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## SUPPLIERS

# Views Mixed On Potential Honeywell-UTC Merger

**A Honeywell International-led merger with United Technologies Corp. would be a boon for shareholders and investors, according to financial details of Honeywell's bid that it released Feb. 26.**

But whether it is good for the aerospace and defense (A&D) sector increasingly is being called into doubt, based on growing reactions from industry insiders.

"I don't think that would be good, at least for Embraer," President and CEO Frederico Fleury Curado said. "On the E2 they are major suppliers, and if they become one supplier they will have an enormous stake. So, that's something we are looking carefully at," he told Aviation Daily in Brazil at the rollout of the E190-E2.

"The proposed merger of two of America's largest industrial companies may make sense for climate control and some industrial businesses, but I don't think it's a good idea for the aerospace businesses," said long-time analyst Kevin Michaels, vice president of IFC International's aerospace and MRO practice.

"First, the overlap of the aerospace businesses is significant, and would likely result in significant divestitures to satisfy competition authorities," Michaels said in a comment on Aviation Week's website, regarding an earlier article about a potential takeover (Aviation Daily, Feb. 24). "Second, a Honeywell-UTC tie-up would likely increase pressure from Boeing and Airbus for pricing concessions via initiatives like Partnership for Success" he said, noting he thinks there is a "strong likelihood" that OEMs will respond by "actively promoting" smaller suppliers and embracing vertical integration. Michaels continued by saying: "Third, Honeywell and UTC run very lean operations so opportunities to remove costs—at least in aerospace—may not be as significant as advertised." He explained that while topics such as reductions in overhead and purchasing leverage are possible, there is "limited upside potential" for margin expansion based on the companies' aerospace units having operating margins in the "mid-to-high teens."

**HONEYWELL**, p. 2

## Intelligence

**Helicopter manufacturers** worldwide delivered 954 aircraft in 2015. That includes 279 piston aircraft and 675 turbine aircraft, according to the General Aviation Manufacturers Association. The figures do not include Finmeccanica Helicopters, which will release fourth-quarter and yearend figures on March 16. Excluding Finmeccanica, manufacturers delivered 933 aircraft in 2014. The HAI Heli-Expo begins Feb. 29 in Louisville, Kentucky.

## FORECASTS/INDUSTRY DATA

# General Aviation, BizAv Avionics Sales Down In 2015

**Worldwide business and general aviation avionics sales last year totaled more than \$2.4 billion, a 4.4% decrease compared to 2014, according to just-released data from the Aircraft Electronics Association. (See chart Page 2)**

Of the total sales, \$1.23 billion, or 50.9%, came from the forward-fit market, which includes avionics equipment installed by manufacturers during aircraft production.

The retrofit market, which includes avionics equipment installed after production, totaled 49.1% of sales last year, or \$1.187 billion.

**AVIONICS**, p. 2

**HONEYWELL**, from p. 1

A&D overlap between Honeywell and UTC was cited by the latter last week in efforts to downplay a possible merger after news broke Feb. 22 of talks between the multi-industrial conglomerates. But Honeywell continues to believe any antitrust issues can be overcome. Early Feb. 26, it released the formal presentation that Honeywell Chairman and CEO Dave Cote made on Feb. 19 to UTC Chairman Edward Kangas and CEO Gregory Hayes.

According to the pitch, a Honeywell-led merger would bring “substantial operating benefits” with a “cost synergy potential” estimated around \$3.5 billion in savings by the fourth year and operating margins around 20%. The offer comprises cash and stock priced at \$108 per UTC share, a 22% premium to UTC’s price the day before their meeting, on Feb. 18. UTC shareholders would receive \$42.63 a share in cash, plus 0.614 shares of Honeywell per UTC share. There would be more than \$39.1 billion in “value creation” for UTC shareholders—\$35.8 billion of which would have been a then-immediate cash benefit—and more than \$72 billion for all shareholders combined. Shareholders also could expect “double-digit” earnings-per-share growth, “strong” free cash flow of about \$10 billion and a “strong” investment grade.

The resulting combined company—which would be led by Honeywell’s Cote—could count on \$97 billion in annual sales, according to the presentation. But it is not clear whether that figure includes business lines that would later be divested to meet antitrust concerns. Commercial aerospace would account for 28% of combined revenue, compared with 18% at Honeywell and 36% at UTC; defense and space would be 13% at the merged company, versus 12% and 14%, respectively.

Honeywell’s release of the details reflects a continued effort to win over UTC stakeholders. Whether it represents the beginning of a hostile takeover or an effort to spur potential activist shareholder allies at UTC, remains to be seen. Regardless, UTC’s Hayes remains opposed.

“Notwithstanding the significant regulatory challenges and customer concerns, Honeywell’s proposal grossly undervalues UTC and overstates potential synergies,” he said later Feb. 26 in response to Honeywell’s release of details. “Effectively, Honeywell’s proposal is a leveraged buyout of UTC using UTC’s own strong balance sheet. Putting aside the insurmountable regulatory risks, the proposal is not an attractive deal for UTC’s shareholders and does not reflect UTC’s strong long-term outlook.”

—Michael Bruno, [michael.bruno@aviationweek.com](mailto:michael.bruno@aviationweek.com), with Guy Norris

**AVIONICS**, from p. 1

Sales to the U.S. and Canada made up 64% of the market, while 36% were sold internationally.

AEA’s Avionics Market Report compiles sales figures from participating manufacturers which submit them to an independent third-party firm retained to produce the report. Dollar amounts are net sales price and include all business and general aviation aircraft electronic sales, including component and accessories in the cockpit and cabin, software upgrades, portables, certified and noncertified aircraft electronics, hardware and batteries and chargeable product upgrades. It does not include repairs and overhauls, extended warranty or subscription services.

