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May 2014

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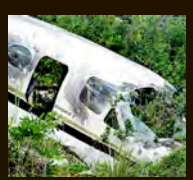

SR TECHNICS
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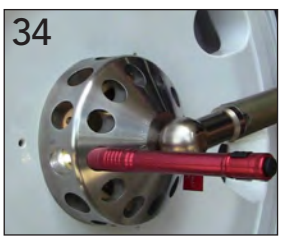
Cover image of a Blackhawk modified Cessna Caravan on the ramp in Las Vegas by Joy Finnegan.



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Preparing for the Worst-Case Scenario

BY JOY FINNEGAN
EDITOR-IN-CHIEF

Several years ago we wrote about "the phone call." An ominous occurrence that hopefully not many of you have experienced. The phone call referred to in that piece is the dreaded call informing you that an aircraft you have had in your facility, or perhaps even worked on or signed off yourself, has been involved in aircraft incident or accident. In that piece we explored the more personal side of what it is like to receive such a phone call and the aftermath. A seasoned A&P mechanic who had experienced that scenario wrote the piece and it was sobering.

In this issue, we wanted to look at the issue from a broader perspective. We asked some experts what a business or individual should do when that happens. We talked to the FAA, the NTSB, former NTSB accident investigators, insurance providers and, of course, lawyers. Often, notification can come well after the actual event. Sometimes, you might not even know anything was amiss until the plaintiff's attorneys have gotten hold of the case and searched for a possible cash cow to act as scapegoat for the survivors (and their own pockets).

Don't get me wrong. I'm not a lawyer hater. We need them and the ability to sue when someone or a company has truly been negligent and those cases do exist.

But, we also know the other side of that story. Anyone and any company that has had anything to do with that crashed aircraft is likely to be named in a lawsuit, even if no clear connection to the event exists.

Our story on planning for the worst-case scenario of this type offers sound advice from leaders in the field. If your company hasn't looked at your worst-case scenario plan in a while, read the story and perhaps incorporate some of the suggestions into your updated plan. That story begins on page 20.

We also wanted to take a look at working with the authorities when it's business as usual. As the regulator for our industry, the FAA is a constant touchstone for us in the maintenance world. But, as I have heard time after time over the years, some offices are better than others. Some are more efficient. Some are impossible. As one experienced operator put it to me, "These offices seem to be independently owned and operated."

Tales have been told of similar requests from similar companies going into the FAA system only to have one resolved in a matter of days while the other languished for months. Why does this happen? Is there anything you can do to ameliorate the relationship you have with the FAA?

We did our best to find out, although, I'll be honest. It's nothing you haven't heard before. In fact, the best recommendation is so clichéd, it truly doesn't mean much anymore. What was it? Better communications. Is that something you could work on? No doubt. Is that something the FAA needs to work on? Absolutely. See what other advice industry leaders had to proffer in our story, "Working with the FAA" starting on page 28.

Other highlights in the issue include the opening of the SR Technics' new component repair facility in Shah Alam, a suburb of Kuala Lumpur, Malaysia. As we have heard over and over recently, Asia is the fastest growing MRO market in the world. We sent our writer Douglas Nelms over to check out the new component facility. See story page 6.

A new feature in this issue is our Aviation Electronics section. This recurring coverage will be a standard part of the Intelligence section from this point on. We are including coverage of electronics, avionics, ATC and other related pieces in conjunction with our new event, Aviation Electronics Europe scheduled to take place in March of 2015. The event is a platform for the international aviation electronics and avionics industry to learn and network regarding products, technologies and services. It will be held in Munich, Germany. A call for papers is currently open now, with a deadline for abstracts of May 31, 2014. Papers can be submitted for consideration here: http://www.ae-expo.eu/abstract-submittal-form/. You can find our aviation electronics news coverage beginning on page 16.

Finally, we have a select group of products in our product roundup starting on page 34. There you will find info on the likes of the Snap-on Level 5 ATC tool control system. If you haven't seen it in action, make a point to find Snap-on at the next event and get a demo. It's amazing. Other products like Hexoff wipes offered by Clayton Assoc., Alberth's Gulfstream Wheel Socket Kit and Laversab's test sets that can help your team be more efficient are featured in this quick look at the latest and greatest. Check them out and let these folks know you saw their product in our magazine.

Thanks so much for reading and we'll see you next issue as we prepare for Farnborough. Who's going?! AM

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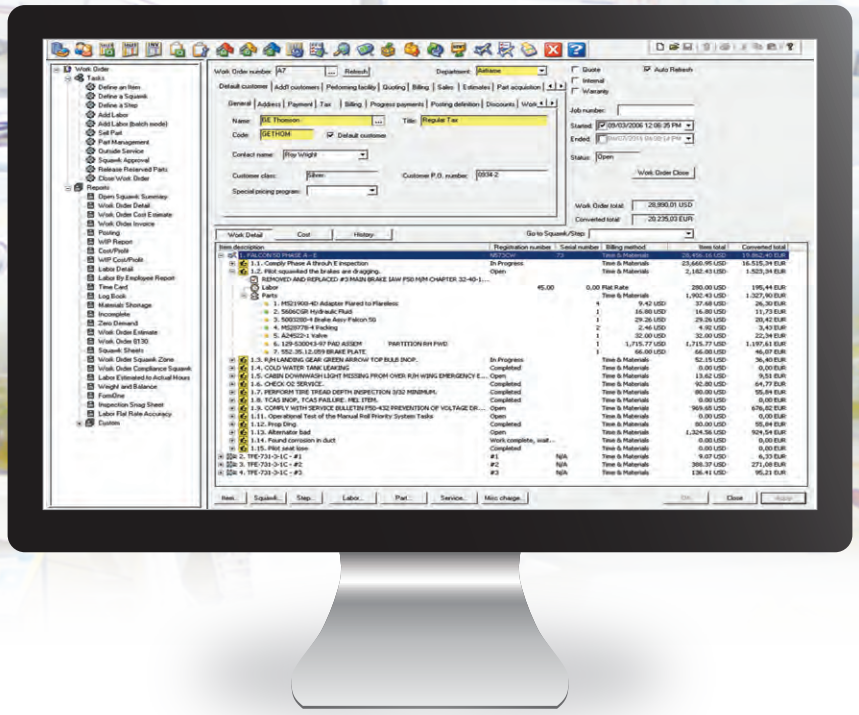

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SR Technics Opens Components MRO for Pacific Rim in Kuala Lumpur

SR Technics opened a new component repar shop near Kuala Lumpur, Malaysia to handle market growth in Asia. SR Technics Images.

SR Technics, a Zurich, Switzerland-based components MRO, has opened a new component repair facility in Shah Alam, a suburb of Kuala Lumpur, Malaysia, designed to meet what it says is a growing need throughout the Pacific Rim.

The new repair facility began operations last January, but was officially inaugurated March 31. The company already has repair facilities in Switzerland and Spain, as well as worldwide distribution centers. With some 100 airlines and 1,000 airliners served worldwide, and over 100,000 shop visits annually, it promotes itself as one of the largest aircraft component maintenance providers in the world.

The company currently has a major Asian distribution center in Singapore, which will continue to serve in that capacity, despite the opening of the Kuala Lumpur facility, according to Felix Ammann, senior vice president, component services. The goal, he said, is to establish distribution points for each region in the world.

SR Technic currently has over 500 aircraft in Asia under contract, including carriers such as Garuda, Philippine Airlines, Singapore Airlines, Japan Airlines, Virgin Australia and MAS, he said.

In announcing the opening of the new Malaysian facility, SR Technics CEO André Wall said that Asia is "one of the fastest growing MRO markets in the world, (and therefore) opening a component shop in this region made absolute sense, locating us where the aircraft are, and enabling the long-term growth of our company." It is part of what Wall called an overall strategy to develop a comprehensive global operation close to its customers.

"While the number of aircraft under integrated component service agreements is increasing by 20 percent per year worldwide, there is a somewhat higher growth in Asia," Ammann said. They also expect major growth in Australia, where they currently have some 200 aircraft under contract.

Since it's unofficial opening in January, the facility has begun repair of four aircraft components—hydraulic pumps, variable bleed actuators, power drive units and audio control elements. While it had just a 60 parts number catalog as of the official opening day, it is expected to be fully operational and capable of doing repairs on 1,200 parts numbers and handing 100 repairs per day by mid-2015, said Heinz Freimann, the newly appointed general manager of the new facility. Once fully operational, it will cover five main products areas, to include: Avionics panels and accessories; hydraulics pumps and actuators, hydraulic control units and values, heat exchanger, lubrication and fuel booster pumps; mechanical for cockpit seats and water/waste; pneumatics including ball screw actuators and cold air thermostat and valves; and electrical actuators, chillers, fans, lights, motors, ovens, PDUs and valves.

The facility will also be able to work on engine parts, although if the entire engine needs maintenance, it will be sent to SR Technic's facility in Zurich, where the company has an engine test cell with capabilities up to the PW 4000 engine. Engine capabilities include the full range of the CFM56 series of engines, the PW 4000 engines and the RB211. Limited engine blades and vanes repairs are also done in Cork, Ireland.

The company currently warehouses parts for the Boeing 737, Airbus A320, A330/A340 and the Embraer E-Jet.

As of the end of March, the company employed 110 workers in Kuala Lumpur, mostly Malaysian technicians, a number expected to roughly double by the end of this year. Of those, 94 percent will be Malaysian nationals. An initial group of 22 Malaysian technicians were sent to Zurich for a three-month training period, which not only trains them

SR Technics says it is also looking to expand into South America.

on component repair, but also provides "the Swiss DNA" to ensure the exacting quality standards expected of a Swiss company, Freimann said. An addition 10 Malaysian technicians are currently in Switzerland undergoing training.

Ammann said that Kuala Lumpur was chosen because it had a skilled workforce with English-language skills, a burgeoning local aviation industry, a fast growing economy and "its location in the heart of Asia Pacific offered by far the best mix to meet our mid-to long-term needs." He also noted that while the new Malaysian facility will be used for component repair, it could indicate the possibility of a more significant move into the region for increased MRO efforts, to include the possibility of heavy maintenance.

SR Technics is owned by Mubadala Aerospace, an Abu Dhabi-based company owned by the Abu Dhabi government and noted for both it civil and military MRO capabilities.

The company is also looking to expand into South America, although no final decisions as to where or when have been made at this time. They are currently looking at a large South American cargo carrier, "and if we get the business, we will build a facility there," Ammann said. They currently have distribution facilities in Miami to support AeroMexico, but no repair stations.

Heinz Freimann, General Manager, SR Technics, Malaysia

Felix Ammann, Head of Component Services

He added that there are no current plans to expand into the U.S. because the large U.S. carriers "tend to do their own component work."

The new facility was reconstructed from a former DHL distribution center, and consists of 150,000 sq. ft. of floor space, of which roughly 100,000 sq. ft. is for component repair and 50,000 sq. ft. is administrative workspace. The new facility was certified under the European Aviation Safety Agency (EASA), Federal Aviation Administration (FAA) and Malaysian Department of Civil Aviation (DCA). Additional certifications are expected as needed. More than 1,000 tools and test equipment items were shipped into the new Kuala Lumpur facility from Zurich, he said.

Ammann noted that a key element of the Malaysian operations will be to host the company's Integrated Component Solutions (ICS) Regional Customer Service Center, which includes a seamless service involving not only the component maintenance, but also the financing, parts management and supply chain logistics. The company said that financing can be done through a partner company, Sanad Aero Solutions, providing a "wide range of financial solutions.

