AUGUST/SEPTEMBER 2018

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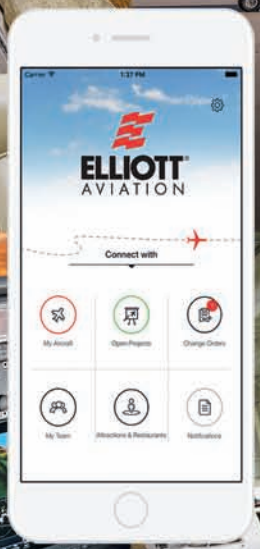

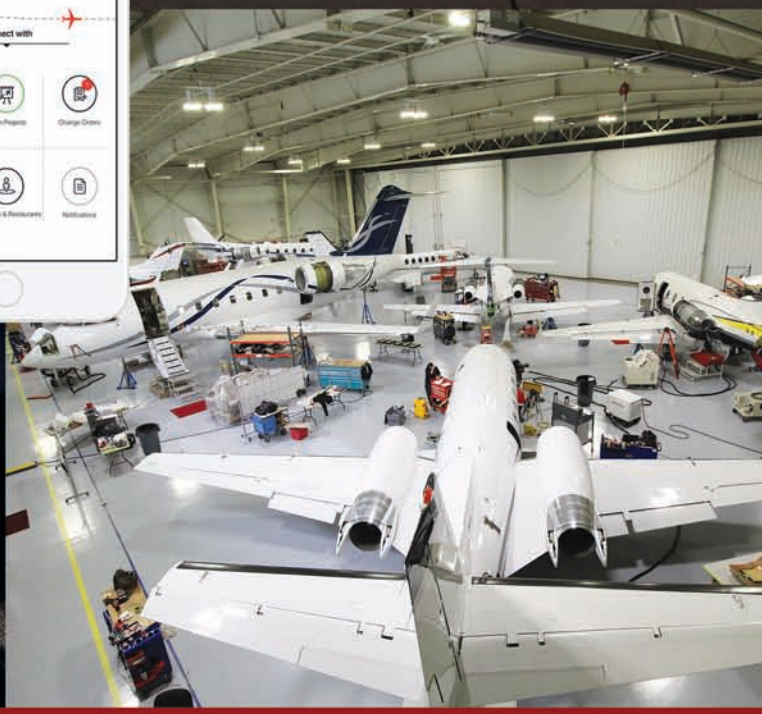

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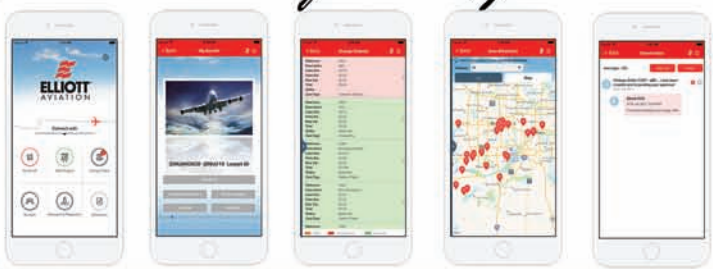

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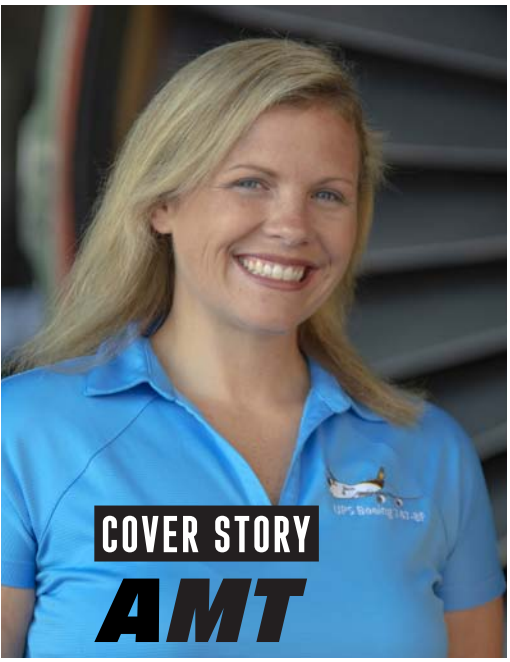

NEXTGEN
40 UNDER 40 AWARDS

Congratulations to the winners of *AMT*'s 2018 Next Gen 40 Under 40 Awards. The different paths that led them to aviation careers, the innovations they have created, and the passion they give to those entering the industry show the way of the future.

Read their stories beginning on Page 32

FEATURES

COLUMNS

DEPARTMENTS

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THE NEXT GENERATION

THIS ISSUE IS ALWAYS A SPECIAL one as we highlight the 40 young men and women selected to receive this year's Next Gen 40 Under 40 Maintenance Professional Awards. These young professionals come from around the world, from all segments of aviation, and different roles that support aircraft maintenance. Reading through the profiles words such as aviation passion, integrity, commitment, and enthusiasm come to mind. Congratulations to not only the 40 selected, but to all of you who were nominated, and those of you who understand the importance of recognizing the next generation of aircraft maintenance professionals by nominating someone.

Looking at this year's winners, some aviation maintenance professionals are still being influenced by fathers working on cars and grandfathers working on the farm. My interest in maintenance and aviation did involve time on my grandfather's farm in Wisconsin. But what about the next generation?

Most youngsters won't have the opportunity to experience fixing farm machinery and learning about tools before even thinking about a career path. They'll be more familiar with computers than hand tools.

That places an extra burden on the industry and the schools that have to do the training. It makes it more important that the current aircraft maintenance professionals promote the career as a way to make a difference. And schools and tool manufacturers will need to develop courses to familiarize students with the basics of what tools are important and how to use them.

Another observation is the increased number of women award winners. In 2017 we had four female winners and this year we have eight. Congratulations, the industry needs your input and contributions.

Other articles in this issue that highlight the importance of the role that people play in organizations include Dominique Cristall's focus on sustainability from Bombardier Business Aircraft's perspective. And Marino Boric continues the series on E-Flight with observations from Farnborough Airshow.

Congratulations again to this year's winners, we anticipate hearing more about you and your achievements in the years to come.

Ron

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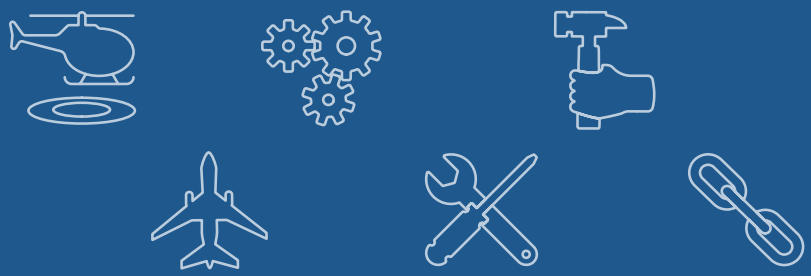

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DOMINIQUE CRISTALL is Communications, Sustainability and Community Affairs Advisor at Bombardier Business Aircraft based in Wichita, KS. Prior to joining Bombardier Business Aircraft, Cristall worked at Bombardier's head office in Montreal, leading the company's sustainability strategy and communications worldwide, encompassing both the aerospace and transportation sides of the business. She holds a Bachelor of Commerce in International Business from McGill University.

SUSTAINABILITY

Often the first thing that comes to mind is the environment but true sustainability is much more

"SUSTAINABILITY" HAS RECENTLY SURGED IN prevalence, appearing in public reports, written on labels, and spoken in panels. But what does it really mean, and why does it really matter?

At the highest level, when a company considers its approach to sustainability, it is asking itself, "How do we need to operate today to ensure we're going to be here, creating value for ourselves and all our stakeholders, in the long run?" In this way, sustainability touches every aspect of the business.

When people hear the word "sustainability," often the first thing that comes to mind is the environment, or community involvement, and while these are certainly foundational elements to any robust sustainability strategy, it is so much more. Sustainability is analogous to risk management strategy, and in many ways, to a business strategy at large. By understanding sustainability as a business imperative, companies are helping ensure the longevity and success of their business, their industries, and our world at large.

BOMBARDIER BUSINESS Aircraft's Singapore Service Center.
BOMBARDIER BUSINESS AIRCRAFT

This notion is something that companies are now looking for in one another, embedding sustainability criteria in their evaluation of potential partners. This extends from material suppliers to the investment community as well: investors are taking nonfinancial indicators into consideration to evaluate the long-term performance of companies, looking at value beyond dollars.

Sustainability means thinking about why we do what we do, at the most fundamental level. For example, at Bombardier, we distill this into creating better ways of moving people around the world.

Bombardier Business Aircraft, from the hangar floor to the cockpit to the boardroom, is committed to responsible practices, because we understand this is key to achieving sustainable, profitable growth.

But how does something so philosophical become ingrained across a business? There is no secret sauce to tackling sustainability comprehensively — it is dynamic, challenging, and changing, just like the world in which we live. We try to approach it in a way that is holistic and comprehensive, looking at four central themes that are both universal and practical: how we innovate, how we operate, our people, and our communities.

INDUSTRY-LEADING PRODUCTS

One of the most important ways an aircraft manufacturer can demonstrate its leadership in and commitment to sustainability is through the industry-leading products it manufactures and services. Given that more than 80 percent of the environmental impact of an aircraft is determined at its design stage, designing with environmental considerations in mind is critical.

Bombardier Business Aircraft President David Coleal chairs the General Aviation Manufacturer's Association's (GAMA) Environment Committee, through which Bombardier has contributed to the industry's recently published "Business Aviation Guide to the Use of Sustainable Alternative Jet Fuel (SAJF)". The guide is available at www.futureofsustainablefuel.com.

Importantly, the business aviation industry began acting on its pledge to environmental stewardship back in 2009. GAMA and the International Business Aviation Council jointly announced the Business Aviation Commitment to Climate Change, a global, industrywide commitment to mitigating climate change, including concrete targets. These targets set to improve fuel efficiency 2 percent per year from 2010 until 2020, achieve carbon-neutral growth from 2020, and reduce CO_2 emissions 50 percent by 2050 relative to 2005.[1]

The industry designed a path to achieve these goals across four pillars. Progress is being made against three of the pillars: enhancing operational efficiency, continuing infrastructure improvements, and promoting market-based measures. The last pillar, advancing technology, includes the development of SAJF. SAJF has the same qualities and characteristics as Jet A and Jet A-1 fuel. Importantly, because it is derived from renewable resources ranging from cooking oil, plant oils, solid municipal waste, waste gases, sugars, purpose-grown biomass, and agricultural residues, it is also significantly cleaner across its lifecycle than conventional fuel.

Limited production, lack of awareness, and challenges of infrastructure and economics currently impede widespread adoption. As we work to address all of these challenges, the exciting part is that aircraft are ready to fly with SAJF today, which means an airplane flying on alternative fuel can make a positive impact immediately. Bombardier Business Aircraft's demo fleet of aircraft recently flew to Geneva, Switzerland, to be on static display at the European Business Aviation Conference and Exposition (EBACE) on SAJF, the third time its demo fleet has completed alternative fuel-powered flights, reminding the industry that our products are ready to fly on SAJF now.

Intrinsically connected to product innovation must be a commitment to the customer, to service, and aftermarket. Again, when considering what it means to be sustainable and foster longevity, a laser focus on the customer is a business imperative. When organizations understand that the needs of their customers are their own and align their operations accordingly, they're better positioned for long-term success. For example, this includes reversing the design process, designing aircraft from the inside out, with the passenger in mind from the beginning. It also means ensuring a robust service network, with a worldwide presence ready to respond to customer needs wherever and whenever they arise.

RESPONSIBLE OPERATIONS

Responsible operations in aviation touch all of the things we do on a daily basis as part of our work building a new aircraft or returning a customer aircraft to service following scheduled or

ABOVE: BOMBARDIER Global 7500 business jet.

RIGHT: DESIGN from the inside out: Bombardier's Nuage seat, the first new seat architecture in business aviation in 30 years, was designed with ergonomics at the forefront.

BOMBARDIER BUSINESS AIRCRAFT

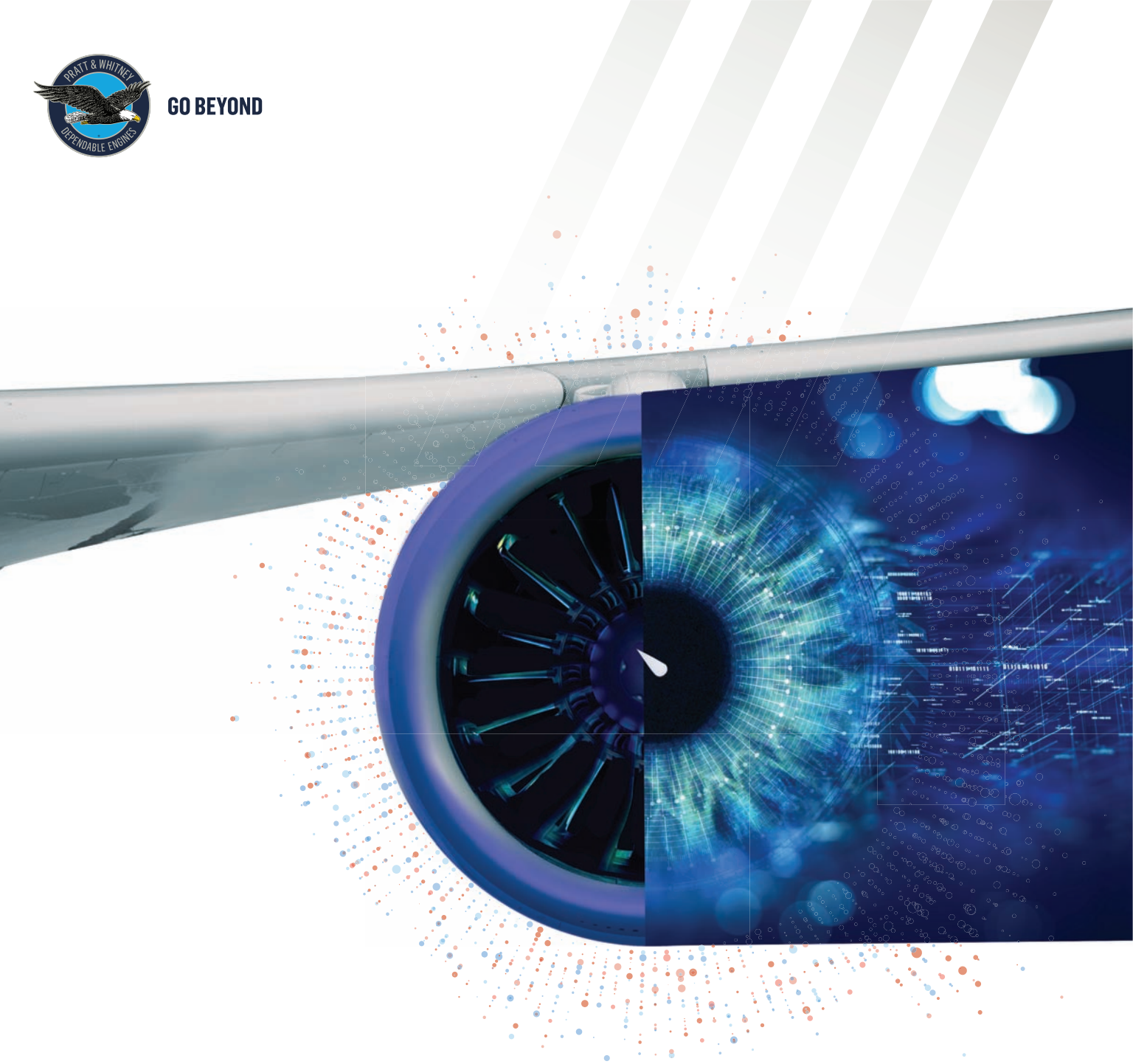
unscheduled maintenance. From recycling programs, from batteries to bottles, to on-site employee health screenings, in many ways, the operational pillar is where sustainability was born, with its roots in the compliance world of health, safety and environment (HSE). On the health and safety side, this means ensuring a safe, ergonomic work environment for all employees and fostering a culture of prevention — we all want to be a part of a work environment where we feel that safety is a priority. Beyond mandatory, regular adoption of bump caps and safety glasses, and managing issues like fatigue prevention and work life balance are also essential pieces of shop floor life.

At Bombardier Business Aircraft, we call this approach our Preventative Culture and work to adopt it throughout daily habits. Accidents and incidents are reported and lessons shared across the organization so as to maintain awareness.

Organizations that implement strong sustainability strategies strive to mitigate their environmental impact across their operations. We set concrete, measurable targets to reduce energy consumption, greenhouse gas or GHG emissions, water consumption, and waste, and sites around the world implement environmental improvements based on local assessments and priorities. Site-specific programs range from recycling programs to solar panel installation.

Outside of the HSE sphere, sustainable operations extend all the way to ensuring a viable supply chain via solid supplier relationships — including audits — as well as

GO BEYOND



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EMPOWERED EMPLOYEES

Companies that lead in sustainability prioritize their employees as a stakeholder, working to understand and develop what drives them in terms of recruitment, engagement, and, in turn, retention.

Bombardier Business Aircraft believes in empowering and engaging a diverse workforce that inspires and fuels innovation. To do so, it has a variety of programs in place to not only foster its current talent, but to also develop its future talent pipeline.

I always like to use my own trajectory as a case study of how the organization does an exemplary job of supporting the unique interests and skills of its employees. I joined the company in 2011 at Corporate Office in Montreal, Canada, leading sustainability strategy and communications worldwide. When I expressed interest in moving within the business and abroad, I was presented with an opportunity in Wichita, KS, within the business aircraft segment. Not only have these opportunities brought inherent diversity in their mandates, enriching my experience and skillset, but my trajectory has also afforded me the opportunity to travel the world. These are things that I infuse back into the work I do. Many of my colleagues have had similar experiences, starting in one business segment in one corner of the globe, transitioning to another. The broader organization benefits greatly from this global crosspollination.

COMMUNITY INVESTMENT

Having a meaningful presence in the communities in which we operate and giving back is a foundational pillar of successful sustainability strategy. This means more than basic donations or sponsorships — the most potent community giving programs offer some form of the organization's expertise, and generate a return on the company's investment as well.

In order to take full advantage of our core competencies and specific strengths as a business, we focus community investment efforts specifically in the areas of STEEM education (science, technology, engineering, entrepreneurship, and math), sustainable development initiatives that enhance the quality of the environment in areas where we operate, and stakeholder engagement opportunities to maintain and develop business relationships with industry stakeholders.

A hallmark example of this approach is the Inspiring Future Aviators program, led by our Hartford, CT, service center. The facility partners with the New England Air Museum (NEAM) at Bradley International Airport (BDL) bringing students from local high schools, technical and vocational schools to visit both locations to learn and enhance their knowledge on what the aviation industry is about, what aviation maintenance operations really are, and to learn about the many professional opportunities that are available to them within the industry. The tour of the Hartford service center begins with an overview of Bombardier and its operations. We then host the students through the hangars and facility, explaining the aircraft maintenance process while highlighting the vast diversity of professions available in the field, from A&P and avionics technicians, to engineers and the various support departments. In this way, we are developing both the industry talent pipeline as well as Bombardier's; we have sponsored and presented the program for several years, and look forward to the day when we hire one of its first participants. That's when sustainability is firing on all cylinders: organizations give back to the community, and directly benefit in return.

CONCLUSION

So as you see, sustainability has grown to encompass so much more than its environmental roots. Sustainability is vast, complex, and can seem incredibly daunting to take on. But the reality is, we are all spinning together and hurtling through space on the same tiny planet, sharing the same resources. Companies that understand this, and the inherent value of embedding sustainability deeply within their business practices are expanding their definition of value creation, becoming more competitive and better poised for the future. All of us — individuals and organizations — contribute to developing the sustainability of aviation as a whole. **AMT**

[1]Source: GAMA Business Aviation Commitment on Climate Change: An Update (https://gama.aero/wp-content/uploads/GAMA_Environment_Brochure_0.pdf)

RAISING THE BAR ON SAFETY

Bombardier has held its annual Safety Standdown for more than 20 years. This knowledge-based aviation safety training program aims to make aviation safer for the industry as a whole, and is offered at no cost to all aviation professionals. Nearly 10,000 corporate, commercial, and military aviation professionals have attended Safety Standdown seminars in person, with thousands more tuning in via webcast from around the globe.

