most exciting projects this year is a Gulfstream G550 with several firsts for VIP Completions, including a starlight-style ceiling and ultra-leather window panels in two tones. "Normally, you want window panels to disappear, but here we're accenting them. It sounds counterintuitive, but it actually brightens the space and makes it unique."

He also recalled their most challenging project—a highly customized Boeing 767 for a celebrity client. "It's the most extensive completion we've ever tackled," Shirazi added, though he won't name the client. "There were really detailed upgrades and finishes. It's a different level of complexity."

Traxler's team is wrapping up a Global 5000 with a gray camouflage exterior and mint green accents, paired with interiors

VIP Completions used light colors and subtle details to outfit this Falcon 7X with the most modern interior aesthetics.

that showcase curved forms, natural textures, and layered materials. "It's a new-age look," she says. "We're incorporating matte wood finishes, cork bulkheads, and more warm, earthy tones."

Both leaders agree that the industry is in the midst of a significant transformation, driven by generational change, technological leaps, and evolving aesthetics.

This move toward personalization, comfort, and understated richness reflects a broader evolution in business aviation's clientele. "It's not just these big corporations buying jets anymore," said Shirazi. "It's people in their 30s and 40s."

And with that generational shift comes new assumptions. Shirazi summarized the current mindset: "Why should my airplane not have the same comforts I have on my yacht or in my house?"

It's a question that's increasingly driving the industry and reshaping everything from the placement of leather seams to adding Apple TVs. As designers, completions centers, and owners push the limits of what a private aircraft can feel like, one thing is clear: the sky is no longer the limit. It's the new living room.

The private aviation landscape is undergoing a quiet but powerful revolution, one driven not just by wealth, but by mindset. For a new generation of owners, the aircraft is more than a means of transport. It's an extension of self, a canvas for personal expression, and a space that must deliver on the promise of comfort, technology, and individuality at 40,000 feet.

What once may have been a straightforward process—pick a configuration, choose a finish, install the essentials—has transformed into a deeply collaborative endeavor. Aircraft completions are now about storytelling: about reflecting a client's life, values, and vision in every seam, switch, and silhouette. Owners are no longer content with off-the-shelf options. They expect the same degree of customization, control, and design excellence that they demand in their homes, yachts, and digital ecosystems.

"The younger owners aren't just buying an airplane—they're buying an experience that aligns with their lifestyle," Shirazi said. "They want the same comforts they have at home, just in the air."

This expectation is driving innovation across the board. Technology is being integrated more seamlessly, with cabin systems evolving to meet the standards of modern smart living.

Materials are sourced with greater care, balancing durability, regulatory compliance, and aesthetic appeal. Layouts are reconsidered to accommodate personal rituals—whether that's meditating, conducting business, or watching a film in total immersion.

And with each project, completions teams are not only crafting interiors but also shaping experiences. They're balancing the visionary with the practical, the artistic with the engineered. They are stewards of both style and safety, creating flying environments that feel at once intuitive and extraordinary.

In that sense, the aircraft cabin is no longer a static, utilitarian space. For those leading the completions industry, the goal isn't just to deliver an airplane, it's to deliver a seamless extension of the owner's life, values, and imagination.But perhaps the biggest shift is already here: a complete reimagining of what aircraft interiors can be—and who they're for.

"It's not just the CEO anymore," Shirazi said. "It's the 35-year-old founder. The couple who travels between homes. Whoever wants their plane to feel like a sanctuary."

In the evolving world of business aviation, the journey has become just as meaningful as the destination. For a new generation of jet-setters, that journey begins the moment the cabin door closes and their world, perfectly tailored, lifts off.

HondaJet Pilots Association presents runway excursion solution

BY MATT THURBER

This HondaJet ended up in Coos Bay, Oregon, after a runway excursion at North Bend's Southwest Oregon Regional Airport.

The HondaJet Owners & Pilots Association (HJOPA) has released a video and developed a training program that outline the correct landing technique for the HA-420 HondaJet. A spate of recent and past HondaJet runway excursions has raised concerns in the business aviation community, and HJOPA chair of safety and board member David DeCurtis is leading the effort to make sure HondaJet pilots understand precisely how to prevent them.

According to **AIN** research, there have been 21 HondaJet runway excursions, including nine since publication of **AIN**'s comparison of excursions between aircraft types on Sept. 1, 2023. The latest took place at Chubu Centrair International Airport (RJGG) in Japan on April 13.

The new HJOPA Proficient Pilot Program (P3) is multi-pronged, according to DeCurtis. It consists of a video showing why it's important to use the correct technique when landing a HondaJet and how to do it, a mentorship component, and data gathering using AirSync hardware to capture flight data that is then uploaded to ForeFlight's CloudAhoy flight debriefing software for post-flight analysis. The CloudAhoy analysis is available for individual pilots and also as de-identified data for trend analysis across the AirSync-equipped HondaJet fleet.

HJOPA, Honda Aircraft, and HondaJet training provider FlightSafety International worked together to produce the video, according to DeCurtis. "[Honda Aircraft] has been very supportive of our efforts... and we're quite thankful to FlightSafety as well. Honda Aircraft, especially their test pilot team, worked hand in hand with us to make sure the video was completely congruent with the flight manual."

While learning to fly in Cessna 172s with traditional avionics and instruments, DeCurtis bought his first airplane, a new Cirrus SR22 with an Avidyne glass cockpit. He added the instrument rating in the SR22 and spent 150 hours flying with an instructor to reach a high level of proficiency. For 13 years, DeCurtis flew Cirruses, eventually owning an SR22 G6 with the latest Garmin avionics before buying his first HondaJet. He is now on his third HondaJet, the latest model Elite II.

"I took a similar approach in my HondaJet training," he said, "which I immersed [myself] in." He flew 100 hours in his jet with Tim Frazier, a Honda Aircraft mentor and, as a company demo pilot and flight operations manager, one of the most experienced HondaJet pilots in the world. They flew those 100 hours before DeCurtis went to FlightSafety's training center at Honda Aircraft's Greensboro, North Carolina headquarters campus for his type rating course. "I had no trouble with it. I was very well prepared," he said.

As it turned out, DeCurtis sat next to an older pilot who had logged 40,000 hours, mostly flying for airlines. "He was a wonderful gentleman," DeCurtis recalled, "very kind and generous in his sharing of his vast aviation knowledge and wisdom."

AIN Media Group

AIN's Annual 2026 FBO Survey

MAKE YOUR VOICE HEARD

Aircraft operators and other FBO users can rate airport service providers they frequent worldwide in five categories—line service, passenger amenities, pilot amenities, facilities, and CSRs—as well as give a shout out to facility staffers who went above and beyond in providing great service.

The results will be announced at AIN's 2nd Annual FBO Awards Dinner & Gala on March 26, 2026, and will appear in the April 2026 issue of of **Aviation International News**.

FBO Survey respondents will be entered to **win a $250 gift card.**

For more information on AIN's FBO Awards Dinner & Gala visit **AINFBOAwards.com**

To access the survey and record your votes, visit: FBOSurvey.com

While DeCurtis soaked up as much knowledge as he could from his new friend, he also helped the older pilot learn how to use the unfamiliar Garmin G3000 avionics, which at this point DeCurtis was intimately familiar with. "Not only was I familiar with Garmin, but I had 100 hours in the aircraft," he said. "I was an absolute whiz, and my business is computers, so I ended up being this guy's tutor from the avionics perspective, and the HondaJet itself because I completely immersed myself in all the data."

Well before going to FlightSafety, DeCurtis had read all the HondaJet and Garmin documents cover to cover. "I'm one of the few people [who] actually read all the manuals," he said. "I was helping him at that level, and he's helping me with all this vast aviation experience."

After earning the type rating, DeCurtis spent more time flying with another mentor, who said after 15 hours that DeCurtis was ready to fly the HondaJet by himself. "The insurance company agreed with him, and I was off on my own in my jet," he said. "But then something remarkable happened, and it changed everything for me."

A SIGNIFICANT EXCURSION

"The gentleman who had 40,000 hours of experience and became a friend of mine flew off a runway. He called me and walked me through the experience he had, and it just shook my world. If this guy—[an aviation] legend with 40,000 hours, an expert to say the least—can go off the runway, then I certainly can go off the runway. I needed to understand exactly what's going on with how to land the jet and what to do to avoid having a runway excursion. That is what started my journey, in terms of becoming an expert and deep diving into the HondaJet landing technique, it was self-preservation and a deep respect for this gentleman who had this excursion."

After researching the proper landing technique and interviewing his friend, DeCurtis discovered why he had experienced an excursion. "He was not following the technique. Having thousands of hours in an airliner does not make you a great HondaJet pilot. You have to forget about what you know from other aircraft, respect the aircraft that you're flying, and learn the technique of that particular aircraft.

"I don't think the HondaJet is unique in that respect. It's just that the HondaJet has a particular landing technique. It's laid out in the flight manual. I realized that this was really important to get out there."

With his newfound knowledge, DeCurtis crafted a presentation and showed it to HJOPA leadership, which invited him to give a seminar at the organization's annual safety summit in Phoenix in 2022. A year later, he was asked to join the HJOPA board as chair of safety, and he continued his research on how to prevent HondaJet overruns. This culminated in another presentation at the safety summit, this time in Colorado Springs in 2024. "The feedback from that presentation, both from Honda and from pilots in the community, was heartwarming."

He realized, however, that this valuable information needed to be shared more widely, so he began working on the video and developing the P3 program, modeling it after the CJP Safe To Land program, which addresses stable approaches, precise speed control, drift, and other factors.

THE PROPER PROCESS

Here is a summary of the proper landing technique from the HondaJet flight manual and the video, which DeCurtis learned in his exploration of HondaJet excursions.

- Crab technique only
- Avoid excess airspeed–target Vref
- Feet up on the brake pedals
- 50 feet agl–throttle rapidly to idle
- Minimum flare
- De-crab just prior to touchdown
- Apply aileron into the wind
- Attempt to align with the centerline
- Touchdown upwind landing gear first
- Place downwind wheel down without delay
- Full landing gear compression
- Aileron into the wind—full aileron if wind is 15 knots or greater
- Prompt de-rotation
- Rudder to track centerline
- Forward pressure on the yoke
- Symmetrical moderate to heavy braking

What DeCurtis has found is that using this technique is, in fact, less work than many pilots put into landings. "You just let the airplane come to the runway," he explained. "You don't flare. It's what I call the artist doing nothing, which is difficult to do when you're a pilot, because you see runway coming at you and you want to do all these things."