However, customers also have the option of single component services (SCS) for ad hoc MRO requirements. This includes loan or exchanges services to reduce unscheduled AOG events.

While SR Technic has its two main logistics centers in Zurich and London, it's three primary repair facilities now include the Zurich center, Kuala Lumpur and Malta, which serves as a maintenance service center for the Airbus A320 family and the Boeing 727NG. Other specialized component repair is done in Palma and Madrid, Spain.

SR Technic also has a program where it can totally take over the component work an airline, handling all aspects to include the supply chain, financing and logistics management, Ammann said.

The new facility will be under the control of Heinz Freimann, while Joel Lim will serve as head of maintenance operations. Lim joined SR Technic last year from Transmile Air Services in Malaysia where he General Manager, Engineering. — *By Douglas Nelms*

about people

Elliott Hires Randy Soutiere/Appoints Ed Chevrestt VP Ops

Elliott announced Randy Soutiere was hired as vice president of Operational Support. Soutiere will oversee engineering, quality control, customer support, lean manufacturing, parts and FBO services. The newly created position is part of an organizational restructuring that appoints Ed Chevrestt to the new position of VP of Operations. The changes represent Elliott Aviation's focus to increase customer support and dedicate extra resources and expertise to technical aspects of the business. Soutiere's nearly 30 years of experience in aviation include a long career with Cessna where he was most recently the general manager of the Mesa, Ariz. facility. Soutiere is a licensed pilot and A&P mechanic. Chevrestt joined Elliott Aviation in 2013 as service manager. In his new role, he will be responsible for on-time completions of Elliott Aviation's operational disciplines at their Moline headquarters including maintenance, paint, interior, avionics and accessory repair and overhaul. Prior to joining Elliott Aviation, Chevrestt was the operations and paint manager of aircraft completions at Hawker Beechcraft Little Rock. Soutiere and Chevrestt will be located at Elliott Aviation's headquarters in Moline, Ill.

Shawn Bergquist to Lead Intertrade

Bergquist

Intertrade, a Rockwell Collins company, announced recently that Shawn Bergquist has been appointed to lead the company as its director. In this role, Bergquist is responsible for Intertrade's overall business, as well as the evaluation of new business opportunities, strategic planning, supply chain management and market and competitive analysis. He reports directly to Thierry Tosi, vice president and general manager, Service Solutions for Rockwell Collins. "Shawn brings a wealth of experience and solid customer relationships which will serve Intertrade in its efforts to grow globally through new product offerings and expanded markets," said Tosi.

Bergquist brings more than 20 years of experience in the aerospace and defense industry, previously serving as Intertrade's supply chain manager, responsible for purchasing aircraft and engines for teardown and asset leasing, and led supply and repair chain pursuits, program and management. Prior to joining the company in May 2008, Bergquist held positions at MidAmerican Aerospace and GE Capital Vendor Financial Services. He also served 12 years in the U.S. Army Special Operations Command. Bergquist received his Bachelor of Science degree in Mathematics Statistics from the University of Illinois.

about people

Gulfstream Names Forehand GM of Lincoln Calif., Facility

Gulfstream Aerospace Corp. has appointed Arno Forehand as general manager of its component repair facility in Lincoln, Calif. He replaces David Pearman, who is now the general manager of Gulfstream's service center in West Palm Beach, Fla. Forehand will handle the daily operations of Gulfstream Lincoln, a 34,000- square-foot/3,159-square-meter operation dedicated solely to repair and overhaul for components, including alternators, converters, generators, avionics and flight instruments. He reports to Jamie Fields, director, Repair and Overhaul Services, Gulfstream.

Before joining Gulfstream Lincoln, Forehand was Gulfstream's senior manager of Spare Part Sales, Repair and Overhaul Sales and Aircraft-on-Ground Expediting. "Arno has provided outstanding service to customers and built strong relationships with them in his more than 15 years with the company," said Mark Burns, president, Gulfstream Product Support. "His logistical expertise combined with his extensive parts knowledge will complement the strong foundation that's been established in Lincoln."

Duncan's Mike Minchow Elected to AEA Board of Directors

Minchow

At the recent 57th annual AEA International Convention & Trade Show in Nashville, Tennessee, the newly elected members to the AEA Board of Directors were introduced and recognized during a special awards luncheon. Mike Minchow, Duncan Aviation's manager of Completions & Avionics Sales was among the newly elected directors selected by the members of AEA in a membership-wide vote. Minchow joins the AEA Board of Directors having worked more than 20 years at Duncan Aviation, serving in several leadership roles including manager of Interior Modification Sales and Design, fractional program manager and avionics sales manager.

Brian Andrews Joins Duncan Airframe Service Team

Andrews

Duncan Aviation welcomed Brian Andrews to the company's Airframe Service Sales team, where he will provide technical sales and quote support for airframe service projects. His main focus will be providing technical sales support for Duncan Aviation's Embraer clients. Andrews graduated from A&P school in 1998 and immediately joined Duncan »

Etihad to Acquire ADAT

Etihad Airways, the national airline of the United Arab Emirates, and Mubadala Development Company (Mubadala), have entered into an agreement in which Etihad Airways will acquire Abu Dhabi Aircraft Technologies LLC (ADAT) from Mubadala. The deal will see Mubadala retain ADAT's engine focused MRO business, which will be the catalyst for the continuity and growth of its engine business through the establishment of a new engine company.

The transaction includes maintenance and engineering teams, hangars, component workshops and paint facilities in Abu Dhabi which will enhance Etihad Airways capability to undertake airframe and component maintenance on its growing fleet of modern aircraft, including the new Airbus A380 and Boeing B787, which will join the fleet in the last quarter of 2014.

"ADAT has been a vital partner to the UAE national carrier over the past five years," says James Hogan, Etihad Airways' president and CEO. "This acquisition will strengthen the maintenance capability of the Etihad Airways group by bringing together critically important functions that go to the heart of ensuring safety and optimal performance of the operations."

Engine MRO is set to form a significant component of Mubadala's aerospace strategy, and this new engine company will form the foundation for this growth under the leadership of Abdul Khaliq Saeed, ADAT's current CEO. At the 2013 Dubai Airshow, Mubadala signed deals with Rolls Royce and GE Aviation to establish next-generation Trent XWB and GEnx MRO centers of excellence in Al Ain. This was further supported with a combined commitment of $1.0 billion in engine parts production from both manufacturers.

"This acquisition by Etihad Airways is a true testament to ADAT's world-class MRO credentials and its exceptional workforce. At the same time, we are establishing a new company to build on the growth in this strategic sector focused on the engine business," Homaid Al Shemmari, CEO of Aerospace and Engineering Services at Mubadala says. "As part of our development mandate, Mubadala is proud to have cultivated a world-renowned MRO service provider and today's announcement is a reflection of our mandate to deliver strong social and economic returns to Abu Dhabi and the UAE."

As well as servicing the Etihad Airways fleet, ADAT's enhanced maintenance capability in Abu Dhabi will be made available to Etihad Airways' equity alliance partners and third party customers, maximising the synergies available to the group.

Hogan welcomed the ADAT team to the Etihad Airways group. "I am delighted to welcome the highly skilled and experienced maintenance and engineering teams from ADAT who will play an important role in supporting the continued growth of the airline," he said.

Jeff Wilkinson, Etihad Airways' senior vice president Technical will be responsible for the combined MRO of ADAT and the daily technical operations business. A transition plan is in place and will ensure 'business as usual' as Etihad Airways continues to work closely with its new and existing employees and customers, ensuring that there is no disruption to existing services during the integration period, while benefits are delivered immediately.The Abu Dhabi facility currently serves more than 70 commercial airline customers worldwide.

Embraer and Boeing sign a MoU for Biofuels R&D Center in Brazil

Embraer and Boeing have signed a Memorandum of Understanding (MoU) for creating a joint biofuels research center for the purpose of developing and maturing the knowledge and technologies that make it possible to establish a sustainable biofuels chain for aviation. The Center shall be installed in the Technological Park of São José dos Campos.

"Embraer is committed in supporting the development of sustainable biofuels for aviation and the joint efforts with Boeing will undoubtedly contribute to the company continuing to be in the forefront of research in this area," says Mauro Kern, executive vice president, Engineering and Technology, Embraer. "Brazil has tradition in the area of alternative fuels and enormous potential yet to be explored in bioenergy research."

"Boeing is working aggressively around the world to expand the supply of sustainable aviation biofuel and reduce aviation's carbon emissions," said Julie Felgar, Boeing Commercial Airplanes managing director of Environmental Strategy and Integration. "With our joint biofuel research center, Boeing and Embraer are making a strong commitment toward a successful, sustainable aviation biofuel industry in Brazil."

"Boeing and Embraer have a tremendous opportunity to work together to enhance Brazil's aviation biofuel capabilities, as well as the global industry's access to aviation biofuel," said Al Bryant, vice president, Boeing Research & Technology-Brazil. »

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about people

Aviation's Battle Creek, Michigan, facility as an airframe technician. In 2007, he became a project manager, where he worked with customers and the service areas to ensure aircraft projects stayed on time and at budget. "Brian has the technical expertise that comes with working as an A&P technician for nearly nine years," says Phil Suglia, sales manager for Duncan Aviation-Battle Creek. "Combined with seven years of working closely with customers and helping to plan and manage their service schedules, Brian has a great understanding of how best to meet customer needs and help provide them with the information they need to make informed decisions about their aircraft service work."

FlightSafety Promotes Moore

Moore

FlightSafety Int'l. announced that Brian Moore has been promoted to assistant manager of the company's Cessna Learning Center in Wichita, Kansas. He succeeds Randy Annett who has been promoted to manager of FlightSafety's Learning Center in Tucson, Arizona. "We are pleased to give Brian this well-deserved promotion to assistant manager," said Daniel MacLellan, vice president, Operations. Brian joined FlightSafety in 1990 as an instructor at the Hawker Beechcraft Learning Center in Wichita. He was promoted to program manager of Bonanza and Baron training in 1997, assistant program manager of training for the Premier in 2007, and most recently served as FlightSafety's relationship manager

Embraer and Boeing continued The project will now be structured via a collaboration agreement between the two companies. Provision has also been made for the possibility of other companies and institutions taking part in the research and development activities.

The aerospace industry took up the commitment to reduce its environmental impact and established ambitious goals for achieving neutral carbon growth by 2020 and for cutting carbon dioxide emissions in half by 2050, compared to the emission levels of 2005. Today, the industry generates approximately 2 percent of the Earth's carbon dioxide emissions.

Several initiatives are under development, including in Brazil, in order to produce a biofuel for aviation that is economically feasible and that meets strict aerospace demands.

One of those initiatives was the demonstration of the technical feasibility of a biofuel produced from sugarcane, which was shown in a test flight with an Embraer 195, during Rio+20, in 2012.

In 2011, a partnership between Embraer, Boeing and the Fundação de Amparo à Pesquisa of the State of São Paulo (FAPESP) began investigations culminating in the launch of the Flight Plan for Aviation Biofuels in Brazil: Action Plan, last year, which indicates the paths to be taken for developing a sustainable biofuel industry for Brazil's aviation sector.