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AN EMPLOYEE wears protective equipment while working at Bombardier Business Aircraft's Tucson Service Center's interior shop.

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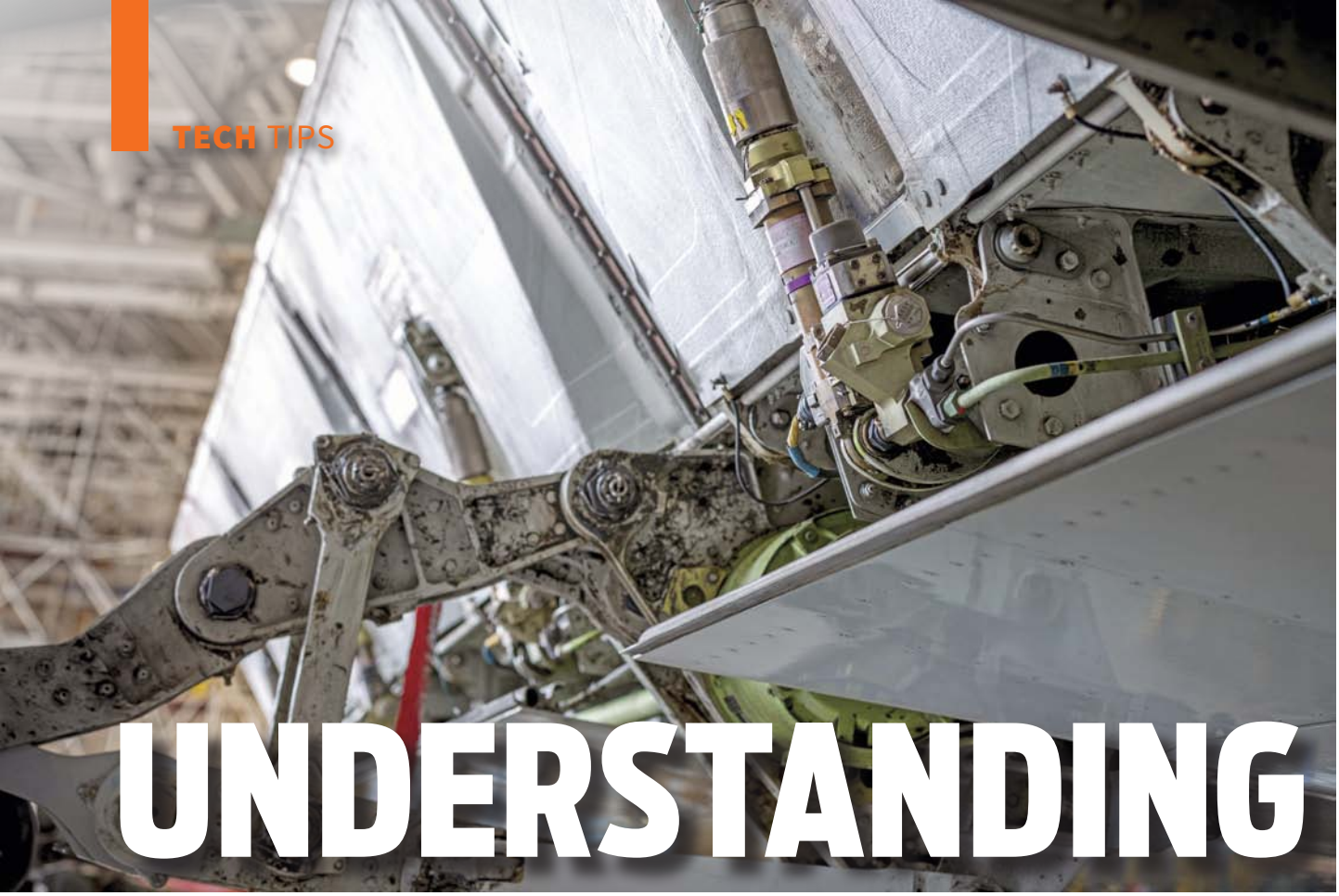


EXXONMOBIL

UNDERSTANDING GREASE SHELF LIFE AND STORAGE BEST PRACTICES

Gary Dudley, Ph.D., Global Grease Product Technical Advisor for ExxonMobil Research & Engineering Lubricants Technology, tackles questions on grease shelf life and storage best practices

By Gary Dudley

TO BETTER UNDERSTAND THE AVIATION INDUSTRY'S KEY concerns and pain points related to grease storage, handling, and application best practices, ExxonMobil asked MRO Americas attendees to submit their grease-related questions directly to the ExxonMobil team. Having collected more than 40 questions on topics, including color, formulation, storage, and handling, ExxonMobil has offered to share the answers in a three-part series.

Q. Where and how should you store greases?

Grease containers should be stored indoors in dry, cool, and clean environments. Normal storage temperatures should range from 0 C to 40 C (32 F to 104 F). In the event that a stored grease is briefly exposed to severe temperatures or environmental conditions, technicians should consult their suppliers with concerns.

Once a container is opened, the grease should be used as soon as possible to avoid potential contamination or degradation.

Since the rate of grease degradation can be impacted by exposure to contamination and/or storage and handling conditions, the listed shelf life recommendation for a grease is no longer applicable once the container is opened.

For more information on storage and handling best practices, review our technical topic here.

Q. How long does grease actually last?

Shelf life specifications can differ between aviation greases. Typically, aviation grease shelf life is listed as the "use by" date on the container.

The average industry shelf life of aviation greases is about three years, however, ExxonMobil's Mobilgrease™ 33 and Mobilgrease™ 28 aviation greases offer extended shelf life for up to 10 years.

Q. Why can't you use grease after its expiration date?

While it's dependent on the product's history, it's likely an expired grease has degraded. Using a grease past its expiration date also exposes a user to other risks associated with using an unapproved product.

The shelf life of grease is really a measure of the useful life of the components in the grease to ensure it is still fit for use. As the product exceeds its shelf life, a decrease in the performance additives that provide wear protection, oxidation stability, and grease structural stability may be observed.

As mentioned previously, to maximize shelf life, normal storage temperatures should range from 0 C to 40 C (32 F to 104 F), and containers should be kept indoors in a clean and dry environment. This helps avoid hydrolysis and other environmental factors that may impact the storage life of the product.

Q. Why do some greases have a longer shelf life than others?

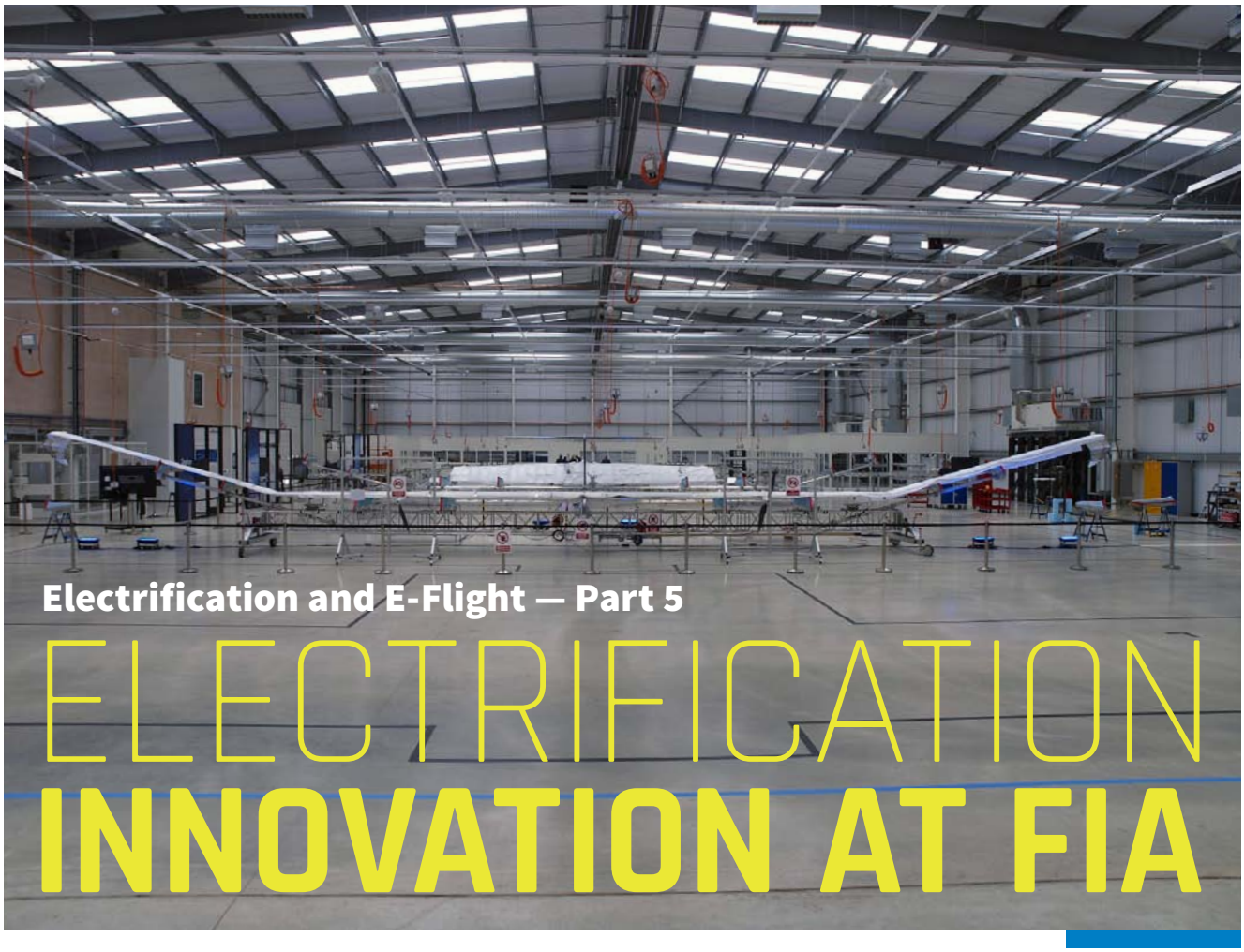
While all aviation greases comply with the same specifications, they do differ in their formulations, chemistry, and performance properties. As a result, the shelf life can vary from one supply to the next.

If the grease is not stored properly, it's also more likely to accelerate deterioration before the expiration date and may no longer be used on an aircraft.

Q. Can grease be recertified to extend the shelf life? Is there any risk?

Although the FAA can approve recertification, the process involves lengthy and rigorous testing, which is conducted by the grease manufacturer. Applying a recertified grease is risk-free. The FAA would not reapprove or recertify a grease if there was an issue with the product.

Coming up in *AMT*'s October issue, Part 2 will focus largely on grease compatibility, conversions, and contamination. **AMT**



Electrification and E-Flight — Part 5

ELECTRIFICATION INNOVATION AT FIA

THE KELLEHER Building is the production site of the Zephyr S, HAPS unmanned, solar-powered aircraft.
MARINO BORIC

By Marino Boric

The Farnborough International Airshow (FIA) is a global aviation and aerospace exhibition similar to the Paris Airshow. It has strong military and commercial aviation content, but this year it was also an impressive showcase of electric flight innovations from almost all fields.

Because the large number and importance of new electrification and E-Flight ideas and projects we thought it only appropriate to talk about a few in our Electrification series.

AIRBUS ZEPHYR

For the first time ever Airbus allowed the media to visit the new Zephyr factory located on the Farnborough airfield in walking distance from the show. The Kelleher Building, which Airbus Defense and Space recently moved into, is a production site of the giant and brittle looking Zephyr S, HAPS (High Altitude Pseudo-Satellite) — actually an unmanned, solar-powered, 150-pound (70kg) light UAV that flies at 70,000 feet for weeks and eventually months at a time. Zephyr is officially described as having the wingspan of an A320 while weighing only as much as an airline seat. The Zephyr S is built from ultra-lightweight composites and features advanced ultra-efficient solar panels. The aircraft structure is built from carbon fiber composites and reinforced where needed by sandwich components and is covered by a transparent fabric. On each wing one unknown electric motor is located.

The original Zephyr 7, developed by QinetiQ in 2003, still holds the flight endurance record of two weeks, and during the show and the press conference, Airbus revealed that the first production unit, the Zephyr S, was undergoing its maiden flight in Arizona after being launched on July 11. In August it achieved a record 25-day flight. Beyond this first flight, Airbus sees flights extending to 100 days, before the ultimate goal of staying aloft for a year at altitudes still to be defined but which may be between 70,000 and 80,000 feet.

More efficient batteries and solar panels mean Zephyr S is "even more capable than we were hoping for" according to Sophie Thomas, head of Zephyr Programme, opening up heavier and more sophisticated payloads, such as LIDAR or SAR radar. Initial results from the first flight were encouraging and the vehicle reportedly sustained daylight altitude 24 hours a day.

ROLLS-ROYCE

Rolls-Royce created a show in the show with three different projects: EVTOL, ACCEL, and remotely even Aston Martin. Rolls-Royce appears to have jumped on the train giving it a strong push. Many, almost all other, projects have an Achilles heel when it comes to a proven range extender or combustion engine/generator unit. Rolls-Royce has the M250 gas turbine which can solve most energy problems of the power hungry VTOL applications.

The Rolls-Royce EVTOL project is part of a strategy to "champion electrification" and realize its ambition to become the world's leading industrial technology company. It builds upon experience gained providing hybrid electric propulsion for non-aero applications, and its expertise in gas turbines, VTOL technology, systems analytics, and aerospace regulation and certification.

Rolls-Royce has become the latest major OEM to join a growing trend within the aviation industry around research and development programs focused on introducing e-VTOL air taxis, and other unique aircraft in the future. Rolls-Royce unveiled by surprise a concept, electric vertical take-off and landing (EVTOL) vehicle at the Farnborough International Airshow 2018. The aircraft should be capable of flying at 250 mph with a range of 500 miles. Presuming right partners and appropriate funding, Rolls-Royce believes it can start flight testing a full-scale prototype by 2020.

ROLLS-ROYCE INTRODUCED a concept, electric vertical take-off and landing vehicle at Farnborough.
MARINO BORIC

Rolls-Royce wants to be clear in its intentions and said to us that it unveiled a concept vehicle and is not looking to design the actual airframe and all of the other systems and components in house. The company uses its existing M250 gas-turbine to drive an electric generator which will serve as the energy source to power six electric motors and a battery that will provide some (limited) energy storage especially for the power demanding vertical flight.

"Our ambition is to become a supplier of the propulsion system for future EVTOL aircraft designs," said Michael Cervenka, head of Future Business Propositions for Rolls-Royce. "We are looking for partners in terms of helping us with the electric propulsion system."

The initial concept vehicle uses gas turbine technology to generate electricity to power six — nondisclosed — electric propulsors specially designed to have a low noise profile. In this hybrid-EVTOL configuration it could carry four or five passengers at speeds up to 250 mph for approximately 500 miles, would not require re-charging (as the battery is charged by the gas turbine), and would be able to utilize existing infrastructure.

According to Cervenka, Rolls-Royce believes that an all-electric eVTOL aircraft would require a much longer time-line toward entry into service because of the infrastructure needed to support its battery charging, adding it is also developing a generator version to produce electricity. The future aircraft design would be fly-by-wire (FBW) and will also require a new type of full authority digital engine control (FADEC) system.

Rolls-Royce engineers are also developing software algorithms that will enable the FBW system to be controlled during the transition between hover and

forward flight. Initially, the aircraft will be flown by a pilot, but it could eventually become pilot-less.

The intermediate design could be adapted for personal and public transport, logistics, and military applications and is based upon technologies that already exist or are currently under development. It could enter service in the early 2020s we've been told assuming collaboration with airframers and a range of strategic partners for aspects of the electrical system.

The EVTOL wings are able to rotate 90 degrees, enabling the vehicle to take off or land vertically. The propellers on the wing would fold away once the craft has reached cruising height, reducing drag and cabin noise, with the craft relying on two rear propellers for horizontal flight thrust.

ACCELERATING THE ELECTRIFICATION OF FLIGHT-ACCEL

Rolls-Royce is leading a research project known as Accelerating the Electrification of Flight (ACCEL) to explore the use of a high power electrical system in a demonstrator aircraft. They are working with YASA, a UK manufacturer of high-power, light weight electric motors and controllers used in automotive, aerospace, and industrial applications.

A 12-foot carbon fiber airplane chassis which has been built combining Formula E auto racing and high-power battery development was exhibited in the Innovation Zone. Once complete, this plane will be the centerpiece of Rolls-Royce's ACCEL initiative and it will be all electric. In a way it shows a new way of working at Rolls-Royce. The ACCEL team plans to build, test, and commercialize this product in a short timeframe.

YASA DISPLAYED a 12-foot carbon fiber airplane chassis that is part of Rolls-Royce's ACCEL project.
MARINO BORIC

The ACCEL initiative, short for accelerate, will use funding from the UK's Aerospace Technology Institute and involves a host of UK partners including electric motor and controller manufacturer YASA and Electroflight Ltd. The Rolls-Royce digital team will be in the cockpit with them, running the data analytics and performance modeling. ACCEL plans to set new records for time to climb for an electrically powered aircraft, and highest voltage and highest power density achieved for an aircraft battery system.

Almost no technical data was disclosed and Cervenka was underlining that this airplane should not be understood as a model, and the purpose is to

demonstrate the opportunities in electrification, and then to push a strategy that accelerates across the business.

ASTON MARTIN VOLANTE

The elite car maker drives toward aviation with its Volante project trying to create a new line in luxury urban mobility. Aston Martin is a newcomer in the world of aviation and in the VTOL world but appears serious about its intentions. What I could see in Farnborough gave to me as a pilot and aeronautical engineer much faith in this project as it was in my opinion one of the ripest newcomer projects I have seen in years. The adapted aerodynamic solutions, the chosen propulsion system, and the overall design of a high-end, three-seat hybrid-electric VTOL is more than a bold try just to create a PR gag.

ASTON MARTIN Volante Vision. ASTON MARTIN

The Volante Vision, is a cooperation project started some 18 months ago with Aston Martin and its UK partners Cranfield University, Cranfield Aerospace Solutions, and Rolls-Royce. The Volante is a hybrid-electric aircraft that relies on a M250 gas-turbine/generator to drive its three propellers. It is projected to have a top speed of 175kt (320km/h), and a 216nm (400km) range — able to connect Paris and London.

UK E-FLIGHT FUNDING

At the FIA 2018 it was announced that UK's aerospace sector will be granted funding of £343 million with the aim of creating a new era of cleaner, greener flight.

From the total investment, £255 million — supported by the Aerospace Technology Institute (ATI) and UK Research & Innovation (UKRI) — will go toward 18 new research and technology projects, including the development of cleaner and greener hybrid aircraft. To support small and medium-sized companies, £68 million of the funding will be made available to increase research and development opportunities, with £20 million to drive improvements in long-term productivity across the sector.

A major beneficiary of the latest funding is the E-Fan X project where Airbus, Rolls-Royce, and Siemens want to develop a flying electrical demonstrator which will form the foundation for future electrical aircraft and help the aerospace sector to manufacture cleaner, quieter aircraft and grow the industry sustainably.

Rolls-Royce's ACCEL project will also lead a UK program to accelerate the electrification of flight which will contribute to the UK's aim to cut emissions through its Clean Growth Strategy.

BELL

Bell moved closer to unveiling the rotor system that will equip its future urban air mobility vehicle, with the manufacturer now settled on its preferred architecture. Closer doesn't mean close enough to disclose it, but the program is moving from a conceptual to a preliminary design phase. Bell's 453kg (1,000-pound) maximum take-off weight air vehicle is being developed in collaboration with Uber for "Elevate" urban mobility initiative. Service entry is expected in the "early 2020s".