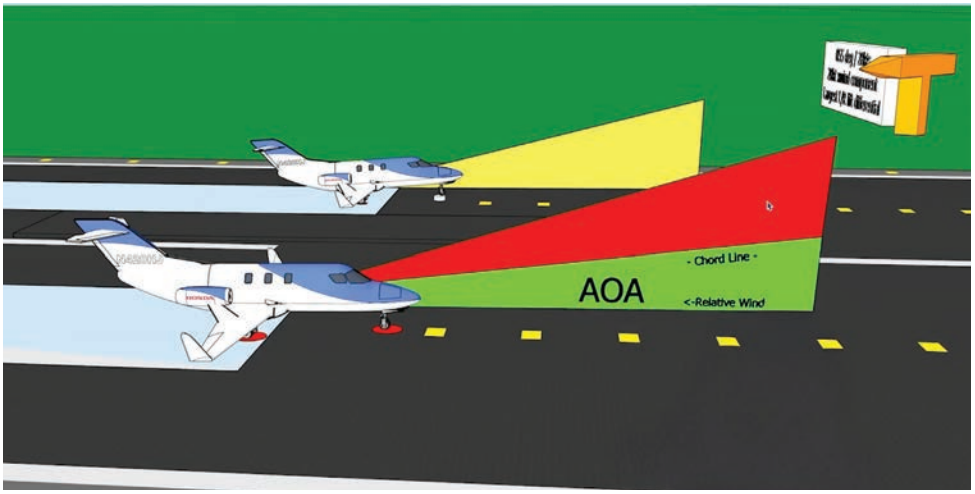
The P3 program is modeled after CJP's Gold Standard program, which not only

Learning the proper procedures for safe operation is essential in any aircraft.

encourages members to fly safely but also rewards attendance at more frequent recurrent training sessions and other training events.

"When you join the P3 program, you're committing to matching the parameters of the stable approach and using the flight manual landing technique. But it goes a lot deeper than that," he said, to include HJOPA-certified mentor pilots who will make sure new and existing HondaJet pilots become proficient at following the flight manual procedures.

This means, he added, "not just checking boxes that we flew 25 hours, to check the box for the FAA, but having the mentor program be proficiency-based, not hour-based." This will be supplemented by the AirSync and CloudAhoy flight data analysis, both on an individual basis and using the aggregated and de-identified data for benchmarking purposes.



Immediately after touchdown, HondaJet pilots must lower the nose and apply brakes.

SIMULATOR SUCCESS

Having attended the type rating training program at FlightSafety, DeCurtis knows that pilots are taught the correct HondaJet technique there. However, after they start flying their HondaJets, they may forget or modify the landing process. "It's like there's an attitude out there, 'Okay, that's how you land the simulator.'" In real life, these pilots may be trying to grease the landing to make it smoother for the passenger, which isn't the correct procedure.

There is a simulator phenomenon that may contribute to this problem, he pointed out. "When you land correctly, the simulator models it with a bit of a bump. It can be jarring. You're flying the simulator and you think, 'In the real aircraft, I don't want that bump.' So you could be incentivized to flare, which is contrary to the flight manual. It's minimal flare in the HondaJet."

Speaking to HondaJet pilots about flying their airplanes exactly how they are taught in the simulator, DeCurtis has heard them claim that "the training is a baseline to which they can add all their experience and expertise."

This manifests in pilots trying to flare the HondaJet to grease the landing or to employ aerodynamic braking, and it also comes up in relation to adding knots to Vref (landing reference speed).

"The flight manual says, 'Fly Vref,'" he said. "There's no 'Add half the gust factor to Vref' in the HondaJet flight manual. You fly Vref. There's 27 knots of buffer between Vref and stall. You've got plenty of room to bounce up and down around Vref. But there are pilots out there who [think], 'Vref is a

baseline. Then you add to that [they say], if it's gusty conditions, you're going to want to add to Vref, to add a margin of safety.' I tell them, 'You're not adding a margin of safety, you're adding a margin of danger.'"

Information that DeCurtis has gathered supports this conclusion. After his 40,000-hour friend suffered the excursion, DeCurtis researched more incidents and interviewed the pilots. "I can tell you that it is a common theme, without exception, that the technique was not followed...in every case."

A more troubling aspect of this was that the worse the weather conditions, the more these pilots deviated from the recommended procedures. "They feel like they need to do all this extra stuff to gain additional control, because the conditions are so bad, and that typically means adding to Vref," he explained.

"These are the four common practices or elements that have been either all present or at least some of them have been present in a particular flight [with an excursion]," he asserted. "But zero cases have I seen [where] the technique was followed and there was an excursion. That hasn't happened."

Proper de-crabbing and brake use can be observed in the HondaJet simulator.

WHAT PILOTS THINK

The reception from HondaJet pilots varies. In a telling example, after DeCurtis explained to a pilot who had experienced an excursion why it happened, the pilot said he found the information "mind-blowing." He told DeCurtis that his explanation was contrary to everything he'd been doing in his flying career until then, which included adding speed to Vref and de-crabbing early in the approach to landing.

This pilot said, "'You're telling me this is all wrong,'" DeCurtis recalled. "I'm saying, 'Yes, all wrong, it's 100% not what you do, and it's not just me. Let's open the book, pages 4-36 in the flight manual. This is not Dave's technique, this is the flight manual. What you're [the pilot] describing is contrary to the flight manual."

That pilot exhibited a positive attitude about the feedback and dove into studying the proper landing technique and even participated in the beta testing of the P3 program. He also installed an AirSync in his HondaJet and returned for more frequent training at FlightSafety with a focus on crosswind landings.

"He's the model example of the right attitude," DeCurtis said. "Other pilots have been receptive. But I haven't had anybody say, 'No, you're wrong!' Or 'That's crazy!' Nobody's pushed back like that."

Some pilots are befuddled to learn that the way they've been flying is not helping them keep their HondaJet on the runway after landing.

"I just walk through it mechanically," he said. "Let's step back a bit. Are you on Vref? When did you take the crab out? Did you hold the nose off? Did you put forward pressure on the yoke when you [touched down]? Was the aileron into the wind? If you add up all these things you didn't do that the flight manual says you should have done, that's all making physics work against you. You're taking all these elements of physics, and you're making them your enemy instead of your friend. What the flight manual is doing is taking physics and making it your friend."

Here is how DeCurtis explains the physics of the flight manual procedure and how that helps HondaJet pilots: "You're coming in at the [minimum] safe amount of kinetic energy, that's Vref. If you add [speed] to Vref, you're adding kinetic energy. You add kinetic energy, you're adding lift [and] braking workload. So the flight manual holds you back to a minimum amount of kinetic energy. It also helps you dump lift, because it's telling you to de-rotate promptly. So you're lowering your angle of attack [and] you're dumping lift.

"It's also increasing friction because you're putting three tires on the runway immediately, and then you're dumping lift, which is putting weight on those tires, which is giving you friction. So in just that little sequence, you have physics working massively in your favor, compared to somebody who's doing the opposite, carrying extra kinetic energy, holding the angle of attack up, creating more lift, decreasing friction, having no directional control, especially from the nose wheel because it's floating, so you have no nose wheel support. So you put it on the ground to help you with a crosswind. It's not magic."

THE NO-BRAKING PROBLEM

While pilots cited in post-accident reports claim that they experienced no braking action after landing, DeCurtis explained that keeping the crab all the way to just before touchdown and de-rotating will enable proper brake response. "Promptly de-rotate. That is, reduce your angle of

attack, which is dumping lift. It's putting three tires [on the runway]. That configuration is going to give you your fastest path to wheel spin. That's conducive to braking."

"If you follow the technique, you put the nose down on the ground. You put forward pressure on the nose—not back pressure—so you're stabilizing the aircraft. You're getting your fastest path to symmetrical wheel spin, and you apply the brakes, and then you hold the brakes, even if they release. You do not pump. You hold the brakes because you have an anti-lock controller that's monitoring the wheel spin for you, and it's putting the brakes on more effectively and more efficiently than you could ever do yourself. Just hold the brakes, let the anti-lock do its thing."

When transitioning from another airplane to the HondaJet, pilots must be willing to learn the techniques unique to the HondaJet. "You could fly a Pilatus PC-12 for 20 years and have absolutely no issues and be a happy pilot," DeCurtis said. "Then you take that experience and bring it into a HondaJet, and if you don't adjust and have respect for the HondaJet technique, you're going to be at risk. You can't have any emotional attachment to a technique. You've got to forget everything you know about the [previous airplane] and learn the technique of whatever type you're going into."

NO AIRCRAFT FIX REQUIRED

"CJP has been successful, and we're going to model that, because the good news is the aircraft doesn't need to be fixed," DeCurtis said. "That would be the hard part. If the aircraft needed to be fixed, that would be a real problem. What needs to be fixed is the way the aircraft is flown, and that's a much easier problem to address.

"I'm approaching 2,000 hours in type. I can tell you that this aircraft is incredibly confidence-inspiring when landing correctly. Otherwise, I wouldn't be flying my family in it, and I wouldn't be on my third one. I would have moved on to another airframe if I had any concerns."

DeCurtis is looking forward to working with ForeFlight, FlightSafety, and CJP on the P3 program. "I think we're going to have a tremendous amount of penetration."

He is concerned, however, that misinformation will continue spreading about the HondaJet landing technique. The P3 program is all about countering this misinformation, but flight instructors, pilots, and designated pilot examiners (DPEs) can undermine these efforts.

"I have talked to DPEs, and they tell me, 'When [conditions are] adversary, add a margin of safety. When you have people in roles of influence evangelizing, contrary to the flight manual, that's a problem. We intend to work together to eliminate that. It's through communication and community. I think that's going to be the most effective way to do it."

He also sees an opportunity to invite insurance underwriters to witness the P3 program and to ask HondaJet pilots if they are participating.

"The insurance companies should be paying attention to this," he said. "We can look at the aggregated data and look for trends in our community. The more pilots that participate in the program, the stronger that data becomes." This should help make HondaJet pilots easier to insure.

"If I'm an insurance adjuster and I look into this program where they're dedicated to using safe, stable approaches and proper landing technique...it's factual data that cannot be deleted. You can print out a report and say, 'Here's my personal data. You can see my trends. You can see my improvement.' If I were an insurance underwriter, I'd be highly interested in people who are dedicated to maintaining proficiency and fighting complacency, which is what our program does."

Celebrating the Goodyear Blimp's 100th birthday

BY DALE SMITH

The Zeppelin-built *Wingfoot Two* Goodyear Blimp is one of three that fly in the U.S.