ARSA Soliciting Input on Drug and Alcohol Testing from Global Aviation Maintenance Community

On March 17, the Federal Aviation Administration (FAA) issued an Advanced Notice of Proposed Rulemaking (ANPRM) to collect information to draft regulations regarding controlled substance and alcohol testing of part 145 repair station employees located outside the United States. To help in the preparation of comments as well as to gather information about current industry practices, ARSA is soliciting input via a survey of potentially affected repair stations.

The rulemaking being considered would require employees of FAA-certificated foreign repair stations and other maintenance providers who perform safety-sensitive work on U.S. air carrier aircraft to be subject to a drug and alcohol testing program, which would have to meet FAA standards and be consistent with the applicable laws of the country where the repair station is located.

Companies that have part 145 certificated repair stations outside of the United States and Canada should respond to the ARSA survey and ensure it reaches the widest possible audience. The survey can be found at:

http://www.surveygizmo.com/s3/1635615/FAA-Drug-and-Alcohol-Testing

With the industry's help, ARSA can work to ensure that international law is respected, burdensome testing requirements are avoided, and that international businesses can continue their vital work with minimal interference.

Field Aviation Receives STC for Dash 8 Long Range Fuel Modification

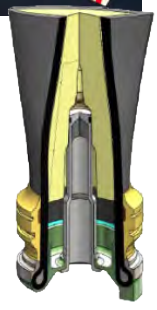
Field Aviation has received a Supplemental Type Certificate (STC) from the Federal Aviation Administration (FAA) for its proprietary Long Range Fuel (LRF) modification for the Bombardier Dash 8 series 100/200/300.

Prior to receiving FAA certification, Field Aviation's LRF modification had been granted STCs from both Transport Canada (TC) and the European Aviation Safety Agency (EASA).

The FAA STC is applicable to all Classic Dash 8 series 100/200/300 aircraft currently type approved by the FAA, TC and EASA regardless of serial number, model and weight. Field Aviation has successfully provided compliance to the new FAA airworthiness authorities standard 25.981 at amendment 25-125 (fuel tank ignition prevention), without the requirement for an exemption, and has been able to demonstrate full compliance to the current FAA airworthiness standards.

The installation of Field Aviation's LRF modification will provide an additional 686 U. S. gallons or approximately 4600 pounds of fuel. The combination of standard tanks plus the LRF modification will increase the Dash 8's fuel capacity to approximately 10,200 pounds and provide a significant increase in available flight time depending on altitude and power settings.

McCauley Composite Prop Receives FAA Certification



McCauley Propeller Systems announced the FAA Certification of the McCauley Propeller Systems' Blackmac Carbon Series constant speed composite propeller.

McCauley says the propeller's composite materials and patented high-strength, low-weight continuous carbon loop blade retention system significantly reduces propeller assembly weight and improves product life.

"The low weight of the Blackmac Carbon Series propeller, offers the ability to improve payload without compromising strength or weight in other areas," said Scott Howell, McCauley business leader. "McCauley has spearheaded innovation in the propeller industry for generations. Earnest McCauley was instrumental in designing and producing the first forged steel propeller in the 40's, and today his legacy lives on with the certification of the Blackmac Carbon Series propeller."

The scimitar propeller blades are made of seamless carbon fiber and fiberglass material and feature electro-formed nickel leading edges.

The Blackmac Carbon Series is certified with no set maximum life and with an overhaul interval of 2,400 hours or 72 months. The Carbon Series retains McCauley's standard parts—including the single-piece oil-filled hub—and labor warranty of three years or first overhaul. Compared to other aluminum propellers, it has 25 percent fewer parts. McCauley says no other certified propeller rated at 350 Hp, wood or composite, weighs less.

Jet Aviation St. Louis Completes Install of Aircell UCS 5000

Jet Aviation St. Louis has completed the industry's first installation of the Aircell UCS 5000 cabin media server. The aftermarket installation in a Bombardier Global aircraft completes the industry's first contract for a USC 5000. The contract was signed with a customer immediately after Aircell announced the release of the router and media server last October. Jet Aviation St. Louis was the first to sign a customer for the new installation and immediately had additional customers ready to schedule installations.

Aircell says the UCS 5000 reinvents the update process and enables licensed content to be played in the cabin on personal tablets or laptops. It provides Wi-Fi access, single SSID for the cabin, a PBX for wired and wireless handsets, and management for voice and data networks. It enables Gogo Vision capability for playing on-demand movies, TV and news and more.

2014 NBAA Maintenance Scholarship Recipients

The National Business Aviation Association (NBAA) Maintenance Committee promotes technical education and training as a means for maintenance technicians to enhance their careers. To support this initiative, they offer aspiring maintenance technicians the opportunity to receive Maintenance Technical Reward and Career Scholarships (Mx TRACS). Aviation military personnel transitioning to business aviation are also eligible for this scholarship.

There are various organizations that donate aircraft, engines and avionics training awards. The Honeywell/CAE Technical Support Teams supports the NBAA Mx TRACS program by providing six complimentary Honeywell/CAE Line Maintenance courses. Through Mx TRACS, the NBAA strives to meet its objective to attract and retain qualified aircraft maintenance professionals to business aviation. This program has had great success through additional courses, an increased number of applications and a higher level of public recognition through various media courses.

NBAA Maintenance TRACS - Honeywell / CAE Awards Recipients for 2014:

- Award: Honeywell Engine 36-150 APU Line Mx Course - Matthew Brindley
- Award: Honeywell Engine TFE-731 Line Mx Course - Herman "Buddy" Hughes Jr.
- Award: Honeywell TPE-331 Turboprop Line Mx - Yamil Feliciano
- Award: Honeywell RE220 Series APU Line Mx - Wesley Osborn
- Award: Honeywell Avionics - Maan Hafiz
- Award: Honeywell Avionics - Jordan Heuerman

Responsive

MONARCH AIRCRAFT ENGINEERING (MAEL) is acutely aware of the damage a grounded aircraft can do to an airline's reputation and profitability.

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about people

with Beechcraft. Brian holds a Bachelor of Science in Professional Aeronautics, Associate of Science in Business Management, and a Master of Business Administration in Aviation, from Embry Riddle University.

Baker Aviation Appoints Molina, Fincher to Key Roles

Molina

Baker Aviation has appointed Anthony "Tony" Molina to director of Maintenance and Edwin "Eddie" Fincher is now the senior maintenance manager/technical advisor. As an avionics specialist and veteran of the U. S. Marine Corp, Molina started his career at Million Air several years ago, Molina went on to ElectroSonics (acquired by GE Aviation in 1999) where he worked completing advanced avionics installations. Later, he moved to Duncan Aviation as an avionics technician and gained additional experience in cabin management systems, service work and troubleshooting. Molina acquired his A&P license and began working on his Electrical Engineering degree while honing his skills as the avionics supervisor for Hunt Oil's two corporate jets. Most recently, he worked independently, providing on-demand maintenance and avionics services for the industry.

Eddie Fincher's exceptional 40-year career has included tenures with KC Aviation, Duncan Aviation, and Bombardier. Before working in the aircraft maintenance industry, Fincher served in the U.S. Army in Vietnam as a door gunner. He has been recognized as a Master Technician from Bombardier, received the Golden Wrench award while at KC Aviation and has served on the Challenger Advisory Board. As an aircraft engine maintenance expert and industry-wide recognized Bombardier Challenger specialist, Fincher was a technician for Aeromech. "We welcome Tony to Baker Aviation. As long time industry friends and a fellow military veteran, I know that Tony adds another strong pillar to our Baker management team as we continue to build on our foundation as the leading maintenance and repair facility in North Texas," stated Ray Goyco, Jr., President and COO for Baker Aviation. "Eddie is an industry legend and will help us exceed our goals in his new supervisory role. As our 2014 growth plans unfold, the strength and depth of our maintenance team now is unrivaled. Tony's strong leadership and avionics expertise combined with Eddie's knowledge base, his intuitive skill set, and a stellar supporting cast of technicians, makes Baker a powerful service facility, ready to provide our customers with exceptional value for their aircraft maintenance dollar," added Goyco.

LHT and Hawaiian Sign Contract for Cyclean Engine Wash

Hawaiian Airlines and Lufthansa Technik have signed a contract for engine wash services. The cooperation comprises engine wash services for Hawaiian's Airbus A330 Fleet with Rolls-Royce Trent 700 engines at Los Angeles (LAX) and San Francisco (SFO).

The engine cleaning frees the engines, in particular the fan and compressor blades, from dirt such as sand, mud, dust and pollen. Once cleaned, the engines are more thermally efficient in operation and use less kerosene for the same level of performance. This reduces costs and is better for the environment.

"For us and our customers, the performance of the engines, protecting the environment by reducing CO2 emissions, and cost savings from extended on-wing time are foremost considerations," says Oliver C. Winter, manager Engine Life Cycle Services at Lufthansa Technik. "Increased reliability and EGT margin, reduced fuel flow and a short turn-around time of the wash event pay into the success story of Cyclean Engine Wash."

Cyclean Engine Wash is already used by more than 30 airline customers worldwide. Lufthansa Technik offers Cyclean for all current engine models from the major manufacturers General Electric, Pratt & Whitney, Rolls-Royce, CFMI and IAE. The number of cleaning stations is continually growing in response to high demand. There are currently more than 30 stations.

Eagle Creek Receives STC for Garmin G950 Install

Eagle Creek Aviation Services has received Supplemental Type Certification (STC) for Garmin G950 glass flight deck installations in Twin Commander aircraft. The G950 offers an integrated glass flight deck, offering new levels of situational awareness, simplicity and safety to the cockpit. This Twin Commander application of the G950 is essentially the complete Garmin G1000 installation less the Garmin Autopilot. In this installation, the G950 is coupled with the proven and popular S-TEC 2100 Digital (DFCS) Autopilot.

The Garmin G950 integrates all primary flight, navigation, communication, terrain, traffic, weather and engine instrumentation systems on a large 12.4-inch multifunction display and two 10.4-inch primary flight displays. Engine data is displayed on the MFD, providing a clean, integrated appearance. These new components provide more data on demand and eliminate up to 150 pounds of wiring and equipment. The total panel transformation also includes all new fuel, oil and hydraulic system pressure transducers and new engine fuel flow transmitters.

For the first time on a Garmin G950/G1000 platform, Honeywell TPE331 engine information was studied and added to show on the large Garmin MFD. To further expand on the panel integration, Eagle Creek engineered and designed a Crew Alerting System (CAS) that allows for removal of the old annunciator panel. To complete the panel, it is WAAS-Certified and will be offered with full RVSM certification and approval. All of the equipment additions and integration truly transform the Twin Commander Panel.

"This is an important step for us to be able to provide the latest cockpit technology to the Twin Commander community," said Eagle Creek CEO Matt Hagans. "There are a lot of pilots that have only flown on glass panels and this STC makes the Twin Commander a viable option for them."

Greenwich AeroGroup Completes Merger

Greenwich AeroGroup announced that Matrix Aviation in Wichita, Kan., has completed its merger with its sister company Professional Aviation Associates in Atlanta, Ga. The merger positions the combined companies to provide customers one point of contact with access to a wider support structure and broader array of products and services.

The newly merged companies are also now located in a new 46,000 square-foot state-of-the-art Distribution Facility close to Atlanta's Hartsfield-Jackson International Airport. The new location provides employees with modern office and warehouse space and is equipped to provide superior support and responsiveness for customer's critical requirements and aircraft on ground (AOG) needs.