Speaking at FAI, chief executive Mitch Snyder said Bell has recently selected Safran to supply a hybrid-electric power system for the aircraft; the biggest piece of the design.

SAMAD
MARINO BORIC

SAMAD AEROSPACE

UK start-up Samad Aerospace created a great deal of interest in its eStarling and Starling Jet, with company chief executive Seyed Mohseni announcing on the eve of FIA that it has secured letters of intent for 103 examples of the electric and hybrid-electric-powered, VTOL business aircraft since the project was unveiled in February. The UK company had on display a 20 percent scale prototype of the aircraft. Samad is offering UAV Starling, six-seat e-Starling, and a 10-seat Starling Jet.

The e-Starling will have four electric-powered fans to deliver VTOL performance: two in its wing roots thrusting vertically and two on pylons farther aft, which are retracted when the fan is employed for forward movement. A gas turbine provides power for e-fans and battery charging.

Samad said the company will start building a 50 percent scale model in August and plans to fly it in 2020. Construction of the first of five full-scale prototypes will begin in early 2019; maiden flight is expected in 2021.

WHAT'S NEXT?

It is difficult to say how Electrification and E-Flight will evolve and affect our lives, our careers, and our future. It does appear like it is coming — and it is exciting. This Electrification and E-Flight series is nearing the end. We have attempted to expose our readers to a whole new emerging technology in our industry. In the final piece we hope to provide information on certification, maintenance, and operation, and education of the people who will build and maintain this new breed of flying machines. ***AMT***

INCREASING THE HUMAN FACTORS IN MAINTENANCE SAFETY MANAGEMENT

Government and industry joined forces in a workshop that identified ways to improve the integration of human factors and safety management systems

By Dr. Bill Johnson

In August, government and industry joined forces in a workshop that identified ways to improve the integration of human factors and safety management systems. Dr. Bill summarizes the activity and outcomes.

DR. WILLIAM B. JOHNSON is the FAA Chief Scientific and Technical Advisor for Human Factors in Aircraft Maintenance Systems. His comments are based on nearly 50 years of combined experience as a pilot/mechanic, an airline engineering and MRO consultant, a professor, and an FAA scientific executive.

THE OPPORTUNITY

Maintenance organizations, large and small, have formalized their safety management with safety management systems (SMS). Many embrace SMS and the benefits because it is a regulation. However, by regulation or not, organizations appreciate that SMS enhances not only the safety benefits but also economic efficiency. Early identification of hazards and addressing risk means that costly errors, worker injury, flight delays, and more, are minimized. Knowing that human error is the most likely cause of negative maintenance events, an SMS must consider human factors. The workshop defined the "Pain Points" related to integration human factors into SMS. The ultimate goal was to recognize current best practices and to write a specification for new tools and processes that help ensure HF-SMS integration.

DELEGATES

The Federal Aviation Administration, the Office of the Secretary of Transportation–Transportation Safety Institute, and the Aircraft Electronics Association were the workshop co-sponsors. This mix of organizers ensured the participation of large and small airlines and MROs from the Americas and Europe. Airline maintenance organizations were American, United, and Avianca (Columbia). Maintenance organizations (MROs) included Lufthansa Technik (Germany), Summit Aviation, Flightstar, and Brant Aero (Canada). Boeing and the Thales Group provided a manufacturer's perspective. Of course, Dr. Bill had a reasonable cast of industry and government human factors practitioners on hand. Everyone attending was active in corporate safety, SMS, and/or human factors. It was an ideal group to fulfill the workshop goal.

"PAIN POINTS"

The medical doctor often starts a patient interaction by asking your general condition. Then, the doc may continue a diagnosis by asking "Does anything hurt"? Do you have any pain points? Are you too heavy or light weight? Are you exercising and eating properly? Is health near the top of your priority list? How can you improve your health? That way the medical practitioner can react to your current condition, offer proactive advice to continue good health, and even predict the risks in your current life style. That's what an SMS does. That's what we did on the first day of the three-day meeting. Many delegates presented the status of their current safety management efforts. Then the group collaborated to list the pain points. Many of the general "pain points" were derived from a group-created listing of common post-maintenance discrepancies. See Tables 1 and 2.

Table 1: Example List

Common Post-Maintenance Discrepancies
Inspection/test not completed
Lock-out/tag-out error
Loose fittings/lines
Paperwork not complete
Improper parts installed

The Day 1 deliberations showed that many of the post-maintenance discrepancies and pain points were identical, but of different scale, between the airline

Table 2: Example
HF-SMS Pain Points
Obtaining high value data from frontline maintenance workers
Insufficient root cause analysis (RCA) before addressing contributing factors
Need for standardized RCA tools
Corrective actions are too often individual centered rather that organizational centered
Sufficient resources for event investigation
Enhance the shared culture between management and labor
Understanding and cooperation between different labor groups (Example: pilots-mechanics, trainers-engineering)

and the general aviation organizations. That was an indication that many of the solutions are likely to be generic but must be adaptable to different organizations.

BEST PRACTICES

On the second day of the workshop, delegates discussed the human factors-related practices that worked well. There was some deliberation on the best practices to address the Day 1 post-maintenance discrepancies. An example is the creation of tool accountability programs and technology-based tool identification to prevent "tools left in aircraft." However, general best practices were more suitable to the workshop goal. Table 3 offers some of the best practice examples. The Day 2 deliberations showed that the integration of HF information into SMS is already well on the way. It is not a novel concept. It can be continued and enhanced.

Table 3: Example
Best Practices for HF-SMS Integration
Peer-to-peer assessment like maintenance line-operations assessment (LOSA)
A "Respect the Aircraft" program focused on preventing a drift away from procedures
A program for increased management presence on the front line of maintenance
New attention toward fitness for duty, especially fatigue
Application of the PEAR model to simplify understanding of HF in an SMS
A SMS information workflow system that all can understand
The importance of frontline empowerment
Use a "floor model" to offer daily safety information data to the workforce
Use of daily, weekly, or monthly newsletters for frontline employees

THE HF-MAINTENANCE SMS TOOL/ PROCESS SPECIFICATION

Day 3 had the goal of summarizing the presentations and discussions to list specifications for a tool and process(es) to enhance/integrate human factors into a safety management system. The deliberations during the first two days made this a manageable task. Table 4 offers examples of "Support needed."

Table 4: Examples of "Support Needed"
Specifications to Enhance HF-SMS Integration
Create a dynamic "floor model" to communicate safety management data to frontline maintenance workers
Create means/motivation for frontline employees to offer solutions to address hazards and related risk
Create means for training departments to provide SMS-oriented examples and solutions
Be sure that SMS data is relevant to frontline workers
Promote the concept of many HF-champions within the workplace, to include managers
Encourage peer-to-peer observation and interactive feedback

During the discussions, on all three days, it was surprising that maintenance organizations share many of the same challenges integrating human factors into SMS, regardless of size. It is also very encouraging that everyone, at all organizational levels, seems to understand and appreciate the value of attention to human factors in all aspects of work and safety management. No one needs to be convinced!

The critical next step must be to capitalize on the data from SMS. That data can help formalize and communicate the best practices to identify hazards and risks associated with human factors in maintenance organizations.

WORKSHOP FOLLOW-UP

This article offered quick summaries of extensive deliberations. The next step will be a detailed report, published in cooperation with the three hosting organizations. That will chart a path of applied research and development. The deliverable shall be focused on operational SMS practitioners of all sizes. Stay tuned.

Thank you to D Smith (OST-TSI), Ric Peri (AEA), and Ashley Awwad (FAA-CAMI) for critical partnership in planning, executing, and documenting this workshop. **AMT**

2018 FARNBOROUGH INTERNATIONAL AIRSHOW IN REVIEW

The Farnborough International Airshow celebrated its 70th birthday this year and went through its 51st edition

By Marino Boric

MARINO BORIC graduated with a university degree as an aeronautic engineer, and acquired degrees in business development/trade and commerce and in journalism. He is a civil and military pilot and has built experimental aircraft. As a journalist, he specializes in aviation and propulsion and travels worldwide, flight-testing UL, LSA, Experimental, and certified aircraft. He is writing for U.S., European, and Chinese media companies.

IN FEW WORDS THE EXPECTATIONS OF THE organizer and of the international press were not high, but as usual with these large international aerospace events, the result was much better than expected.

Although not a maintenance-focused event, the Farnborough trade event was, and still is, the platform for the aerospace industry to do business and is in the focus of many airlines, aviation companies, and airframe and engine manufacturers from around the world. What is seen at these events will someday be ours to operate and maintain. Regardless, we feel it's important to provide a few highlights of what's happening on the world stage.

FIA is held on even years and tries to reach and compete with the Paris/LeBourget Show importance which is held in uneven years. The biennial air show has its origins in the annual RAF Airshow held in Hendon from 1920. FIA is held in Farnborough, which is conveniently located some 30 miles (48 km) south-west of central London. As other shows in this field, the FIA has its tradeshow, and its public show parts, held respectively July 16-20, and July 21-22, 2018.

THE 2018 AEROSPACE MEDIA AWARDS

For me and *AMT* Magazine, FIA began the night before the official opening at the Aerospace Media Awards Dinner. Two of *AMT* Magazine's recent articles were on the short-list of nominees for an award; one written by myself and the other by Gerome Chandler. Even though we didn't walk away with any top honors, this is the third year in a row that *AMT* Magazine has been recognized at this international media event. Yes, we are proud!

THE BIG MANUFACTURERS BIG NUMBERS GAME

Something interesting at this FIA in the order-race. Nearly one-third of Airbus and Boeing commitments came from "undisclosed customers". What is the reason for airline customers keeping their commitment in a "stealth mode"?

Boeing wins sales race

In its press conference at the end of the trade show, Boeing announced a total of $98.4 billion in orders

and commitments for commercial aircraft, together with $2.1 billion in commercial and defense orders and agreements. The U.S. manufacturer gained 673 orders and commitments, including 48 for the 777F, five for the 747-8F, 52 orders for the 787, and 564 for single-aisle 737 MAX.

... and Airbus ends on a high note

At its wrap-up press conference, Airbus disclosed it had received orders for 431 commercial aircraft (93 firm orders and 338 MoUs). These comprised 60 A220-300s, 304 A320 Family aircraft, 42 A330neos, and 25 A350 XWBs.

Airbus - Bombardier

Airbus showcased its newly re-branded A220 family, after securing a major deal on the eve of the show from JetBlue Airways.

Airbus acquired a majority (50.01 percent) stake in the C Series Aircraft Limited Partnership (CSALP) on July 1 — and re-branded the CS100 and CS300 to the A220-100 and -300, respectively. Two A220-300s were exhibited at the show — a test aircraft and one in the colors of Air Baltic still registered as experimental.

Bombardier also showcased its brand-new "Atmosphere" named cabin which is addressing the comfort on a CRJ900 painted in Delta Air Lines colors. The Atmosphere cabin has larger entrance way, more shoulder space, wheelchair accessible lavatories, and larger luggage bins. The move comes as Bombardier is trying

to re-focus on the regional aircraft market after the move with Airbus searching for its own identity in that field. Bombardier sees rising demand for regional aircraft and a recent increase in Q400 sales.

Blossoming Cargo World

Another pretty significant trend in civil orders was a boost in orders coming from the cargo world, with Boeing as a clear winner with 53 commitments for freighters from DHL Express, Qatar Airways, Volga-Dnepr/CargoLogic, and GECAS. Even the "cargo exhibition" at FIA reached its hoped-for effect.

Embraer

Embraer is continuing its air show tradition, decorating another E-Jet E2 with a shark-themed livery that was almost intimidating to some FIA visitors. The "Profit Hunter" series began in Paris last year

with an eagle, continued with a tiger at the Singapore show in February.

Embraer "predators" entered the FIA 18 having lost out to Airbus A220-300 in a crucial contest for 60 aircraft with JetBlue. Earlier this month, Boeing and Embraer unveiled a memorandum of understanding to create a joint venture focused on the Brazilian commercial aviation business and the deal should be closed by the end of 2019.

Mitsubishi

The MRJ90 made its first airshow flying appearance at FIA 2018 and made a clear statement that the much delayed regional jet program is on track and ready for final take-off.

Total Count 1,329 (including 476 undisclosed)

Boeing: 673 (208 undisclosed), Airbus: 431 (268 undisclosed), Embraer: 176, Bombardier: 4, ATR: 25, and CATIC: 20.

BOOM TECHNOLOGY

Boom plans to fly a supersonic demonstrator the XB-1, called "Baby Boom," for a future Mach 2.2 airliner two years later as predicted, by the end of 2019. Boom fell behind its initial schedule by taking more time to optimize the aerodynamics of the XB-1 and switching to a different variant of the GE Aviation J85 engine. The $200 million airliner will be built in a factory operated by Virgin Galactic in California.

TEMPEST *(BAE SYSTEMS)*

On the military front the dominant topic was a full-size mock-up of the UK's Team Tempest — which may enter service somewhere by 2035. FIA week was the launch of the "Tempest Jet" Britain's Combat Air Strategy, which now stands out from the

flood of other FCAS-named projects. The Tempest should be affordable and flexible and its significance will go well beyond the UK military world; this means that the U.S. F-35 is no longer the "only game in town" for a stealth fighter program in the decades ahead. The UK invited other countries to join them in this program.

AERO VODOCHODY

Back after the stop of production of its successful jet-trainer, Czech Aero Vodochody has launched a new version of the L-159 advanced jet trainer called F/A-259 Striker which is a late bid for the U.S. Air Force's potential OA-X close air support requirement. The company's show stand included branding for the new designation and a cockpit simulator, together with its other trainer aircraft, the lighter version L-39NG.

PIAGGIO

The Italian airframe manufacturer unveiled plans to produce a revised version of HammerHead UAV and started to strengthen relationships with Leonardo and stronger investing in marketing of its twin pusher P180 Evo. Chief executive Renato Vaghi said to us that the cash injection from its partner has helped to restructure and to focus on business, special mission, and unmanned aircraft, with plans to diversify its engine parts manufacturing operations.

Piaggio already started to widen its Avanti exposure through increased air show participation and demonstration flights on remote markets like China. Vaghi confirmed that a widely publicized push to promote the P.1HH may have caused some business aviation operators to question the company's ongoing commitment to the business aviation sector. Piaggio recently revealed it is working with Leonardo on a new version of its P.1HH HammerHead UAV.

ROLLS-ROYCE ULTRAFAN

Rolls-Royce reported that it has frozen the design for a demonstrator version of its future UltraFan engine program, which is expected to be run in ground tests in 2021. After the powerplant's basic architecture has been defined, engineers concentrate on detailed design and on the manufacturing of components. Rolls-Royce is proceeding with demonstrator testing of individual sections of its future engines.

Compared with RR Trent XWB, the new core will have a larger high-pressure compressor, a shorter intermediate-pressure compressor, and a lean-burn combustor with two separate fuel systems to optimize combustion in cruise and high thrust flight phases. The core has been equipped with the fan system from Trent XWB-84 and a Trent 1000's low-pressure turbine. The core could be ready for a new engine program and enter service by 2020. The core will be employed on the future UltraFan engine family, which will have a geared, IP turbine-driven fan, and no low-pressure turbine; possible service entry by 2025.

LIEBHERR

Liebherr Aerospace group is clearly on the "E-flight trip" and recently announced that it has started collaboration with the car giant GM to develop next-generation APUs based on fuel-cell technology.

SATAIR

Satair is expanding in the UK as its parent Airbus moves to further integrate its aftermarket parts activities. Satair is expanding in Great Britain close to the Heathrow airport.

GARMIN

Garmin marked its comeback to FIA with the debut of its tandem cockpit and integrated flight deck for the light attack, military trainer, and intelligence, surveillance

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and reconnaissance markets. Garmin was more than prepared for this FIA edition having offered us the possibility to test-fly the tandem simulator a day prior to the show. Garmin is widening its focus to the government and military aircraft sector. The tandem cockpit featured the G3000 touchscreen avionics suite, which interfaces with L-3's Widow Mission execution software.

THE E-FLIGHT WORLD AT FIA

This FIA 2018 edition will enter in the records of successful exhibitions helped widely by the newcomer, the "electric" movement. The British industry has until now not created many headlines in this field and seemed almost to have overslept this trend. The FIA 2018 proved that they have jumped on this train in an impressive way. As the quantity and their relevance was so high we have decided to present the most important new projects in our Electrification and E-Flight series article (Page 14). **AMT**

NIAR JOINS ASTM ADDITIVE MANUFACTURING CENTER OF EXCELLENCE

ASTM International announced that Wichita State University's (WSU) National Institute for Aviation Research (NIAR) will join its Additive Manufacturing Center of Excellence as its first "strategic" partner. ASTM International and four founding partners (Auburn University, NASA, EWI, and the UK-based Manufacturing Technology Centre). recently launched the center to support R&D that advances additive manufacturing standards, which in turn will drive commercialization of cutting-edge additive manufacturing technologies. To learn more visit www.amcoe.org.

CONTINENTAL BREAKS GROUND IN MOBILE, AL

Continental Motors Group is building a greenfield manufacturing and office building in Mobile, AL.

The Blue Marlin facility will encompass 275,000 square feet and the project represents a $75 million investment. The factory will have new, state-of-the-art manufacturing equipment and include a special area designated for evaluation of new manufacturing techniques and processes, including additive manufacturing and automation. The factory is set to be completed and in operation 2020.

RAA ANNOUNCES NEW COMMUNICATIONS DIRECTOR

The Regional Airline Association appoints Aaron Karp as communications director. Before joining RAA, Karp spent nearly 20 years as an aviation journalist with some of the leading publications covering the airline and aircraft manufacturing industries, including Flight International, Air Transport World, and Aviation Week.

MTU MAINTENANCE CANADA CELEBRATES 20TH ANNIVERSARY

MTU Maintenance Canada, a North American affiliate of German engine manufacturer MTU Aero Engines, recently celebrated its 20th anniversary. It has seen over 1,100 engine shop visits over its 20-year history. In 2011, the company introduced its Accessory Repair Center of excellence which completes over 11,000 accessory repairs per year. MTU Maintenance Canada employs a workforce of nearly 400 experienced and highly skilled professionals.

FOR MORE UP-TO-DATE NEWS VISIT WWW.AVIATIONPROS.COM

CELEBRATING THE NEXT GENERATION OF MAINTENANCE PROFESSIONALS: THE JOURNEYS THAT LED THEM TO AVIATION

A common thread: experiencing aviation at a young age, a family member who worked in the industry, a natural interest in STEM-related subjects, a natural curiosity to solve problems and processes, and a supportive circle of family or mentors

PETE BUNCE is president and CEO of the General Aviation Manufacturers Association (GAMA), which represents more than 100 of the world's leading manufacturers of general aviation airplanes and rotorcraft, engines, avionics, components, and related services. GAMA's members also operate repair stations, FBOs, pilot and maintenance training facilities and manage fleets of aircraft. For more info: www.gama.aero.

THE 40 YOUNG MEN AND WOMEN WHO RECEIVED the *AMT* Magazine Next Gen Awards this year are a great example of hard work, dedication, and passion coming together to create success. Each year, it's exciting to see the number of talented individuals who receive this award, think about how they will help our industry flourish, and take the next steps in safety and innovation.

I'm also proud to see the list of award winners continually includes employees who work for GAMA member companies, including this year: Keilah Bias, StandardAero, Continuous Improvement Engineer; Catherine Chelimo, Garmin, Aircraft Certification Engineering Technician; Joshua Hoskins, Cirrus Aircraft, Manager Region Field Service Manager; Judson Rupert, Lycoming Engines, Principal Engineer, Piston Engineering; Eric Sorensen, Duncan Aviation, Engine Line Team Leader; John Coty Stiltner, StandardAero, Customer Account Leader; Emmeline Watson, Duncan Aviation, Certification Coordinator; and Imran Zaveri, GE Aviation Repair Technician and Rock Valley College Student.

