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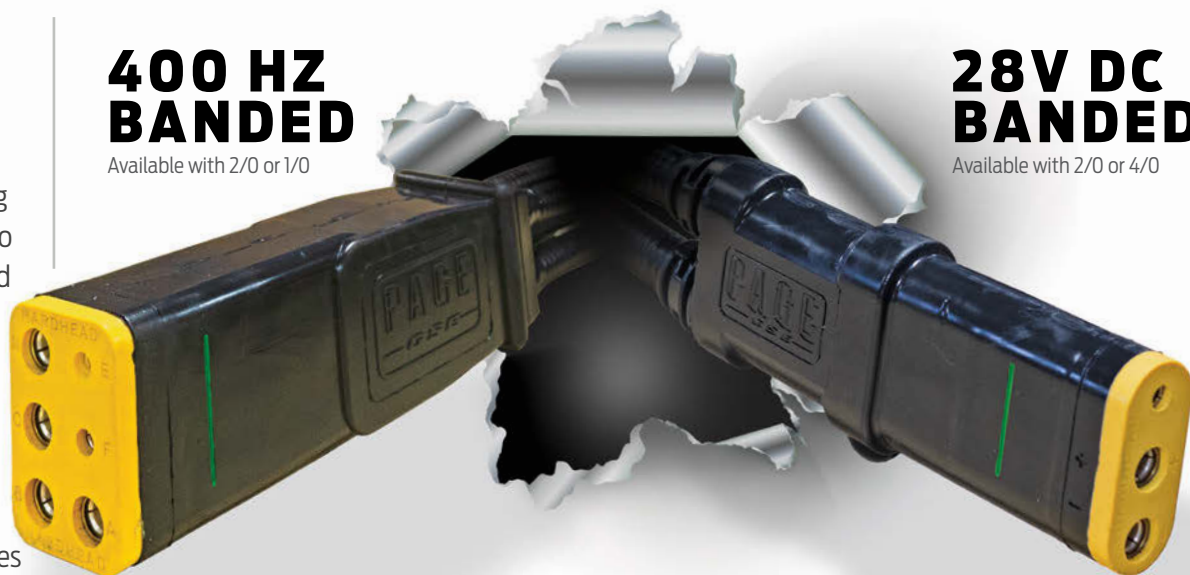
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ONLINE EXCLUSIVES



Smooth Openings: When and Where to Install Bi-Fold Doors

By Jason Myrvik

Bi-fold doors feature a unique truss system that keeps them stable up to widths of 90 feet, accommodating some of the largest equipment.

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VIDEOS



Virtual Reality ULD Training Demonstration

In this video provided by ULD Care, Airport College demonstrates their virtual reality ULD training simulation.

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PODCASTS



Developing Forced Air Deicing Equipment

Lee Williams, president at Avia Enviro, and Rudy Yates, president at Ground Support Specialist, discuss the evolution of forced air deicing nozzles and future plans for the technology with *Ground Support* Worldwide editor Josh Smith.

[AviationPros.com/21217850](https://aviationpros.com/21217850)

ARTICLES

The Future of the Airport Experience Must be Extraordinary and Experiential

By Vaughan Edmonds



When looking to grow a brand, rather than worry about Tik Tok or blockchain or cryptocurrency, think first about the golden rule of business. How can we provide a good customer experience?

[AviationPros.com/21216262](https://aviationpros.com/21216262)

Airports, Unmanned Aircraft and Uncertainty

By Walker Jaroch

As the adoption rate of drones continues to grow, airports are increasingly worried about what they can do to prevent and deal with unmanned aircraft incursion.

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Aviation M&A Along the Road to

Recovery

By Warren Romine

Despite a 2020 that the aerospace sector would like to forget, there are reasons to be hopeful. Aviation professionals can take solace in the past performance of the aviation industry and the expected turnaround which will inevitably occur in the market.

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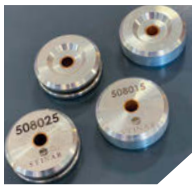
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STINAR
GROUND SUPPORT EQUIPMENT

► TOP NEWS

dnata Gains IATA's CEIV Fresh Certification in Singapore

dnata has been awarded IATA's Centre of Excellence for Perishable Logistics (CEIV Fresh) certification at Singapore Changi Airport for achieving the highest quality and standards in the temperature-controlled handling of perishable products, including fresh fruits, meat, fish, dairy and flowers.

The most important aspects of air transportation of perishables are time and temperature management to prevent food loss. The CEIV Fresh program meets these exacting requirements primarily based on the IATA Perishable Cargo Regulations (PCR), which combines professional regulatory and operational input from industry and government experts.