"The completion of this merger is a major step forward in expanding our product offerings, while improving our flexibility and financial strength," said Greenwich AeroGroup's senior vice president for CR&O and Distribution Dave Miller. "As a combined organization, we will work to deliver benefits to our customers, create value for our shareholders and enhance the careers of our employees."

Miller added that the companies will continue to operate under their current names until a new name has been determined for the combined entity.

Hose Laylines Decoded in Parker Hannifin's Video Series

The fourth episode of Parker Hannifin's new Tiger Talk video series provides industry professionals with an in-depth analysis of the company's hose laylines.

Parker Hannifin's Hose Products Division developed the Tiger Talk video series as a simple and convenient online video resource for industry professionals looking to learn more about fluid conveyance technology and the products they rely on every day.

"Tiger Talk gives consumers pertinent product information to help them make informed business decisions," said Doug Honig, marketing services manager, Parker Hannifin Hose Products Division. "These videos were made to give consumers brief, simple and easily accessible insight into a complex industry."

The layline, or printing along the length of the hose, contains a wealth of useful information about each hose. In about two minutes, Parker's layline episode explains what information is contained on each layline; what that information tells an operator about the hose's unique attributes; and how to use that information to ensure a hose will operate at its full potential.

In addition, the Tiger Talk episode details the various methods of applying a layline to a hose and all of the pertinent variable data contained on each layline. To learn more about the data contained on Parker's hose laylines, view the Tiger Talk episode at http://solutions.parker.com/Hose-Layline.

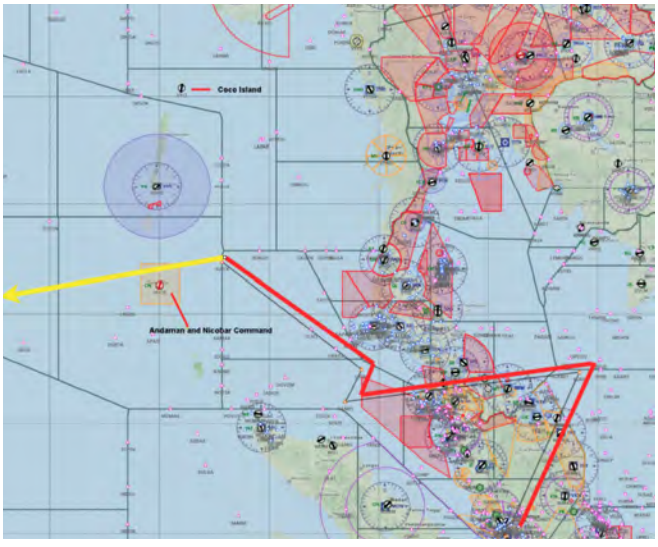
about people

Coreano Appointed GM PAS Technologies KC

Coreano

PAS Technologies Inc. announced the appointment of Luis Coreano as general manager PAS Technologies Kansas City, Missouri. In this new capacity Coreano will report to Thomas C. Hutton, CEO. "Luis joined PAS in 2013 as the director of operations for the Kansas City business. He was instrumental in our operational performance turnaround," states Hutton. "Luis is a lean thinker that possesses very strong technical and leadership skills. He walks the talk regarding lean and PXP. I am very excited about Luis in this new capacity. Please join me in congratulating Luis in this new role." Prior to joining PAS, Luis spent 13 years in the Aero Engine Industry. He has extensive experience in engineering, operations, and customer service. Luis is well versed in both OEM and MRO products and processes. Coreano earned a Bachelor of Science in Aerospace Engineering at Embry Riddle Aeronautical University and a Master of Science in Mechanical Engineering at Rensselaer Polytechnic Institute.

Inmarsat to Provide Free Global Airline Tracking



Inmarsat has proposed to ICAO a free global airline tracking service.

In advance of a conference on aircraft tracking being hosted by the International Civil Aviation Organization (ICAO) held in Montreal on Monday May 12th, Inmarsat confirmed that it has proposed to ICAO a free global airline tracking service over the Inmarsat network, as part of the anticipated adoption of further aviation safety service measures by the world's airlines following the loss of flight MH370. This service is being offered to all 11,000 commercial passenger aircraft, which are already equipped with an Inmarsat satellite connection, virtually 100 percent of the world's long haul commercial fleet.

In addition, Inmarsat will also offer both an enhanced position reporting facility to support reduced in-flight aircraft separation, and a black box in the cloud service, under which, on the back of certain defined trigger events (such as an unapproved course deviation), historic and real-time flight data recorder and cockpit voice recorder information can be streamed off an aircraft to defined aviation safety recipients.

"We are confident that the proposals we have presented to ICAO and IATA represent a major contribution to enhancing aviation safety services on a global basis. In the wake of the loss of MH370, we believe this is simply the right thing to do," Rupert Pearce, CEO of Inmarsat, said. "Because of the universal nature of existing Inmarsat aviation services, our proposals can be implemented right away on all ocean-going commercial aircraft using equipment that is already installed. Furthermore, our leading aviation safety partners are fully supportive of expanded use of the ADS-C Service through the Inmarsat network. This offer responsibly, quickly and at little or no cost to the industry, addresses in part the problem brought to light by the recent tragic events around MH370."

Saab Launches Five New Radars

Defense and security company Saab extends its surface radar portfolio, with the introduction of five new complementary Giraffe radars for land and sea. This strengthens the current product offering but also takes the Giraffe firmly into the long-range air surveillance domain and puts an entirely new capability onto the market.

Saab says its combat-proven surface radar portfolio, including the Giraffe AMB and Arthur radars, has been improved and expanded through the addition of new technologies and designs. Alongside its existing products, Saab is now producing new active electronically scanned array (AESA) radar variants for land and sea.

For the first time Saab's Giraffe radars also offer a solution for long-range air surveillance. The company says there is now a Giraffe option for every air surveillance and air defense application, on land and at sea.

Saab has more than 30 years of AESA design experience. This depth of experience, and Saab's understanding of radar cost, performance, reliability and packaging issues, results in a unique technology solution. Saab's advanced surface-based radars are highly-effective against multiple 'difficult' air targets in the most dense and challenging operational environments.

"I'm proud to present this important milestone in our surface radar development," says Micael Johansson, head of Saab's business area Electronic Defense Systems. "Our portfolio now caters for all advanced radar requirements, from very short- to long-range air defense, but also surveillance, and weapons location with true multi-role functionality."

ACT Airlines Chooses navAero iPad EFB

navAero announced recently that ACT Airlines has chosen the navAero iPad Air Class 2 EFB system as the platform of choice for their electronic flight bag initiative.

The navAero iPad "Smart" Mount system with the integrated power interface module will be deployed to provide an installed platform for holding the iPad device as well as supply certified connectivity to aircraft power for device charging. The integrated system will allow ACT to realize maximum functionality of the iPad Air tablet as a deployed Class 2 EFB platform. The ACT EFB program will be implemented on both their Airbus A300 and Boeing B747 fleets with first installations planned to take place in second quarter, 2014.

"The navAero iPad Tablet EFB system has proven to be perfect solution to our needs and our bright future," says Cpt. Taner Gokbul, ACT Airlines Flight Operations manager. "It will not only reduce weight, cost, effort and risk. It will also benefit greater efficiency and improved situational awareness."

Simone Giordano, president, navAero Group commented: "Over the past months, we have worked closely with ACT Airlines to document and demonstrate our technology and how our offerings could meet the specific needs and requirements of their EFB program. The navAero iPad/Tablet system will provide ACT with a platform for both their fleets that can be used in all phases of flight along to help them achieve their business and operational goals."

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Pax and Crew Will Soon Have 24/7 Wi-Fi Connectivity Powered by Honeywell Aerospace and AT&T's 4G Service

Honeywell Aerospace will be the exclusive hardware provider of domestic air-to-ground communication for AT&T's planned in-flight connectivity services, which will bring faster Wi-Fi to passengers on commercial airlines and business jets. With the new 4G LTE service, passengers will experience speeds that are a significant improvement from today's air-to-ground speeds.

Honeywell feels this partnership will revolutionize the way that passengers travel, crews communicate and owners/operators conduct their business. Honeywell says their expertise and AT&T's technical strength and scale in building networks and managing their ongoing evolution will provide a unique opportunity to change the way passengers and airlines connect to the mobile internet.

AT&T and Honeywell will build and deliver an exclusive aircraft hardware needed to connect AT&T's planned air-to-ground system in the United States. With the new service, passengers will be able to enjoy 4G LTE's fast and dependable connections to watch video, text with family and friends, and access quicker speeds to surf the internet.

LTE is the wireless technology designed to support roaming internet access via cell phones and handheld devices. This system is being developed so that it can integrate with Honeywell's GX and L-Band satellite systems allowing true regional and potentially global connectivity for passengers, crew and operations personnel.

"Honeywell has established itself not only as a technology development leader but as the company that fully understands consumers' desires to stay connected whether at home, in the office or car, and in-flight through the Connected Aircraft," said Tim Mahoney, president and CEO of Honeywell Aerospace. "AT&T's industry leadership in consumer communications, coupled with Honeywell's expertise in aviation, satellite communications and now the connected home and the connected aircraft is the perfect match to meet the growing connectivity requirements in a rising market."

Through the acquisition of EMS Technologies in 2011, Honeywell has added new and complementary technologies to its air-to-ground and satellite communications portfolio. That strategic expansion coupled with Honeywell's existing satellite communications expertise led to the company winning hardware and business aviation service contracts for Inmarsat's GX Aviation satellite constellation, set to be fully operational in 2015. Today, the company is expanding its air-to-ground connectivity solutions through a growing relationship with AT&T that includes plans to launch a new high-speed 4G LTE based in-flight Wi-Fi service for passengers, crews and operation personnel.

AT&T and Honeywell will build an exclusive aircraft hardware needed to connect AT&T's planned air-to-ground system in the United States. Honeywell Image.

Zambia to Join Neighbors with Thales ATM

Following an international competitive tender, the Ministry of Transport, Works, Supply and Communication of Zambia has chosen Thales for the supply, delivery, installation, and commissioning of the country's air traffic management and radar surveillance system.

Zambia joins an extensive community of African countries that use Thales systems and pursue regional harmonization. The Group will supply its TopSky-ATC to Kenneth Kaunda International Airport in Lusaka and Harry Mwanga Nkumbula International Airport in Livingstone. The Thales solution will be delivered alongside two primary radars and two secondary surveillance radars equipped with full Mode S. All systems are fully compliant with the new ICAO Flight Plan 2012 format and Eurocontrol standards.

Thales will supply ATM system for Zambia. Thales Image.

Before Zambia, other African countries - including Namibia, the Democratic Republic of Congo and South Africa—have deployed this air traffic automation and surveillance system. "The chance to equip Zambia's ATM is further testament to the strength of our brand in Africa. We look forward to a long and fruitful partnership with this new client," says Thomas Pistre, director of Sales for Africa of Thales's ATM business.

Universal Avionics Builds Support Team for Airlines

Universal Avionics recently placed airline and government sales operations under its corporate structure. Previously, the company had a distributary relationship with Alliance Marketing Partner, DAC International, for Airline and Government customers.

"Bringing Airline and Government sales in-house for these customers and integrators provides an opportunity for improved communication and service to the customer base by leveraging the company's existing processes," says Scott Campbell, director of Airline and Government Sales for Universal Avionics. Sales operations for the business Aviation market have been under the company's corporate structure for over 33 years.