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**PROGRAMS**

**Bombardier Learjet Delivers 75th Learjet 75**

**WICHITA – Bombardier Business Aircraft delivered its 75th Learjet 75 light business jet on Feb. 24, two years after the first Learjet 75 entered service.**

The milestone aircraft went to Aurora Jet Partners, a fractional, charter, sales and aircraft management company based in Edmonton, Alberta, Canada.

“This is a very proud moment for Bombardier Learjet,” Tonya Sudduth, general manager of Learjet programs and of the Wichita Learjet site, said at a celebration at the Learjet facility here. “The 75th delivery marks a major milestone in business aviation. It is another achievement in the proud history of our iconic brand.”

The Learjet 75 is the first of its kind for Aurora Jet Partners, said Bill McGoey, Aurora Jet Partners president. The company’s fleet includes Challenger 300, Challenger 604, Challenger 605 and Global 5000 aircraft. It has options to take delivery of two additional Learjet 75 aircraft this year, McGoey said. “We do see more coming”

McGoey said business has been good for the company, and that “2015 was our best year” in growth and income. The Learjet 75 will be based in Toronto. The aircraft’s price and performance, as well as Bombardier’s support of its aircraft, makes the Learjet 75 the right addition for the company as it grows, McGoey said. “We’re extremely thrilled to be adding a Lear 75,” he said. The aircraft will be in operation as early as next week.

The Learjet 75 has a list price of \$13.8 million and seats six to eight passengers. It incorporates a Garmin 5000 cockpit, winglets, a flat cabin floor, cabin management system with touchscreen monitors and audio and video control and LED lighting. The aircraft cruises at Mach 0.81 and has a range greater than 2,000 nm, Bombardier said.

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2015 Business and General Aviation Avionics Sales (In billions)				
Year	Retrofit	Forward-fit	Total	% Change From Previous Year
2015	\$1.19	\$1.23	\$2.42	-4.40%
2014	\$1.23	\$1.29	\$2.53	4.00%
2013	\$1.11	\$1.32	\$2.43	9.00%
2015 Percentage Of Total Sales By Market				
Year	Retrofit	Forward-fit	North America	International
	49.10%	50.90%	64.20%	35.80%

Source: Aircraft Electronics Association Avionics Market Report

**SUPPLIERS**

## Amid Seats Crisis, Zodiac Aerospace Lowers Profit Target

**PARIS – Zodiac Aerospace will not meet its 2015-16 target of close to 10% operating profit margin, and its planned recovery from a crisis in its aircraft seats and interiors business will take longer than the 18 months initially predicted, the company's chief executive said.**

In a Feb. 24 conference call with investors and reporters, Zodiac Aerospace CEO Olivier Zarrouati said the company is focused on meeting delivery schedules for customers, including new aircraft programs that are ramping up at Airbus and Bombardier.

"The A350 is one of them. The lavatory of that airplane is part of the program that is showing a very aggressive ramp-up in 2016," he said. "We still have some seats programs that are in the ramp-up, and let's not forget the other existing programs like the C-Series that will see first deliveries in 2016. We have to take all those things into account."

Airbus production of the A350 is expected to more than triple this year, with plans to deliver more than 50 aircraft. "This is ambitious and challenging, but we know what we are doing," Airbus Chief Financial Officer Harald Wilhelm said during the company's annual full-year earnings news conference in London on Feb. 24.

However, early deliveries this year have thus far been hampered by delays in the A350 supply chain, including Zodiac, which Airbus CEO Fabrice Bregier has publicly criticized. Zarrouati declined to comment on his customer's deliveries, but said Zodiac's troubles are not expected to lead to delays in aircraft programs.

"It is just taking more money than we thought it would," he said.

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– Jens Flottau in London, [jens.flottau@aviationweek.co.uk](mailto:jens.flottau@aviationweek.co.uk)

**PROGRAMS**

## Fourth G500 Test Aircraft Joins Flight Test Program

**The fourth Gulfstream G500 test aircraft has completed first flight and joined the G500 flight test program, Gulfstream Aerospace said Feb. 20.**

It is one of five test aircraft that will be involved in the flight test program. The G500 flew from Savannah-Hilton Head International Airport in Georgia with flight test pilots Eric Holmberg and Brian Dickerson and flight test engineers Dominic Pompeo and Mark Mondt on board for 3 hr. 17 min.

Gulfstream began the flight test program for the G500 last May. It has accumulated more than 580 flight hours to date. FAA

certification is expected in 2017.

The flight of the fourth flight test aircraft is a milestone, the company said. For the first time, Gulfstream has integrated a team of product support maintenance technicians with the flight test team to follow the aircraft through manufacturing and flight testing.

"The collaboration between Product Support and Flight Test throughout the G500 certification process will ultimately enhance the support available to operators when the aircraft enters service," said Mark Burns, Gulfstream president. "This dedicated service team reflects Gulfstream's commitment to continuous improvement and ensures we deliver on our promises to customers."

The fourth flight test will be used to test avionics, flammable fluid drainage, water ingestion and select systems, such as water/waste, lighting and fire protection. It will also perform flight standardization and operations evaluations. A fifth flight test aircraft has been delivered to the Savannah Completions Center.

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**PROGRAMS**

## Gulfstream's G600 'Iron Bird' Makes First Flight

**Gulfstream Aerospace Corp.'s G600 iron bird completed its first simulated flight to demonstrate the growing maturity of its G600 aircraft program, the company said.**

The iron bird, which includes a spatially correct, dimensionally accurate structure that includes a flight deck, allows engineers to test the flight control and mechanical systems.