No matter what someone's level of interest in aircraft may be, they can generally tell what type of "airplane" is flying overhead by their reaction to the sound it makes. The sounds of a jet fighter or helicopter guarantee a good look skyward. At the same time, a light private airplane may only elicit a sideways glance, and a commercial jet might not garner any reaction whatsoever.

But the one sound guaranteed to earn long, often longing glances upward is the unmistakable thrum of a Goodyear Blimp as it passes overhead.

And that simple irresistibility is why Goodyear Tire & Rubber has operated its fleet of flying ambassadors since 1925. Like so many aviation innovations, the history of Goodyear Blimps starts with the dream of one man.

Goodyear's first CEO, Paul Litchfield, was an aviation enthusiast who established the company's first aeronautical department in 1910. He recognized significant potential in expanding the company's role in the emerging aviation industry through rubber-coated fabrics and coatings for both airplanes and lighter-than-air aircraft. In 1912, Goodyear built its first balloon to fly in national and international competitions.

The program's success led to the development of various coated balloon and blimp envelopes and, ultimately, to a contract with the U.S. Navy to build entire airships. At about this time, Litchfield came up with the idea of building company-branded blimps to market Goodyear across the country.

Of course, the first step in bringing that idea to fruition was building a dedicated base to manufacture and operate the company's fleet. In 1917, Goodyear began constructing its Wingfoot Lake hangar in Suffield Township, Ohio. The massive 400-foot-long hangar was large enough to house not only the company's blimps but also production of U.S. Navy airships. Between 1917 and 1925, Goodyear built some 25 blimps for the U.S. military.

The Wingfoot Lake facility is now the world's longest continually operating airship base and remains the primary home of Goodyear's Airship Operations.

In 1919, Goodyear built its first non-commissioned blimp and christened it the *Wingfoot Airship Express*. Like all seagoing ships that came before, Goodyear continued the tradition of christening its airships to help guarantee luck in the open skies. Alas, the airship was lost in a crash later that year.

Along with the *Wingfoot Airship Express*, the company also launched three smaller "pony blimps." At just 95 feet long, the smaller blimps were shipped to airshows across the country to showcase Goodyear and the potential for everyday lighter-than-air travel.

1925 TO 1945: EVERYTHING FROM ADVERTISING TO AERIAL BOMBING

The next significant advancement in Goodyear airship design came on June 3, 1925, when the company launched the most modern non-rigid airship of its time and the first to be flown using helium. Just

a month after leaving the hangar, the first true Goodyear Blimp was christened *Pilgrim*.

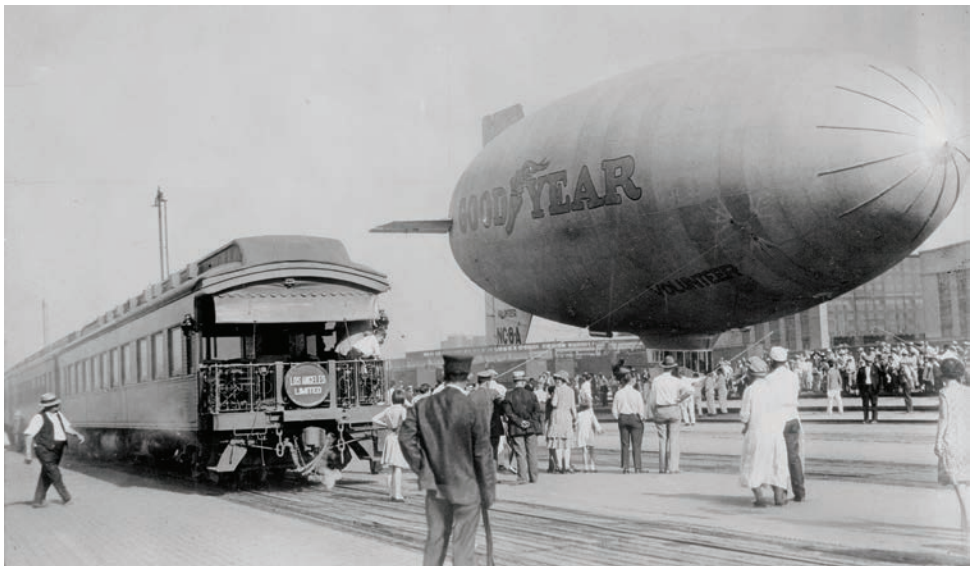
With Goodyear proudly painted on its envelope, *Pilgrim* logged more than 95,000 flight miles. It was joined in 1928 by *Puritan*, which became the country's first permanently licensed airship. *Puritan* was the first TZ model blimp, which served as the template for the next decade of the company's growing fleet.

In 1930, the third edition, *Defender*, became the first airship in the world to be equipped with a lighted sign, dubbed the Neon-O-Gram. The first *Enterprise* joined the fleet in 1934, and with a 123,000-cu-ft envelope (nearly 40,000 cu ft bigger than *Puritan*), it was the biggest of the fleet to date.

In 1942, Goodyear's *Resolute* was the only airship based along the western coast of the U.S. That and the other four blimps in the company's fleet were officially drafted—crews and all—into service with the U.S. Navy.

Airships were assigned to escort Navy fleets due to their ability to fly slowly, act as spotters, and drop depth charges to drive away enemy submarines. In all, the blimp fleet flew some 37,000 missions and helped guide nearly 90,000 vessels along the Atlantic corridor without a single loss to an enemy submarine.

By the war's end, Goodyear had built more than 320 blimps, most of which were delivered to the U.S. Navy and Army. There have only been 31 officially christened as Goodyear Blimps.



Goodyear's experience with making rubber-coated fabrics led to blimp development.

1946 TO 1968: A STAR IS BORN

At the end of the war, and with the promise of a post-war boom in tire sales, Goodyear purchased seven of its blimps back from the Navy, with a five-ship fleet returning to their promotional roles as the *Ranger, Volunteer, Enterprise, Mayflower,* and *Puritan*.

To support the company's aggressive marketing efforts, the following 20 years saw Goodyear's aerial ambassadors experience numerous technological upgrades to help them expand their promotional envelopes.

One of the most noteworthy and one that would set a foundation for missions that the blimps still serve today came on Jan. 1, 1955, when a Goodyear Blimp provided live aerial coverage of the Rose Bowl Parade and Rose Bowl football game—both firsts for a national TV broadcast.

The advent of live aerial coverage transformed the way we view outdoor sports. Since that historic broadcast, Goodyear's fleet of blimps has covered more than 2,000 events, including championships for nearly every major U.S. sport and the Olympic Games.

In 2019, the Goodyear Blimp became the first non-player or coach to be inducted into the College Football Hall of Fame.

Of course, the blimps aren't tethered strictly to sports; they've also become cemented in American pop culture. From hovering over the New York World's Fair in 1964 to appearances in major movies, including *Help!, A Star is Born, Black Sunday,* and *Scarface*. The blimp also served as the iconic lyrical image in the video for Ice

Goodyear blimps have provided aerial coverage for over 2,000 events, including the 1978 Rose Bowl.

Cube's chart-topping 1993 song *It Was A Good Day*.

1969 TO TODAY: THE BLIMP BECOMES A ZEPPELIN

On April 25, 1969, the Goodyear Blimp *America* was christened. It wasn't just a new blimp, but a whole new kind of blimp: it was the first of new-generation GZ-20 models.

At 192 feet tip-to-tail and with a 202,700- cu-ft envelope, the twin 210-horsepower Continental IO-360-powered GZ-20 would serve as the base design for the Goodyear Blimps until the last one's retirement in 2017.

In 1972, parts for another new GZ-20 blimp were flown to Cardington, England, to assemble the *Europa*. After its completion and certification, the first internationally based Goodyear Blimp was flown to its home in Capena, Italy, where it operated until 1987.

The next significant advancement in Goodyear's airship program came in 2014 when it introduced a completely new aircraft designed to the company's specifications by Zeppelin Luftschifftechnik in Friedrichshafen, Germany. The first of the new NT series was christened *Wingfoot One*.

In 2000, astronaut Sally Ride christened the *Spirit of Goodyear* at the Wingfoot Lake hangar.

In 2018, Goodyear christened *Wingfoot Three*, marking the fleet's complete transition to the Zeppelin-designed NT model. Today, all of Goodyear's U.S.-based blimps' structures are built at Zeppelin's facilities in Germany and then sent to the Wingfoot Lake facility for final assembly by a joint team of Goodyear and Zeppelin technicians.

The current fleet of Goodyear Blimps is equipped with Garmin G500H touchscreen displays with synthetic vision. Also included in the avionics suite are dual Garmin GTN650 touchscreen GPS Navigators, Garmin's remote ADS-B Out/In transponder, audio panel, helicopter terrain awareness/warning, traffic alert system, dual Barco ICAS screens, and a standby display for IFR compliance.

By definition, blimps are non-rigid airships, and the Zeppelin NT's aluminum and carbon-fiber internal framework technically makes it a semi-rigid airship. But, while they may no longer be a Wikipedia-defined "Blimp," the fleet will always be affectionately known as Goodyear Blimps.

Goodyear blimps travel the world, such as this one flying over Rome in 1973.

100 YEARS YOUNG

Today's blimp fleet consists of *Wingfoot One* (N1A), based in Suffield; *Wingfoot Two* (N2A), based in Pompano Beach, Florida; and *Wingfoot Three* (N3A) in Carson, California. There is also a fourth Goodyear-branded airship operated by Zeppelin and based in Friedrichshafen, Germany, which is owned and operated by Goodyear's manufacturing partner, Zeppelin.

But no matter where the U.S.-registered aircraft are based, Michael Dougherty, chief pilot and operations manager for Goodyear Airship Operations, stressed that safety and consistency are paramount.

"We have 75 full-time Goodyear Airship associates that operate as a single organization," he explained. "We are an IS-BAO

Modern Goodyear blimps have all the latest technology but still require a skilled and patient hand at the flight controls.

Stage III [registered] corporate aviation operator. Having an icon as recognizable as the Goodyear Blimp, we need to make sure we are doing everything right. People are often surprised by that level of professionalism. This isn't a flying circus-type thing.

"Safety management is key. We move pilots and maintenance specialists around a bit to help with scheduling. Each team has four pilots, two crew chiefs, five field mechanics, four broadcast technicians—we own all the broadcast equipment on the blimps—and ground support mechanics handling all of the trucks, mooring gear, the ground service equipment we need, and three general crews to round out operational support."