Universal says the new structure promotes an environment of confidence and streamlined communications during up-front discussions in providing the opportunity for decision makers to interface directly and with Universal Avionics' on-staff engineering and sales resources, similar to the way their authorized dealers do in the business aviation market.

"This change marks an important and exciting transition for Universal; one that enables the company to interface directly with its airline and government customers," says Universal Avionics CEO Paul DeHerrera. "I believe the decision to bring this in-house will enable us to provide a consistent and united worldwide representation across all our business markets, and I'm confident that our customers and integrators will benefit from interfacing directly with our company's sales representatives."

The new Universal Avionics Airline and Government sales team consists of Bob Sanchez as program development manager, Military and Government (worldwide); Robert Kline as airline sales manager for the U. S. and Latin American sales regions; and Ross Dickey as airline and government sales manager for Europe, Eastern Europe and the Middle East.

Icelandair Chooses Panasonic's FlightLink

Panasonic Avionics has signed Icelandair as a customer for its FlightLink solution. FlightLink uses Iridium's global satellite-based communications solution to support flight deck voice and data, independent GPS, continuous real-time aircraft tracking and weather data aggregation everywhere commercial airplanes fly. Aircraft that are equipped with FlightLink are connected to an airline's ground operations 24 hours a day, seven days a week, and 365 days a year.

A key component of FlightLink is Panasonic's patented Tropospheric Airborne Meteorological Data Reporting (TAMDAR) sensor, which collects extremely high quality weather data from the atmosphere during the flight. Data is streamed back in real time via satellite to Panasonic's weather operations center. It is then assimilated into specialized, high-speed computing clusters that produce the weather industry's most accurate forecast information used by Fortune 500 companies, governments, insurers, energy providers, investors and commercial airlines to make intelligent business decisions.

Icelandair will install the FlightLink system, including TAMDAR across its fleet of 21 Boeing 757s, allowing key weather data gathering from the North Atlantic and Arctic regions, as well as throughout significant parts of Europe and North America. Weather data gathered by the system will enable improved operational efficiencies for Icelandair and more accurate weather forecasts for the aviation community throughout Iceland.

As part of the relationship, Panasonic will also be providing FlightLink's TAMDAR data from Icelandair aircraft to the Icelandic Meteorological Office (IMO). Panasonic says the installation of FlightLink and the associated streaming of weather data will greatly increase the quantity and quality of weather information available in the region. TAMDAR data received by the IMO will be ingested into local weather models to improve regional aviation forecasts in Iceland.

"Icelandair's unique network over the Arctic and North Atlantic makes it a key partner for Panasonic," said Paul Margis, president and CEO for Panasonic Avionics Corporation. "The ability to connect an aircraft to an airline's ground operations and the incredibly accurate weather data obtained will be a key driver for greater operational efficiency, and we welcome them to our global partnership – this offers huge opportunities for the industry."

The data from the TAMDAR system provides significant potential cost saving advantages through superior four-dimensional data analysis and numerical weather prediction. Improvements in forecast accuracy allow numerous industries to enhance their operational efficiency, save on fuel costs, and better prepare for significant severe weather events.

TAMDAR is installed across a network of hundreds of commercial aircraft that are operated by more than a dozen partner airlines throughout the northern hemisphere. It collects tens of thousands of highly detailed and accurate readings from the atmosphere each day.

Release of Universal Avionics FlexPerf Module Set for July

Universal Avionics' new FlexPerf Trip Performance module is on schedule for FAA submittal and subsequent approval in July of this year. FlexPerf will be available for Universal's WAAS/SBAS Flight Management System (FMS) and Multi-Mission Management System (MMMS), with Software Control Number (SCN) 1001/1101. The module consists of a software upgrade and hardware mod, and provides advanced fuel savings predictions for aircraft performance in Climb, Cruise and Descent phases of flight.

WAAS/SBAS-FMS Family: LP/LPV Monitor, UNS-1Ew, UNS-1Fw and UNS-1Ew

FlexPerf features a "flexible" design that continuously records actual aircraft fuel burn during every phase of flight. Using this data, FlexPerf applies refinements to the baseline aircraft performance data stored in the FMS/MMMS. Even the smallest aircraft changes that could affect performance, like new paint and engine health, are sensed and combined into the FlexPerf algorithm. The resulting calculations provide aircraft performance predictions to build a performance profile computed with total accuracy. To assist with crew planning, the aircraft trajectory is provided with ETA and fuel remaining for the entire flight.

Are You Prepared for the Worst?

By Charlotte Adams

If you are a small to medium-sized, independent aircraft repair facility and, out of the blue, you get a call from the National Transportation Safety Board (NTSB) or the Federal Aviation Administration (FAA) as part of an ongoing investigation of an aircraft accident, what should you do? Or worse still, if you are unexpectedly contacted by plaintiff's lawyer or by someone with a badge who is demanding your records, what do you do?

Experts contacted by ***Aviation Maintenance*** agree that it's important to be prepared for a worst-case scenario. If a facility has an "early warning system" in place, along with a plan of what to do if the worst should happen, fast-moving events that follow in the wake of an accident are less likely to negatively affect your business. A facility's early warning system could include looking periodically at the NTSB's daily updated aviation accident database page (http://www.ntsb.gov/aviationquery/Month.aspx), the FAA's preliminary accident/incident report page (http://www.asias.faa.gov/pls/apex/f?p=100:93:0::NO:::) and news media reports in order to anticipate whether there could be some involvement in an investigation or potential exposure to a lawsuit. In general aviation (GA) the possibility of a lawsuit appears more likely than the possibility of participating in an NTSB investigation.

Also "it would behoove you," especially if you are working on flight-critical components, "to have a methodology in place for ensuring you will be contacted by the owner/operator…" if anything happens, says Sarah MacLeod, executive director of the Aeronautical Repair Station Association (ARSA).

A repair station may only find out about a problem when they're served with legal papers in a lawsuit.

Experts agree that having a plan in place, in case the unthinkable happens, is key.

It's also important to notify your insurance carrier immediately so that it can assess the situation and hire a lawyer to advise you in the NTSB process or defend your interests in a liability lawsuit. Although the purpose of an NTSB investigation is to determine probable cause, not liability, lawsuits frequently follow in the wake of the agency's final report.

Plaintiffs' lawyers can't submit the probable cause report as evidence in a liability suit, but they can use the NTSB's factual report and they can depose the same people that the aviation authorities consulted. Even though the NTSB's determination of probable cause may have implicated pilot error, the lawyers representing an injured passenger or the passenger's widow, for example, may develop a completely new theory, perhaps involving maintenance. The repair facility may not hear of this potential lawsuit until some years after the investigation has been completed.

Another thing to be aware of, if a facility works on older aircraft, is that the General Aviation Revitalization Act of 1994 established an 18-year "statute of repose"

In a general aviation scenario, most of the time repair stations don't hear about an accident until the NTSB investigation is over, according to Russ Mirabile, senior vice president and head of speciality claims North America for the XL Group.

for general aviation aircraft and their component parts, protecting manufacturers from liability. This changed the playing field for the aircraft maintenance industry, says Jim Strawinski, lead partner in Strawinski & Stout, an aviation defense law firm in Atlanta. Consequently, plaintiffs have shifted their focus to the maintenance facilities. As Strawinski explains, "Now in accident litigation the microscope is on the repair stations, aircraft maintenance facilities and mechanics, when older general aviation aircraft are involved."

A facility also should be aware of public relations, given the American public's insatiable appetite for information about air crashes. Although a facility may not be able to hire a PR consultant, it should be very careful about what it says to the press and to try to speak with a single voice.

Realities

For many reasons it may not be possible to know in advance that an airplane you worked on has crashed. Typically, a certified repair station (CRS) receives an aircraft part or component to be repaired or overhauled indirectly, from a distributor, FBO (fixed base operation) or individual A&P (airframe and powerplant) mechanic, says John Hoff, senior partner in the Chicago-based Hoff Law Group with experience in aviation law.

Usually the first time a certified repair station finds out about there being "a problem" with their repaired/overhauled component will be when they're named and served with legal papers as a party in a civil liability suit, well after the fact," Hoff says.

In a general aviation scenario, most of the time repair stations don't hear about an accident until the NTSB investigation is over

and the report has been finished, says Russ Mirabile, senior vice president and head of speciality claims North America for the XL Group, which insures maintenance facilities as one of its lines of business.

And if a CRS does hear of the investigation while it's ongoing, unless it's a major accident, it's unlikely that the repair station would be involved in the early stages of the investigation, he says.

"It's very rare for a [repair facility] to be involved in an investigation upfront," Mirabile says. The maintenance aspect may not have been investigated. The investigators may have focused on something else that they believed to be the singular cause of the accident.

The more time that goes by between repair station work and the aircraft accident, the less likely it becomes that the repair station would become involved in the investigation of the accident, Mirabile says. The NTSB or FAA may not have seen the need to go back far enough in the records to see that the repair station once worked on the plane.

Indeed the NTSB may have determined that pilot error was the probable cause. But a plaintiff's lawyer, who wants to recover damages for his client, may find that the maintenance shop worked on the airplane a few years prior to the crash and try to prove that the facility was at fault. The repair facility may not be notified that it's being sued until years after the crash and the investigation, Mirabile says. "That's a situation we see when a repair facility is brought into a case."

A repair facility also needs to avoid talking—without legal counsel—to investigators sent by plaintiffs' lawyers, he says. And if people show up flashing badges and demanding a facility's records, "politely sit them down in a chair and call the lawyer," Mirabile says. "They have to have a subpoena," he adds. Indeed, it would be difficult for a lawyer to advise or defend a maintenance facility if the records of its work are unavailable. Although XL Group has internal lawyers who act as claims managers, the insurer retains outside lawyers for the insured, whose duty is to the insured even though they are paid by the insurance company.

Having an independent lawyer may shield post-investigation documentation from discovery if the facility is later involved in a liability suit, under the "attorney work product" or "attorney client communications" privilege protections, Hoff explains. Such protections, however, typically will not protect the underlying work orders, invoices or log book entries made contemporaneously with the work being performed, he says.

Plan, Plan, Plan

But even if news of an investigation comes unexpectedly, you want to be at your best. Without a plan, the maintenance facility may find itself improvising, reacting blindly without understanding the implications of its actions. That is not only inefficient but potentially contrary to one's interests.

It is also important to understand the investigatory process and the NTSB/FAA procedures and regulations that might affect you. The NTSB recommends, as a step towards better preparation beforehand, taking the agency's two-day course titled, Aircraft Accident Investigation for Aviation Professionals (AS 301), which is offered several times a year. This course would give a more in-depth look into the NTSB process.

The insurance company will hire a lawyer to advise you in the investigatory proceeding and to defend you in a civil liability suit. But you also may need to have a lawyer who is knowledgeable of FAA's regulations if an FAA enforcement action against you is in any way likely down the road.

Party Status?

NTSB makes use of the "party system"

"But even if news of an investigation comes unexpectedly, you want to be at your best. Without a plan, the maintenance facility may find itself improvising, reacting blindly without understanding the implications of its actions."

to get the technical information it needs for an investigation. According to the NTSB's regulations, to be made a party to an investigation, an entity has to show that its personnel are technically qualified to actively assist in the investigation, explains Marshall Filler, a partner at the Alexandria, Va.-based law firm, Obadal, Filler, MacLeod & Klein.

Filler says that if a repair facility can show this to be the case, it should write to the NTSB's Investigator-In-Charge (IIC), requesting party status. There are advantages to party status, including awareness of all information coming into the investigation and the ability to comment on draft factual reports, he explains. Thus, parties are better prepared than outsiders would be to defend their interests among the competing agendas of other participants in the investigation.