One of the interesting things about these winners is the stories of how they found a career in this industry. A common thread was experiencing aviation at a young age, thanks to a family member who worked in the industry. Another common thread was a natural interest in STEM-related subjects, a natural curiosity to solve problems and processes, and a supportive circle of family or mentors in their lives who helped them build on their interests. These two common threads ended one way though — once these award winners encountered aviation, they set their sights on finding a way to make their passion about it a profitable future.

A Manufacturing Institute survey shows that experiential learning is huge for students, given the biggest influencer for their career choices is their own interests and experiences. But the second largest influencer on student career pathways, is parents. A recent article in *The Wall Street Journal* highlighted how some manufacturing companies, including GAMA member Woodward Inc., have targeted parents to attract students to jobs in their companies. This tactic includes hosting "Parents Night" at a company factory and facility and providing information about the benefits of a career in the industry, including pay, which can be 20 percent higher than what an average worker earns in other industries, the ability to be innovative, have a highly valued skill set, and longevity.

The 2018 Boeing Pilot & Technician Outlook forecasts that 790,000 new civil aviation pilots, 754,000 new maintenance technicians, and 890,000 new cabin crew will be needed to fly and maintain the world fleet over the next 20 years. Of those total numbers, the general aviation industry will need 155,000 pilots and 132,000 technicians. Meeting this extraordinary demand, Boeing says, will require proactive planning and collaboration within the global aviation industry, with educational outreach and career pathway programs being essential to inspiring and recruiting the next generation of personnel.

GAMA is helping establish pipelines for students through a variety of scholarships, programs, events, and advocacy on Capitol Hill, helping make regulations and policies more efficient and modern, and of course, partnering with our member companies to do all we can, in all the places we can, to make students more aware of our industry and the opportunities within it.

Congratulations to all of the award winners this year. You've accomplished so much, and we're counting on you to advance our industry with not only the safety-enhancing products and technology you help develop, but also within your communities, by telling others about it and inspiring the next generation of leaders to join us. **AMT**

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StandardAero is proud to recognize three of our team members - Keilah Bias, Euan King and John 'Coty' Stiltner - as recipients of Aircraft Maintenance Technology magazine's 2018 AMT Next Gen award. Keilah, Euan and Coty embody the job commitment and professionalism which the AMT's Next Gen award celebrates, and we are delighted to see them acknowledged alongside their peers as leaders within the next generation of maintenance professionals.

Keilah, Euan and Coty exemplify the qualities demonstrated daily by StandardAero's 6,000 employees worldwide, such as quality workmanship and responsiveness, enabling us to be Bigger. Better. Bolder.

We wish Keilah, Euan and Coty - along with all of this year's winners - the very best success in their future careers within the industry.

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AMT NEXTGEN

40 UNDER 40 AWARDS

Congratulations to this year's winners of the *AMT* Next Gen 40 Under 40 Awards. And also to those who recognized your achievements by nominating you.

The attributes that make up this year's winners all have a passion for aviation, whether it's maintenance, education, executive management, general aviation, business aviation, antique aircraft, rotorcraft, military, MRO, or airline. They all love what they do and want to keep improving themselves and the industry.

There is no one path to success in aviation. Sometimes you grow in one company, other times it requires moving around to take advantage of what the industry offers or which direction your interest takes you. Take a look at this year's winners to see the different paths that are available. And as always, share your story to encourage others to follow.

Aircraft Maintenance Technology is proud to recognize this year's winners. Here is a list of the winners and the companies they represent:

Anthony Arispe, *Airspeed & Attitude*

Randall Arnold, *Airborne Maintenance & Engineering Services*

Keilah Bias, *StandardAero*

Ronnie Rebecca Lee Booth, *Satair USA Inc.*

Kyle Bushman, *The Ragwood Refactory*

Catherine Chelimo, *Garmin*

Sam Collins, *Aircraft Propeller Service LLC*

Maarten de Haas, *AFI KLM Engineering & Maintenance*

Bruno DeSouza, *Banyan Air Service*

Simone Drakes, *Avionica*

Bartolome Ferriol, *AAR Aircraft Services*

Garret Fischer, *West Star Aviation*

Lambros Floros, *Envoy Air Inc.*

Greg Heine, *Flightdocs Inc.*

Joshua Hoskins, *Cirrus Aircraft*

Michael Janik, *Exec Aero LLC*

Kevin Ketterer, *Via Airlines*

Muhammad Usaid Khalid, *Endeavor Air*

Euan King, *Vector Aerospace*

Henry Locher, *AAR Landing Gear*

James Logue, *Desert Jet Maintenance*

Christian Ludwig, *MTU Maintenance Canada*

Candice McHargue, *UPS*

Peter Morelli, *Airborne Maintenance & Engineering Services*

Travis Morse, *Best Jets*

Spencer Necessary, *STS Mod Center*

PV Supun Nirmal, *Civil Aviation Authority of Sri Lanka*

Shawn Petersen, *Sky Quest*

Adrian Rothrock, *Aviation Institute of Maintenance (KC)*

Stacey Rudser, *STS Aviation Services*

Judson Rupert, *Lycoming Engines*

Mark Saretsky, *Aviation Technical Services*

Eric Sorensen, *Duncan Aviation*

Julio Soza, *PSA Airlines*

John Coty Stiltner, *StandardAero*

Elizabeth (Eli) Tilden, *Delta Air Lines*

William Villanveva, *Aviation Institute of Maintenance (Chesapeake)*

Devin Watson, *Plane Safe Aircraft Maintenance*

Emmeline Watson, *Duncan Aviation*

Imran Zaveri, *GE Aviation, Rock Valley College*

Anthony Arispe, 37, Owner, Airspeed & Attitude, McKinney, TX

Anthony Arispe left the Coast Guard in 2004 telling himself he would never work on another boat. Instead, he worked as an apprentice mechanic under Bob Aiello, Aiello Aviation, in Marshall, TX, until he received his A&P. Aiello was an IA that held an active certificate for more than 50 years.

Then Arispe focused on avionics installation and modification to be able to work with the military and contracted with L3 and Sierra Nevada working overseas to help support American troops and flight operations. He moved to Colorado in 2010 to work with military programs for a few years until he decided it was time to get back to his general aviation roots.

He started Airspeed & Attitude in 2014 in McKinney, TX, with the "goals of catering to the single engine legacy fleet and training the next generation of mechanics and pilots." He is the president/owner. The company has teamed with Master CFI Gary Reeves and purchased a Cessna 172 for demo and training purposes. "The aircraft can be used for our clients to get comfortable with new equipment while the airplanes are down for modification as well as teaching our new mechanics how to fly."

The company is a member of the Aircraft Electronics Association and Arispe continues his education both as a mechanic and a pilot through online courses, webinars, and live training.

He currently has three interns training to become A&Ps. "I believe though that our future technicians need to be more versatile and knowledgeable in full aviation systems. I want our future technicians to be able to not only maintain aircraft but to be able to recruit the numbers that we have lost over the last decade. That is why I train my mechanics how to remove an engine, wire in a complete new radio system, troubleshoot electrical issues, as well as how to fly.

"Our little company has grown over the last couple of years," Arispe says, "and I would love to see that growth welcomed by a city that we may be able to create school programs for students to experience aviation, college students to start their flying career, veterans to continue their education, and the industry receive the most versatile well-trained technician and pilots the industry has seen yet."

Ronnie Rebecca Lee Booth, 28, Skills and Training Program Specialist, Satair USA Inc., an Airbus Services Company, Ashburn, VA

Ronnie Rebecca Lee Booth says, "Working in aviation allows me to be a part of the stories of so many: the reunited family, the successful entrepreneur, and the critical supply delivery. It allows me to be a part of something bigger than myself, and to influence the lives of many." Her grandfather, David Booth, is a former recipient of both the Charles Taylor and the Wilbur Wright FAA Awards. Her uncle, Raymond Booth, is the head QA/QC final acceptance individual for FedEx at Boeing for the 767 aircraft program. Her mother, Rebecca M. Booth graduated from Guilford Technical Community College, and is one of the first women in ultra light aviation.

Booth received the majority of her training through Royal Technical Group, Inc. and Satair. She holds a bachelor of arts from Duke University (on a full academic scholarship), a master of business administration from Wake Forest University (on a full Presidential scholarship), and a Project Management Graduate Certificate from Duke University.

Currently she serves as the global head of training for all 10 Satair distribution centers and warehouses across seven countries. She is responsible for developing the training curriculum structure and content for Satair's warehouse operations. She is also in charge of creating development programs to help employees expand their skills and career opportunities.

Nominated by Ned Angene, Accountable Manager, Royal Technical Group: "Ms. Booth worked here at Royal Technical Group, and completely constructed our EASA MAG 6 compliance from start to finish. Ms. Booth is under 30 years old and given the right opportunities she could be running a multi national aviation corporation in the future. Ms. Booth quickly understands complex issues and creates solutions and her understanding of the global aviation industry is amazing."

Booth gives back to the industry through "my commitment to ensuring that every individual, regardless of their background, has access to high quality training that can help them reach their goals. I am passionate about and committed to helping others grow and reach their potential."

Booth's career goals center on expanding her reach and ability to provide quality education to all members of the aviation industry. "I hope to move into increasingly strategic roles where I can not only influence my department and company, but provide resources and structures to the wider aviation community as well."

Randall Arnold, 30, Line Maintenance Supervisor, Airborne Maintenance and Engineering, Erlanger, KY

In February 2014 Randall Arnold started working as an unlicensed mechanic at Airborne Maintenance and Engineering (AMES). In June 2016 he tested for his A&P license. "I did not attend college for my license I got it all through on-the-job training." He was one of the first participants in the Airborne Line Maintenance Utility Tech/A&P Advancement Program giving unlicensed individuals with mechanical aptitudes the ability to become a utility technician through mentoring and on-the-job training.

In January 2017, he began as a flight mechanic for Airborne Maintenance and Engineering, working outstation coverage, general flight mechanic roles, and AOG work throughout the country. In January of 2018 he was promoted to line maintenance supervisor in Cincinnati/Northern Kentucky Airport, focusing on ATI/Amazon aircraft. Now he oversees a crew of approximately 13 working heavy line maintenance on the DHL and Amazon fleets.

Nominated by Jim Savastano, AMES General Manager: "Randall continually improved his knowledge and was always willing to jump into new training opportunities so he could perfect his skills. Over the course of three years he logged the hours needed to receive FAA signatures to enable him to take his A&P examinations. Randall is very humble about his promotions and the opportunities he has experienced since joining the team in 2014. This may be due to the work ethic that he learned from his Grandpa on the farm which is what has endeared him to his crew. Randall was provided the opportunity to start his career but his dedication, hard work, and willingness to learn are what has made him successful and led to his promotions at the CVG Line Maintenance Station. He sets the example for what can grow from a company investment in programs that provide skill training, mentoring, and long-term on-the-job training.

Arnold supports the industry by "helping new mechanics either fresh out of school or in the utility tech programs, with learning these aircraft and teaching them the things they need to know to help achieve their goals, whether it's being a flight mechanic or getting their license. I encourage people to ask questions and get involved.

"I constantly strive to better those around me. It is all about the team and not individuals. I want to continue to move up in aviation and hopefully one day be in charge of an entire station or multiple stations. Continued knowledge helps not just yourself but those around you, while also helping to provide a safer work area."

Peter Morelli, 37, Production Manager, Airborne Maintenance & Engineering Services, Tampa, FL

After graduation from high school Peter Morelli had a strong desire to serve his country in the Navy. He researched options and decided on aviation.

Besides the Navy, he also trained at the Michigan Institute of Aviation and Technology where he obtained his A&P license.

His aviation career began in the U.S. Navy in 2001 as aviation mechanic/crew chief on C2-A Greyhound aircraft. He was responsible for maintenance of the aircraft along with in-flight troubleshooting when required. He served as a crew chief in both Operations Enduring and Iraqi Freedom. After being discharged and receiving his associate's degree, Morelli wanted to explore the civilian side of aviation. Upon accepting a position as a mechanic at PEMCO World Air Services in Tampa, his assignment fell under John Wing's supervision, who became his mentor.

Currently, he is production manager at Airborne Maintenance & Engineering Services. He is responsible for assigning manpower, managing budgets, and ensuring the maintenance flow is followed in accordance with all policies and procedures to ensure a reliable and on-time departure.

Nominated by John Wing, Director of MRO Maintenance, Airborne Maintenance & Engineering Services: "As the production manager for the Frontier Program, he embraces the opportunity to drive the company's operating principles of providing unsurpassed customer service but he takes that to the next level and delivers it to his entire team. Peter helps support our Rapid Improvement Events (RIE) which is a cross-functional group addressing inefficiencies that are barriers to completing tasks. He has a passion to lead his teams to exceed the customer's expectations because he knows that it will result in opportunities for our entire operation. Those opportunities allow his team to grow and flourish as they are promoted throughout our organization. Peter has invested countless hours in developing each individual to make a stronger unit. This has led to countless promotions throughout his group."

Morelli believes that the best way to give back to the industry is to help train and mentor junior mechanics. "One of the most rewarding parts of my current position is the ability to take a junior mechanic and build them up to a lead mechanic or supervisor."

He would like to further his education and attain his bachelor's degree. "My goals also include continuing to climb in the industry toward a director or vice president position."

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Peter Morelli
Airborne - Tampa, Florida

Randall Arnold
Airborne - Greater Cincinnati, Ohio

Mohammad Usaid Khalid, 26, Maintenance Controller, Endeavor Air, Bloomington, MN

Mohammad Usaid Khalid was introduced to aviation by his dad, an aircraft engineer. "He would always tell me how the aircraft works and that motivated me to work on aircraft myself. Having an aviation background helped me a lot."

Khalid was lucky to have great mentors and teachers who always helped him achieve his goals. They include Shawn D. Wyatt (teacher), Dave Boris (CRT mechanic at Bombardier), Katie Mosher (trained him for maintenance control position) and his dad.

He received his training in Pakistan. He started as a technician at Pakistan International Airlines (PIA) and worked his way up to become an engineer through on-the-job training. At PIA he was the youngest EASA SARI qualified engineer. He has his A&P and also an EASA license which qualifies him to work on aircraft in European countries. Currently he is maintenance operation controller with Endeavor Airlines.

Nominated by Keith Norton, Maintenance Controller, Endeavor Air: "Attaining a maintenance controller position at such a young age is one example of Usaid's exceptional abilities. I believe he is the youngest maintenance controller at our company and yet he is one of the most skilled and respected. He is highly intelligent, highly motivated, safety conscious, very helpful to his co-workers, personable, calm under pressure, and diligent in his work. On a personal note, I am twice Usaid's age. We both started with the company last summer and Usaid has become my most trusted mentor. He has helped me develop as a controller more quickly than I thought possible."

Nominated by Kathryn Mosher, Maintenance Control, Endeavor Air: "Usaid Khalid was selected as maintenance controller with Endeavor Air due to his intellect and professionalism. Usaid's degree in engineering and technology has given him a good foundation in troubleshooting new generation aircraft. Usaid has a solid background as a programmer and application developer. As his mentor and trainer, I can attest to his ability to quickly pick up the nuances of maintenance controller position. This is a challenging position even for someone with years of experience. Usaid is able to make the accurate and timely decisions and take the necessary course of action required to maintain the integrity of scheduled operations without jeopardizing aircraft safety or airworthiness in accordance with the appropriate regulations and manuals."

His goal is to become a maintenance controller of a major airline and work up to a manager of a maintenance operation controller or director of maintenance.

Keilah Bias, 25, Industrial Engineer, StandardAero, Summerside, PEI, CN

Keilah Bias was always interested in solving problems, trying to improve processes, and being creative. This led her to becoming an engineer and landing a job as a summer student with Vector Aerospace in 2013.

Bias has been mentored by many people over the years including her previous professor and now friend, Libby Osgood, who is an aerospace engineer. "My current supervisor, Sharon Ross, and the women I work with at StandardAero since our Vector Aerospace days greatly contribute to building my skill and knowledge in the aerospace industry and my personal development."

She received her diploma in engineering from University of Prince Edward Island, and finished her industrial engineering degree with cooperative education at Dalhousie University.

Nominated by Alex Youngs, StandardAero Director of Sales and Marketing Business Intelligence: "StandardAero's Summerside facility utilizes a broad range of KPIs to manage processes related to customer, financial, and productivity. Keilah has been instrumental as a bridge between the business and the technology team responsible for data warehousing. By developing a suite of management dashboards, Keilah equipped the leadership team with effective management tools for day-to-day decision-making. Keilah was a key resource for leaders during the C3 (cost, cash, competitiveness) campaign where $8M in annual savings were identified, realized, and sustained. She set dashboard expectations and then coached many teams to help them track savings and ensure balancing metrics were visualized and monitored."

Bias constantly advocates to promote engineering as a career choice for young students, especially for women "I believe that many girls don't even consider engineering because they never knew it was something they could do. Outside of the industry, I do my best to be involved in community projects as I believe engineering, or any career, is meant to help better our society."

"My greatest career goal is to add value to other people in whatever role I am in. I also desire to increase my knowledge of the aviation and aerospace industry, along with different areas of business operations. I would like to pursue a teaching role in the future, whether as part of my role, or in a sessional capacity. Since I was a child I believed that teachers can have a lasting effect in the society. Finally, I want to be in a position where I can inspire others, especially young girls to pursue engineering as a career choice and aerospace as an industry to build their career."

PASSIONATE. PROFESSIONAL. PRECISE.

Usaid Khalid knew at a young age that his world would revolve around aviation. His father engrained in him a **passion** for aviation maintenance while growing up in Pakistan. His training carved out a **professional** approach to each item on a task list. His **precise** attention to detail allowed him to develop the skills necessary to assist technicians out in the field. Usaid Khalid isn't just a next generation Maintenance Controller, he is an ambassador of what's possible when you dream big.

Congratulations, Usaid, on being named to **AMT's NEXTGEN 40 Under 40**!

Learn more about how you can say #IFlyEDV at www.EndeavorAir.com/Careers

Judson Rupert, 39, Principal Engineer, Piston Engineering, Lycoming Engines, Williamsport, PA

Judson Rupert's father was a pilot, A&P/IA, so he grew up around aviation. His father is one of his mentors and he also received some on-the-job training from his father.

Rupert received his bachelor's degree in aerospace engineering from Penn State University, his master's of aeronautical science and Part 65 Certificate from Embry-Riddle Aeronautical University, and attended U.S. Naval Test Pilot School (Class 132 Fixed Wing). He is currently working on taking his written, oral, and practical exams to obtain his FAA mechanic certificate with A&P ratings.

He worked at Penn State University Airport for the Flight Department Line Service and also for the Penn State Aerospace Department as a research assistant. He started as a systems engineer for Lycoming Engines in 2011 and is currently a principal engineer, piston engineering at Lycoming. His duties include leading, guiding, supporting, and directing engineering professionals within the context of product development testing and project execution. He also serves as a senior technical analyst for Atkinson Aeronautics & Technology Inc.

Nominated by Katie Bell, Director of Marketing & Communications, Lycoming Engines: "Judson (Jud) Rupert is Lycoming Engines' Principal Engineer and is a true aviation enthusiast. Jud has been a part of the Lycoming team for over seven years. Today Jud oversees the planning and execution of engine component and system development testing, including Lycoming's Integrated Electronic Engine (known as iE2), which is the most advanced piston aviation engine available on the market today. Jud has a passion for building and restoring aircraft, and recently accepted a volunteer role as Pennsylvania State Liaison for the Recreational Aviation Foundation (RAF). He also is president of the Quarter-to-Two Flying Club, a club for Lycoming employees and their families. Jud's wife and two daughters enjoy going on flights with him in their 1950 Cessna 170A. He also has a Hatz Classic biplane in his basement and a 1939 Luscombe 8B in his garage both of which he continues to work on as his busy schedule allows."