The device simulated taxi, takeoff and landing as well as maneuvers and transitions at altitude and airspeed.

"The first flight sets in motion the testing and validation required for the G600's actual first flight," said Dan Nale, Gulfstream senior vice president of programs, engineering and test. "With the iron bird, we can confirm the characteristics of the system components, improve the integration maturity, make modifications and provide those benefits in a lab environment, all while on the ground and still in the design stage to the benefit of the flight test aircraft."

Having the iron bird as a resource enhances safety and streamlines the testing process, Nale said. The first G600 flight-test aircraft and structural test aircraft are in production. Entrance into service is expected to 2019. The aircraft features an all-new Symmetry Flight Deck with active control sidesticks, touchscreen controllers, a next-generation vision system and Honeywell Primus Epic avionics. It also offers a digital fly-by-wire system with flight envelope protection, stability augmentation, increased redundancy and reduced maintenance, the company said.

The G600 is capable of traveling 6,200 nm/11,482 km at Mach 0.85 or 4,800 nm/8,890 km at Mach 0.90. Its maximum operating speed is Mach 0.925, the same speed as Gulfstream's G650 and G650ER.

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**SUPPLIERS**

## ATP Orders 15 More Piper Archer TX Aircraft

**Piper Aircraft has received an order from ATP Flight School for 15 additional Archer TX aircraft for its training fleet.**

The order is part of a three-year agreement for up to 100 aircraft signed in April 2013. The original order included 15 Piper Archer single-engine training aircraft for delivery in late 2013 with an option for 85 more.

ATP has been exercising its option for additional Archers as it transitions to a predominately Piper training aircraft fleet, the company said. At the current rate of increase, Piper will deliver 70 of the 100 aircraft to ATP by the end of this year. “This follow-on fleet transaction is a display of ATP’s ongoing confidence in Piper Aircraft,” Piper President and CEO Simon Caldecott said. “Our training aircraft continue to impress students and instructors, delivering unmatched performance with countless hours of flight school training around the world.”

The Archers are primarily used by ATP’s Airline Career Pilot Program students. This program puts students on an airline-sponsored career track, and moves them from no experience to an airline pilot’s position in two years. After training in the Archers, students then transition to ATP’s multi-engine fleet of more than 100 Piper Seminoles, which are similarly equipped to the Archers.

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**SUPPLIERS**

## Cessna Aircraft Settles EEOC Discrimination Suit

**Cessna Aircraft, a division of Textron Aviation, will pay \$167,500 and furnish other relief to settle a disability discrimination lawsuit filed by the Equal Employment Opportunity Commission, the agency announced.**

The lawsuit charged that Cessna, based in Wichita, failed to make the required individualized assessment of the ability of conditional employees to perform essential functions of jobs in two separate cases. Instead it relied on workers’ compensation standards. Violations were found in Wichita and Milwaukee, and were based on what appeared to be a company-wide policy, the EEOC said in a press release.

In one case, Cessna required a conditional employee to meet national maximum medical improvement standards to be eligible to work, despite the employee providing medical documentation that he could work without restriction. Cessna rescinded the job offer to the employee, the EEOC said. In a second case, Cessna withdrew its job offer to an employee who had a history of workers’ compensation restrictions “without regard for his subsequent improvement

and ability to provide medical documentation of his ability to work without restriction,” the EEOC said.

The conduct violates the Americans with Disabilities Act (ADA), it said. “Although we have always challenged the EEOC’s pursuit of this case given the underlying facts, we understand that many processes have room for improvement,” a Cessna spokeswoman said in a statement. “The company is receptive to adopting new standards for placing employees in a manner that effectively balances safety concerns with our commitment to working with individuals with medical impairments and disabilities. Despite the EEOC’s allegations, Cessna has always and will continue to work closely with applicants and employees in attempting to find placements in line with restrictions, including the successful placement of one of the applicants named in the EEOC case prior to the suit being filed.”

The decree settling the suit requires Cessna to pay the two former conditional employees a combined amount of \$167,500, prohibits such discrimination in the future, and requires reporting to the EEOC for two years with Cessna creating a new ADA policy. Cessna must also train its human resources and health services employees on disability discrimination, reasonable accommodation and retaliation under the ADA and on the interplay of workers’ compensation laws and the ADA.

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**CHARTERS / BROKERS**

## NetJets, Teamsters Prepare For Strike Authorization Vote

**Another labor dispute appears to be brewing between NetJets and the Teamsters union.**

NetJets technicians and flight dispatchers – workers represented by the International Brotherhood of Teamsters – are preparing for a strike authorization vote, the union said. Members of Teamsters Local 284 at NetJets who work in fueling, catering, dispatching, stock clerking, aircraft cleaning and maintenance control operations could also be affected by the labor unrest.

The affected workers have been in contract negotiations for five years, it said. “NetJets workers are speaking out against cost-cutting demands and proposals that they say undermine the ability to perform their jobs, which are essential to the safety of NetJets passengers,” the Teamsters said in a release.

The dispute follows a multi-year dispute between NetJet and its pilots and flight attendants. A NetJets spokesman said the company did not have a comment. According to the Teamsters, NetJets seeks to replace flight dispatchers with automation and software programs, Paul Suf-foletto, president of Local 284 said in a statement. “Management is also telling our aviation technicians that they have to compete against lower-cost mechanics if they want to perform necessary maintenance work on NetJets aircraft. These actions raise serious questions about cost cutting at the expense of employees responsible for the safety of flights.”

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**PROGRAMS**

## Robinson Opens Order Book For R44 Cadet Aircraft

### **Robinson Helicopter Co. is officially accepting orders for its R44 Cadet aircraft.**

The helicopter has an introductory price of \$339,000 with standard equipment. A float version is \$367,000. Delivery dates will not be confirmed until after FAA certification is completed, the company said.