Since the manufacturers naturally will try to deflect any possible argument that their products contributed to the causal chain of an accident, "the last man left standing" may be the pilot or the Federal Aviation Regulations (FAR) Part 43 maintainer/repairer/overhauler, neither of whom is typically represented as a "party to the investigation," Hoff says.

The party system, where the IIC "invites" companies whose expertise will technically contribute to the investigation, "works well for large cases," Filler says, although repair stations are sometimes rejected as parties, if investigators believe they already have enough expertise. But if there are questions about maintenance issues, the certificated repair station that performed and approved the work always wants to be a party to the investigation, he says. In GA accident investigations, where evidence gathering typically has been assigned to the FAA, the party system is less formal, compared to major investigations, but is still complicated with potential pitfalls, he says.

However, certified repair stations "rarely

"The NTSB's 'independent view' of the cause or causes of an accident set out in the probable cause report can not be directly used in any court of law against anyone, much less a CSR," Hoff says. "But the documentation provided to the FAA can be used for enforcement actions."

would…be invited to be a party to the investigation," Hoff says. In a GA accident, Hoff says, the parties to the investigation typically would be the airframe manufacturer, the engine manufacturer and the manufacturer of a part—a like a carburetor—that may have been implicated.

The pilot and the maintenance facility, which typically have insurance policies in force, are usually advised by their insurance companies and their assigned lawyers. But neither the insurance companies nor the lawyers are permitted to be "parties to an investigation," by operation of law, Hoff says. As a non-party to an NTSB Investigation, the facility is essentially a "fact witness," Hoff says.

Representation

Ideally the facility also should retain regulatory counsel to supplement the insurance company lawyer and to defend the facility's interests if there should be a disconnect between the advice of the two lawyers, Filler says. The insurance lawyer's advice, for example, might not reflect a complete understanding of regulatory requirements, he says. Hiring an independent lawyer also may be advisable if there is any equivocation about coverage or the insurance carrier's "duty to defend," Hoff notes.

Regulatory counsel should also help the repair facility navigate the bureaucratic maze, which in addition to the NTSB and FAA, may also include state and local agencies if hazardous materials or other environmental issues were involved, Filler says.

Gotchas?

A frequent complication in GA investigations is that the FAA may be wearing two hats—it may be gathering evidence for the NTSB, but it also may be focusing on its enforcement and safety responsibilities, Filler explains.

Mirabile suggest that repair stations wait until they are contacted by the FAA or NTSB unless they have knowledge of employees' deliberately violating the FARS. In that case it's their duty to report this to the FAA, he says.

Indeed, the FAA "has an independent obligation to go out and investigate" an accident for its own independent enforcement purposes, Hoff says. The FAA is also investigating for internal negligence or departures from its own internal handbook requirements or FAA orders by the air traffic controllers or operational violations by pilots or maintainers.

Enforcement actions are not covered under XL Group's liability insurance, Mirabile says, although the lawyer hired by the insurance company would certainly cooperate with any counsel handling the regulatory aspects. But a regulatory action is not likely unless something really egregious has happened, he adds.

The FAA may use findings in the NTSB's preliminary factual report in an enforcement action. Penalties can entail the suspension or revocation of a CRS's certificate in a "certificate action" or up to $11,000 per FAR violation in a civil penalty action. These cases are heard by either NTSB or Department of Transportation administrative law judges, respectively, Hoff explains.

There might even be potential criminal liability, if a fatality occurs or the potential falsification of records becomes an issue, Filler says. In other words an investigation

could have ramifications which have the potential to create "a three-ring circus," he says.

Filler advises that individuals involved in an NTSB investigation should "start from rule 1," which is to "answer the question asked." On the other hand, providing minimal information isn't always best, he adds, if the extra information would help to prove that the facility did not contribute to the causal chain of the accident.

The FAA certificated Part 145 CRS maintenance facility is obligated to cooperate with the investigation and honestly answer their questions, per the requirements of United States Code, Hoff says. False statements to any federal official can be punishable criminally. However, the CRS should provide only copies of the documents requested, and not volunteer more, he recommends. Doing so might give the NTSB IIC additional lines of enquiry that the FAA could use against the facility.

The repair facility also has to decide whether the FAA should be allowed to participate in the facility's interview with the NTSB, Filler says.

In the past some individuals have been reluctant to give evidence to Safety Board investigators because of the participation of FAA employees who may also be responsible for enforcement of FARs, Filler recalls. To prevent such reluctance, NTSB policy permits a person being interviewed to request exclusion of FAA employees from interviews. However, if FAA personnel are excluded from a Safety Board interview, the FAA may want to interview the person afterwards. And the substance of a Safety Board interview will be made available to all participants, including the FAA.

If the matter has potential criminal implications, the individual is not obliged to incriminate himself. The Fifth Amendment is rarely invoked, but it has happened in the past, Filler says.

Liability Potential

The NTSB's "independent view" of the cause or causes of an accident set out in the probable cause report can not be directly used in any court of law against anyone, much less a CSR, Hoff says. But the documentation provided to the FAA can be used for enforcement actions.

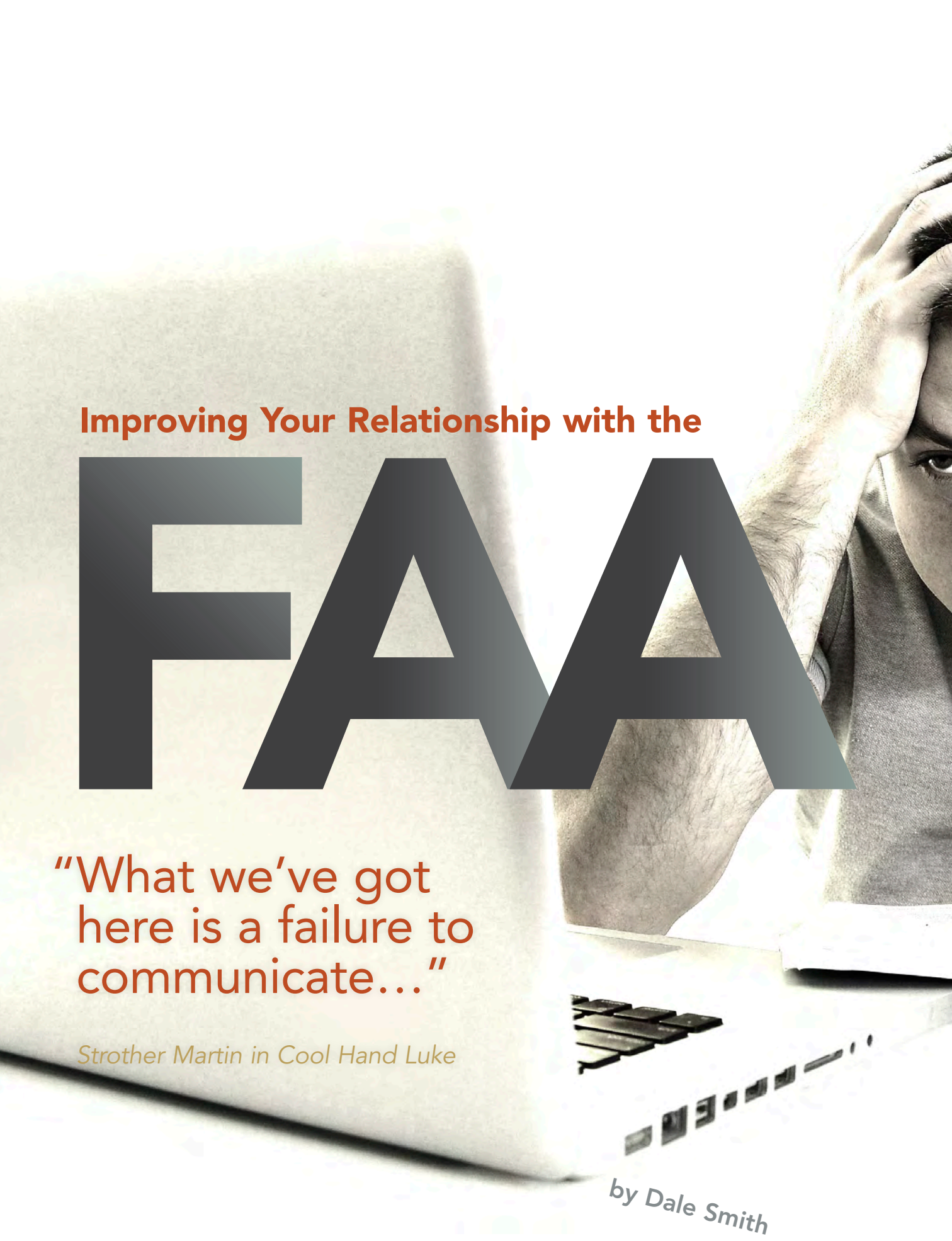
The maintainer's legal travails would not necessarily end with the finding of the administrative law judge. If the judge factually found that the maintainer violated a FAR, that judgment (finding) could be used against the maintainer "collaterally" by a plaintiff in a subsequent civil liability suit arising out of the same incident, Hoff says.

For the purposes of a liability suit, the ultimate "probable cause" would always have to be independently established and proved "de novo," via a retained "expert witness" who will "opine" and be subject to cross-examination and rebuttal testimony and counter evidence, Hoff says. This makes it more of a "fair fight" and "level playing field," he says.

The plaintiff's lawyer also can depose the people mentioned in any governmental investigative report, to obtain needed factual matters, even though they cannot use the NTSB probable cause report or its conclusions as evidence to benefit their case. Depositions and discovery can include the CSR certificate holder or their employees, either as a party via a "notice to produce" or "appear for deposition," or via subpoena if not a party to the litigation. AM

Improving Your Relationship with the

FAA



"What we've got here is a failure to communicate…"

Strother Martin in Cool Hand Luke

by Dale Smith

With a little effort and improved communications you can build a relationship with your local FAA representative that will be truly mutually beneficial.

Okay, let's face it; to most of us in the aircraft MRO business an imminent visit with our local FAA representative is right up there with a root canal. And no doubt, there are FAA folks that feel the same way about dealing with us.

While no one knows how this rift, perceived or not, actually began, it's clear that it's not doing anyone any good. Especially in today's less than stellar economy. We on the MRO side have much bigger, and much realer issues to deal with than whether or not our FAA inspector "likes" us.

"From what I've seen, the typical shop's relationship with their local FSDO representative is not a good relationship or a bad relationship—it's just a relationship," explained Ric Peri, V.P. Government and Industry Affairs for the Aircraft Electronics Association (AEA). "They (FAA) have a job to do and it's not to be kindler, gentler and friendlier to you. They

It is important that a shop knows the FAA policies and regulations and especially knows how their own shop is maintaining compliance. Photo by Joy Finnegan.

just need to know that you are qualified to do the work you need to do. That's it. It's not about feelings."

"The problem is, I believe, that the FAA representatives and shop owners are both woefully deficient in their collective communications skills," he said. "Because when they're faced with a question or problem, they don't explain what they are trying to say very well. There's a lot of room for interpretation and that sets a bad tone."

Fortunately, the FAA is aware of the need for better communications and their spokesperson, Les Dorr had this to say, "In the workforce or in life in general, some form of communication is consistently being used in our activities, whether it be verbal or non-verbal. Mechanics, crew leads, supervisors and inspectors all should have the knowledge and skills to communicate effectively," he said.