To give back to the industry Rupert is Pennsylvania state liaison for the Recreational Aircraft Foundation and an EAA Young Eagles pilot. He is a member of General Aviation Manufacturers Association and the Society of Flight Test Engineers and has participated in symposiums for both.

His future goals are to "stay technical in aeronautics, promote safety, and continue to make sure the younger generation looks at aviation as an avenue for fun, adventure, and a career."

Kyle Bushman, 25, Owner, The Ragwood Refactory, Creswell, OR

Kyle Bushman started flying remote control airplanes at a young age and found he enjoyed fixing them as much or more than flying them. He started flying at age 14. Restoring and watching his first aircraft fly away between 2013 and 2014 gave him the sense that "there is nothing in this world like building an airplane with your own hands and watching it fly for the very first time."

He went to A&P school right out of high school and received his training from Lane Community College.

His mentor is his grandfather, Ralph Halderman, who always pushed him in a positive direction.

In 2013 Bushman went to work for The Ragwood Refactory with founder Tim Talen, and learned everything he could. Talen was restoring antique aircraft and Bushman thought the time was right to get into antiques before the information and knowledge was lost. After two years Talen decided to retire, and Bushman made the decision to follow his passion and make The Ragwood Refectory his own.

Nominated by Joshua Levi Knowlton, Field Mechanic, Hillsboro Aviation and 2017 *AMT* Next Gen Award Winner: "Kyle first soloed an airplane at the age of 16. He started A&P school at 18. At the age of 23 he took over The Ragwood Refactory antique aircraft restoration shop in Creswell, OR. He currently owns a 1949 Ryan Navion, a 1943 Navy N3N biplane, and three rare 1938 Cessna 165 Airmaster projects that are in various stages of restoration. He is now 25 years old and quickly becoming one of the leaders in the world of antique aircraft restoration. He always opens his shop for kids and makes himself and his planes available to people who are curious about aviation. He has restored several awardwinning aircraft already and his attention to detail is second to none. I've known and worked with Kyle for about seven years now and cannot think of a more deserving person for this award. He works extremely hard for very long hours every day. Kyle has a big heart and is extremely honest and he never cuts a corner. I trust his work and his word. He is the epitome of what the aviation industry needs in order to grow in the 21st century."

To give back to the industry he is a strong advocate to people around him, letting them know there is unlimited opportunities in aviation. "There is a huge need for people willing to learn and if you are that person, you can write your own ticket."

His goals are to continue to grow the shop, to expand the business to allow for not only restoration work on tube and fabric airplanes but to start doing 100-hour and annual services as well.

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Julio Soza, 37, Dayton Maintenance Manager, PSA Airlines, Vandalia, OH

After high school Julio Soza joined the Air Force, and served as a crew chief working on C-130s.

All of Soza's A&P training was from the military, which allowed him to get his A&P license. While in the Air Force he completed his associate degree in aviation maintenance technology and used the GI bill to attain his associate degree in business administration. At PSA Airlines he learned on the job with the support of a training department for new mechanics. Soza has been trained on all three types of CRJs that PSA operates (200, 700 and 900), NDT (eddy current, dye penetrant, ultrasonic), GE Borescope, Principals of Troubleshooting, and GE line maintenance.

Soza worked line maintenance in the Air Force for three years and then transferred to doing isochronal inspections as part of the aerospace repair department. Then he moved to PSA Airlines, then part of US Airways Express, now part of American Eagle. Soza is currently in charge of the Dayton, OH, base facility that has two hangars and currently takes on eight to 10 aircraft at night. He is in charge of over 100 mechanics and six supervisors, responsible for the overall maintenance operation at the two hangars.

Nominated by Timothy L. Law, Regional Manager, Maintenance Production, PSA Airlines: "Julio Soza started his aviation career in the U.S. Air Force as a C130 mechanic performing line and heavy maintenance for six years. He has been with PSA for 11 years. During his time with PSA, Julio has advanced from being a mechanic (five years) to a lead mechanic (two years), to a maintenance supervisor (three years) and was recently promoted to the position of maintenance manager for our Dayton, OH, base. He has matured into a very effective leader who is highly regarded by not only his leaders and peers, but also by the individuals under his charge. He has made numerous improvements to not only his station performance, but also the facility while still building morale in his people. Julio is a fine example of what can be achieved with hard work and dedication to a trade. He sets a great example for others to emulate."

To give back to the industry Soza ensures that his team focuses on on-time departures and fixes any aircraft out of service in a timely manner. "We understand the importance to get our passengers to their destination safely and reliably."

Soza's career goal is to continue working with PSA to improve overall performance and customer satisfaction. "PSA currently has many opportunities and I want to continue to learn from this aviation industry."

Catherine Chelimo, 39, Aircraft Certification Engineering Technician, Garmin International, New Century, KS

"As a child, math came easy to me," Catherine Chelimo says, "and I enjoyed sciences specifically physics. I was always interested in how things work so I was naturally drawn to machines. Growing up in Kenya I had minimal exposure to aviation but still fell in love with aircraft and aviation at 9 years old."

Chelimo has been fortunate to have had various mentors throughout her career, from college instructors to her current team leader Greg Finch.

She graduated from the University of Central Missouri (UCM) with a bachelor of science in aviation technology with an emphasis on aircraft maintenance and earned her Airframe and Powerplant license. She went back to UCM and earned a master of science in aviation safety. She has also received training from FlightSafety.

She started her career working as an A&P technician at Midwest Corporate Aviation, then worked for over five years at Advanced Aviation before joining Garmin International. She recently took the position of an aircraft certification engineering technician.

She was nominated by Gregory Finch, Garmin Aircraft Certification Team Lead: "Catherine has approximately 11 years of aviation experience and has been employed by Garmin for the last five years. At Garmin she has proven herself to be a valuable asset to any team that she is on. Catherine saw an opportunity to assist with avionics installations over and above her normal duties. On the road to gaining the necessary experience in system safety, Catherine is participating in a development path that includes working in several different roles that include engineering technician, electrical designer, and systems engineer with a final goal to fulfill the role of a system safety engineer. In each of these roles to date, Catherine has exceeded expectations and is grasping the concepts and technical knowledge at a very fast pace."

To give back to the industry Chelimo is getting more involved in Garmin's STEM outreach program and this year she assisted in giving hangar tours and talking about different career opportunities in aviation to local middle and high school girls, when Garmin hosted various events for Women in Aviation week.

One of Chelimo's career goals is "to utilize my skills and knowledge in the system safety group and assist Garmin in continuing to provide safe and exceptional products to the aviation industry. Eventually, be involved in FAA rulemaking aspect."

"We try to create an environment where everybody feels at home. I really enjoy coming in to work and trying to build on that family environment as we grow."

- Julio Soza, Maintenance Manager

Part of the mission at PSA is our commitment to growing our company where **passion** is shared, **professional excellence** is expected, and all people are **valued and respected**. Julio Soza, Dayton Maintenance Manager, exemplifies these values through his leadership and passion for both aviation and safety.

We are proud to recognize him as an AMT 40 Under 40 Award winner.

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Christian Ludwig, 35, Director Accessory Operations, MTU Maintenance Canada, Richmond, BC

The motivation for Christian Ludwig to join the aviation industry came after an Assessment Centre visit for students at MTU which included a shop tour. He received firsthand information about turbine engines and maintenance practices. From there on, he was hooked.

He started at MTU as a Jet Trainee which is a special entry-level program established for areas where a lack of qualified managers has been identified. Ludwig had great support and guidance by his supervisor David Campbell and head of the department, Robert Gentzke. He was assigned to various German locations as well as China with a focus on MRO engine shop management, V2500 engineering, quality management, strategic purchasing, and finance.

His first position after training was at MTU Maintenance Hannover GmbH as procurement manager for V2500 and PW2000 engines. Then he was named head of purchasing and logistic department (Accessory Repair Centre). His current position is director, Accessory Repair Centre and Supply Chain at MTU Maintenance Canada Ltd. (Vancouver).

Nominated by Victoria Nicholls, Media Relations Manager, MTU Maintenance: "Christian started his career at MTU in 2009 as an executive trainee reporting to department heads of several MTU locations in Berlin, Hannover, and Zhuhai before he moved into a leadership position in 2013 heading the Supply Chain Department at MTU Maintenance Canada Ltd. In 2016, he took on his current role as director of the Accessory Repair Centre (ARC) and has overseen tremendous growth. Last year, the ARC repaired 11,000 accessories for over 120 customers including airlines, engine manufacturers, and the U.S. Air Force. Christian is the architect behind the "vision 2020" that has been created to secure the long-term success of our accessory business. He is a dedicated and passionate member of our team."

Ludwig is passionate about driving improvement and developing the industry and creating value for his customers. MTU has revived its apprenticeship program this year which allows him to introduce young talent to the industry.

While Ludwig has short- and long-term goals, "I also like to stay open-minded about opportunities and challenges to come. When I am look back at my career in 30 years I would like to be able to say: I had continuous opportunity to learn and grow. I helped others to succeed and drove improvement or change. I was never bored at my job."

Sam Collins, 37, Director of Quality and Supply Chain, Aircraft Propeller Service LLC, Lake Zurich, IL

When Sam Collins was a freshman in high school a representative from Spartan College of Aeronautics spoke to his class about aviation as a career path. "From that point forward I planned to obtain an A&P license and a bachelor's degree in aviation management." He received his degree and A&P from Spartan College of Aeronautics. He earned an MBA in technology management from the University of Phoenix in 2006.

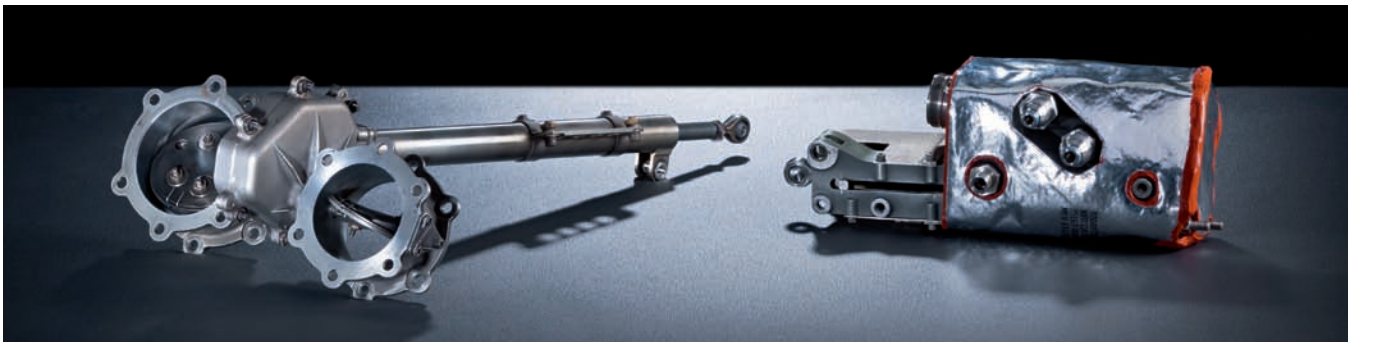
Collins has always felt that it is necessary to have a mentor and also be a mentor simultaneously. The greatest mentor that he has had was Marcus Abendroth, vice president of operations at Avcon Industries Inc. He is responsible for "Jumpstarting my career in the right direction and bringing me up within the company."

His career has included positions at Chromalloy as director of quality, Cirrus Aircraft as director of technical services, AIRCO as director of quality, Avcon Industries as quality manager, Beechcraft Corp., Cessna Aircraft, and Business Jet Services. He received a Leading Edge Award from Cessna along with FAA FAAST Gold and Bronze certificates of training. Currently he is director of quality and supply chain at Aircraft Propeller Service.

Nominated by Dan Colbert, President and CEO, Aircraft Propeller Service: "From an early age, Sam Collins has had a passion for aviation. Sam's aviation career began in earnest during his junior year of college when he worked as an A&P technician for Business Jet Services. While at Avcon, he received his Inspector's Authorization Certificate and became a Designated Manufacturing Airworthiness Representative (DAR) of the FAA with nine function codes, including: Airworthiness, Conformity, and Export of Product. He is one of just 400 manufacturing DARs in the USA. Today, Sam serves as director of quality and supply chain for Aircraft Propeller Service (APS). He led APS' successful completion of the AS9100 Upgrade to Revision D and the initial accreditation of its Latin American facility. His contributions at APS have included: developing a robust Corrective Action Reporting program; rewriting RSM, QCM, AS9100D, EASA, and CAAM manuals; introducing, monitoring, and measuring customer satisfaction, product conformity, TAT, and vendor processes; and developing a Supply Chain Cross-Training Matrix."

"As a mentor to others," Collins says, "I do my best to share as much knowledge as possible and look for ways to improve efficiency and reduce defect rates, which will benefit the customer."

His goals for the future are to "continue to advance and expand my knowledge base within the aviation industry."

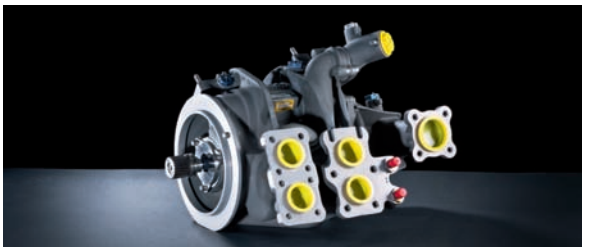


Your experts for engine accessories

If you imagine an aero engine as a human heart, then its accessories could be likened to the coronary blood vessels. Just as the human heart is surrounded by a network of arteries, the engine is surrounded by a range of supporting components such as starter motors, fuel and hydraulic pumps, actuators, sensors and valves.

Should these accessories fail, the engine is at risk of suffering something like a heart attack: the engine can no longer operate safely and the aircraft must either perform an emergency landing or else remain grounded. Meanwhile, the costs incurred increase with every passing minute.

Just like an operation on a heart, accessory management is an intricate affair. Time pressure, extreme complexity – one single engine has on average 80 different accessories manufactured by 15 to 20 different suppliers – logistical demands and geographical constraints all come into play when repairing accessories, which draw on some 450 different procedures.



As with medical surgery, you generally pick the experts for the job. In the case of accessories, that is the Accessory Repair Center (A.R.C.) at MTU Maintenance Canada in Richmond. The team in Vancouver offers accessory repairs for everything from business jet and regional engines such as the CF34 to the mighty GE90 that powers the Boeing 777. They can also provide all-inclusive service packages for all an airline's accessories. This includes the management of line replaceable units (LRUs), specific accessory components that can be exchanged on location during routine operations. Defective accessories can be replaced with functioning ones within between 4 and 24 hours – either repaired or from storage, a service also provided.

www.mtu.de/en/

MTU Maintenance congratulates Christian Ludwig, Director of Accessories Operations, MTU Maintenance Canada, on being nominated for the top 40 under 40 award!

Stacey Rudser, 30, Line Maintenance Technician, STS Line Maintenance, Titusville, FL

Stacey Rudser was inspired to enter the aviation industry through a high school Air Force Junior ROTC program. On a visit to Patrick Air Force Base she got to see an HH-60 Pavehawk helicopter and a C-130 up close. "That's when I knew I wanted to be a part of aviation."

Mentors include Bill Russo, Lynette Ashland, and Andy Hakes.

Rudser received her training from the Aviation Institute of Maintenance in Orlando, FL. She was the first woman to graduate from the school in 2009. And she has received training scholarships through the Association for Women in Aviation Maintenance (AWAM) from UPS, Southwest Airlines, and Pratt & Whitney.

She started her career at MROs, first at Mobile Aerospace, then Timco in Lake City, FL. Rudser gained experience in corporate and general aviation when she relocated to Central Florida. She now works contract line maintenance for STS Line Maintenance, handling operations for Frontier Airlines.

Nominated by William Russo, Aviation Program Director, University of the District of Columbia: "Stacey has developed a proven track record as a team-oriented leader, dedicated to high quality, economically viable results, with a strong emphasis on safety, communication, and compliance. What really makes her worthy of industry recognition is her dedication to giving back to an industry which has given so much to her. In particular, Stacey has dedicated substantial personal time and effort to inspiring and mentoring young men and women to consider a career in aviation, and helping to support those who are just beginning a career in aviation maintenance. I applaud her efforts to make a positive difference in the lives of those who might not have considered a career in aviation, were it not for meeting and being inspired by her."

Nominated by Andy Hakes, EVP Airline Operations, Engio - AireXpert: "Stacey has quickly established herself as a motivated, genuine, and committed advocate for women in aviation technical roles. She engages with very young children and she's organized events in which she creatively gives young folks the opportunity to complete projects involving tools and materials."

She belongs to the AWAM, the Aviation Technical Education Council (ATEC), and Women in Aviation Intl. (WAI). She serves on AWAM's national board of directors, is the co-chair of its scholarship program, and is the founder and president of the Central Florida AWAM chapter.

Rudser would like to work for a 121 airline that has a corporate culture supportive of women and a focus on giving back to the community.

Spencer Necessary, 36, Director of Safety, Security & Regulatory Compliance, STS Mod Center

Spencer Necessary grew up around aviation in both the general aviation and military aviation and was primarily motivated by his father, retired from the U.S. Air Force.

After serving in the U.S. Army in field artillery, he turned to aviation maintenance. Like his father, he is a USPA D-Licensed Skydiver and has completed over 2,000 freefall skydives and has worked as a skydiver videographer/photographer.

He began his career in aviation in 2004 after leaving the Army in late 2003. His first job was working as a bench technician inspecting and servicing aircraft temperature and pressure sensing devices and turbine engine ignition system components. In 2005 he enrolled in the AMT program at Tarrant County College in Ft. Worth, TX, and attended night school while working full time. He worked in avionics and then the VIP interior completion industry with management roles overseeing quality control and quality assurance. He is now director of safety, security, and regulatory compliance for STS Mod Center.

Nominated by Bryan Shaw, Marketing Director, STS Aviation Group: "During the acquisition period of AeroMod International, STS Aviation Group sought the services and expertise of Spencer Necessary who possessed the passion, dedication, and aptitude needed to bring cutting-edge technology and a fresh approach to commercial MRO. Flash forward 19 months and Spencer Necessary and his team have hired more than 150 people, booked two hangars until the end of 2019, and begun construction on a third hangar that will be open by the end of the year. Spencer and his team have also created a revolutionary workflow system that allows STS Mod Center's aircraft repair and modification specialist to do a complete, nose to tail, InFlight Connectivity install in three days or less."

To give back to the industry Necessary spearheaded a program at Tarrant County College to develop a program to prepare highly experienced but noncertificated individuals to test for and attain FAA mechanic certification. In 2016 he was appointed by the Tarrant County College, Board of Trustees to serve on the college's Aviation Advisory Committee.

Necessary never wants to stop learning. He hopes to influence as many people as possible in a positive manner and to help reduce some of the confusion and stress that comes along with compliance with quality standards and regulatory framework in the aviation industry. He plans to seek Designated Airworthiness Representative (DAR) designation and a private pilot license (maybe even commercial).

STS Mod Center

A Division of STS Aviation Group

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CIVIL AVIATION
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- FAA 145 Repair Station
- AS9110C
- AS9100D
- EASA 145 Repair Station
- ISO 9001:2015
- ANAC 145 Brazil

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STS Mod Center operates out of state-of-the-art hangar facilities in Melbourne, Florida and Kansas City, Missouri. The company is an MRO leader in avionics and structural aircraft repair and modification services. From major / minor aircraft repairs and modifications to complete in-flight connectivity packages, STS Mod Center delivers exceptional results for clients around the world. Contact our team today to learn more.

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Greg Heine, 30, Chief Operating Officer, Flightdocs, Bonita Springs, FL

Greg Heine's education and experience prior to Flightdocs was in business management. Although not an aviator, he always had an interest in aviation. "The idea of bringing together business, technology, and aviation into a career path was really exciting and has been a great experience over the last decade."