The R44 Cadet's airframe, rotor system and powerplant are the same as the R44 Raven I. But the Cadet has a reduced maximum gross weight of 2,200 lb. The engine power has been derated to 210 hp takeoff and 185 hp continuous. The lower weight and derated power provide increased performance margins at high altitudes and extends the time between overhaul from 2,200 hr. to 2,400 hr., which reduces operating costs.

It also offers a variety of operational equipment, such as air conditioning, stability augmentation system and autopilot and avionics packages for VFR or IFR training.

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**PROGRAMS**

## Embraer's Phenom 300 Most Delivered Business Jet In 2015

### **Embraer's Phenom 300 light business jet was the most delivered business jet in 2015 for the third year in a row, the company said.**

Brazil-based Embraer delivered 70 twin-engine Phenom 300 aircraft to customers last year.

There are 320 Phenom 300s in operation in 28 countries, the company said. To date, the fleet has accumulated nearly 300,000 flight hours.

The market share of Embraer Executive Jets has grown to 17% in terms of unit deliveries. In 2015, Embraer delivered 120 business aircraft, including in the Phenom, Legacy and Lineage families. It was the highest number of deliveries in five years, the company said.

The Phenom 300, which holds nine passengers and two crewmembers, received type certification in December 2009, with deliveries following the same month. It has a high-speed cruise of 453 kt. and a range of 1,971 nm with six occupants. The aircraft is powered by two Pratt & Whitney Canada PW535E engines with 3,200 lb. of thrust each.

"The Phenom family's design was based on the highest industry requirements, combining the attributes of a best-in-class aircraft,"

said Marco Tulio Pellegrini, president and CEO of Embraer Executive Jets. "To have the most-delivered business jet in the world for the third consecutive year is a true recognition that we have achieved our commitment to design game-changing products to meet operators' needs."

– Aviation Week Staff

**SERVICES**

## Mecaer Luxury Cabin Finds Niche

### **Mecaer Aviation Group's MAGnificent luxury helicopter interior is finding a niche among Bell 429 owners, from the first installation at Bell Helicopter's Prague facility to the most recent supplemental type certificate (STC) from Russian aviation authorities last month.**

The MAGnificent cabin for the Bell 429 was unveiled last August and already has STCs from the Agência Nacional de Aviação of Brazil, the European Aviation Safety Agency (EASA) and Transport Canada. "Achieving this [EASA] goal within nine months of our application is no small accomplishment," MAG co-general manager Armando Sassoli said. Mecaer has also applied for MAGnificent approval from the Civil Aviation Administration of China.

The MAGnificent interior was "a 100% in-house solution" created by Mecaer's Rome-based design studio. The Italian interiors specialist's MAGnificent Interior Configurator allows buyers to personally customize their own interior. The configurator app can be downloaded at the App Store for iPads and is searchable as "MAGnificent Interior Configurator."

Customers may choose from a wide range of fabrics, colors and four-, five- or six-seat cabin configuration. Also available is a personal electronic device (PED) interface, and passenger-controlled electro-chromic windows.

Mecaer's Inflight Entertainment Enhanced Lounge (I-FEEL) provides a fully customized interactive touch-screen control system. Added to the cabin comfort is Mecaer's SILENS noise abatement package, allowing headset-free passenger communication. The system has resulted in a cabin noise level of 68 dB (SIL) as installed in an AgustaWestland AW-139. Mecaer is now working on a new AW-139 sliding door SILENS STC that will be certified in midyear. It will allow sliding door customers the same technology that was previously available in the hinged door AW-139.

According to Mecaer, the SILENS systems are in service in helicopters in six of the seven continents, "and have logged hundreds of thousands of headset-free flight hours."

Sassoli added that new materials are always being developed which create a lighter system and lower dB levels. And the lighter weight, he pointed out, permits a better useful load and more range.

– Kirby Harrison

## SERVICES

## Flying Colours Expands Facility As Work Grows

**Flying Colours Corp., a North American maintenance, repair and overhaul completions and refurbishment company, is expanding its cabinetry finishing shop in Peterborough, Ontario, Canada.**

The company is adding 6,500 sq. ft., which doubles its workshop, to keep up with a rise in customer demand for refurbishment and completion work, it said. The expansion will provide room for two new downdraft tables to collect fine dust particles produced during the finishing process and a new downdraft spray booth to support the process of varnishing wood veneers.

The workshop design includes a skylight and daylight lighting to help in the inspection of cabinetry components that pass through the shop, the company said. Flying Colours is also updating its customer offices, which will feature custom glass walls, custom-made hardwood floors and leather furniture. A VIP lounge will include custom brick and glass finish with a full entertainment system. The offices were expected to be completed by the end of February.

Investment in the projects were driven by the increase in work it has taken on in the past 12 months, the company said. “We are seeing more work coming from a number of Bombardier Global projects, as well as a rise in the amount of mid-to-large size refurbishments coming through the doors,” said Sean Gillespie, Flying Colours executive vice president. “The increased demand for work in larger-type aircraft and our Global ASF status means we need to match customer expectation in terms of their experience when visiting us.”

Flying Colours has facilities in Canada, the U.S. and Singapore. It specializes in business aircraft completions, interior refurbishment and modifications, heavy maintenance, exterior paint, special mission modifications and avionics installations.

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## SAFETY

## Data Extracted From Flight Recorder Of AW609 Wreckage

**LONDON – Italian air accident investigators have successfully extracted data from the combined flight data and cockpit voice recorder recovered from the wreckage of the second prototype AgustaWestland AW609 commercial tiltrotor.**

The data extraction comes almost four months after the probe into the loss of the aircraft began following the fatal Oct. 30 crash.