Dorr also said that the lack of "proper communications" may lead to any or all of the following undesirable consequences:

- The quality of work and performance may be reduced
- Time and money may be lost as errors occur because important information is not communicated or messages are misinterpreted
- Improper communication may cause frustration and high levels of stress.

Getting to Know You...

And by "improving communications" I don't mean sending your FAA representative a text or email. Sorry, but because of the high-levels of sophistication of your needs and the considerable room for misinterpretation, this kind of relationship has to be built and nurtured face-to-face. And that means getting together with your local FSDO folks pronto.

"One of the best practices for communicating would be to visit with the local flight standards district office regularly," Dorr said. "Meet the office manager and field inspectors. Also, attend FAA events and invite the FAA to your maintenance facility."

Peri stressed that getting to know your FAA folks needs to happen as soon as possible. "Don't wait until you need their help to introduce yourself to them," he said. "It's like anything else, if you only talk to someone when you need them it's hard to

"We're all in this together – that's the kind of attitude you need to bring to the table. Leave all the old FAA baggage behind…"

develop a relationship. If you wait, then don't be surprised if they (FAA) are not as responsive to you as you like."

In fact, the AEA (and hopefully other aviation alphabet groups in the near future) feels the need to build stronger relationships with the FAA has initiated its FAA Ambassador Program (https://www.aea.net/governmentaffairs/ambassadors.asp).

Rick Ochs, CEO of Spirit Aeronautics is one of the association's active ambassadors. "It's our way to grow relationships and bring them (FAA) information on our industry," he said. "Even if they've been out there before, invite them out again to see what's new at your shop. Since it's the government, the folks at your FSDO or ASO routinely rotate in and out. When someone changes in the office, that's a good trigger to reach out to them again."

"And make sure you invite all of your FSDO representatives," Ochs said. "You don't want to inadvertently come across to your inspector that you are trying to go over their head by just inviting the manager."

Ochs said that sometimes your invitation will go unheeded, but you need to keep trying. "Honestly, I had no luck with our prior guy when I invited him, but our new manager recently came out and we had a very productive tour and meeting," he said. "It was informal tour. Nothing fancy. I just introduced our technicians and administrative folks to him. Then I gave him a short briefing on who we are, what our market is, and our recent projects—stuff like that. I think it was very good for him to get that information first hand. It wasn't a long visit, but I think it was very valuable."

While he is a staunch supporter of FAA visits, Peri said that you have to be careful about how you treat the meeting no matter if it's at your facility or a neutral site.

"There are pretty strict rules about gifts—even meals," he said. "If you go out for a meal, I always figure on splitting the check. (Separate checks make it even easier). The FAA folks can accept things like coffee and doughnuts, if they are there for everyone, and not just for them."

Peri also said that while visits to the FSDO and hosting FAA folks at your shop are the best foundation builders for an improved relationship, there are other things you can do.

"Find ways to interact with the FSDO representatives as much as you possibly can," he said. "Participate in the IA seminars for example—keep checking the FSDO calendar for local meetings. Any professional setting where you can share common experiences and ideas."

We're All Professionals Here

While these meet-and-greet type visits are primarily about founding a relationship, both Peri and Ochs stressed that you have to clearly communicate what your company is all about and what kind of help and guidance you need from your FAA representative.

"You are a hard-working company trying to make it in very tough times and you need their help guidance and support," Ochs said. "We're all in this together—that's the kind of attitude you need to bring to the table. Leave all the old FAA baggage behind…"

The bottom line is what you need to do is become proactive in getting to know the folks in your FSDO and to get them familiar with you and your shop's abilities. Do that, and you're one giant step towards streamlining any upcoming approvals.

Peri likens it to back when you were getting your pilot's license your instructor would only let you do what you had already shown them you could do safely. "Until he was comfortable with your abilities he kept everything in the green arc," he said. "It's the exact same. Their (FAA) job is to be our 'flight instructor' and to make sure we know how to do what we need to do. We have to show them we know the rules. We know what needs to be done so I'm not asking them for things that I'm supposed to know the answer to."

No one is suggesting you put on an "I know the FAA rules" presentation, but it's a good idea to interject some of your own company's internal processes and procedures concerning rules and guidelines research when it comes to a field approval or an STC.

As Dorr stated earlier, clear communications is a key to minimizing misunderstandings and one way to clean up your communications and requests is to know what information you need from the FAA without requiring your inspector to revisit the regulations with you.

"Before they contact the FAA, the shop should know exactly what his/her mission is and be prepared discuss thoroughly the proposal or issue," Dorr stated. "It is important that the shop knows and understands the FAA policies and federal regulations and especially know how their own shop is maintaining compliance."

"The shop should understand what type of work they are rated to perform and their operating processes and procedures are in place," he said. "Providing detailed information, required records, and other applicable documentation related to the subject describing the methods, procedures, and practices would greatly assist the FAA to clarify and explain how it is done. It is of the up most importance to articulate what it is you want and why."

While folks in the know say it's often the easy way for the FAA to just say, "go read the regulations," it's often a way to circumvent possible issues with a project.

"One big reoccurring problem is a shop not knowing what their FAA representative's limitations are," Peri said. "Your FSDO representative doesn't know everything and doesn't have the authorization to supersede the published FAA rules. The best way to avoid issues is to become familiar with those rules and what your representative's level of authorization is."

"If you're asking for a Field Approval on something that your inspector just doesn't have the authority to do, then you're going to frustrate them as well as yourself," he said. "But, this is something you need to know early on in a project. The earlier you can contact them with the right questions, the easier it will be for you to get what you need in a timely fashion."

"You have to understand that even your FAA inspector is dealing with big bureaucracy," Ochs said. "No doubt your inspector can be frustrated with some of the guidelines and constraints he has to deal with every day. The more you can do to help him/her accomplish what they need to get done in a positive way, the better."

"Always, stop and keep in mind that if the answer isn't what you want, it may not be because your inspector is imposing these burdens on you – they may be coming from much higher up," he said. "More times than not, your inspector wants to get through the project as painlessly as you do. It's just finding that common ground and working together from there with the least amount of resistance as possible."

And it all starts with good, clear communication. AM

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Product Roundup

By AVM Staff

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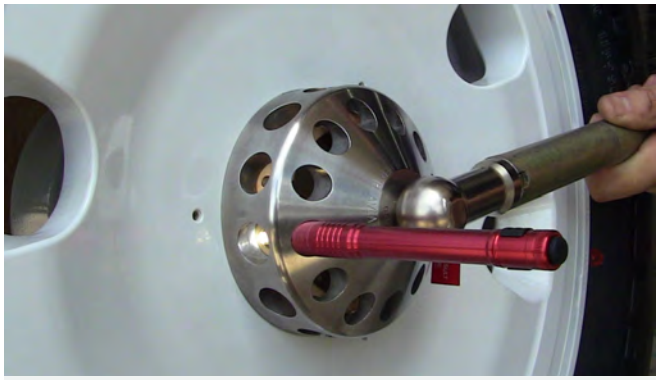

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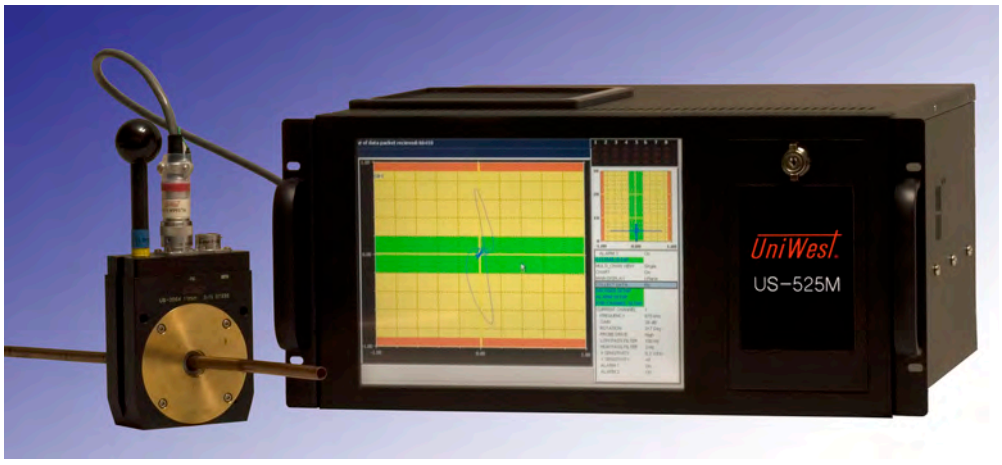

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BY RUS SUTARIA

Demystifying Black Swan Events

RUSTOM SUTARIA is director of Content & Knowledge Services for Avia Intelligence, a provider of aviation training and consultancy services founded in 2013. Sutaria has spent 20 years in aircraft engineering and maintenance, of which 15 years has been spent working for various high-profile aviation businesses in technical Services functions. Sutaria's aviation consultancy (ARCGlobal.info) provides training and consultancy support predominantly within civilian aviation disciplines, and specializes in aviation safety and regulatory training development and delivery. Sutaria is a graduate of Kingston University with a B.Eng. (Hons.) in Aerospace Engineering, and also holds an MSc in Aircraft Maintenance Management from City University in London. He is also an active member of both the Executive Council & Technical Committee of the International Federation of Airworthiness (IFA), and a Member of the Royal Aeronautical Society.

Black Swan events like Air France AF447 and more recently Malaysia Airlines MH370 appear to highlight latent weaknesses, not only in our aviation system, but more so in our ability to secure the technology that we, as an industry, operate. Add to that an apparent lack of security, not only of the aircraft itself, but more so the ease of control of critical on-board systems like Aircraft Communications Addressing and Reporting System (ACARS) and the aircraft's transponder. The reader might get the impression that Black Swan events are likely to be far more commonplace than we first thought.

Whilst the hunt for MH370 continues, perhaps it is time to turn our attention back to the potential causes of the event. Let's consider the potential implications of the on-board technology and the potential role of aircraft engineering and maintenance will need to assume in order to ensure security of the aircraft in their care.

Putting the Genie Back into the Bottle

Surely, it cannot be that easy to switch-off the aircraft's transponder simply by turning a knob that is easily and conveniently located on the engine pedestal. I admit it; the un-initiated will not necessarily realize that such controls for communications are actually in plain sight. Although the media have done an excellent job highlighting this point to the public.

Let us not also forget that an experienced flight simulator pilot would have already known exactly where everything is. There are breathtakingly accurate simulators that are easily purchased. Therefore we have to admit that more people know the anatomy of the B777 flight deck than we would like.

With the genie already out of the bottle, the events of MH370 seem to suggest that a fundamental change to the ability to control and the location of the transponder on the flight-deck may be merited. The question is whether the pilot truly needs the ability to switch the transponder on or off. In this author's opinion, the only reason for the transponder to be off, must be for maintenance purposes, and none other. By removing the ability to switch transponder power on or off to a location beyond the control of the assailant or the pilot would be a good first step.

Perhaps we should also include security technology utilized by retail banks to make the task of isolating power to critical systems that much harder. Add to this the much-discussed need for a discrete panic button either on the flight deck or in the cabin, as has also been suggested. Panic-buttons should include technological and procedural protocols ensuring that the transponder remains discretely active, possibly reverting to a unique transponder code that indicates to any air traffic controller that the aircraft is in distress, together with an automated ACARS message confirming that the aircraft is trouble.