Shortly after graduating from Bentley University, Heine joined Flightdocs in an entry-level position. He started doing data entry for the setup of aircraft maintenance schedule templates and revisions. From there he moved into an analyst position where he worked with customers to keep their aircraft maintenance compliance up to date. Shortly after that he managed the analyst team and operations. Heine is currently chief operating officer at Flightdocs and his core focus is in the development of new products and strategic positioning for the future.

Flightdocs is part of the NBAA, HAI, WAMA, PAMA, GBAA, and a few other organizations. "We attend many conferences throughout the year and it's great to be able to get facetime with so many of our customers in one place. Personally, in 2017, I was voted in to the board for the NBAA Maintenance Committee."

Nominated by Mercedes Jorge, Director, Marketing, Flightdocs: "The younger Heine has played a pivotal role in the company's growth, which averages 30 percent a year. From the early days as an intern he rapidly progressed and took an active leadership role in developing the company's signature product called Enterprise. Today, his primary focus is finding growth opportunities and that takes him back to his product development roots. "We're continually looking for new ways to help our customers streamline their operations with a steady stream of new products and technologies with new features and functionality," Heine says. "That's what drives our aggressive growth goals." He is happy to focus on investing in research and development and promises "the next big thing" is just around the corner."

At any given time Flightdocs typically has between four and eight interns on the Flightdocs team. The company has been able to bring on several interns as full-time employees as they graduate. "We also contribute to a few scholarships, most notably the NBAA TRACS scholarships. We've been able to transform a traditionally heavy paper based workflow, and go fully electronic. This has made our customers so much more efficient and effective."

In the short term he'd like to focus on taking Flightdocs to the next level and continuing to grow. In the future he'd like to start his own tech company from scratch: "Take a vision and see it through to a final product in the hands of customers."

Joshua Hoskins, 36, Manager of Field Service, Cirrus Aircraft, Plano, TX

Joshua Hoskins became interested in aviation at an early age. "As a 5-year-old boy on my first commercial flight, the pilot took an interest in me and allowed me to sit in the cockpit. I was so intrigued with all the buttons and lights. Working with my father and grandfather, I quickly learned I had a talent for auto mechanics. I also spent summers as a teen working with a family friend, Gifton McCreery, at Texas Helicopters. I quickly found a passion with my combined interests in aviation and mechanics. McCreery's mentorship encouraged my passion and developed a foundational understanding of respect for aviation."

At 18 he started work as a parts manager at Dalfort Aerospace before moving to Monarch Air where he earned his pilot's license. He received his bachelor's degree in aviation management from Everglades University in 2006 and worked at DFW Instruments as a technician. Then he moved to Arkansas and worked at Sharp Aviation where he completed his A&P. He started at Cirrus in mid-2014 and in 2017 was promoted to his current position as manager of field service. His current job responsibilities include support of the 7,000+ Cirrus aircraft fleet and oversight of over 200 authorized Cirrus Service Centers.

Advanced training includes avionics training from Honeywell and Garmin, maintenance training from Continental Motors, Cirrus, Hartzell Propeller, and Williams International. Hoskins belongs to Aircraft Electronics Association and regularly attends AEA and NBAA conventions along with EAA AirVenture Oshkosh.

Nominated by Paul Coldagelli, Manager, Region Field Service Managers, Cirrus Aircraft: "Josh came to Cirrus Aircraft with an A&P/IA and a PP/instrument rating. He quickly gained his commercial rating while with Cirrus Aircraft and has been flying several missions in addition to his regional field service manager duties ever since. Josh manages a team of five regional service managers that globally support over 211 Authorized Service Centers and over 7,000 Cirrus Aircraft customers. He excells when troubleshooting intelligent airframe platforms like the Cirrus SR and SF series aircraft where the avionics are integrated in every system of the aircraft from spinner/radome to tail."

As for giving back to the industry, Hoskins says, "I do my best to identify individuals in which I can provide such mentoring and encouragement in aviation from taking time to notice a little boy with a sparkle in his eye when he sees an airplane to encouraging my direct reports to work toward their career goals.

"I look forward to what the future holds in my development as an aviation professional and aircraft owner."

Maarten de Haas, 35, Instructor, AFI KLM Engineering & Maintenance, Netherlands

Through an information day at ROC College Airport, Maarten de Haas was exposed to aircraft construction and composites, as he was wondering which path to take. "At that time, I did see that composite was going to be the future and for me the technique was more interesting in aviation (than shipbuilding)."

After four years of training at ROC College Airport, he applied at KLM. He started as a composite technician which lead to a part-time instructor position and composite repair specialist. And this spring he was named a full-time instructor. His main field is structure courses: composite and metal bonding training, damage assessment, structure, etc. He has completed advanced composite repair courses from Boeing and Airbus along with didactical training for instructor from KLM.

Roel Groeneweg, a composite technician at KLM for almost 47 years, has helped de Haas progress in his profession, and other specialists and managers have given support and advice.

Nominated by Joost Zuidam, Production Preparation Engineer, AirFrance Industries KLM Engineering & Maintenance: "Maarten started his career at KLM E&M as a composite technician. While using the experience and knowledge of the older staff in the composite shop, he wasn't shy of introducing new techniques and methods to enhance the quality of repairs. As the years progressed he started sharing the gained experience with the younger and other newly employed staff as well as older colleagues, being patient with them while guiding them through the complex composite repair processes, thoroughly explaining why certain steps within the repair were so important. His commitment lead to Maarten becoming part of the shop's certifying staff after a few years. What I've always appreciated greatly in Maarten is the fact that he always takes the time to teach and try to improve everybody's skill level, always giving personnel safety and product quality (flight safety) a very significant role within the repair process. Due to his approach on repairs and all processes involved Maarten in my eyes became the go-to guy for newly developed repair techniques or repair firsts within the composite shop. Beginning of 2018 Maarten has started a new job, becoming a full-time Part 145 instructor for KLM E&M Training (SPL/GK).

To give back to the industry de Haas' goal is "to make somebody else better. For the benefit of safety, KLM, and my colleagues I'm always willing to share my knowledge."

As to the future, "For now I'm good, just started a new job. I do have lots to learn and enough challenges for the future."

Simone Drakes, 36, Vice President of Engineering, Avionica, Miami, FL

Simone Drakes says "Aviation has always been a part of my life as my father was an air traffic controller, and my brother is a pilot."

Drakes was mentored by Lauren Nelson whom she met at EMTEQ. He was the former director of aircraft engineering at Eastern Airlines and co-founded AVITAS Engineering which was acquired by EMTEQ in 2002. He was president of engineering from 2008 through 2012.

She received her bachelor of science degree in avionics engineering at Embry-Riddle Aeronautical University and also received training at FAA Academy, Boeing, Avionica, and Aircraft Electronics Association. She is a member of Women in Aviation International, Institute of Electrical and Electronics Engineers (IEEE), and IEEE Women Engineers. Industry awards include the South Florida Business Journal Class of 2018 Top 40 Under 40. Yearly she attends AMC/AEEC Symposium, Flight Safety Foundation, NBAA-BACE, and EBACE.

She was nominated by Anthony Rios, Vice President of Sales, Avionica: "Simone Drakes started with Avionica in 2008 as an avionics project engineer, and in 2015, Simone became vice president of engineering, overseeing research and development, aircraft installation and global civil aviation certification, and technical publications. Simone leads a team of 25 engineers who design and deploy avionics enhancements that offer increased server capacity, data connectivity throughput, and improved reliability and safety across all Avionica products and platforms. Her achievements include: helped obtain new sales contracts with Kalitta, flydubai, Easter Jet, Cathay Pacific, Hong Kong Dragon, HondaJet, Bombardier, Air Greenland, Icelandair and Korean Air for Avionica products (satLINK MAX, aviONS, avCM and avSYNC service); completed the first Supplemental Type Certification (STC) for Avionica's Iridium transceiver, the satLINK MAX; and as DER, supported Avionica's numerous STC installation design approvals for Boeing 747 and 737MAX aircraft providing safe voice and data cockpit and cabin flight crew wireless connectivity, pioneering new certification regulatory compliance for cyber security."

To give back to the industry, Drake provides on-the-job training and mentorship of more than 10 recent university graduates and she makes presentations at industry forums and conferences.

Future gioals include attaining her Ph.D. in aviation.

Bruno DeSouza, 34, Parts Manager, Banyan Air Service, Fort Lauderdale, FL

Bruno DeSouza was 23 when he decided to get into aviation. The career opportunity was working in purchasing with Regional Airline Support.

"My mentor with Regional Airline Support was Tino Collorafi. He guided me in understanding the importance of customer service. At Banyan, Lynn Juengel is my mentor. She helps me think strategically about business and to plan ahead much like a chess game."

With his job at Banyan Air Service, DeSouza is responsible for providing the leadership, vision, and direction of six direct reports and over 50 teammates associated with maintenance, turbine, and parts warehouse as well as shipping and receiving. He works with the Banyan technical sales team in a service manager role to assist Portuguese and Spanish speaking customers. And he works with the IT staff and accounting staff to streamline processes for better efficiency. DeSouza is Banyan's representative for LABACE and NBAA.

Most of DeSouza's training has been on-the-job training. Advanced training has been in-house training on many aviation aspects, which include avionics equipment, maintenance equipment, leadership training, and contract negotiations.

Nominated by Nancy Bouvier, Director of Marketing, Banyan Air Service: "Bruno DeSouza is 34 years old and has held the position of parts manager at Banyan Air Service at Fort Lauderdale Executive Airport for about three years. He is recognized at Banyan as the "go-to guy" that "always comes through" and "always accepts the challenge." He works closely with the information technology staff and the accounting staff to stream line processes that make his team more efficient. One recent innovation he has made is the use of Uber to deliver parts, saving Banyan hundreds of dollars on shipping. When he is not at work, he enjoys spending time playing basketball, soccer, and swimming with his spouse and two sons, ages 8 and 4. He hopes they will follow in his footsteps and enjoy a career in aviation."

To give back to the industry, DeSouza "works closely with vendors and our team by presenting new ideas for procedures and creating new cost options. These ideas center on lowering costs, making the processes easier, and/or shortening timeframes."

As for future goals, DeSouza is working on getting his A&P license and also wants to continue his formal education by taking business management classes. He plans on continuing to learn newer techniques while lowering costs and increasing efficiency.

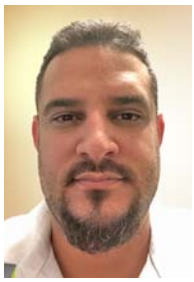
Bartolome Ferriol, 33, Shift Manager, AAR Aircraft Services Miami

Since Bartolome Ferriol was a child, his uncle, an AMT, took him to the airport frequently and he's liked aircraft since then.

Ferriol's mentor is Ramses Perez, current vice president of operations at AAR. He received training at George T. Baker Aviation school and has taken advanced training in several aircraft types along with leadership training.

His career has included several companies in Florida including MIA Executive Aviation, Commercial Jet Inc., Gulfstream International Airlines, Alpha-Tech Aviation, and American Airlines. Currently he is shift manager at AAR Aircraft Services Miami, responsible for the operations, organization, and planning of 12 project managers, avionics and interior department with a total workforce of 215 employees, ensuring productivity, and most importantly employee safety.

Nominated by Vicky Sokolowski, Director Field HR, AAR Aircraft Services: "As a shift manager Bartolome is responsible for managing 12 crews and supporting departments with an overall daily average of 215 employees, ensuring each project has the required manpower to reach the assigned goals. The most important goal for him in his current assignment as shift manager at AAR is to build a strong motivated crew that works well as a team on his shift as well as the day and midnight shift to achieve our customer and AAR goals. With time and experience he can move on to become a director of maintenance at one of AAR's repair stations. His long- term goal is to develop his management skills through training and experience followed by obtaining a degree in maintenance management. This degree can help him grow within any organization to reach an executive position where he can continue to give the best of himself while achieving great results through innovative ideas. He also mentors and trains the junior technicians to ensure they understand the importance and criticality of the function of an aircraft maintenance technician in this industry."



To give back to the industry, he shares his "knowledge and experience with the incoming future AMTs, ensuring they develop the skills and responsibilities that come with this profession." He also preaches safety, compliance, and ownership to "keep the integrity of this small world of aviation maintenance technicians to the highest possible."

Ferriol's goal is to continue acquiring experience to continue growing within the AAR organization.

Garret Fischer, 35, Lead Aircraft Maintenance Technician, West Star Aviation, East Alton, IL

Originally Garret Fischer signed up with the Navy through the delayed entry program and was given the job of aircraft mechanic. But a baseball injury derailed that plan and after he healed he attended Southwestern Illinois College's AMT program. His father was a mentor as he was the one that directed him to the local college with an aviation maintenance program.

He worked for Jet Aviation in Cahokia, IL, as a technician, engine shop lead, and engine shop supervisor. Currently he is lead, aircraft maintenance technician at West Star Aviation. He organizes and assigns work to team members, ensures work is completed efficiently, provides guidance and keeps projects on track in regards to safety, hours, and schedule.

He has received advanced training on the Honeywell RE220 Series APU, P&WC JT15D series hot section inspection, Honeywell 131-9 (A) APU and HTF series (AS907) Turbofan, Rolls-Royce BR710-A2-20, GE CF34-3A1/3B and CFM56-7B line maintenance.

Nominated by Matthew Harter, Instructor, Southwestern Illinois College: "Garret has been immersed in aviation, especially turbine engines, since his first day of A&P school in 2002. After completion of the indepth, one-year A&P program at Southwestern Illinois College, Garret hit the ground running in the workforce. He first worked for AVMATS in O'Fallon, MO, in its engine overhaul facility. After a few years, he took his new skill set to Jet Aviation in Cahokia, IL. He quickly adapted to the pace of working on the floor rather than the overhaul shop. He excelled on the engines for the Bombardier line of aircraft as well as engines for Gulfstreams, Falcons, and Hawkers. Within in a short amount of time he became the manager of the engine shop. In 2017, looking for a new challenge, Garret moved to West Star Aviation in Alton, IL. In his short time there, he has become an integral part of the Bombardier team. Using the wealth of knowledge he has gained at several factory training schools, he has been a key resource on the engine side of operations."

In regards to giving back to the industry, he shares his experiences, good and bad, in order to help educate others and make the maintenance world more knowledgeable.

Fischer's career goals are pretty simple, "I would like to be a go-to person for assistance in resolving aircraft-related problems. Whether that is in a management type role, a technical adviser, or a senior mechanic who travels to the customer during scheduled or unscheduled events. My main goal at the end of the day is to deliver a quality product."

Candice McHargue, 34, Aircraft Maintenance Control Supervisor, UPS, Louisville, KY

Candice McHargue's love of aviation all began as a little girl. She would watch her dad working in the garage. She'd ask questions about how parts and each system operated, then started picking up tools to help repair the vehicles. "At the age of 16 I decided I wanted to work with my hands and do something different than most and that was repairing aircraft."

McHargue attended Vincennes Aviation Technology Center in Indianapolis, IN, and received her A&P in 2003. After getting hired on at a local MRO, she attended Embry-Riddle Aeronautical University obtaining a bachelor's degree in technical management. She belongs to the AWAM Louisville Chapter and Women in Aviation International.

She began her aviation career at a local FBO working on flight school aircraft performing 100-hour engine inspections right out of A&P school. Then she went to AAR Aircraft Services where she moved into a lead technician role after three years as a technician. After obtaining her undergrad degree and attending her first Women in Aviation Conference in 2008, she moved to UPS. She is currently an aircraft maintenance control supervisor which includes monitoring out of service aircraft and irregulatory events and being a liaison between engineering, materials, tooling, and line maintenance including coordinating movement of required parts.

Nominated by Stella Burton, AMT, UPS: I met Candice 13 years ago while working heavy maintenance at an overhaul facility. She hired on at UPS as a line maintenance supervisor. She has demonstrated great leadership skills in various departments including the Line, Safety Committee, and Maintenance Control. In Maintenance Control, she would oversee and coordinate with dispatch and planning on MEL and CDL procedures and status. On the Safety Committee she made safety improvements in her operation and has helped mechanics by improving task cards and engineering orders to better assist them."

To give back to the industry she established the Louisville AWAM chapter in 2012. She is currently vice president of the chapter and coordinates hangar tours at UPS with the local schools in her community. "It's a way to recruit the next generation of aviation engineers and aircraft mechanics."

In the future she would like to expand her responsibilities as a manager. "Job enrichment will allow me to develop and expand my abilities and build more productive relationships with people inside and outside of UPS." Targets include becoming a division manager and eventually director of operations.

Lambros Floros, 28, Manager, Aircraft Maintenance, Envoy Air, Niles, IL

From a young age, Lambros Floros was fascinated with airplanes and the mechanics of flight. He spent a lot of time at the airport with his dad watching takeoffs and landings.

Floros received his A&P and bachelor's degree in aviation maintenance management at Lewis University. He also completed Embraer 140/145/175 and CRJ 700 familiarization courses, GE CF34-8C/E, Rolls-Royce AE3007A, Principles of Troubleshooting, Train the Trainer, Check Runman, and various leadership courses with Envoy. He also received E-175 training from Embraer trainers and became a subject matter expert and helped with the transition of the new aircraft to the fleet.

In October 2013, he joined Envoy as a mechanic focused on Embraer 140/145 and CRJ 700s. This year he was named manager for aircraft maintenance which includes the entire Chicago maintenance hub operation of 140 mechanics, crew chiefs/tech crew chiefs, 12 supervisors, and 70 aircraft with 200 flights a day.

Nominated by Minnette Velez, Communications Specialist, Envoy Air: "From the beginning, Lambros Floros was known as an exceptional mechanic. His aircraft knowledge and troubleshooting ability were many years beyond his experience level. In his current role as manager on duty, he continues to do a great job working problem aircraft in the hub to keep our airline operating on time with minimal disruptions to our customers.

Floros is always willing and able to help out his team and spends quality time during the day working with the crew chiefs and line mechanics to quickly resolve maintenance issues on quick aircraft turnarounds. During his time as an administrative supervisor, he worked tirelessly to strengthen the tooling inventory, working closely with avionics technicians and technical crew chiefs to ensure the aircraft maintenance tooling needed to improve our ability to troubleshoot and fix maintenance issues on our fleet was readily available. He's also been instrumental in the acquisition of new equipment to make our operation more efficient. Through his contribution, he supported the development of a new training tracking program and the creation of a new training management office."

Floros gives back to the industry by being a mentor to new supervisors and mechanics that are hired for Chicago. "I take them under my wing and help them to navigate their own success. I try to facilitate positive working relationships amongst my team and the many other workgroups we interface with daily.

"My career goals are to continue to grow, learn, and be a good mentor. If I can help just one person, that's a success."

William Villanueva, 39, AMT Instructor, Aviation Institute of Maintenance, Chesapeake, VA

William Villanueva has always loved watching jets in the sky. He lived next to an outlying airfield where the Navy would practice their touch and go. He joined the Marine Corps to be an aircraft mechanic. "The love for working on and with aircraft always stuck with me even after I got out of the Marines."

He received his aviation training from the Aviation Institute of Maintenance in Chesapeake, VA. One of his mentors is Jerry Lee, a maintenance instructor. "His teaching style kept you attentive and eager to learn. When I went from student to peer he helped me to become a good instructor and whenever I needed help again he was always there to lend a hand."

While in the Marines, he was a shift supervisor and shop inspector, quality assurance inspector, in flight trouble shooter, aviation gas free engineer, joint oil analysis technician, and shop supervisor. Currently he is an AMT instructor at Aviation Institute of Maintenance in Chesapeake, VA.

Nominated by Timothy Murray, Program Coordinator, Aviation Institute of Maintenance, and 2017 *AMT* Next Gen Award Winner: "William Villanueva is the kind of person who not only has a talent for aviation maintenance, but also has the ability to inspire others within the field. William came to the Aviation Institute of Maintenance in order to pursue his love for aviation maintenance in the private sector. His ability to break down complex systems, and to simplistically convey the science behind aviation maintenance technology proved a valuable asset to his fellow students. Today, Will is a teacher at the very same school he once attended. His creativity coupled with his talent for inspiring others has made him very popular among the student body. Will employs competitive games, visual ques and props, and a blend of Marine Corps discipline and humor to teach future mechanics in the field of aviation maintenance. His students applaud his methods to make class fun, including using a homemade flag that he throws to denote incorrect answers, in much the same way a referee uses a flag in a game of football. The skies are safer today because William Villanueva has taken on the responsibility of making sure future mechanics are just as capable as he is."