In an update published on its website Feb. 18, the Italian National Agency for Air Safety (ANSV) said the recorder’s protective housing

and the memory inside had been extensively damaged in the accident. As a result, investigators were unsure whether critical data could be recovered until a number of precautionary electrical tests had been performed.

ANSV said the process was undertaken in coordination with the public prosecutor from Vercelli, one of the towns near to the accident site, who is performing his own investigation.

The prosecutor’s investigation aims to establish possible liability.

The aircraft, N609AG, was fully instrumented and involved in envelope expansion work, vibration surveys and stall and buffet tests.

Test pilots Herb Moran and Pietro Venanzi both died in the crash.

The tiltrotor reportedly broke up during a high-speed flight test. Eyewitnesses said the aircraft was on fire before it crashed.

AgustaWestland has halted flight tests of the remaining tiltrotor, AC1 based in the U.S. A third aircraft, AC3, is currently in the last stages of final assembly. According to the ANSV, it is the first time a European investigative agency has performed the extraction from such a recorder system. The agency said it will now analyze the data, but would not say when a report may be released.

A delay would likely put additional pressure on the aircraft’s certification schedule. Finmeccanica had been hoping to achieve civil FAA certification in the Powered Lift category in 2017, with deliveries scheduled to start soon after.

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## SERVICES

## BendixKing Upgrades Aero Wave 100 System

**BendixKing, a division of Honeywell Aerospace, has enhanced its inflight Internet connectivity for general aviation aircraft, the company said.**

The company is now shipping its next generation of the BendixKing Aero Wave 100 with a new Active Low Gain Antenna and optional Wi-Fi routers that make installation easier and provides voice or data connectivity for passengers and crew, it said.

Aero Wave also provides connected Honeywell services to general aviation pilots, such as weather services, flight planning tools and communication with flight dispatchers and fixed base operators.

Service plans are billed based on hours of use rather than amount of data used, BendixKing said. “Building on our first-generation AeroWave 100, BendixKing is excited to enhance the system with a simpler install process and easier passenger access to inflight Internet,” said Justin Ryan, president of BendixKing. “The new antenna and routers reduce the system weight, install and setup time, and component count.”

The company is offering a \$3,000 promotional rebate to customers who take delivery of the AeroWave 100 system before June 1. The system is available through BendixKing’s dealer network.

– Aviation Week Staff

**AIRPORTS**

## Airport Executives Recognize 97 Airports For Excellence

**The American Association of Airport Executives (AAAE) has recognized 97 airports with an ANTA Digicast Excellence In Airport Training award for training completed last year.**

The award confirms that airport employees and additional staff working at each recognized facility have completed a specified amount of federally-mandated, airport-specific training and continuing education using ANTN Digicast's web-based training system.

Award levels are based on total training programs watched and total number of employees training at each airport.

Airports that subscribe to ANTN Digicast have unlimited access to the service's 300-plus training programs for all employees and tenants. Topics include operations, security, customer services, aircraft rescue and firefighting, FAA-required recurrent training and more.

"ANTN Digicast was created for airports as a cost-effective, efficient way to help them comply with training requirements, and we're encouraged that so many airports have made it an integral part of their training programs," AAEE Vice President Patrick Raker said.

— Kirby Harrison

**REGULATORY/LEGISLATIVE**

## Registration Deadline Past, FAA Looks at Next UAV Steps

**With the deadline for hobbyists to register their small UAVs now past, the FAA will find out which of its approaches – education or enforcement – will have the most beneficial impact on airspace safety.**

When the deadline closed on Feb. 19, 368,172 owners had registered UAVs weighing from 0.55 lb. to 55 lb. over an eight-week period. Since an owner could register more than one UAV, the FAA says it does not know how many aircraft are covered.

The Consumer Technology Association estimates about 700,000 small UAVs weighing more than 0.55 lb. were sold in the U.S. last year, and forecasts 1 million will be sold this year. Owners must have the registration certificate with them when flying a UAV. "Registration will be ongoing. When we learn about an event, we investigate. We can educate or take civil penalty action," the FAA says. Civil penalties can be up to \$27,500; criminal penalties up to \$250,000 and/or three years in prison.

As a next step, the FAA has evaluated a system to detect and identify "rogue drones" and their operators in airspace around airports, where the majority of more than 100 UAV sightings a month reported by pilots are occurring.

Working with the Homeland Security Department (DHS), the FAA

evaluated a prototype of CACI International's SkyTracker UAV detection system from Jan. 25 to Feb. 2 at Atlantic City International Airport in New Jersey.

CACI's proof-of-concept system uses radio frequency sensors in high, prominent locations around the airport. When it detects frequencies that UAVs typically use, the system triangulates the signals and determines the location of both UAV and operator.

A total of 141 operations were executed over five days – 72 with a UAV on the ground and 69 with different small UAVs in flight, the FAA says. The FAA, DHS, CACI and the University of Maryland are now compiling the data for a final report by next August.

The system performed as designed, CACI Chief Operating Officer John Mengucci says. "SkyTracker successfully identified, detected, and tracked UAS in flight, and precisely located drone ground operators – all without interfering with airport ground operations."

— Graham Warwick, graham.warwick@penton.com

**REGULATORY/LEGISLATIVE**

## FAA And Singapore Strike Landmark U.S.-Asia MRO Deal

**FAA and the Civil Aviation Authority of Singapore have by signed the first set of maintenance implementation procedures (MIP) between the U.S. agency and an Asian counterpart.**

The MIP, signed Feb. 16, paves the way for streamlined maintenance oversight for repair stations in the U.S. and Singapore, where agency data show there are 56 FAA-certificated shops.