As Dougherty described the operation, the Blimp's support team is basically an FBO/MRO on wheels. "We are self-reliant for most of our missions. We can't just go to your regular FBO to buy parts for the blimp. Our traveling technicians keep track of maintenance, and if we need something shipped to their location, they order it from our maintenance control group in Suffield," he said.

That's critical to keeping the airships in the air, considering that each of the U.S.-based blimps averages 90 to 120 RONs and 400 to 600 flight hours a year.

"The blimp is a pretty needy aircraft. We have two 40-foot-long mast trucks that weigh 64,000 pounds each. When we get to a site, they unfold vertically with the nose mooring mast," Dougherty continued. "We can't land without the ground crew and mast, so we have a spare. When both trucks are working, we can move faster by positioning one team at the next location."

> "The blimp is a pretty needy aircraft. We have two 40-foot-long mast trucks that weigh 64,000 pounds each. When we get to a site, they unfold vertically with the nose mooring mast."
>
> — Michael Dougherty
> Chief pilot and operations manager for Goodyear Airship Operations

It's not only its reliance on the mooring truck that makes the blimp "needy." Dougherty said that when the blimp is moored, someone has to be with it all the time to regulate the ballast to maintain equilibrium so the ship never rises too high, straining the mooring link, gets too heavy, or risks striking the ground.

"If the winds are more than 10 knots, someone has to be in the cockpit 'flying' all the time," he added. "It's like a giant windsock. It's certified up to a category one hurricane with winds up to 90 miles per hour."

Dougherty said that during his career, he and his crew have carried regular folks to former presidents, astronauts, sports and entertainment celebrities, and everyone in between. And it seems that one thing surprises them all.

"I think the biggest surprise people have with the Goodyear Blimp is the size and professionalism of our organization. They see it flying low and slow and think it's super simple—it's not," he said. "It's the hardest thing I've ever learned to fly. It's like flying a boat [it's an airship, remember], so you have to be part sailor and part pilot, and it takes training and dedication.

"Without the 20 people on the ground, the blimp wouldn't go anywhere," Dougherty said. "It's a needy aircraft that requires a team of specialists to keep it in the air. I can tell you we have a super-solid team, and I'm really proud to be part of it all."

As part of its centennial celebration, Goodyear has announced that it will have two blimps at the Experimental Aircraft Association's AirVenture this year in Oshkosh, Wisconsin. That's something no blimp fan wants to miss.

FAA raises concerns about Bell 206L vertical vibrations

BY MATT THURBER

Collective bounce involves interaction between the pilot's hand on the collective stick and vertical vibration of the airframe.

The FAA has issued an airworthiness concern sheet (ACS) about a vertical vibration issue with Bell 206 LongRanger helicopters. According to the FAA, it "has received reports of severe vertical vibrations on Bell 206L (LongRanger) helicopters. These events are inconsistent in their repeatability. In addition, post-flight inspections have not identified any failure that caused the vibration event. Reports indicate the vibration subsides once additional load is applied on the main rotor by increasing collective. The vibration may worsen with a low friction set on the collective."

According to the ACS, on Sept. 26, 2024, in Fern Prairie, Washington, a Bell 206L suffered a vertical vibration incident where "continued vibration resulted in substantial damage to the helicopter's tail boom, but the aircraft was able to land safely."

In its preliminary report about the accident, the NTSB wrote, "While in cruise flight about 1,000 ft above ground level, the helicopter experienced 'a severe vertical hop' and began to shake violently. The pilot initiated an emergency descent, during which time the shaking subsided. The pilot performed a normal landing in an open field. After egressing, the pilot observed substantial damage to the helicopter's tail boom."

On March 17, 2025, aftermarket rotor blade manufacturer Van Horn Aviation (VHA) published an information letter (NOTICE No.: 33000-6R1) titled "Collective bounce recovery and mitigation." The Fern Prairie 206L was equipped with Van Horn's composite rotor blades. The Bell 206 series factory blades are metal.

"We put out the letter because we had a handful of reports over several years," said VHA design engineer Chris Gatley. "First and foremost, the sole reason for putting out the information letter is like the ACS

mentions—there was the incident in Oregon [the helicopter was on its way to Oregon] where [the helicopter] got a severe hop but the tailboom bent. Both we and the NTSB are concerned that pilots may be doing the wrong thing or not know what to do. We know from customer input and testing ourselves that the reliable recovery method is to slow down and raise collective and pull power to load the rotor system. The sooner you do that, the better."

Gatley pointed out that collective bounce is not isolated to VHA's rotor blades and that VHA pilots have experienced this phenomenon on metal-bladed 206s, although it seems to be limited to the 206 LongRanger model.

DIFFICULT TO REPRODUCE

A challenge with this issue is that it is difficult to reproduce. For example, a large fleet operator with VHA-bladed helicopters has not experienced collective bounce or vertical vibration, according to Gatley. VHA is conducting testing on a LongRanger to try to learn more about the causes, although the VHA letter outlines everything the company has learned to this point. The follow-up testing in the LongRanger "will add to that information and narrow down what's causing it," he explained.

In any case, he pointed out that it's important for pilots to report to the FAA any instances of collective bounce or vertical vibration in Bell 206-series helicopters, as outlined in the ACS, and with any types of rotor blades. "We're very much trying to learn as much as we can," he told **AIN**.

Bell has published information on collective bounce, including an Operations Safety Notice dated Oct. 18, 1976, for operators of 206A/B/L, 204B, 205A1, and 212 models that addressed proper setup of collective minimum friction (not the collective control's friction setting in the cockpit).

"Maintenance of collective minimum friction," the notice explained, "is a certification requirement by the FAA and is designed to preclude 'collective bounce' by reducing the effects of pilot over-control; reducing effects of wind gusts and turbulence through the rotor and into the airframe; [and] preventing feedback from external sling loads into the airframe."

In 2007, a Bell *Rotorbreeze* article outlined a "vibration or ground bounce caused by the leading edge pitch link main rotor to mast coupling phenomenon." While it's not exactly clear whether this phenomenon happens only on the ground, it is interesting to note that the solution is the same as for the collective bounce that pilots have experienced: "Usually a slight increase in collective pitch will cause the rotor to sustain its lift and the vibration will go away," according to the article.

Asked about the current issues, Bell responded to **AIN**: "We fully support the FAA's investigation, and hope that any Bell 206 operators who may have experienced similar events to those described in the Airworthiness Concern letter will submit those to the FAA for review."

In the Van Horn letter, it explains, "Operator reports have indicated the potential for pilots to experience severe vertical vibrations on a small number of Bell 206L LongRanger helicopters equipped with Van Horn Aviation (VHA) p/n 20633000-101 main rotor blades. The phenomenon is characterized as a vertical vibration that develops in level flight or upon the initiation of a descent at 100+ KIAS and quickly increases in intensity. In many cases, the vibration is not readily repeatable even on the same aircraft and in the same configuration."

A KNOWN ISSUE

The letter describes collective bounce as "a known issue on the 206 family, as well as several other Bell helicopters with two-bladed, teetering rotor systems. Recent investigation has determined that the vibration occurs at approximately 5 Hz, which is consistent with a tail boom natural frequency."

While investigation is still ongoing, collective bounce is characterized by an interaction between the pilot's hand on the collective stick and a vertical vibration of the airframe. Several aircraft configuration and maintenance items have been identified as potential contributors.

Should pilots encounter this phenomenon in-flight, the appropriate recovery method is presented. "If collective bounce is experienced in-flight, immediately load the rotor by increasing collective, reducing speed, and turning right."

In the letter, VHA includes a diagram showing a shaded region where collective bounce is possible and where pilots may want to avoid operating. "This should not be construed as an operational limitation or a certainty that a severe vibration will develop when operating in this region.

"Pilots should simply be aware of the possibility of collective bounce to develop and be prepared to recover, if necessary. All reported instances have occurred with a single pilot operating aircraft in light configurations with approximately 300 pounds of fuel or less. If possible, ballasting the aircraft and/or avoiding fuel burn below 300 pounds will likely avoid any occurrence."

If pilots have to fly in that shaded region, VHA advised, "reduce speed to below 100 KIAS [and] avoid low-G maneuvers. All reductions in collective and forward cyclic should be applied slowly and smoothly. Increase collective friction via the friction knob, as practical."

There are also recommended maintenance actions, the most important of which is proper installation of the blades to avoid incorrect blade sweep. "Correcting blade sweep has so far been demonstrated to eliminate or reduce the vibration to a minor level," the letter explained.

Gatley reiterated the key piece of advice for pilots experiencing collective bounce in the VHA letter: "Don't drop the collective and make it worse and just sit in [the vibration]." Or as the letter put it in bold type: "DO NOT lower collective or enter an autorotation. The vibration will only intensify and continue throughout the descent until the rotor is loaded again."

ItalyFBO Grows with Two New Locations

ItalyFBO—the country's largest aviation service provider—has added two locations to its network after submitting successful tender bids at Ancona International Airport/Raffaello Sanzio (LIPY) and Milan Bergamo Airport (LIME).

At Bergamo, the company, which had previously provided handling supervision on the airfield, now has an operations office and VIP lounge upstairs in the general aviation terminal (GAT) that opened on April 15, located opposite the main commercial terminal on the other side of the runway. Before this opening, all arriving private aviation flights were handled through the commercial terminal. The GAT—which is open from 8 a.m. to 10 p.m. daily, with after-hours callout available—offers dedicated customs, immigration, and security clearance on the ground floor.

On the ramp, it has space for up to 14 ultra-long-range business jets and three bizliners, with the capacity to configure for handling larger widebody airliners.

ItalyFBO was also awarded the handling of all general aviation flights at LIPY, offering private lounge space within the airport's departure terminal for passengers and crew. Upon aircraft arrival, its staff will escort private passengers and crew through LIPY's customs and immigration process. The airport has substantial aircraft ramp parking and 1,800 sq m (19,375 sq ft) of available hangar space.

The company operates at 39 airports throughout Italy, with FBOs at 12 locations. Its facilities in Florence and Pisa have achieved Stage 3 registration under IBAC's International Standard for Business Aircraft Handling.

Atlantic Aviation Expanding to Second Nashville Airport

Atlantic Aviation was selected as the winner of the Metropolitan Nashville (Tennessee) Airport Authority's (MNAA) request for proposals to establish an FBO at John C. Tune Airport (KJWN). As a result, Atlantic will build a complex that will provide operators using KJWN with an option for service providers.