He gives back to the industry by instructing future aviation mechanics.

As for future goals, Villanueva wants to work in general aviation, and on fabric and wooden aircraft, refurbishing the old aircraft.

Adrian Rothrock, 39, Campus Executive Director, Aviation Institute of Maintenance, Kansas City, MO

Adrian Rothrock didn't start out looking for a career in aviation. It found him. "I wanted to find a place where I could grow and at the same time help people. Aviation Institute of Maintenance has done that for me for the past 10 years."

Over his career Rothrock has worked with many different people that have had an impact on him. "I remember them all fondly for what they gave me. They probably don't even realize it. As simple as it is, one important thing to do is listen. If you are reading this and know me, I have probably kept something you have said to me close to me. For that I am thankful."

Rothrock started at Aviation Institute of Maintenance (AIM) in admissions, spent two years as a director of admissions, and the last seven years as the campus executive director. He is responsible for the operations of the Kansas City campus.

Nominated by Daniel Dappen, Retired SMSgt/Aircraft Mechanic, U.S. Air Force: "Adrian's think outside the box and innovative thinking allowed him to construct a five-week Professional Military Certification Course (PMAC) at the Kansas City AIM school. This program takes the military aviation mechanic's hands-on experience and streamlines the A&P certification process allowing military aviation mechanics to earn their A&P certification in as little as five weeks. Over the past year Adrian has set up this program across four U.S. Air Force bases and is working to expand to other bases over the next year. His mentorship and leadership has paved the way allowing over 80+ military students to earn their A&P certification bridging the gap between the military and the civilian community. Adrian is committed to ensuring that all military aviation mechanics have a chance to earn their A&P while serving their country. His contribution has opened doors and opportunities for many transitioning military personnel when it comes to quality of life and securing jobs in the aviation industry because of this program he introduced. Adrian is passionate about producing and maintaining highly qualified aviation mechanics and the aviation community will continue to strive because of his commitment and devotion. I believe Adrian is truly a pioneer in this industry not only for the civilian sector but for the military side as well."

Rothrock's career goal is to continue giving individuals pursuing their A&P a "high quality education at Aviation Institute of Maintenance, and have students proud of their choice to study with us."

Michael Janik, 22, Aircraft Maintenance Technician, Exec Aero, Orlando, FL

Michael Janik started out by working at his uncle's avionics shop, Palm Beach Avionics, in South Florida when he was a small child. "I worked there during the summers when I was in school. While in high school, I completed my private pilot certificate. I moved to Orlando to pursue an engineering degree but decided engineering wasn't for me. I recently completed my A&P and now work as a certificated technician. Throughout this process I have gained many mentors through the airport, every one of them bringing something different to my career."

While at Flight Training Professionals, Janik created a seminar for students to learn about aircraft systems in depth. His two-hour course starts with the very fundamentals of the four-stroke combustion engine and builds into how the rest of the airplane works around supporting this power system. "I no longer work at FTP in the conventional sense, but I do put on the seminar on occasion to teach the next round of students they have coming through. The class is designed to teach any level of pilot, from private to CFI, and I enjoy bridging the gap between pilots and mechanics (since I try my best to speak both of their languages!)."

Nominated by Nathan T. Marler, General Manager, Exec Aero LLC: "Michael Janik has a great dedication to aviation. Initially he gained his private pilot certificate. Michael then entered the Exec Aero LLC's aircraft mechanics apprenticeship program. Recently Michael gained his A&P certificate. While enduring the riggers of the apprenticeship program, Michael has gained additional education from DAHER and Cirrus Design as well as practical experience from working on the vast array of aircraft that pass-through Exec Aero LLC. These aircraft are anything from LSA category to King Air and even the all new Cirrus Vision Jet. Along with the practical mechanical knowledge Michael has also gained a working knowledge of Garmin G1000 and G3000 systems as well as the more traditional style of avionics. While in the apprenticeship program Michael also worked at Flight Training Professionals which was the recipient of AOPA 2016 Flight School of the Year award. All of this by his 22nd birthday. Michael is a valued team member and is currently mentoring other apprentices while continuing to gain in his aviation knowledge."

Janik's next goal for his aviation maintenance career is to enter into the airline industry. "The airlines are the reason I was so fascinated by airplanes at a young age. I feel that the airlines have something to offer for everyone, and I'd like to explore my options and find out where I fit in best."

Kevin Ketterer, 38, Vice President of Technical Operations, Via Airlines, Maitland, FL

Kevin Ketterer's father has been in the aircraft maintenance industry since the late 1970s. "Growing up in Minneapolis, MN, I really enjoyed visiting the numerous Northwest Airlines shops and hangars. They used to have a "bring your child to work" program that made a real difference in my career path."

Ketterer attended Northland Community and Technical College in Thief River Falls, MN. He says that right out of A&P school "I learned the ropes from the more experienced mechanics I worked with."

He started as a line mechanic at Ryan International Airlines in Minneapolis, and quickly transitioned to the position of 727 flight mechanic. Post 9/11 he relocated to STL, ATL, DFW, and MCO working charter/DOD contracts. In 2004 he decided to take a chance on a very young airline: JetBlue Airways. In 2013 he was promoted to maintenance supervisor. He also worked at Allegiant as a maintenance supervisor, and then AAR Miami as a shift manager. Presently he is the vice president of maintenance/119 director of maintenance for a Part 121 carrier, Via Airlines in Orlando, FL.

Ketterer has received the FAA AMT Ruby Award in 2004 and 2007 and the Diamond Award in 2015. He has attended specialty training classes from Airbus, Boeing, International Aero Engine, numerous Honeywell classes, and many others.

Nominated by Amos Vizer, Chairman, Via Airlines: "Kevin joined Via Airlines as the director of maintenance for our EMB120 fleet. Kevin quickly earned the respect of the FAA and fellow managers by working very long hours, attention to detail, and forward thinking solution-oriented approach. This feedback was brought to my attention with the recommendation to promote Kevin to vice president of technical operations of the whole organization. Kevin has excelled beyond any level of expectation by significantly improving fleet reliability, reducing cost by almost 25 percent, improved safety, clear communication, and stronger relationships with the FAA. There is no one else I have ever encountered that has made an impact as Kevin has, not even people 20 years older. Kevin has proved that talent, dedication, desire to learn, and hard work are the valuable tools a person needs to make a true effect on an airline and the whole industry."

His career goal: "To continue to be an advocate of both safety and integrity, and to continue to learn, network, and grow professionally."

Euan King, 35, Technical Supervisor, StandardAero, Almondbank, Perth, Scotland

Euan King was previously a mechanic for Jaguar/Land Rover. He has always been interested in aviation and was looking for career development. "I needed to find a better work/life balance. Working at StandardAero (previously known as Vector Aerospace) provides the challenges I seek but allows for that balance."

He joined Vector Aerospace in 2012 and was involved in activities such as the Improving Quality (IQ) Steering Group which helps to monitor and identify any potential issues with the work area. King worked to promote company values throughout the workplace and was also part of the continuous improvement team which strives to make beneficial changes to processes/procedures in the workplace. King was appointed fuels and propellers technical supervisor in 2015. He is responsible for the day-to-day activities of 20 technicians who repair and overhaul the various fuel components and propeller assemblies international and inter-site customers.

Nominated by Kerry Howard, UK HR Director, Vector Aerospace: "Euan was well suited to this new challenge [moving into aviation]. On joining Vector Aerospace, Euan was able to use his transferable skills and his enthusiasm for learning. His [current] responsibilities include working with departments such as planning, procurement, technical support, customer service, and quality to ensure the timely completion of work for customers. Euan enjoys the varied aspects his role provides. This includes financial oversight, people management, and mentoring apprentices within his section. In August 2017, Euan embarked on a Business Improvements Techniques NVQ and is currently working toward achieving this qualification. The techniques he is learning will help him to further implement improvements in his work area.

One of these recent improvements, delivered in 2018, has been the move of the fuels components section within the facility. Euan helped create a work shop floor layout and liaised with facilities and information services teams to ensure a quick and successful move of all workshop equipment."

In the role of mentor, King works closely with StandardAero's current apprentices and continues to provide a mentoring role to the company's graduate apprentices and technicians.

"Looking to the future I would like to become more hands on in the (changing) Almondbank Apprenticeship Scheme, developing and mentoring talent within the industry," King says. "I would like to become involved in things such as STEM events and career fairs which would help to encourage young people into the aviation and engineering industries."

Henry Locher, 36, Vice President of Operations, AAR Landing Gear Services, Miami, FL

The ever-changing environment and challenges are what drew Henry Locher into aviation.

Jesus Banal, vice president of operation and general manager of AAR Landing Gear Services, was his mentor.

Locher started at AAR Landing Gear Services in 2010 as a business intelligence analyst. He built his career around production and soon became the director of operations and he was in charge of the planning department and overseeing critical aspects of the production system. In 2017, he was promoted to his current position of vice president of operations, and he is in charge of leading the production, planning, and supply chain of the landing gear overhaul facility.

He attended the University of Miami, Universidad Metropolitana, Villanova University, and received additional training at AAR Corp. He focused on production engineering at Universidad Metropolitana, received a master's degree in industrial engineering from the University of Miami, and achieved Lean Six Sigma Black Belt at Villanova University. He belongs to the University of Miami, Center for Advanced Supply Chain Management.

Nominated by Scott Ingold, Vice President and General Manager, AAR Corporation, Landing Gear Services: "Henry Locher joined AAR Landing Gear Services in Miami in 2010. He was tasked with creating business intelligence tools to help us run our business more effectively and efficiently. This eventually led him into identifying better production systems and moving the operational philosophy away from the classical push and expedite. He was able to develop a proprietary software that drives all internal operations and support external ones critical to operational success. His commitment to employee safety is unwavering and with our growing operations he has helped start apprenticeship programs to continue to train critical skillsets for our industry."

To give back to the industry Locher mentors and makes time for people in the industry. "I'm currently mentoring my successor and hopefully I can teach him everything that Jesus Banal taught me throughout my career in the aviation industry."

His short-term career goal is to increase professional knowledge and training. "I would like to get aviation certifications and keep improving my management skills while in my current role. Long-term, I would like to keep growing inside AAR and achieve a leadership role as general manager in AAR Landing Gear Services or another management opportunity that would continue to expand my skillset."

James Logue, 29, General Manager, Desert Jet Maintenance, Thermal, CA

Growing up in Marshfield, MA, James Logue was fascinated with aviation. He would hang out at the FBO just to talk to pilots and watch airplanes. He started taking flying lessons in high school but really enjoyed fixing cars and electronics so he chose aircraft maintenance as a career path.

Logue received his training from the National Aviation Academy. He has achieved the FAA AMT Award each year of his career and received the Gold Award twice. Advanced training includes Challenger 300 and Embraer Phenom and Legacy maintenance training, along with Rockwell Collins and Honeywell avionics training.

Logue started working in a GA avionics shop after getting his A&P and FCC licenses. He worked for Bombardier as an avionics technician in the KBDL service center for two years before going to Embraer. Then he worked for Air Bear Aviation performing AOG maintenance. He now works for Desert Jet Maintenance as the general manager, with responsibilities to expand the business and ensure that maintenance is accomplished in a safe, efficient, and profitable manner.

Nominated by Chris Little, Chief Marketing Officer, Desert Jet: "James Logue has been instrumental to the growth of Desert Jet's Maintenance business. He has doubled the staff, hiring talent within the local area and has developed strategic relationships for continued growth. James has instituted processes creating efficiencies to save the company money and reinvested back to incentivize and reward his employees. Through James' leadership and his commitment to training and safety, Desert Jet Maintenance has been awarded the coveted FAA Diamond Award of Excellence for the first time. James is an innovator, motivator, and enthusiastic individual dedicated to his craft and elevating his team's expertise and performance. His commitment to continuous improvement is a testament of his many successes, both personally and for the companies he has been employed by. He has earned the coveted Desert Jet "Awesome Award" in recognition of his accomplishments and dedication to going above and beyond for his team, company and/or customers."

He enjoys mentoring new technicians and has also been a part-time Part 147 instructor.

Logue's career goal is to grow and expand Desert Jet Maintenance. "We have grown a lot in the past year so my goal is to keep the momentum going and grow Desert Jet Maintenance into a major player in the industry."

Travis Morse, 37, Chief Inspector, Best Jets International, Minneapolis, MN

Travis Morse comes from a long line of aircraft maintenance technicians: his father and grandfather both were A&Ps and retired from Northwest Airlines, and his other grandfather retired from Garrett Aviation as a tech rep.

Morse graduated from Northland Community and Technical College in 2003 with his A&P. He received his IA in 2009. Advanced training includes courses at FlightSafety: Gulfstream 550 Master Technician, Gulfstream G200, Avionics Honeywell Epic, Rockwell Collins Proline 4, Falcon 900EX EASy Master Technician, Falcon 900A, B&C, Falcon 50, Bombardier Challenger 300, Challenger 300 avionics, and Bombardier CRJ 200. He has also achieved Level 1 eddy current and liquid penetrant status.

He started at Pinnacle Arlines as an avionics technician and maintenance technician, then moved to Jetchoice as a maintenance supervisor/inspector. Currently he is chief inspector for Best Jets International. His job includes overseeing calibrated tool and tool control processes to ensure compliance; determining schedules and assignments for work activities that are based on work priority, quantity of equipment and skill of personal; scheduling inspections and unscheduled maintenance at service center; and assisting the director of maintenance with any assigned tasks.

Nominated by Michael D. Victor, Director of Maintenance, Best Jets International: "Travis is the Chief Inspector for Best Jets International 135 charter aircraft including the 10 passenger or more aircraft. He is responsible for all the inspection criteria for our fleet of eight aircraft. Travis has an exceptional relationship with the MSP FSDO maintenance principal inspector. Travis has shown his knowledge and organization skills during our FAA, Wyvern, and Argus audits on the inspection requirements. He has been instrumental in contributing to the required 135 Continuing Analysis, Surveillance Program (CASP) requirements and in helping with our SMS program. Travis conducts all our on-site audits of the maintenance avionics and parts vendors we use. Travis monitors aircraft when they have been in major maintenance events at our approved vendors as well as keeping cost down and reviewing final invoices. Travis is an asset to Best Jets International as well as making my job a lot easier. He has my full trust with his capabilities in troubleshooting aircraft systems and his decision making concerning the aircraft released back into service. Travis assists me with writing aircraft MEL's and input when the General Maintenance Manual needs any revisions."

Morse's career goal is to be a director of maintenance for a reputable company.

P.V. Supun Nirmal, 25, Civil Aviation Inspector, Civil Aviation Authority of Sri Lanka

P.V. Supun Nirmal's father was working in SriLankan Airlines catering services, and their house was located near the airport, so he had a good view of aircraft from an early age.

Nirmal graduated with a degree in aeronautical engineering at General Sir John Kotelawala Defence University, Ratmalana, Sri Lanka. Currently he is working on his master of business administration for London Metropolitan University MBA at ESOFT, Sri Lanka. His first job in aviation was at SriLankan Airlines as an engineering intern in the engineering department. Then he advanced to Fits Aviation as a junior aircraft technician in the engineering department. Currently he is a civil aviation inspector for the Civil Aviation Authority of Sri Lanka.

"I love my work and I have a passion to it. So when there is a new task, I'm up for it. I take it up as a challenge. Also in my life, meeting with people, I have learnt that what you have, you can share."

Nominated by Ganesan Jeyapalan, Aircraft Engineer (Rtd), British Airways: "I have known Supun Nirmal for the last four years and found this young man to be very keen and very much interested in aviation. He is mainly interested in planning, maintenance practices, and aircraft engineering. His enthusiasm and immense interest in aviation is adorable and admirable. I am sure one day this young man will achieve a very high standard in the field of aviation."

Nominated by Weeramuni Arachchige Jagath Rupasiri, Aircraft Engineer/Instructor, Cinec Maritime Campus, Malabe, Sri Lanka: "P.V. Supun Nirmal has carried out many maintenance activities under the supervision of licensed aircraft engineers/qualified technicians. He is very good at aircraft documentations and contributed immensely in preparing scheduled and unscheduled maintenance documentations for Cessna 152. He is a hardworking technician who works with great commitment and enthusiasm. Currently he is trying to build up an Aviation Club and make use of his knowledge and share it with the younger generation."

Nirmal is currently the director of administration (2018/2019) at the International Youth Alliance for Peace (IYAP), a youth-led volunteer organization.

Nirmal's short-term goal is to work to his potential in a challenging, dynamic, and diverse environment, enhancing his professional skills in the field of aviation engineering. And his long-term goal is to be in a respectable position in that organization while making a positive and effective contribution.

Shawn Peterson, 33, Lead Aircraft Maintenance Technician, Sky Quest, Cleveland, OH

Shawn Petersen's introduction to aviation was the typical story, "When I was very young I went for a ride in a Cessna 172. I'm scared of heights, but when we lifted off I had that incredible weightless sensation as I looked out the window and saw earth getting smaller. I was instantly hooked."

Petersen has had many mentors through the years but the most influential was his father. "Growing up on a farm I was always helping my dad work on equipment. He helped me develop troubleshooting skills along with knowledge on how to use tools."

He received his training from Michigan Institute of Aviation and Technology. Advanced training includes familiarization courses for Hawker 125 series aircraft and EMB 135/145 and the NBAA Professional Development Program for successful leadership.

He worked at a repair station in Columbus, OH, doing heavy checks on EMB 135/145 and EMB 175. He became run/taxi qualified on both aircraft and would help train new individuals on the operation and taxi of the aircraft. From there he went to Cleveland and Nextant Aerospace. There. he learned sheet metal skills and made parts, installed parts, performed R&D, developed a system of how-to's, and ran the pylon build on newly designed aircraft. He is currently a lead aircraft technician for Sky Quest where he is assigned five Hawker 800/850/900XPs and a 400A Beechjet. He is responsible for scheduling, performing, or quoting maintenance.

Nominated by Cole Goldberg, Business Development, Sky Quest: "As the company grows, Shawn continually takes on more roles, helping new mechanics learn the company's ways, new software, and different techniques, with patience and a genuine desire to see new hires learn and succeed. Shawn strives to service his aircraft with the utmost safety, handling both scheduled and unscheduled maintenance, while guiding his line technicians to learn and grow with the company and the fleet. While saving the company and aircraft owners money, Shawn personally ensures that all work performed is up to company standards."

Petersen enjoys talking with people that may be looking for either a career out of high school or a change from what they're currently doing. "Aviation is an exciting and challenging field and I am happy to share my knowledge and experience. We as A&Ps need to try and recruit as many go-getters as we can find."

Petersen hopes to continue to excel as a lead technician, and potential director someday or maybe consult on aircraft sales and acquisitions. He would like to "become less hands on with maintenance and instead take more of a management role."

Mark Saretsky, 32, Site Director Components Everett, Aviation Technical Services, Everett, WA

Mark Saretsky's family has been involved in aviation his entire life.

Saretsky's grandpa loved to fly and he passed along his extreme passion for flight. "I knew from the time I was 5 years old that I wanted to be involved in the industry. Every moment I had I was focused on something related to aviation."

He received a bachelor of science in aviation management at Central Washington University and his MBA from Seattle University in 2016. He has achieved Six Sigma Green Belt Certification and Six Sigma Black Belt Certification at Alaska Airlines.

He worked as a customer service agent for Alaska Airlines while attending Central Washington University. After graduating, he transitioned into process improvement with Alaska Airlines. In 2011 he took on the role of productivity engineer at Aviation Technical Services and focused on projects in component services group and learning about the MRO business. His current position is the site director for the components facility in Everett, WA, which includes management of the P&L and the operations group.