"This landmark agreement with the Civil Aviation Authority of Singapore will strengthen aviation safety while reducing the cost of inspections on repair work," FAA Administrator Michael Huerta said. "The U.S. looks forward to our continued collaboration with ASEAN [Association of Southeast Asian Nations] member-states."

The agreement sets up reciprocal acceptance of maintenance oversight, among other benefits. It builds upon a bilateral aviation safety agreement (BASA) in place since 2004.

"Though BASAs are great tools for political public relations — allowing administrators and elected officials to trumpet global collaboration — implementation procedures gives actual meaning to regulated parties," the Aeronautical Repair Station Association said. "Properly respected and enforced, the Singaporean MIP will enhance efficiencies for the maintenance industry in the world's most fertile region for aviation growth."

Fleet projections make clear Asia-Pacific's demand for aftermarket support. Aviation Week's 2016 Commercial Fleet & MRO Forecast projects the region's fleet to grow 74% by 2025, to 8,118 from 4,664 today.

MRO demand in Asia-Pacific is expected to total about \$11.2 billion this year and grow to \$14.5 billion in just five years—a 7% compound annual growth rate (CAGR). That compares to a global MRO growth rate of about 4% during the same time, the Aviation Week forecast shows.

—Sean Broderick, avweeksean@gmail.com

**BUSINESS AVIATION BRIEFS** .....

**Air Charter Service** has moved its operations to a new facility on Santa Monica Boulevard from Los Angeles. The facility, which almost doubles the amount of office space, will accommodate further growth, the company said. The location, which is a few miles from Hollywood, will be convenient for its clients involved in the entertainment industry, it said.

.....

**AAR** now offers a range of aftermarket support services for helicopter operators, including parts sales, engineering and total life-cycle support programs, under its new Rotorcraft Services business division. The launch of the new business unit was announced ahead of the Heli-Expo show, which runs March 1 to March 3 in Louisville, Kentucky.

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**Mid-Continent Instruments and Avionics** has earned AS-9100C and ISO 9001-2008 certification for its quality management system, which followed an assessment by Orion Registrar. The certification is universally recognized in the aerospace industry.

.....

**Sentient Jet** has been named the official private aviation partner of The Kentucky Derby, Kentucky Oaks and Churchill Downs, the company said. Under the multi-year agreement, Sentient Jet will offer a Kentucky Derby-themed flight card, which offers premier access to

race tickets in addition to the Sentient Jet Card's 25 hr. of private jet flight time and other cardholder benefits. Attendees of The Churchill Downs Mansion for Derby and Oaks will have access to Derby Air powered by Sentient Jet to book private travel to and from Louisville. For customers flying to the races, mini bars will be outfitted with ingredients for Mint Juleps and Oaks Lilies.

.....

**Gulfstream Aerospace** was named the top business brand in the Asia-Pacific by JetNet's quarterly iQ report. Gulfstream's fleet in Asia-Pacific has doubled from 142 aircraft in 2010 to 289 at the end of last year, an average of more than 29 deliveries a year. Its fleet in Southeast Asia has doubled over the past five years to more than 60 aircraft.

.....

**328 Design GmbH**, a division of the 328 Group, has successfully achieved the first Supplemental Type Certificate for the Dassault Falcon 50EX from the FAA under the FAA/EASA bilateral safety agreement. The STC covers extensive cabin refurbishment. The certification was a project between 328 Design GmbH and Duncan Aviation.

.....

**FlightSafety International** has achieved FAA and European Aviation Safety Agency Level D qualification of its fourth full-flight simulator for Gulfstream G650 aircraft, it said. The simulator is located at FlightSafety's Learning Center in Wilmington, Delaware.

.....

**AIRWORTHINESS DIRECTIVES** .....

**TURBOMECA S.A. ARRIEL 1E2** turboshaft engines [Docket No. FAA-2015-1280; Directorate Identifier 2014-NM-064-AD; Amendment 39-18404; AD 2016-04-10] Final Rule. The FAA is adopting a new airworthiness directive for certain ATR-GIE Avions de Transport Régional Model ATR42-500 aircraft, and Model ATR72-102, -202, -212, and -212A aircraft. The AD becomes effective April 1. This AD requires removing the tachometer box on affected engines. This AD was prompted by reports of uncommanded inflight shutdowns (IFSDs). The FAA is issuing the AD to prevent failure of the tachometer box, which could lead to failure of the engine, IFSD, and loss of control of the helicopter. The FAA estimates the AD to affect 200 engines installed on helicopters of U.S. Registry with an estimated cost to comply for U.S. operators of \$51,000. For service information in the AD, contact Turbomeca S.A., 40220 Tarnos, France; phone: 33 (0)5 59 74 40 00; fax: 33 (0)5 59 74 45 15. For more information, contact Philip Haberlen, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 1200 District Avenue, Burlington, Massachusetts, 01803; phone: 781-238-7770; fax: 781-238-7199; email: philip.haberlen@faa.gov.

**MD Helicopters (MDHI)**, Model 369A, 369D, 369E, 369FE, 369HE, 369HM, 369HS, 500N, and 600N. The AD includes helicopters with a certain part-numbered main rotor blade attach pin installed. The AD requires ensuring the life limit of the pin as listed in the Airworthiness Limitations section of aircraft maintenance records and Instructions for Continued Airworthiness (ICA). If the hours time-in-service (TIS) of a pin is unknown, or if a pin has exceeded its life limit, this AD requires removing the affected pin from service. This AD was prompted by a report from an operator who purchased pins that did not have life limit documentation. These actions are intended to document the life limit to prevent a pin remaining in service beyond its fatigue life, which could result in failure of a pin, failure of a main rotor blade, and subsequent loss of control of the helicopter. This AD is effective March 31. The FAA estimates the AD to affect 118 helicopters on the U.S. Registry with an estimated cost of compliance of \$4,535 per helicopter to replace 10 pins if the pins have exceeded their life limit. For more information, contact Galib Abumeri, Aviation Safety Engineer, Los Angeles Aircraft Certification Office, Transport Airplane Directorate, FAA, 3960 Paramount Blvd., Lakewood, California 90712; (562) 627-5324; email Galib.Abumeri@faa.gov.