In addition to a 7,500-sq-ft terminal and 37,000 sq ft of hangar and shop space, Atlantic will also add a 70,000-gallon-capacity fuel farm. It expects to break ground in the second quarter of 2026, with an anticipated completion of the facility by the end of 2027.

The new facility will enhance the FBO megachain's footprint in Music City, joining its redeveloped FBO at Nashville International Airport (KBNA), which opened last year.

Sacramento Mather Airport Gets Second FBO Option

California's Sacramento Mather Airport (KMHR) now has another service provider with the opening of the Mather Jet Center, which is under the same ownership as maintenance provider Mather Aviation. Victor Cushing is a 40-plus-year veteran in aviation maintenance with facilities at both KMHR and Modesto City–County Airport (KMOD), while partners Matt Bosco and Dan Kimmel are owners of Modesto Jet Center at KMOD.

Located within the Mather Aviation maintenance building, a 100,000-sq-ft hangar that once housed B-52s at the former air force base, the FBO—the newest addition to the Avfuel-branded dealer network—occupies 2,000 sq ft of terminal space on the ramp side of the building. It includes a passenger lobby, pilot lounge, and conference room, with onsite car rental.

Despite the size of the Mather Aviation facility, which also serves as a home to its Part 145 maintenance and avionics facility, the company anticipates building additional hangars because it is virtually at capacity with based, transient, and maintenance clients.

With its 11,300-foot main runway, KMHR is a popular tech stop for aircraft en route to Hawaii, and it is now the only Sacramento-area airport with a choice of fuel providers.

Booming Business at Appleton Flight Center in Wisconsin

For the U.S. aviation community, July means Oshkosh, otherwise known as EAA's AirVenture, the world's largest aviation gathering, held annually at Wittman Regional Airport (KOSH) in Wisconsin. However, for Appleton Flight Center, the county-owned FBO 25 miles away at Appleton International Airport (KATW), Oshkosh means booming business. "It's a big deal for us as we get as much revenue in that one week as we would for an entire month," said Scott Volberding, KATW's assistant airport director. "We will get traffic start arriving in that July 18 timeframe, and they will be with us until that July 28th timeframe. Over that week, we'll see 700 aircraft in and out, it's a big deal!"

Appleton Flight Center, the county-run FBO at Appleton International Airport, has a two-story terminal, one of the first net-zero LEED-certified GA terminals in the country.

During the show, the airport will see its 16-acre ramp inundated with aircraft, leading to the overflow light aircraft parking on neighboring fields. With all the aerial activity swirling around KOSH, EAA will move a fleet of revenue-generating vintage warbirds—consisting of a Stearman biplane, P-51, B-24, B-25, and the B29s Doc and Fifi—to KATW to conduct passenger flights while AIrVenture is ongoing.

Outagamie County took over operation of the FBO, the lone service provider on the field, in 2021. The complex features a 5,000-sq-ft, two-story terminal built in 2014, with an airy double-height passenger lobby, pilot lounge, snooze room, shower facilities, crew cars, onsite car rental, and, being Wisconsin, no fewer than four flavors of cheese curds in its new refreshment bar. Upstairs, a 14-seat, a/v-equipped conference room has floor-to-ceiling windows offering "distracting" views of the airfield.

The FBO has 55,000 sq ft of heated aircraft storage space, including a 31,000-sq-ft, $7.4 million hangar that opened last year. Volberding describes it as a game changer. "Before that, we didn't have any place for the large business jets, those [Bombardier] Globals, and [Dassault] Falcons, and Gulfstreams," he told **AIN**, adding the facility's pair of smaller 12,000-sq-ft hangars could not accommodate those aircraft size-wise. "Now our revenues are doing quite well this year because of that. It's been a great addition for our FBO." The facility is home to 19 jets, ranging from a Gulfstream GV down to an Eclipse 550.

An Avfuel-branded dealer, the location also conducts fueling on the commercial side with its fleet of four 5,000-gallon jet-A refuelers, with a fifth due later this year. It also has a pair of 1,000-gallon avgas trucks and offers self-serve for both fuels. Over the past decade, Volberding has seen its volumes rise from 2.4 million gallons a year to a predicted 9 million this year. KATW's fuel farm holds 100,000 gallons of jet fuel and 20,000 gallons of 100LL, and he believes that it is overdue for an expansion. "We're up to 36 loads of fuel a week at times, that's a lot of fuel going through here," he said.

Open every day from 4 a.m. to 11 p.m., the FBO has a staff of 40, and its line service staff benefits from training through NATA's Safety 1st and Avfuel's programs, along with in-house instruction.

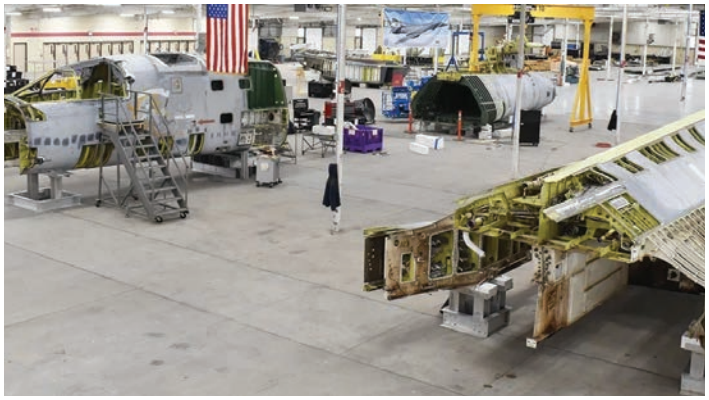
As an international gateway, arriving private aircraft will clear customs on the ramp at the main terminal before proceeding to the FBO, which is certified to handle international refuse.

KATW is 25 miles from Green Bay, and it is the favored airport for visiting NFL teams heading to play the Packers on the "frozen tundra" of Lambeau Field. The FBO's staff helps support the fueling and ground handling of those large charter aircraft.

According to Volberding, the FBO sees 50 to 70 operations a day on average. With its 8,000-foot main runway, KATW is also home to Gulfstream's largest production facility outside of Savannah.

Boasting a staff of more than 1,300, it can accommodate more than a dozen ultra-long-range business jets, and does full completions, along with MRO operations. The airframer has invested more than $60 million in the location, with its latest addition being a paint hangar. While Gulfstream does conduct fueling operations for customers at its facility, some choose to fill up at the FBO before departing. C.E.

COMPILED BY CURT EPSTEIN



Dassault Systèmes and NIAR Open Wichita Research Center

Dassault Systèmes and the National Institute for Aviation Research (NIAR) have collaborated on a new Manufacturing Innovation Center at the Wichita State University Innovation Campus. The facility offers companies in the aviation sector expanded access to virtual prototyping, advanced automation, and reverse engineering tools.

NIAR's mission is to support the aircraft industry with design, certification, and sustainment, and it partnered with Dassault Systèmes to create a hands-on research and development space where firms can evaluate new manufacturing methods and equipment before making capital investments. The new lab complements NIAR's Advanced Technologies Lab for Aerospace Systems, a makerspace where engineers troubleshoot manufacturing and tooling issues.

The center includes a full-scale extended reality cave, a robotics and intelligent automation lab, an additive manufacturing suite, and a reverse engineering lab. These facilities allow project teams to simulate factory layouts, experiment with 3D printing, and test re-creation workflows using Dassault Systèmes' 3DExperience platform.

SkyWay Mod Moves CJ3 Lav Access To External Panel

MRO provider SkyWay Group has introduced a lavatory modification for Cessna Citation 525B CJ3 and CJ3+ business jets that enables external waste servicing through a newly installed fuselage panel. Called SkyFlush, the system has received FAA supplemental type certificate (STC) approval.

The modification replaces the original left-hand, belted, self-contained flushing toilet with a new toilet insert designed to pump waste overboard. Requiring no changes to cabinetry or interior accessories, the unit fits within the existing cabinet structure.

An external service panel is installed on the left side of the aircraft, aft of the wing in the fuselage fairing. The panel includes a 4-inch waste drain fitting, a blue water service port, an LED system status indicator, a power switch for the macerator pump, and a service switch to add water and deodorizer. The design is compatible with standard aviation ground support equipment.

SkyWay noted that variants of the SkyFlush mod for additional aircraft in the Citation 525 series—including the CJ, CJ1, CJ2, CJ2+, and CJ4—are in development and are expected to receive STCs in the near future.

AMAC Expands Aircraft Support and Modification Capability

AMAC Aerospace has acquired aircraft modifications specialist Kreative Engineering Services (KES). The transaction adds cabin design and modification capability to the group's portfolio, as well as increased bandwidth for advanced engineering projects, EASA/FAA certification and compliance tasks, and product development and industrialization for furnishings and mechanical systems.

KES, founded in 2012 and based at L'Isle-Jourdain in southwestern France, has extensive experience working on the design and modification of interiors for VIP and commercial aircraft.

Meanwhile, AMAC's MRO facility in Basel, Switzerland, outdid itself recently when it had five VIP Boeing 747s on its hands simultaneously. The tasks conducted on the widebodies included a mix of 6A, A, B1, B2, C1, C3, and D checks; 12-, 24-, 36-, and 48-month checks; and the installation of a Starlink communications system.

EAP Seeing Benefits of Managing Supply Chain with Own Inventory

While the industry continues to grapple with supply shortages, hourly maintenance program provider Engine Assurance Program (EAP) has gradually accrued its own inventory and, as a result, is reaping the benefits in the growth of its customer base. This is particularly true in Europe, where engine supply shortages have remained acute, according to EAP managing director Sean Lynch.

EAP was founded in 2016 to fill what it saw as a gap in the market, supporting older engines with lower-cost maintenance programs. The company offers tiers of coverage for some of the most common business aviation engine platforms, including Honeywell's TFE731, Rolls-Royce's Tay 611-8, and Pratt & Whitney Canada's PW300 and PW500 families.

Since its founding, EAP has captured 30% of the German market for Learjets alone, growth that has occurred as operators search for consistent support in the face of supply-chain constraints, Lynch said.

"There's not enough inventory over in Europe to support all the operators," he noted, "and the operators that have signed up with us know that we maintain our own inventory. We're not relying on the continuous excuses of the supply chain."

He pointed to the complexities of the issue that were borne out of the Covid-19 pandemic. Not only did smaller vendors go out of business during the pandemic, but the industry lost a level of craftsmanship, making repairs a more difficult option, he said.

"I think what has hurt the engine business the most is that we used to be better at repairing parts," Lynch explained. "We are not anymore. A lot of small vendors that could take a combustor part and repair it folded."