"There is an increasing demand for safe air transportation of temperature-sensitive goods. We constantly invest in infrastructure, training and process improvement to ensure that these delicate products reach the end-customer in perfect condition," Sam Gould, dnata Singapore's head of cargo, said. "IATA's CEIV Fresh certification demonstrates the



quality and reliability of our services, and supports Changi Airport's positioning as the preferred cargo hub for time- and temperature-sensitive shipments."

WFS Awarded GDP Certifications for Pharma Facilities in Spain

Worldwide Flight Services' (WFS) stations in Madrid and Barcelona have obtained Good Distribution Practice (GDP) certifications. GDP certification is awarded after a rigorous independent audit to confirm a pharma facility's temperature management capabilities, as well as the suitability of its auditing processes, risk assessment and corrective/preventive measures.

It provides WFS customers with a guarantee that temperature-controlled pharmaceutical products are consistently stored, transported and handled under the product-specific conditions required by the pharma industry.

"As the world's leading air cargo handler, WFS is already at the forefront of best-practice for pharma shipments in terms of compliance and our ability to safeguard product integrity," said Humberto Castro, WFS' managing director – cargo, Spain. "Now



that our Madrid and Barcelona stations have both GDP and IATA CEIV certifications, customers have the added assurance that we meet the highest global standards for handling air cargo shipments of pharmaceuticals."

► PEOPLE

Menzies Aviation Appoints EVP to Drive Fuel Operations Growth

Menzies Aviation announced the appointment of Morven McCrindle to the newly created role of executive vice president – fuels. McCrindle will spearhead Menzies' fuels growth strategy, as the company looks to balance its portfolio mix across fuels, cargo and ground handling.

With expertise in fuels procurement and operations, customer relationship management and large scale airport development and investment projects, McCrindle joins Menzies after 13 years at Delta Air Lines, where she most recently held the position of regional director, airport affairs for Europe, Middle East, Africa and India. Previously she was general manager, global jet fuel procurement and operations for the airline.

"I am delighted to welcome Morven to Menzies Aviation as our executive vice president – fuels. Morven brings with her a wealth of aviation experience and fuels operations expertise to this newly created role, which will be invaluable as we look to further grow our global fueling footprint and optimize our services portfolio," said Mervyn Walker, chief operating officer. "We are looking forward to working closely with Morven to pursue our ambitious growth strategy and to further develop best practice across our fueling operations."



dnata Announces Global Leadership Team Appointments

dnata announced three key senior management appointments.



John Bevan has been appointed divisional senior vice president for travel and will oversee all aspects of dnata's travel business, managing a portfolio of more than 30 reputable B2B and consumer brands across more than 20 countries. Bevan's appointment is effective June 1, 2021.



Stewart Angus has been appointed divisional senior vice president for airport operations. Angus has been managing dnata's international ground handling and cargo business since

2004. In his new role, he will also lead the company's airport operations at the two Dubai airports in the United Arab Emirates.

Robin Padgett, who has been leading dnata's global catering operations for seven years, will

also expand his responsibilities and become divisional senior vice president for catering and retail. The expansion of Robin's role is in line with the company's strategy to promote buy on board and further diversity of its catering operations.



"I'm pleased to announce enhancements to our global leadership team," said Steve Allen, executive vice president. "The appointment of John to the management team and the expansion of our experienced leaders' roles will help us emerge from the current, challenging environment as a fitter, leaner business that consistently provides service excellence to customers across the globe. With our highly trained, customer-oriented team we will continue to work hard and enhance our operations to be the world's most admired air and travel services provider."

Smith Joins WFS as UK Commercial Director

Jennifer Smith has joined Worldwide Flight Services (WFS) as UK commercial director – cargo and ground handling. She brings extensive commercial experience to this newly created post, having previously spent 20 years in regional cargo sales management roles with Continental Airlines, American Airlines and Etihad Airways. Smith joins WFS from Air New Zealand, where she held the post of regional cargo sales manager – UK and Europe.

In her new role, Smith is tasked with using her extensive key account management expertise to strengthen WFS' existing airline client relationships, and to lead the onboarding of new airline customers.

"Jennifer is a welcome addition to our leadership team in the UK and brings a strong customer perspective to our business and to the way we want to engage with, and support, our airline clients. After such an extremely challenging year for the aviation industry and its partners, it is more important than ever to provide a consistent business model that sustains growth, provides exemplary service, and reinforces our commitment to 'best-in-class' safety and security services," said Paul Carmody, managing director – UK cargo.



► NEW DEALS

NAS and Colossal Africa to Acquire South Africa's Largest Ground Handler

National Aviation Services (NAS), Colossal Africa and a consortium comprised of the current executive management team have signed an agreement to acquire BidAir Services from the Bidvest Group. The closing of the acquisition is subject to fulfilling final requirements from the Airports Company of South Africa (ACSA) that manages South African airports as well as other regulatory approvals.