Nominated by Mike Beck, Senior VP/Executive Advisor, Aviation Technical Services: "Over the last five years Mark has been instrumental to the success of our components business by streamlining the organizational structure, reducing costs, and ultimately increasing revenue by 50 percent while doubling site profitability.

As a result of his creativity and leadership, Mark was promoted to site leader in 2017, making him the youngest site leader in ATS by more than a decade. Mark also designed, built, and implemented an electronic work order system from scratch. Mark was able to obtain FAA approval for electronic sign off within the system, which allowed us to have a paperless, accurate clean work order document for our operations group and our customers."

Nominated by Nick Heminger, Senior Manager, Safety Management Systems, Aviation Technical Services: "It is safe to say that with his father as airline senior executive, two uncles and a grandfather who were commercial pilots, and an aunt who was a flight attendant, aviation is an established gene within Mark's DNA. Mark was instrumental in streamlining key processes to minimize waste and create more value for our customers."

To give back to the industry, Saretsky works closely with Central Washington University to recruit new graduates into roles at Aviation Technical Services.

"My career goal is to focus on driving excellent value by leveraging new technology solutions and building customer and supplier partnerships."

Eric Sorensen, 36, Engine Line Team Leader, Duncan Aviation, Provo, UT

Eric Sorensen was always interested in the mechanical aspects of cars, motorcycles, and anything else with an engine, which lead to his aviation career.

After high school he attended Colorado Aerotech (Westwood College of Aviation Technology), and earned his A&P and associate degree. Advanced training includes Duncan Aviation's leadership programs; FAA Gold and Silver training certificates; Honeywell LTS 101, TFE 731, and HTF 7000 line maintenance certificates; factory training on Lear 45 and 60 and Gulfstream G200; and line maintenance certificates on GE CF34, Pratt & Whitney 300 series, and Rolls-Royce Tay 611 and BR 710.

His parents have supported his decisions, and were always there to offer encouragement. In his aviation career, mentors include Bill Prochazka, COO at Duncan Aviation; David Anderson, assistant chief inspector; David Cordova; and Chad Doehring.

Sorensen began his career at Intermountain Turbine Services as a helicopter engine technician moving up to shop foreman. He started with Duncan Aviation in December 2010 on an engine Rapid Response Team in Scottsdale, AZ. His current position is engine line team leader. He heads up the engine program in Provo, and is responsible for all engine-related maintenance on a wide variety of business aircraft.

Nominated by Chad Doehring, Vice President of Aircraft Services, Duncan Aviation: "Eric's mechanical abilities, along with his inherent leadership skills, catapulted Eric to his current position of Team Leader within the Airframe Department. Eric's contributions have impacted both the company and our team members immensely. Eric's "can-do" attitude and methodical approach have made a positive impact on our quality of work performed, level of service provided, and dedication to our customers. Eric's variety of talents as an aviation professional has allowed him to build several successful aircraft maintenance teams."

To give back to the industry, Sorensen is on the Utah State University Aircraft Maintenance Advisory Board. He provides feedback to the college, and Duncan Aviation has hired a number of employees from the school. He's also been involved with a number of aviation maintenance career fairs at Utah State University, Salt Lake Community College, and Pima Community College.

Sorensen's career goal is to provide leadership at all levels to assist expansion efforts in Provo and provide exceptional customer service. Beyond this current challenge, his leadership efforts will be directed toward making Duncan Aviation and the Provo operation a world-class facility.

John Coty Stiltner, 34, Customer Account Leader, StandardAero, Maryville, TN

John Coty Stiltner joined the U.S. Air Force in 2007 where he began his aviation career.

His mentor is his father, Randy Stiltner. "Although he did not work in the aviation industry, he did instill a great sense of hard work and responsibility which has allowed me to be successful."

He received his initial aerospace propulsion training through the U.S. Air Force at Lackland Air Force Base, Wichita Falls, TX. He received an associate's of applied science degree in aerospace maintenance technologies from the Community College of the Air Force and a bachelor's of science degree from Liberty University in interdisciplinary studies: aviation and natural sciences.

His career has taken him from the U.S. Air Force, to 414th Air Reserve Unit supporting the F-15E Strike Eagle's F100 powerplant, the West Virginia Air National Guard's 130th Airlift Wing supporting the C-130 Hercules T56 engine to Kay & Associates Inc. as an aerospace engine mechanic. Stiltner currently holds the position of customer account leader for StandardAero. He maintains daily communications and overall relations with roughly 30 customer accounts worldwide.

Nominated by Alex Youngs, Director of Sales and Marketing Business Intelligence. StandardAero: "Since August 2015, Coty has served as customer account leader at StandardAero's Maryville, TN, facility. In this role, Coty has provided leadership to his APU support team, acting as a liaison between the customer and StandardAero's operations, engineering, and materials teams. Coty has quickly become a core member of the Maryville team, bringing deep technical insight and a strong project management skillset, combined with excellent customer rapport. Coty's strong work ethic is matched by his contributions back to the community: a long-time athletic coach and mentor, Coty currently volunteers as a wrestling coach at a local school. Coty has also volunteered at various animal shelters. During his active USAF service, Coty also volunteered as a member of the Langley AFB Honor Guard, eventually being appointed as flight commander. During his 11-year career, Coty has earned a reputation for technical excellence, business acumen and strong leadership."

"I believe I provide a service to the aerospace industry that is based on experience and hard work. I have worked my way from a basic aerospace engine mechanic to an experienced maintenance professional and account leader for various customers around the world today."

Stiltner plans to pursue an advanced degree to assist in his advancement.

Elizabeth Tilden, 39, General Manager, Airframe Supplier Operations, Delta Air Lines, Atlanta, GA

Aviation is in Elizabeth Eli Tilden's blood, literally. Eli's father is a pilot, and her sister is a flight attendant. And her husband, Scott, works in technical operations and hopefully her two boys will follow the family tradition.

Mentors include John Goglia, Mike Lane, Gary and Mary Ann Eiff, and Denver Lopp.

She received training from Orange Coast Community College (A&P), has a bachelor's of arts from the University of California - San Diego, and a master's of science degree from Purdue University School of Aviation in industrial technology with a focus on human factors management.

Eli's career has spanned several transportation areas, such as helicopters, general and business aviation, railroads, the National Transportation Safety Board (where she served under the Honorable Board Member, John Goglia), and several Part 121 air carriers. She's been with Delta Air Lines for the last 10 years, and currently serves as the general manager, Airframe Supplier Operations. The division is responsible for over 400 maintenance events for the 860+ aircraft in Delta's fleet.

Nominated by Jim Hickey, Program Manager, ODA Engineering, Delta Air Lines: "Eli has a passion for safety and the aviation maintenance business. Her personal experiences of loss and tragedy, resulting from aircraft-related incidents, drive her pursuit to minimize risk in the maintenance ecosystem. One of her trademarks is combining data innovation in the airframe operation. For example, her projects have driven practices that make the AMTs more safety-minded, create a stronger reliability program, and allow for predictive indicators of aircraft condition. While Eli's career in aviation has been rewarding, she recognizes that it came with many challenges.

Specifically, it was and still is, male dominated. Additionally, she believes the interest for the career field is waning. Nonetheless, Eli is optimistic and hopeful about the future and the changing landscape. She is grateful to have had amazing mentors and companies with innovative and inclusive cultures (such as Delta Air Lines), who have given her the opportunity to grow into the leader she is today. She hopes she can pay it forward, and do the same for the next upcoming generation of aviators."

To give back to the industry she is a mentor in several Delta organizations. Tilden has taught at Purdue University, a Part 147 school. And she has published several academic papers, and has been a speaker at SAE and MRO conferences.

Her career goals are "to create an environment where amazing things can happen every day."

Devin Watson, 29, Supervisor, Plane Safe Aircraft Maintenance, Waukesha, WI

Devin Watson's motivation in aviation started as a kid, he always wanted to fly airplanes and understand how they worked. His aviation career started in the Air Force and continued as an A&P shortly after.

Watson's current mentors are Sam Cryer and Bill Polachek.

Watson received most of his training while in the Air Force but got his A&P through the aviation program at Milwaukee Area Technical College, ran by John Prybil and Mark Mohen. He is a Rotax certified mechanic and works on various light sport aircraft. As for industry recognition, he received an accommodation while in the Air Force for aviation maintenance. He has taken Cessna 210 courses and plans to attend Continental and Lycoming training. Watson has a broad mix of aircraft experience including turbine and enjoys learning something new everyday.

Currently he is supervisor at Plane Safe Aircraft Maintenance. He works in general aviation and also on some transit corporate aircraft. The facility maintains several planes associated with Warbirds of America, as well as planes for the Commemorative Air Force. His day-to-day activities consist of mostly general maintenance.

Nominated by Samuel K. Cryer, President/Owner, Plane Safe Aircraft Maintenance: "Devin started working at Plane Safe even before he received his license. As of February 2018, he has earned his Powerplant and is scheduled for his Airframe. Devin has exhibited an earnest interest in all aspects of aircraft maintenance. Devin truly loves aircraft and the people who fly them. Devin was promoted to supervisor and all mechanics report to him in the absence of the director of maintenance. Devin is given the list of priority aircraft and he determines how the aircraft get completed. Devin interjected himself into a higher level meeting and when quizzed on why, he simply stated "Well, I have to know how to deal with situations so when I take over (the business) I will be ready." Devin is a instrumental part of my business and he has already earned the respect of our customers after only a year and a half of employment."

His future plans are to obtain his pilot's license, own the company he currently works for, and continue to grow his knowledge. He plans to join the CAF and continue to volunteer his time to the Warbirds of America. "Aviation has always been a passion and I am glad I have worked in a manner to get me to this point," Watson says.

Imran Zaverl, 28, Repair Technician, GE Aviation, Loves Park, IL; Student, Rock Valley College

Imran Zaveri was motivated to get into the aviation industry because of the "opportunities to work with cutting-edge technology, learn a diverse technical skillset, and because I find airplanes fascinating."

Mentors include instructors at Rock Valley College: Greg Heckmann, Elroy Hilbert, and Todd Morgan.

Zaveri is currently receiving training to obtain his Airframe and Powerplant licenses at Rock Valley College in Rockford, IL. He has received numerous scholarships from Association of Women Aviation Maintenance (AWAM), Aircraft Electronics Association, and Rock Valley College Foundation. He is a member of the Experimental Aircraft Association and Aircraft Owners and Pilots Association.

Currently, Zaveri is a repair technician at GE Aviation in Loves Park, IL. He inspects, disassembles, assembles, and tests field commercial aviation components. Previously, he was an inbound receiving inspector and shop technician at AAR Aircraft Services in Rockford, IL.

Nominated by Greg Heckman, Aviation Maintenance Technology Instructor, Rock Valley College: "Imran has been an excellent student, both in the academic and hands-on portions of our curriculum. It is obvious with Imran that he just doesn't want to learn the material, but dig deeper to gain a greater understanding. He often asks questions or seeks advice to be more prepared for his work as an aircraft technician. During both semesters completed so far he has achieved a 4.0 GPA. Outside of school, he has been active in the aviation industry and currently works full time as a second shift repair technician at GE Aviation. Prior to this, he held positions as a shop technician and shipping and receiving clerk with AAR in Rockford, IL. In these positions he has diligently applied the same meticulous skills and strong work ethic demonstrated in school."

Zaveri is active in the local aviation community and inspiring the next generation of aviators. This includes being involved in local EAA chapters (22 at Cottonwood Airport and 1414 at Poplar Grove Airport). In 2017 he volunteered at EAA AirVenture and assisted with running a Redbird P-51 Mustang simulator to give children the experience of flying a classic warbird.

His short-term goal is to gain as much experience as possible flying, maintaining, building, and modeling aircraft. He would like to work as a powerplant, composites, or avionics technician for GE, be part of the cutting edge of aerospace technology, and obtain a degree in engineering or physics.

Emmeline Watson, 36, Certification Coordinator, Duncan Aviation, Lincoln, NE

"Engineering is about load, geometry, and material properties. If you know these three variables," Emmeline Watson says, "you can apply your math skills and solve virtually any problem. I love to solve problems and have applied my engineering skills to crack growth, vehicle dynamics, pavement design and large building structures, but never airplanes. When the opportunity arose to join the Duncan team I jumped at the opportunity."

Mentors include Dr. Roberto Soares from grad school, and Jeannine Falter, Don Shaffer and Tracy Bohaboj from Duncan.

Watson received her bachelor of science degree in civil engineering from the Federal University of Ceara in Brazil. From there, she achieved her master of science degree in engineering mechanics from the University of Nebraska-Lincoln. Watson has also taken FAA Part 21 training.

She started at Duncan in a temporary, entry-level structural engineer position and was later promoted to a full-time position and then Engineer II. For the last year, she's been working as a certification coordinator, where she manages and coordinates engineering and certification projects.

Nominated by Tracy Bohaboj, LNK Engineering Team Leader, Duncan Aviation: "Since joining the Duncan Aviation team, Emmeline has embraced the aviation industry and has personally sought out mentors in the business to expand her knowledge base. As a result, Emmeline continues to excel in her current role and is routinely tapped to work on special projects, some of which include international travel. Her passion for her work and love of the industry keeps her well connected with student groups and professional organizations. Emmeline is the first to volunteer to address youth organizations interested in engineering and aviation to empower them to enter a STEM career field. Her determination and positivity are infectious, as is her desire to empower youth of all backgrounds to pursue a career in engineering, or other STEM career fields."

For the last few years, Duncan has partnered with the University of Nebraska Math Department, and hosts an event for high school girls from all over the United States for UNL's math camp. During their visit to Duncan, they are presented with "real-world problems" where the girls need to apply the math concepts they've learned. Watson serves as a panelist, for STEAM discussions at local high schools, universities, and colleges. "I love my field, and love sharing this passion every chance I get."

As for the future, Watson intends to "keep learning everyday from this amazing field called aviation."

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This year's *AMT* Magazine annual class of Next Gen Award winners includes young professionals from five ARSA member companies

FOR THE FOURTH TIME, *AMT* MAGAZINE IS celebrating an annual class of Next Gen Award winners — young men and women whose commitment to their work, involvement in the industry, and professional achievement make them worthy examples of the aviation community's bright future.

As always, this year's winners include some of the best young talent from organizations connected to ARSA membership: Henry Locher, AAR Landing Gear; Peter Morelli and Randall Arnold, Airborne Maintenance & Engineering Services; Christian Ludwig, MTU Maintenance; Maarten de Haas, AFI KLM; and Keilah Bias, StandardAero.

Each year, my colleague Brett Levanto — a 2015 Next Gen Honoree — uses ARSA's space in this edition to celebrate the winners while highlighting things we all can be doing to help brighten the industry's future. Brett routinely underscores our shared responsibility to cultivate the very best aviation professionals, give them the tools they need, and inspire them to commit to keeping us all safely in flight.

This year, it's my opportunity to report on what the association and aviation allies are doing to make good on that shared responsibility to recruit and train the next generation of maintenance professionals. A key priority has been passing a piece of legislation through the U.S. Congress proposed by ARSA to provide grants of up to $500,000 to businesses, unions, schools, and governmental entities that collaborate locally to pursue innovative new workforce development initiatives. Our goal is to get the legislation (S. 2506/H.R. 5701) included in the FAA reauthorization bill currently — as of this writing — winding its way through Congress.

Working with a coalition of more than 30 organizations representing maintainers, airlines, manufacturers, general and business aviation, and unions, we've convinced 25 senators to cosponsor our workforce bill. Getting one-quarter of the Senate to agree on anything in the current political environment is a major achievement. We've been gratified that lawmakers recognize how important the aviation maintenance industry is to the national economy, the challenges presented by the aviation skills gap, and the need for Congress to act.

My optimism about our short-term prospects aside, we still have a long way to go. Assuming we're successful in getting the workforce program included in the final FAA bill (which, depending on when you're reading this, you might already know), Congress will still have to appropriate money for the program and the FAA will have to work with industry to get it up and running. Then it will be up to aviation leaders to collaborate locally to come up with innovative recruitment and training initiatives.

There's plenty for all of us to do to make the new program a reality and make it successful, and ARSA's team will continue its work in Washington. To bring that work home, the association provides tools for aviation professionals to become a personal advocate and professional resource for the maintenance community.

The association's work is carefully laid out on arsa.org, but there are key places to stop when making a difference:

1. ARSA's Workforce Legislation Action Center. An online resource for making a difference and communicating with American elected officials in support of the AMT workforce. (Visit arsa.org/legislative/grant-program-action-center to get active.)

2. Aerojobs.org. The web-based recruitment tool targets individuals with the skills needed to maintain aircraft (regardless of what industry they're in now).

3. AVMRO.arsa.org. The industry's information portal introduces the world of maintenance, repair, and overhaul. The site has information useful to everyone from job seekers to the media to elected officials to nervous fliers.

4. Propaganda. "You Can't Fly Without Us," a seven-minute documentary on the maintenance industry produced for public television. ARSA provides license for use of the film as an informational or recruitment tool. (Visit arsa.org/documentary.)

5. Training. The association's growing library of sessions on regulatory compliance, government affairs, legal and business development topics now includes eight hours accepted for IA refresher training. (Visit arsa.org/training for course information and to register.)

Thanks to Henry, Peter, Randall, Christian, Maarten, Keilah and all of this year's honorees for representing the best of the maintenance community. In order to truly celebrate their talent and commitment, let's commit to the future of the industry and make good on their potential. ***AMT***

Christian A. Klein is the managing member of Obadal, Filler, MacLeod & Klein, P.L.C. overseeing the firm's policy advocacy practice. He represents trade associations as a registered federal lobbyist and provides strategic communications and legal counsel services to clients. He is executive vice president of the Aeronautical Repair Station Association and a member of the University of Virginia's adjunct faculty.

SHERWIN-WILLIAMS LARGE AREA METALLIC HLG SERIES NOW AVAILABLE WITH ACRY GLO® TOPCOAT SYSTEM

Sherwin-Williams Aerospace Acry Glo® Urethane has now been formulated with its Metallic HLG Acrylic Urethane topcoat finish for a cool, metallic finish. It not only handles quick drying stripes, but also as a metallic overall finish for business jets and general aviation aircraft.

Acry Glo Acrylic Urethane is a multi-component topcoat that has been a proven performance coating in the aviation industry for more than 30 years. Acry Glo Urethane is quick drying, exhibits outstanding gloss and delivers gloss retention upon weathering. Its excellent buffing characteristics make it a top choice.

"We have received numerous requests to do metallic aircraft crowns, bellies or overall aircraft," said Julie Voisin, Sherwin-Williams Global Marketing Manager. "Acry Glo was designed to be fast and not initially intended to cover large surface areas. With the new revised Acry Glo HLG system, we can now offer designers and customers options."

The new Acry Glo HLG metallic system involves a modified metallic color formula and is mixed differently than the traditional Acry Glo system to enable a longer application wet edge and dry times. Although mixed differently, the same, commonly used metallic colors are still available (i.e. Las Vegas Gold, Titanium, Ruby Metallic, etc.)

Providing versatile, proven performance, Acry Glo is a high-quality, rugged aerospace coating that offers outstanding durability with a chip resistance that keeps equipment looking good even in extremely harsh conditions and has long-lasting design requirements.

Several clearcoat options are available to be used over the new Acry Glo HLG system including the Acry Glo Clearcoat CM0571080 and the new SKYscapes® General Aviation Clearcoat CM0855CC3.

ACRY GLO® HLG SYSTEM BENEFITS:

- Extended wet edge application times
- Resistant to chipping and UV exposure
- Long-lasting, high-gloss finish
- Available in popular metallic colors
- Salt, chemical and hydraulic fluid resistant
- Numerous clearcoat options available

For more information on coatings, go to Sherwin-Williams Aerospace visit www.swaerospace.com

SHERWIN-WILLIAMS Aerospace Coatings


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