This is also a problem for manufacturers, Lynch added. "There were several manufacturers that laid a bunch of highly experienced people off right at the beginning of the pandemic." This included people who may have specialized in a certain part repair, and now that expertise is gone.

To manage this, EAP has its own supply chain. "We know that specific manufacturers don't have fuel control units twice a year [or] they run out of blades twice a year," he said. "So, we just stock the parts. It's not cheap, [but] we know we can't rely on the system. We made our own system."

DAVID MCINTOSH

Sean Lynch
managing director, EAP

He said the company applies a lot of common sense to its approach. It also makes sure it has rental engines ready to go. During Covid, the support industry would frequently discover that parts that used to be readily available weren't. "We just started buying an extra one every time that happened," Lynch said. EAP also would stock up after learning there would be extended lead times on parts. "When we have it in our inventory, there's no relying on anyone else to hope that they get it shipped by the end of the day. We get it shipped by the end of the day because we have it."

This is critical because EAP works directly with customers. "When you call any of these other vendors and ask them for a part, they don't have the urgency because they don't know the customer who's stressed out. We know our customers, and everyone that works for us has been in the business long enough to have experienced the stress that's involved with someone who's AOG."

He noted that six months ago, estimates were that 100 airplanes were grounded around the globe awaiting engine parts and without loaner options. Lynch estimates that EAP, however, has been at 98% availability of rental engines. Much of it involves planning well in advance. Six months ahead, EAP is planning for a scheduled engine shop visit. It actively and continually scans the market to see who has engines available, "so that when we have the AOG, we're not searching, we already know who has it."

As a result, EAP is growing in a slow, steady fashion. "People are finally starting to hear about our customer service."

In Europe, however, things are ramping up more quickly, including signing a large fleet operator. EAP has stocked parts in the region so they could be closer to the operators. It also recently formalized a relationship with Aero-Dienst for engine support as it builds its base of MRO partners and vendors.

In addition to building its inventory and partnerships, EAP is gradually adding the engines it supports. EAP plans to stay in its niche—"If they haven't been in service for at least 20 years, we don't even look at them," Lynch said.

It recently added Rolls-Royce BR710 engines on Bombardier Globals and Gulfstreams. Customers have already lined up for those programs. EAP has also laid the groundwork to add Pratt & Whitney Canada 308Cs on Dassault Falcon 2000 EX/LX/DX models and Honeywell HTF7000s that power Challenger 300s. K.L.

BY DAVID JACK KENNY

Preliminary Reports

CVR Failed To Record in Fatal Medevac Crash

Bombardier Learjet 55, Jan. 31, 2025, Philadelphia, Pennsylvania

The cockpit voice recorder (CVR) failed to record before and during the January 31 crash in Philadelphia and may not have recorded on any flights for several years, according to the preliminary NTSB report. After departing Northeast Philadelphia Airport (KPNE) at 6:07 p.m. EST, the Learjet went down approximately one minute after takeoff, killing both pilots, two medical crewmembers, and two patients onboard, along with two people on the ground.

ADS-B data showed the airplane departed Runway 24 and climbed to 1,650 feet msl before descending to 1,275 feet at a groundspeed of 242 knots while in a left turn. No distress calls were received from the flight crew, who were in contact with the KPNE tower.

The aircraft initially struck a concrete sidewalk, triggering a large explosion captured on security video. Wreckage and debris spread across a 1,410-foot by 840-foot area, impacting buildings, homes, and vehicles. One commercial sign struck during the descent indicated a 22-degree descent angle.

The CVR was located under eight feet of debris but had not recorded audio. Night IMC prevailed at the time, with a 400-foot overcast ceiling, 6 miles visibility, and surface winds from 220 degrees at 9 knots.

The pilot-in-command held an airline transport pilot certificate with 9,200 hours of flight time; the second-in-command had 2,600 hours of flight time and held a commercial certificate. Both held type ratings for the Learjet 55.

Jet Blast Suspected in Caravan Upset

Cessna 208B, March 14, 2025, Dallas, Texas

A Cessna Caravan taxiing onto Runway 17R of Dallas-Fort Worth International Airport (KDFW) was abruptly pitched onto its left wingtip, causing a propeller strike and "substantial damage" to the left wing. The upset occurred 24 seconds after a departing Airbus A321 began its takeoff roll on the same runway.

Surface winds of 18 knots gusting to 27 from 170 degrees likely extended the "danger area" behind the Airbus' engines, estimated at 1,150 feet in a no-wind condition. The A321 had travelled 1,500 to 2,000 feet when the Caravan was cleared to line up and wait. The accident occurred as its pilot aligned the aircraft with the centerline.

Five Injured in HondaJet Overrun

Honda Aircraft HA-420, April 7, 2025, North Bend, Oregon

One passenger suffered serious injuries when the light jet ran off the end of Runway 5 of Southwest Oregon Regional Airport (KOTH), through the overrun area, and into Coos Bay. The pilot and three other passengers sustained minor injuries. The Part 91 corporate flight originated from St. George, Utah, a route the pilot had flown every Monday morning for the past year to transport the operator's employees.

The pilot described entering the landing conditions, including a wet runway, into the airplane flight management system (AFMS) to obtain a required landing distance of 4,200 feet at a reference speed of 113 knots. He said they touched down 1,000 feet past the approach end of the 5,980-foot runway at about that speed; braking initially felt normal, but became ineffective halfway down the runway. Unable to stop, he steered right to avoid the localizer antenna. After leaving the pavement the airplane rolled through grass and mud and down a 15-foot embankment into the bay. All occupants escaped through the main cabin door.

ADS-B data confirmed that the HondaJet touched down near the runway's aiming point, but at a ground speed of 128 knots. Investigators repeated the AFMS calculations with the same input values and obtained a required landing distance of 5,910 feet at a reference speed of 111 knots. ADS-B data from the five previous flights showed similar profiles aside from a slightly higher touchdown speed on the accident flight.

Midair Breakup in Hudson River Tour Flight

Bell 206L-4, April 10, 2025, Jersey City, New Jersey

A Bell 206L-4 helicopter on an aerial tour flight broke apart in flight and fell into the Hudson River near Jersey City, killing the pilot and all five passengers. The aircraft had departed Downtown Manhattan/Wall Street Heliport (KJRB) at 2:58 p.m. for what was the pilot's eighth tour flight of the day. The accident occurred at about 3:15 p.m.

ADS-B data showed the helicopter flew south of the Statue of Liberty before turning north up the East River corridor past the George Washington Bridge. It then reversed course and proceeded south along the New Jersey shoreline. Near the Holland Tunnel ventilation towers, the helicopter climbed from 625 to 675 feet msl before entering a rapid descent. The final data point recorded an altitude of 125 feet.

Witnesses reported hearing loud "bangs" before the helicopter broke up midair. Video footage showed the aircraft separating into three main sections: fuselage, main

rotor system, and tail boom. The fuselage came to rest inverted in six feet of water; other major components were located submerged to depths of 30 feet.

The helicopter was not equipped with onboard data or video recorders. The pilot held a commercial certificate with rotorcraft-instrument ratings and had logged 790.2 total hours, including 48.6 in the Bell 206.

Final Reports

Fatal Depressurization Remains Unexplained

Cessna Citation 560, June 4, 2023, Montebello, Virginia

Incapacitation from hypoxia following a loss of cabin pressure was cited as a contributing factor in the crash, but the NTSB was unable to pinpoint the cause of the depressurization. The single pilot and three passengers were killed when the twin-engine jet spiraled down onto a Virginia mountainside after overflying its destination of Islip, New York, and turning back toward its point of origin, flying southwest at 34,000 feet until it presumably exhausted its fuel. Fighter pilots who scrambled to intercept the airplane after it penetrated the Washington, D.C., Flight Restricted Zone reported seeing no "holes or missing windows or doors," smoke in the cockpit, or frost on the windows. The pilot was slumped over into the copilot's seat and did not respond to radio calls, intercept maneuvers, or flares.

The flight had departed from Elizabethton, Tennessee. Radio contact was lost after the pilot read back a clearance to his filed altitude of 34,000 feet while climbing through 26,600. An instruction three minutes later went unanswered.

Most components of the pressurization and emergency oxygen systems were destroyed in the crash. Maintenance records from the previous month listed 26 discrepancies that the owner had declined to resolve, "including several related to the pressurization and environmental control system." Two days before the accident, a mechanic saw that the pilot-side oxygen mask was not installed, and the supplemental oxygen supply "was at its minimum servicing level."

The 69-year-old pilot, a retired airline captain, had an estimated 34,500 hours and 850 make-and-model.

Rescue Helicopter Caught in Vortex Ring State

Kawasaki BK117 B-2, Sept. 19, 2023, Mt. Pirongia, North Island, New Zealand

The Transport Accident Investigation Commission concluded that it was "virtually certain that the helicopter entered a vortex ring state while descending on the windward side of a ridge line" while attempting to set up for winch extraction of an injured hiker. After making a 180-degree climbing turn towards the patient's location, the pilot began descending to set up for winch deployment. When he slowed to less than 60 knots to allow the rear cabin door to be opened, "the helicopter suddenly and unexpectedly dropped."

The pilot was unable to arrest the descent and focused on mitigating the impact as the ship crashed through the tree canopy onto the ground. All three crew members escaped without injury, and the pilot and winch operator helped the paramedic treat the patient and prepare for extraction.

IMC Encounter Led to Fatal Night Helicopter Crash

Airbus Helicopters EC130, Feb. 9, 2024, Halloran Springs, California

The pilot's decision to continue a night VFR charter into instrument meteorological conditions (IMC) led to spatial disorientation and a fatal crash near Halloran Springs, California, according to the NTSB's final report. The crash occurred at 10:08 p.m. local time, killing all six occupants, two pilots and four passengers.

Operated under Part 135, the helicopter departed Palm Springs International Airport (KPSP) at 8:45 p.m. after a delay. About 80 minutes later, it struck mountainous desert terrain in dark, rainy, and snowy conditions.

The aircraft's radar altimeter, required under Part 135 rules, was known to be inoperative before the flight. The company president, who also served as the flight follower with operational control, reported that he told the pilot not to depart if the altimeter was not functioning. A mechanic attempted repairs but did not resolve the issue, and the helicopter completed a positioning leg before beginning the charter flight.

While waiting at KPSP for a delayed passenger, the crew did not obtain a formal preflight weather briefing or update the flight risk assessment. During that time, the National Weather Service issued updates indicating deteriorating conditions with rain and snow showers across the route.