BidAir Services provides quality-handling services including passenger and ramp handling, load control and operations,

cleaning, toilet and water services, among others at nine South African airports.

"NAS prides itself on its global expertise and local knowledge. We believe that the success of the aviation industry in Africa is tied to its economic prosperity and have made significant investments into the industry across the continent. We look forward to adding BidAir Services, the largest South African ground handling company to our expanding network," Hassan El-Houry, group CEO of NAS, said.

► Upcoming Events

June 22-25

AEA International Convention & Trade Show
Dallas, TX

July 11-13

AAAE Conference & Exhibition
Las Vegas, NV

July 26-Aug. 1

EAA AirVenture
Oshkosh, WI

Postponed Events

Petro 2021

IATA AGM & World Air Transport Summit

Canceled Events

NBAA Maintenance Conference

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AND CASINO
LAS VEGAS, NEVADA**

Havaş Renews Agreement with Qatar Airways Cargo

Havaş signed an agreement with Qatar Airways Cargo to extend the long-term ground handling partnership until the end of 2025. According to the renewed agreement, Havaş will continue to provide cargo and warehouse services at Istanbul, Ankara, Izmir and Antalya airports to Qatar Airways Cargo; as well as cargo services at Adana Airport.

"We are very glad to extend our service agreement with Qatar Airways Cargo to create synergy on cargo and warehouse services," Havaş general manager



S. Mete Erna said. "We will continue to increase the efficiency of our operations and adopt innovations to contribute to the success of all our business partners."

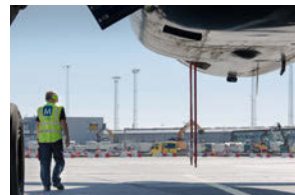
Menzies Aviation Wins Contract with Avianca

Menzies Aviation announced it has been awarded a five-year cargo contract with Avianca at Miami International Airport (MIA). This contract represents one of the most significant wins in the history of Menzies' cargo business. From May, a team of more than 300 Menzies professionals will provide warehouse cargo handling services for Avianca.

"We are so proud that Avianca has selected Menzies to be their cargo handling partner at their Miami hub, which is a large-scale and complex operation for

the carrier," said John Redmond, executive vice president – Americas.

"The Avianca organization is delighted to be starting a new chapter alongside Menzies Aviation at our Miami hub, which is one of our most important operations," added Ruben Atehortua, director cargo operations – Avianca Cargo. "We have every faith that this is the beginning of a strong alliance which will enable us to continue providing an exceptional service to our clients whilst enhancing our position in the Miami market."



What's Going on with NFPA 407?

By Jessica Purgett

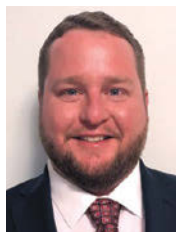
The National Fire Protection Association's (NFPA) standard for aircraft fuel servicing in the United States, NFPA 407, lays out requirements for the safe refueling of aircraft. The standard applies to fuel farms, self-serves, mobile refuelers and other fueling operations.

The NFPA undergoes regular reviews and there were some changes in the 2017 version which require both new and existing equipment to have automatic overfill devices installed at airport fuel loading racks by June 2 of this year.

According to the National Air Transportation Association's (NATA) GA Fuel Handling Subcommittee, these additional over-fill protection systems are not necessary.

"Essentially, these automatic over-fill devices communicate electronically with fuel trucks to shut down the pump when the truck becomes full," said Steve Berry, NATA's manager of fuel quality and safety.

Though these overfill protection devices work well, Berry says there is not enough data to prove they are necessary.



Steve Berry

"The requirements and operational procedures we have in place now have a demonstrated history of reliability. Every fuel truck in use at airports today already has a high-level shut-off device installed,"

he notes. "While those manufactured in the last few years have two high-level devices installed. These devices, commonly called jet-level sensors, have been a requirement of the 407 for decades. And you also have what's known as a dead-man device. Basically, it's a device that you have to hold while you're performing the bottom loading operation. If you release it, the fuel flow stops."

The over-fill protection devices on fuel trucks are tested before every bottom load operation to ensure they're working properly. Berry notes this process has worked since he's been in the industry – almost 20 years.

"The overfilling of mobile refuelers is just simply not a statistically relevant issue," he says. "It just doesn't happen with the kind of frequency that would justify such a wide-sweeping change and expense across the entire industry."

He says additional overfill safety devices could cause major logistical issues.

"In the general aviation industry, the majority of fuel trucks are leased from the major fuel suppliers," he notes. "And so, you've got a fleet of tens of thousands of trucks out there all across the country that are going to have to be retrofitted to meet whatever system ends up being installed at the airport."