Security in the Hangar/Line Mx

It has also been identified that 9M-MRO emerged from an 'unspecified' maintenance visit 12 days before the aircraft operated as MH370. Although there has been no suggestion of a link between this hangar visit and the MH370 event, the proximity of the maintenance visit does call into question the general adequacy of security around the aircraft. At this point, the author wishes to emphasize that no evidence at all has come to light suggesting that the preliminary causes of the incident came from the hangar or even the aircrafts' maintainers in Kuala Lumpar.

However, the incident does serve to highlight potential compromises within the hangar that might facilitate access to the aircraft, or on-board systems, with a view to the embodiment of clandestine modifications.

Security around hangars and airport gates has improved with hangars now being physically located well within airside perimeters. However, have there been questions asked of the security inside the hangar or for that matter a specific aircraft? How many of us actually question the movement and presence of our own personnel between aircraft that are in hangar?

How many of us even have the time to stop and question someone whom we don't know or was not expected to work on a particular aircraft? "I've walk around numerous hangars and aircraft in the UK and I am hardly ever challenged," says Ray Ward an aviation consultant specializing in maintenance human factors.

Through initial and recurrent maintenance human factors training, our engineers are taught to identify a wide variety of behaviorally based abnormalities stemming from the Dirty Dozen. "Shouldn't we also be taught to identify potential security issues stemming from furtive or other behavioral patterns?" asks Ward.

Furthermore, Ward points out that the techniques of passenger profiling'are also as equally successful in preventing unlawful acts of interference. So why are not teaching our hangar personnel basic profiling techniques that are designed to identify potentially clandestine behaviors within the hangar environment?

How to Hide a Landed Aircraft?

With a distinct lack of debris and the recent announcement that investigators are now reconsidering the possibility of the aircraft having landed, we must ask ourselves the question, what was the purpose of hi-jacking the aircraft? Since there has been no financial or political demands made (so far), could the aircraft have been taken for commercial benefit?

A theory to proffer revolves around suspect unapproved parts, which is a big business. The aircraft may have been taken for the sole purpose of utilizing 9M-MRO as a template for the production of bogus components. In the timescales, it may be possible that the aircraft could have been disassembled. Putting all other issues and theories aside, disassembly would seem to be the quickest and easiest means of achieving a commercial black swan disappearance. What you would do with the passengers and crew is anybody's guess. According to Phil Baum of *Aviation Security International*, the hostages from the Avianca F50 were release some 19 months later. As with everything in aviation, anything is possible. AM

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BY RYAN AGGERGAARD

When is an Aircraft Not an Aircraft?

Issues in Drone Regulations

One of the most talked about emerging fields of aviation right now deals with drones and the law. The ever increasing prevalence of drones in both civil and public use continues to drive questions asking when, where, and how drones can be operated, and by whom. High profile announcements and incidents—use of drones for retail delivery, recording video footage of parks, college campuses, and sporting events, uses by law enforcement and other agencies, and alleged near collisions with commercial aircraft—serve to keep discussion of drones in the public view.

The significant commercial opportunities presented by drones are readily apparent to most observers. At the same time, concerns about safety, noise, and privacy from regulatory agencies and consumer advocates drive the discussion toward the legal and regulatory framework that should apply to drones and their operation. As the Federal Aviation Administration and other agencies seek to promulgate regulations and advance policies to address the growing use of drones in the United States, it will be important and valuable for the maintenance community to remain up to date on the current status of these aircraft.

The first thing that must be remembered is that at this time there are very few regulations that apply specifically to drones, or Unmanned Aircraft Systems (UAS). The FAA Modernization and Reform Act of 2012 (the FAA Modernization Act) specifically ordered the FAA to begin developing a comprehensive plan to integrate UAS into the National Airspace System. Part of this plan involves the issuance of a Notice of Proposed Rulemaking to implement the contents of that plan. In its comprehensive report to Congress, the FAA anticipated that the Notice of Proposed Rulemaking (NPRM) would be issued sometime in the year 2014. To date, that NPRM has not been issued.

Notwithstanding the absence of UAS-specific regulations, the FAA has still proceeded to implement and enforce policy over the operation of UAS in the United States. Such authority is claimed under the FAA's safety mandate and its statutory authority to regulate both aircraft and airspace. Recently, however, questions have arisen as to whether certain UAS are considered aircraft under the statutory and regulatory definitions, and whether certain UAS may be exempt under the FAA's own policy. It is upon this question that much else turns, and so it is this question we will address in this article.

Title 49 of the United States Code defines "aircraft" as "any contrivance invented, used, or designed to navigate or fly in the air." The Federal Aviation Regulations offer a similar, though not identical, definition of "aircraft," defining it as "a device that is used or intended to be used for flight in the air." It must be noted that in neither of these broad definitions is there any requirement that the aircraft be manned. The plain language of both statute and regulation would therefore appear to encompass UAS. This can be contrasted with regulations in some other countries that specifically require a person to be on board a vehicle for it to be legally considered an aircraft.

The FAA's position is that, based on the unambiguous definitions of "aircraft" found in both the statute and the regulation, the agency clearly has authority to regulate UAS as aircraft. (For our purposes, it is not necessary at this time to discuss the agency's authority to regulate UAS with respect to operation in airspace; we will concern ourselves with whether a UAS is an "aircraft" as defined by the law, as the ultimate definition could affect the maintenance community in the future.) Recently, however, a ruling handed down by an NTSB Administrative Law Judge (ALJ) has questioned whether certain UAS are, in fact, aircraft under the FAA's own interpretation of the statute and regulations, and whether the FAA has exempted UAS from enforcement in certain cases.

In the case Huerta v. Pirker, the FAA assessed a $10,000 civil penalty against the operator of an "unmanned aircraft system (UAS), a Ritewing Zepher power glider aircraft" for operating the UAS in a careless or reckless manner, by, among other things, flying the UAS in close proximity to people, cars, buildings, and an active heliport. The ALJ, however, put the horse before the cart in this case, and

focused on whether the UAS in question was even an aircraft according to the FAA's own interpretations. Seizing upon Advisory Circular 91-57, the judge determined that because the UAS was a model aircraft it was subject only to voluntary compliance with recommended safety standards for model aircraft operators. (The judge never reached the crux of the issue: whether the operation of the UAS was careless or reckless.)

It is not clear from the opinion why the ALJ decided that the UAS was in fact a "model aircraft" as opposed to an "aircraft," and therefore subject only to AC 91-57's voluntary compliance request. This is an important note. In the FAA's Appeal Brief to the NTSB, it has argued that not only are model aircraft considered "aircraft" under its own interpretations and plain meaning of the definitions, but also that the term "model" was arbitrarily applied in the case without any objective criteria or guidance. The resolution of these two issues could provide a pivotal key in determining whether UAS will ultimately be deemed aircraft requiring an airworthiness certificate, which would subsequently place such UAS squarely within the maintenance requirements of Part 43 of the FARs.

Although a number of commenters have agreed with the ALJ's interpretation that the FAA has excluded remote control model aircraft from the broader definition of "aircraft" by positing specific advisory guidance related to model aircraft, it is not clear from the definitions of aircraft or AC 91-57 itself that model aircraft are not still subordinate to the broader definition of "aircraft" in general. Recall that the definitions of aircraft are extremely broad, referring only to a device or contrivance designed to fly in the air. This is certainly broad, and as the ALJ observed could theoretically include paper airplanes and balsa wood gliders. Moreover, the Advisory Circular does not specifically exempt model aircraft from being subject to the remainder of the FARs. It only puts forth a set of operating safety standards for model aircraft operators. One possible way to read the AC is that it imposed additional voluntary standards on the model aircraft community. This is a matter of interpretation, and one with which the ALJ clearly disagreed. However, it is possible that the ALJ's interpretation could be overturned on appeal, and "model aircraft" deemed to in fact fall under the more expansive definition of "aircraft."

It is further unclear what criteria the ALJ used in assigning the term "model aircraft" to the UAS in question. The judge did not appear to rely on the definition provided in the FAA Modernization Act, which defines a model aircraft as an unmanned aircraft that is –

1) capable of sustained flight in the atmosphere;

2) flown within visual line of sight of the person operating the aircraft; and

3) flown for hobby or recreational purposes.

Reference to such a definition would have been informative in this case. One reason the judge may not have turned to this definition for guidance is that it clearly refers to hobby or recreational purposes, and the UAS operation in question was done for commercial purposes. This would have clearly placed the drone in question outside of the statutory definition of a "model aircraft." (It would not have been binding in any case, as the FAA Modernization Act was not enacted until several months after the incident giving rise to the case.)

Adding to the confusion, Congress specifically warned the FAA in the FAA Modernization Act that it was not to promulgate any rules or regulations with respect to model aircraft operating under certain express parameters. The inclusion of such a provision indicates that Congress probably recognized that model aircraft-UAS line may be a challenging issue going forward and would prefer that additional regulation not further muddy the waters. The confusion as to what constitutes a model aircraft is further illustrated by the ALJ's willingness to look at the UAS specifications in the case and quickly assign the term "model aircraft" to the UAS without further discussion, implying a sort of "know it when you see it" test.

The demarcation between "model aircraft" and "aircraft" with respect to UAS, and whether and which Federal Aviation Regulations will apply to them, could have a significant effect on future potential maintenance and repair opportunities. It is clear from the provisions in the FAA Modernization Act that certain small UAS (those less than 55 pounds) flown by hobbyists will, in the short term, escape the promulgation of additional regulations. It also seems likely that in the case of these UAS there will probably be very little, if any, demand for maintenance services, as the incredibly low cost and capability of the UAS makes simple replacement far more logical.

The real question is whether larger and larger UAS will be deemed "aircraft" under the statutory and regulatory authority of the FAA. The restriction on new model aircraft regulations mentioned above applies, among other restrictions, only when the model aircraft weighs not more than 55 pounds. Moreover, the definition of model aircraft itself provides no size limitations, but does require line-of-sight operation. This begs the question of whether large UAS will still be considered "model aircraft," as long as they are operated in sight, and if so, to what extent does the FAA's regulatory authority over them change?

Larger UAS in fact may be subject to all the requirements of the FARs, including type certification, conformity with type design, and issuance of airworthiness certificate. The FAA's comprehensive plan anticipates the eventual phase-in of both small and large UAS, typically first in the public arena, then at the civil level. This means that those agencies operating larger UAS for any number of purposes: border patrol; police surveillance; firefighting; and search and rescue, will have a need for maintenance services for their UAS fleet. Such expertise is not likely to be had in-house by most such agencies. And, while the manufacturers of UAS will most likely make efforts to provide a vertically integrated suite of services, to include maintenance and supply, austere budgets from the federal level down through state and local governments may well encourage operators of UAS to seek out alternative maintenance providers.

Much will depend on how the regulatory structure over Unmanned Aircraft Systems is framed. Even an unfriendly (in the eyes of the FAA) appellate ruling from the NTSB with respect to their regulatory authority over "model aircraft" or "small unmanned aircraft" does not foreclose the applicability of the remainder of the FAR to UAS larger than 55 pounds. The definition of "aircraft" is incredibly broad, and gives the FAA significant authority to regulate contrivances designed to fly in the air, and it is possible the NTSB will say as much on appeal. As use of UAS continues to expand, and regulators, industry, and the legal community wrestle over definitions and applicability, those who are poised to take advantage of the emerging clarity in drone regulation may reap the rewards. AM

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