The flight launched under night VFR with "no moon illumination," intending to follow lit freeways to Boulder City Municipal Airport (KBVU) in Nevada. Terrain surrounded the route, and visibility dropped as conditions worsened. About 10 miles from the crash site, the helicopter slowed, descended, and briefly deviated from the freeway corridor before returning to its planned track. Shortly after, the aircraft's airspeed and altitude increased, followed by a sustained right turn and rapid descent into terrain. The rotorcraft impacted in a high-energy, right-side-low attitude. There was no evidence of mechanical failure.

Although the pilot had been trained in inadvertent IMC recovery, the flight profile deviated from that guidance. The NTSB cited spatial disorientation as a contributing factor. Organizational failure was also a factor. "Company management...failed to exercise ground and flight operational control to cancel or modify the flight," the report noted.

—Amy Wilder contributed to this report

Compliance Countdown

BY GORDON GILBERT

JUST AROUND THE CORNER

Aug. 2, 2025

Europe: Legal Framework for AI

Deadlines are approaching for implementing the legal framework for the development, the placing on the market, the putting into service, and the use of artificial intelligence (AI) systems in the European Union. This regulation "ensures the free movement, cross-border, of AI-based goods and services, thus preventing member states from imposing restrictions on the development, marketing, and use of AI systems." Regulatory obligations for providers of general-purpose AI models apply starting Aug. 2, 2025. In addition, member states "should lay down and notify the [EU] commission the rules on penalties, including administrative fines, and ensure that they are properly and effectively implemented" from Aug. 2, 2025. States must be in compliance with the remainder of the requirements by Aug. 2, 2026.

July 1, 2025

Australia: Helicopter Performance

The Civil Aviation Safety Authority of Australia is requiring certain helicopter operations to transition to new and revised performance rules. These relate to the ability of a rotorcraft to proceed on a flight path that enables acceptable safety outcomes in the event of an engine failure. The rules require operators to develop procedures that demonstrate how they will ensure safety outcomes during critical phases of flight (particularly during takeoff and landing). Affected operators must complete the transition by July 1, 2025.

Sept. 1, 2025

Hong Kong: Advance Passenger Information System

Hong Kong has delayed the scheduled startup of its Advance Passenger Information System (APIS) program. Originally set to become effective on April 1, 2025, the revised implementation date is Sept. 1, 2025. These changes are part of a broader effort to enhance aviation security through the electronic transmission of passenger and crew data to border control authorities before a flight's arrival. The APIS requirements will apply to all flights arriving in Hong Kong, including those operated by commercial, business, and general aviation. Specifically for business aviation, this means that operators of private and charter flights arriving in Hong Kong will be required to submit APIS data for all passengers and crew members before the aircraft's arrival. Flights departing from Hong Kong are not affected by this requirement.

Oct. 1, 2025

Europe: Travel Authorization Systems

The implementation timelines for the European Union's ETIAS (European Travel Information and Authorization System) and EES (Entry/Exit System) have been delayed again. Originally set to launch in 2022, EES will require operators to electronically verify visa validity for third-country nationals traveling to the EU. This system replaces manual passport stamping and aims to improve tracking of visitor entry, exit, and overstay status. The new scheduled start date is Oct. 1, 2025. ETIAS is an online pre-travel and pre-boarding requirement applying to visa-exempt third-country nationals planning to travel to European states. The new scheduled start date is not exact but won't occur before late 2026. International business aviation flight planning organizations believe both programs will apply to passenger-carrying private and charter flights into the EU.

Oct. 27, 2025

U.K.: Gatwick Airport Expansion

Regulators of Gatwick Airport continue to make progress with its plans for capacity expansion, one component of Gatwick Airport Limited's future investment program between 2025 and 2029. A key proposal is to extend its current "standby" northern runway and bring it into regular use, which could increase the airport's maximum capacity by an estimated 13 million passengers per year. The U.K.'s Secretary of State has issued a "minded to approve" decision on Gatwick's northern runway project, and the deadline for the final decision is Oct. 27, 2025. Other elements of the program include a price cap on operator fees that aims to ensure reductions in airport charges.

Oct. 31, 2025

U.S.: Notam Transition

During October 2025, the FAA is scheduled to transition its notam format to align with international standards, nearly a year later than originally targeted. The agency said the transition to the new format will ensure U.S. notams are compliant with standards set by the International Civil Aviation Organization (ICAO). According to the FAA, the new format will result in improved accuracy and accessibility of notam information for pilots, dispatchers, and other notam consumers, provide

notam consumers with one consistent format for domestic and international operations, and allow for enhanced search, sorting, filtering, and archiving capabilities.

Nov. 4, 2025

Canada: Drone Out-of-sight Operations

Regulations allowing medium-sized drone operations and some beyond visual line-of-sight operations without the need for a special flight operations certificate go into effect Nov. 4, 2025. The requirements introduce: pilot and operator certification for lower-risk beyond visual line-of-sight operations; expanded privileges for advanced pilots to fly sheltered operations and extended visual line-of-sight operations; rules for flying medium drones (more than 55 pounds up to 330 pounds) within visual line-of-sight; technical standards for drones and any supporting systems flying advanced, complex, or special flight operations; requirements for flying microdrones at advertised events; and updated fees for services provided by Transport Canada.

Nov. 27, 2025

International: Recommended Standards from ICAO

ICAO has restructured several annexes with updated recommended standards. On Nov. 27, 2025, these become applicable for certain communication, navigation, airport, and heliport operations and aeronautical meteorological services. New standards introduce advanced satellite navigation monitoring and security and reliability of aviation communications with enhanced cyber-resilient standards for air-ground data exchange. Provisions allow for wireless connections between safety systems and improved radio altimeter protection. New standards become effective Nov. 26, 2026, to upgrade ground handling services and for SMS for heliports.

For the most current compliance status, see: ainonline.com/compliance

People in Aviation

BY JESSICA REED

PATRICK PENG

Patrick Peng was appointed as *Embraer China*'s managing director and senior v-p of sales and marketing for commercial aviation. Peng's 20-plus years of experience in the aviation industry include working at Airbus, GE Aviation/CFM, Thales, and Safran.

The *Blackhawk Group* tapped **Charlie Love** as president of the company's Performance Center Network. Love's 25-plus years of experience includes serving as director of business operations at ACHI and as general manager at an Embraer MRO facility.

A new executive leadership team has been established at *Cirrus Aviation Services*. **Eric Grilly**, appointed as the company's president, brings experience as president of resident shows for Cirque du Soleil and as CEO of VStar Entertainment Group. **Gary Reinert** takes on the position of CFO, having recently served as CFO of May Manufacturing and Morito Scovill Americas. **Brian Kip**, now chief marketing officer at Cirrus, was a co-founder of marketing agency SKC Group. **Travis Turner** was hired as Cirrus' v-p of guest experiences. Turner founded both The Emergent Group and Luxe Lifestyle Managers and brings experience in hospitality and luxury lifestyle management.

JENNIFER JEWETT

Jennifer Jewett, controller at *Jetcraft*, was promoted to senior v-p of finance. She played a significant role in the company's previous integration of Corporate Fleet Services (CFS Jets), and her prior experience focused on the finance sector. **Philip Baer** was also named Jetcraft's sales director for the U.S. South Central, including Arkansas, Arizona, Louisiana, New Mexico, Oklahoma, and Texas. Baer brings two decades of experience working for NetJets and NetJets Europe. Jetcraft Commercial brought **Anton Õnnik** onboard as v-p of sales for Europe following Jim Sorokan's retirement. Õnnik's 20-plus years of industry experience include senior leadership roles at Xfly and Estonian Air.

Electra Aero hired **Max Ochoa** as CFO. Ochoa's 20-plus years of experience includes working at Satelles as CFO and general counsel and holding leadership roles at companies such as Alation, Turn, Adify, and TiVo.

STEPHEN WEST

Stephen West was named president of *Premier Private Jets*' charter division. West was formerly president and CEO of Ultimate Jets and has also worked for Sentient Jet and Raytheon Travelair.

Jets MRO tapped **Ron Jennings** as v-p of sales. Jennings brings more than three decades of aviation experience, including senior leadership roles at Elliott Aviation, C&L Aviation Group, and Premier Aviation Services.

The *International Aircraft Dealers Association* named **Brendan Lodge** regional director of the UK/EU and international markets; he is the association's first Europe-based staff member. Lodge's 25-plus years of experience include aircraft sales, acquisitions, financing, and valuation appraisal.

Juan Hernandez was promoted to v-p of field support at *Gulfstream Aerospace*. He has been with the company since 1998 and joined the technical operations team in 2008.

Southern Sky Aviation appointed **Ralph Crosby** as v-p of business development. Crosby's 20-plus years of experience include fractional and jet card sales, as well as business jet sales.

JUSTIN MERKLING

Justin Merkling, manager of the engine shop at *Duncan Aviation*'s facility in Battle Creek, Michigan, was promoted to manager of customer service effective July 1. **Luke Swager** takes on the position of engine shop manager. Swager has been a part of the customer service team for two decades.

Jessica Litz-Rowden, previously manager of chapter relations for Women in Aviation International, is now serving as director for the *New Mexico State Aviation Division*. Litz-Rowden previously worked at Cutter Aviation for 17 years.

USAIG v-p and claims manager **Robert Kehoe**

was promoted to senior v-p and will manage the aviation insurance company's hull loss claims division. **John Watson**, USAIG's senior v-p for hull loss claims, also received a promotion to field claims office manager.


JOHN WATSON

Vertical Aerospace has appointed three new executives to its board: **James Keith Brown**, **Kris Haber**, and **Carsten Stendevad**. Brown, a senior advisor at Thrive Capital, was formerly a founding partner at Och-Ziff Capital Management, and was senior managing partner and head of the operating committee at Coatue Management. Haber is CEO and founder of investment firm Vega Partners and brings more than three decades of experience in corporate finance and business development. Stendevad, partner and co-chief investment officer for sustainable investing at Bridgewater Associates, previously served as CEO of ATP, Denmark's national pension plan.

Pete Carroll was tapped as director of operations at *Jet Access*. Carroll previously held leadership roles at Pacific Coast Jet and MidAmerica Jet and is a pilot with more than 6,700 hours of flight time.


MARTIN HOFACKER

Martin Hofacker was named managing director of *Invicta Finance*, a business jet and super yacht finance specialist. Hofacker previously managed his own consultancy specializing in debt arrangements and also held several leadership roles at Credit Suisse.

NBAA U.S. Southeast region director **Greg Voos** retired after 11 years of service at the association. Voos previously worked for Delta Air Lines for 17 years, supervising crew tracking, and later served as Home Depot's aviation office manager.