**APPOINTMENTS** .....

**Philippe Couteaux** has joined Aircelle as vice president of strategy and vice president of customer support and services. Most recently, Couteaux served as vice president and general manager of Turbomeca.

**Wayne Hargreave** has joined aviation services company TrueAero in Sebastian, Florida, as director of finance and accounting. Hargreave has held management positions with AerSale and Kellstrom Industries.

**Hans Nilsson** has joined executive search firm Stanton Chase International as head of its Global Aviation sector. Most recently, Nilsson served as director at the International Air Transport Association, IATA, in Geneva.

**Tom Shawaryn** has been named sales manager of Zenith Aviation. Shawaryn previously served as warehouse manager and senior sales associate at Zenith. He joined the company in 2008.

**Craig Zysk** has joined FRASCA International, based in Urbana, Illinois, as vice president of new business development. Zysk most recently served as vice president of sales and marketing at MD Helicopters.

**Donna Clark** was promoted to vice president of member services for the American Traffic Safety Services Association. Clark previously served as director of training.

**Cyril Arar** has been named chairman of Strata Manufacturing. **Ismail Ali Abdulla** has been named deputy chief executive officer of Strata; and **Murray Hundleby** has been named general counsel.

**Chris Mundy** has been named general manager of Rectrix Aviation's Aerodrome Center at Sarasota Bradenton International Airport in Florida. Mundy previously served as a line service technician for Rectrix.

**Chris Rozansky** has been named executive director of Venice Municipal Airport in Florida. Rozansky previously served as director. The current executive director, Ted Soliday, will retire April 15.

**Rob Lewis** has been appointed vice president and general manager of the commercial business unit of Portland, Ore.-based Erickson Inc., an aviation services company. Other appointments include **Andy Mills**, vice president of global business development; **Gary Starr**, vice president of global supply chain; **Erick Nodland**, global director of operations; **John Patriarch**, sales manager to the Department of Defense; and **Chris Maynard**, business development manager-Alaska.

**CALENDAR** .....

**Mar. 3**—Laureate Awards, The National Building Museum, Washington, D.C., [www.aviationweek.com/laureates](http://www.aviationweek.com/laureates)

**Mar. 5-7**—ISTAT Americas 2017, San Diego Hilton, San Diego, CA, [www.istat.org/p/cm/ld/fid=49](http://www.istat.org/p/cm/ld/fid=49)

**Mar. 7-9**—SpeedNews 6 Annual Aerospace Raw Materials & Manufacturers Supply Chain Conference, Beverly Hills, California, [www.aviationweek.com/events](http://www.aviationweek.com/events)

**Mar. 7-9**—SpeedNews 30th Commercial Aviation Industry Suppliers Conference, Beverly Hills, California. For more information go to [www.awin.aviationweek.com/events](http://www.awin.aviationweek.com/events)

**Mar. 9-10**—Airline Engineering & Maintenance, China & East Asia, Hong Kong, [www.aviationweek.com/events](http://www.aviationweek.com/events)

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## Monthly Program Profile: Pilatus PC-12

### Pilatus PC-12

The Pilatus PC-12 single-engine turboprop had its first prototype flight on May 31, 1991, and was certified by the FAA on June 15, 1994. Originally powered by the Pratt & Whitney Canada PT6A-67B, it was marketed primarily as a corporate transport, but is now also operated commercially by regional and charter air carriers and claims military and law enforcement operators as well.

Swiss aircraft manufacturer Pilatus describes its PC-12 as being “versatile,” and, by many measures, few other airplanes so aptly fit that description. When it comes to the PC-12, versatility begins with a cabin that offers nine possible configurations. These configurations include a six-passenger executive interior, a nine-passenger commuter setup, and four and six-seat combi configurations. Beyond cabin flexibility, the PC-12 is at home at busy airports with 2-mi.-long runways, as well as austere operating environments that do not have the luxury of a paved runway. With this versatility, the airplane sees service with a wide variety of private and public-sector users.

Although the PC-12 was first certified in 1994, Pilatus announced the latest version of the aircraft, the PC-12NG in 2006, and received its type certification in 2008. While changes have been made over the years – the PC-12NG features the PT6A-37P engine – the tried and true aspects that make the airplane so versatile remain. These include a maximum speed of 290 KIAS, and takeoff and landing distances over a 50’ obstacle that measure 2,600’ and 2,170’, respectively. Such impressive performance figures allow the PC-12 to open up many destinations that do not have mile-long runways (or runways at all). Once airborne, a range of more than

1,600 nm – including NBAA IFR reserves – is possible in the nine-passenger commuter configuration with a payload of nearly 1,500 lb.



Inside the PC-12, there are things to be liked by both the pilot and the passenger. The pilot(s) – it is certified for single-pilot operations – can call on the utility of the four large digital displays that form the Honeywell Primus Apex avionics suite. The Primus system features Honeywell’s Smart-view synthetic vision system that further enhances safety during periods of reduced visibility. Not to be outdone, PC-12NG passengers find themselves in a 330-cubic-ft., flat-floor cabin, which was designed with the assistance of BMW Group Designworks. That collaboration has produced a number of tasteful interior designs that the airplane can be outfitted with. Finally, among the many conveniences that the PC-12 affords passengers, it features a 40-cubic-ft. baggage compartment that is accessible during flight.

A military version, the U-28A, is used by the USAF for intra-theater support of special operations forces. The PC-12 Spectre is used as a surveillance aircraft by the U.S. military, Homeland Security, and law enforcement.

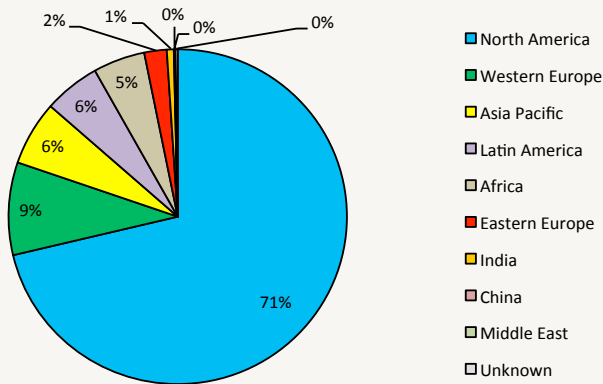
### Pilatus PC-12 Specifications

PERFORMANCE	
Maximum Range*	1,845 NM
Maximum Speed Cruise	285 KTAS
Long-Range Cruise	-
VMO (Maximum Operating Speed)	240 KCAS
Maximum Operating Altitude	30,000 ft
*High-Speed Cruise (HSC), VRF, and Reserves	
WEIGHTS	
Maximum Takeoff	10,450 lbs.
Maximum Landing	9,921 lbs.
Maximum Zero Fuel	9,039 lbs.
Basic Operating Weight (w/ pilot)	6,782 lbs.
Empty Weight	-
Maximum Payload (w/ pilot & fuel)	2,283 lbs
Maximum Fuel	2,704 lbs.
DIMENSIONS	
Length	47.3 ft
Overall Wingspan	53.3 ft
Height	14.0 ft
Seating	9 maximum

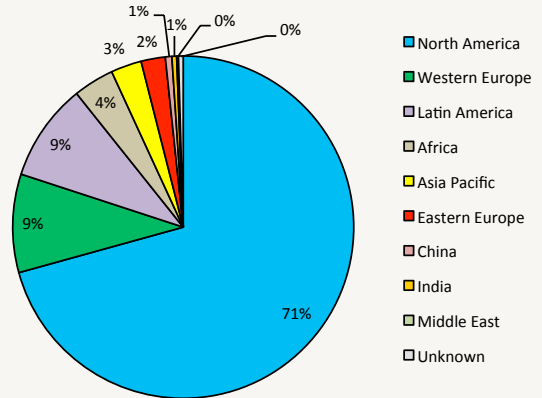
Continued on Page 11

**Industry Data: Pilatus PC-12 (Continued)**

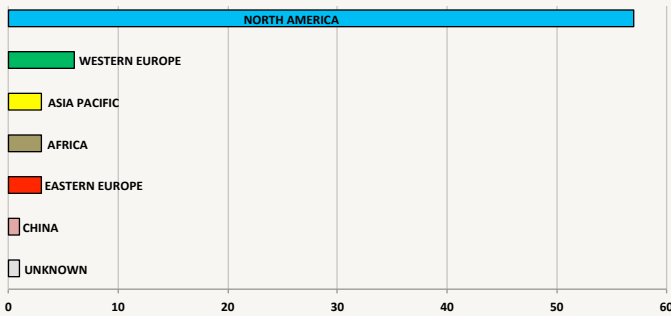
**Pilatus PC-12 In-Service Fleet Share 2016**



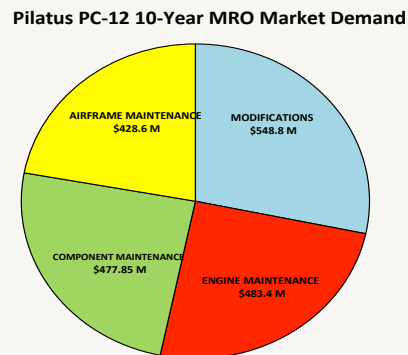
**Pilatus PC-12 In-Service Fleet Share 2025**



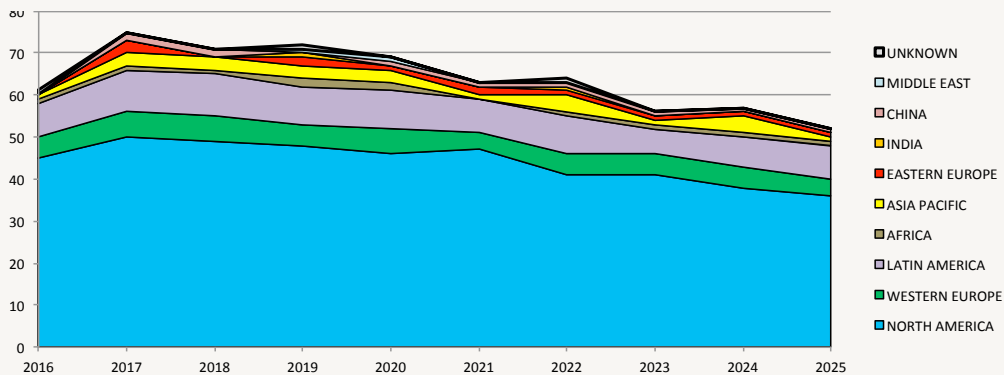
**Pilatus PC-12 Deliveries to Date 2016**



**Pilatus PC-12 10-Year MRO Market Demand**



**Pilatus PC-12 Deliveries by Regions**



Source: Aviation Week Intelligence Network