NBAA announced that Cook Flight Operations aircraft captain **Doug Rock** has become the 1,000th aviation professional to receive the Certified Aviation Manager (CAM) designation. Rock, who has two decades of experience as a corporate pilot, pursued the certification to expand his knowledge base and enhance his decision-making capabilities.

FINAL FLIGHT

James Edward "Jim" Schuster, who led the turnaround of *Raytheon Aircraft* and its transition to *Hawker Beechcraft* in the 2000s, passed away on May 8, in Wichita. He was 72.

Under Schuster's leadership from 2001 to 2008, the Wichita-based OEM implemented sweeping changes that revitalized the struggling aircraft manufacturer. His leadership resulted in record order backlogs in his final years at the helm, expanded global operations, certification of 19 new aircraft, and increased government and special-mission aircraft sales. Upon announcing his retirement in November 2008, Hawker Beechcraft chairman Sanjeev Mehra described Schuster as "a true leader who has positioned Hawker Beechcraft atop general aviation."

Phil Michel, who served as v-p of marketing at *Cessna Aircraft* from 1975 to 2007, passed away on May 25 at the age of 85.

Born on July 11, 1939, in Bronxville, New York, Michel joined Cessna in 1975 as v-p of marketing, a position he held for nearly 32 years. During his tenure, he played a significant role in promoting Cessna's aircraft lineup, contributing to the company's growth and global market presence.

AWARDS AND HONORS

On June 26, the board of governors of the Aero Club of Washington honored two aviation industry leaders with the 2025 Donald D. Engen Aero Club Trophy for Aviation Excellence, **Mary Miller**, former v-p of industry and government affairs at Signature Aviation, and **Pete Bunce**, former president and CEO of the General Aviation Manufacturers Association.

In addition, **Pete Bunce** and the entire GAMA team have received the National Aviation Hall of Fame's 2025 Milton Caniff Spirit of Flight Award.

Sheryl Barden, CEO of Aviation Personnel International, will receive NBAA's 2025 John P. "Jack" Doswell Award at the NBAA-BACE convention in Las Vegas in October.

Retired U.S. Air Force test pilot **Charlie Precourt** received the Flight Safety Foundation's 2025 Business Aviation Meritorious Service Award.

› continued from page 10

span last year, while it increased the total of TBM 960 deliveries from eight to 11 in the most recent first quarter.

Piaggio delivered one of its Avanti Evo pusher-twins this year after handing over none in the first quarter of last year.

Piston aircraft deliveries rose by nearly 20% to 353 units in the first quarter.

HELOS ON COURSE

Turbine rotorcraft deliveries remained nearly static overall, with just a two-unit difference YOY. Bell increased deliveries on its light single 407GXi from four to 11 in the first three months of this year, finishing the quarter with a 61% increase compared to last year's first quarter.

Airbus Helicopters saw no change in the 48 helicopters it handed in both first-quarter 2024 and first-quarter 2025, while Leonardo had a slight decrease from 29 deliveries in the first three months of 2024 to 27 this year. The Italian manufacturer saw its biggest change in the twin-engine midsize AW169, delivering four fewer in the first quarter than it did in the same span in 2024.

Robinson Helicopter handed over six fewer of its R66s in the first quarter YOY, while Enstrom, which delivered a pair of its 480Bs in first-quarter 2024, did not have any turbine helicopter deliveries in the first three months of this year.

Sikorsky delivered a large-cabin S-92 in the first quarter of this year, after having had no deliveries to open 2024.

"It is encouraging to see a strong first quarter for the general aviation manufacturing sector," GAMA president and CEO James Viola told **AIN**. Speaking of the first quarterly industry report since being handed the reins by long-time GAMA head Pete Bunce, who retired in April, he added, "There is some uncertainty that lies ahead for the sector, especially as it pertains to tariffs. It will be important that we work together to face these challenges by showing the importance of the industry and the strong economic growth and opportunities we deliver." ▮

AIN Media Group

JAMES HOLAHAN (1921-2015), FOUNDING EDITOR, WILSON S. LEACH, FOUNDER & CHAIR EMERITUS

EDITOR-IN-CHIEF – Matt Thurber
MANAGING EDITOR – Charles Alcock
DIGITAL EDITOR – Chad Trautvetter
EDITOR AIN MONTHLY MAGAZINE – Kerry Lynch
BUSINESS AVIATION SERVICES EDITOR – Curt Epstein
SENIOR EDITOR – Hanneke Weitering – Technology Editor
COPY EDITOR – Jessica Reed
NEWS REPORTERS – Sarah Rose, Amy Wilder
CONTRIBUTORS – Cathy Buyck – Europe, David Donald – U.K., Mark Huber – Rotorcraft, Jennifer Leach English, David Jack Kenny – Safety, Gordon Gilbert , Jennifer Meszaros – Southeast Asia, Dale Smith, Richard Pedicini, James Wynbrandt
PRODUCTION MANAGER – Martha Jercinovich
GRAPHIC DESIGNER – Grzegorz Rzekos
DIRECTOR OF VIDEO – Ian Whelan
SENIOR DEVELOPER – Cameron MacPherson
FRONT END DEVELOPER – David Lohmeyer

EXECUTIVE CHAIR – Dave Leach
PRESIDENT – Ruben Kempeneer
HEAD OF PEOPLE & BRAND – Jennifer Leach English
SENIOR DIRECTOR, INDUSTRY AFFAIRS AND EVENTS – Nancy O'Brien

ADVERTISING SALES
DIRECTOR OF SALES - Henry Specht
Victoria Tod – Northeastern U.S./Eastern Canada/United Kingdom, +1 (203) 733-4184
Michelle James – Western U.S./Western Canada, +1 (520) 343-0236
Joe Rosone – Midwestern U.S., Southeastern U.S./Caribbean/Brazil, +1 (301) 693-4687
Diana Scogna – Europe/Middle East, +33 6 62 52 25 47
DIRECTOR OF MARKETING AND CLIENT SERVICES – Lisa Valladares
AUDIENCE DEVELOPMENT DIRECTOR – Eileen Silberfeld
EVENTS SPECIALIST – Brien O'Brien
MARKETING SPECIALIST – Alyssa Barry
SOCIAL MEDIA MARKETING – Zach O'Brien
SALES ADMINISTRATOR – Cindy Nesline

MANAGER OF FINANCE & HUMAN RESOURCES – Tracy Britton
ACCOUNTS PAYABLE – Mary Avella
ACCOUNTS RECEIVABLE – Bobbie Bing

U.S. HEADQUARTERS
214 Franklin Ave., Midland Park, NJ 07432, +1 (201) 444-5075
Advertising Inquiries: +1 (201) 345-0085, adsales@ainonline.com
Circulation Inquiries: +1 (201) 345-0085, subscriptions@ainonline.com
WASHINGTON, D.C. EDITORIAL OFFICE:
Kerry Lynch: klynch@ainonline.com, Tel: +1 (703) 969-9195
EUROPEAN EDITORIAL OFFICE:
Charles Alcock: calcock@ainonline.com, Tel: +44 7799 907595

Aviation International News (ISSN 0887-9877) is published twelve times per year (monthly). Periodicals postage paid at Midland Park, N.J., and additional mailing offices. **Postmaster:** Send address changes to AIN Media Group, 214 Franklin Ave., Midland Park, NJ 07432.
Allow at least eight weeks for processing. Include old address as well as new, and an address label from a recent issue if possible.
Subscription inquiries: +1 (201) 345-0085 or email: subscriptions@ainonline.com.

Aviation International News is a publication of AIN Media Group, 214 Franklin Ave., Midland Park, NJ 07432; Tel.: +1 (201) 444-5075.

AIN Media Group publishes **Aviation International News, AINalerts, AINonline, Business Jet Traveler, BJTwaypoints, ABACE Convention News, Dubai Airshow News, EBACE Convention News, Farnborough Airshow News, FutureFlight.aero, VAI Convention News, LABACE Convention News, MEBAA Convention News, NBAA Convention News, Paris Airshow News, Singapore Airshow News, Mobile Apps: Aviation International News; AINonline.**
PUBLICATION MAIL AGREEMENT NO. 40649046 RETURN UNDELIVERABLE CANADIAN ADDRESSES TO:
PITNEY BOWES INTERNATIONAL MAIL, STATION A, P.O. BOX 54, WINDSOR, ON, N9A 6J5, returns il@imex.pb.com.

BPA WORLDWIDE

For feedback, letters to the editor, or other editorial needs, please contact AIN's Editors at ainedit@ainonline.com


AIRCRAFT POST
Save time and money by monitoring the value of your aircraft in 'real-time'.
Subscribers can also:
– Generate a comprehensive list of all aircraft transactions in the last 12 months
– View a detailed photo gallery for your specific aircraft
– Receive a weekly report summarizing market fluctuations
Visit aircraftpost.com/contact to learn more
AIN Media Group


HOW DO YOU LEAD
AN INDUSTRY FOR
100 YEARS?
For a century, Pratt & Whitney has powered progress and transformed the possibilities of flight. With more than 90,000 engines in service and investments in cutting-edge technology — we're just getting started. Together as RTX, the next century holds even greater promise.
Learn more at prattwhitney.com
RTX
COLLINS AEROSPACE | PRATT & WHITNEY | RAYTHEON
PRATT & WHITNEY
DEPENDABLE ENGINES
YEARS OF
POWERING
THE FUTURE

AIN Media Group

THE GLOBAL LEADER

IN BUSINESS AND CIVIL AVIATION, NEWS, ANALYSIS & DATA.

AIN AVIATION INTERNATIONAL NEWS
ainonline.com

AIRCRAFT POST
aircraftpost.com

BUSINESS JET TRAVELER
bjtonline.com

FutureFlight
INNOVATION FOR AVIATION'S NEXT REVOLUTION
ainonline.com/futureflight

CALS
Corporate Aviation Leadership Summit
ainonline.com/cals

AIN FBO AWARDS
ainfboawards.com


HOW DO YOU LEAD
AN INDUSTRY FOR
100 YEARS?
For a century, Pratt & Whitney has powered progress and transformed the possibilities of flight. With more than 90,000 engines in service and investments in cutting-edge technology — we're just getting started. Together as RTX, the next century holds even greater promise.
Learn more at prattwhitney.com
RTX
COLLINS AEROSPACE | PRATT & WHITNEY | RAYTHEON
PRATT & WHITNEY
DEPENDABLE ENGINES
YEARS OF
POWERING
THE FUTURE