Berry says if these requirements are enforced, there will have to be great communication between the airports and the owners of the fleet trucks to make sure the truck has the same fueling system as the airport.



"There's also the issue of emergency situations. Any time there's wildfire season out west, for example, fuel suppliers will send trucks to support the need for additional fueling operations," he mentions. "These trucks get moved around the country all the time to support the critical fueling operations our country needs. So, when we add this extra step in there, we're talking about having to retrofit these trucks before they can get shipped out. It just creates and compounds a logistical problem."

There is also a major cost involved with retrofitting all these trucks to meet the new standards. Berry estimates it to be around \$100 million after taking into account all the public-use airports.

Berry and other members of the NATA tried to overturn this regulation with TIA 1558. Their initiative fell short of passing by four votes. NATA members requested a hearing in order to appeal that ruling, but it was denied by the NFPA Standards Council. In a press release published April 30, NATA wrote it, "filed a Notice of Intent to Petition the NFPA Board of Directors as a final effort to seek relief from these onerous requirements."

NATA encourages fuel providers to work with their Authority Having Jurisdiction (AHJ) to, "request a modification to the retroactive component of the requirements," which would prevent existing equipment from being subject to the June 2 compliance deadline. GSW

COMMANDER

30*i*



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A Renewed Look at Aviation Fuel

Sustainable aviation fuel (SAF), produced from renewable feedstocks, is a “drop-in” fuel, which allows it to work with existing aircraft engines, fueling systems and infrastructure.

By Pratik Chandhoke

The clearer skies across many urban centers due to COVID-19 was a wake-up call, clearly showing the impact our actions have on air pollution and our climate.

This has invigorated the dialogue on climate change and environmental justice in the United States, with businesses and governments looking for ways to meaningfully cut emissions and pollution fast. This is especially true for aviation.

The commercial global aviation industry accounts for approximately 3 percent of global greenhouse gas emissions. This number is set to grow. The U.S. Federal Aviation Administration (FAA) forecasts an

increase in U.S. airline passengers from 917 million in 2019 to 1.31 billion by 2039 – a 43 percent increase over a 20-year period.

More people flying on more planes means more fuel burned and more emissions if we continue business as usual. This poses a challenge. How can airlines keep these people flying with less emissions?

The best option is to power aircraft with a low emission, renewable fuel. The good news is that such a solution exists. Sustainable aviation fuel is available with supply set to increase in the years ahead.

Drawing Inspiration from Past Success

The aviation industry is facing a “fork in the sky,” and much like Neste, it has the chance to be on the right side of history by contributing to a sustainable future.

About 15 years ago, Neste decided to change its course and transform from an oil company to a renewable and circular solutions company. The main driver of this was to help create a healthier planet for future generations.

As part of this journey, Neste has been supporting the production of sustainable aviation fuel (SAF) for nearly a decade. Currently, Neste is a leading producer of renewable diesel and SAF. In 2011, Neste completed its first test flight powered by sustainable aviation fuel. The company has moved quickly since then, supplying SAF to U.S. airlines.

When Neste began this journey, climate change was just an inconvenient truth in much of the U.S., with limited demand from customers for renewable fuels and no policy frameworks in place to support renewable fuels.

Since then, more and more customers are demanding low emission, renewable fuels and governments are progressing policies



All photos courtesy of Neste

to encourage and incentivize the use of renewable fuels instead of fossil fuels.

Solutions to Address the Problems of Today

Across the board, airlines recognize sustainable aviation fuels as one of the key elements to achieve their climate goals.

Sustainable aviation fuel, broadly, refers to jet fuel that is produced from renewable feedstocks instead of crude oil. There are a variety of possible feedstocks for sustainable aviation fuel, including used cooking oil, tallow, energy crops, agricultural and forestry residues and municipal solid waste.

The Neste MY Sustainable Aviation Fuel available in North America, for example, is made primarily from waste and residue materials such as used cooking oil. In fact, Neste is collecting and turning used cooking oil from concessionaires at airports, like Dallas Fort Worth and Chicago O'Hare, into renewable fuels. This creates a circular economy, where the waste from airports can help power aircraft.

Sustainable aviation fuel is a “drop-in” fuel, which means that it works seamlessly with existing aircraft engines, fueling systems and infrastructure.

Because of this, sustainable aviation fuel can immediately reduce direct greenhouse gas emissions and pollution from aircraft. Neste MY Sustainable Aviation fuel, for example, has the potential to reduce emissions by up to 80 percent compared to fossil jet fuel on a lifecycle basis.

Besides offering lower lifecycle carbon emissions, SAF usage lowers direct emissions of air pollutants, such as sulfur and particulate matter, for ground handling support and supports regional economic development through locally sited circular economic supply chain elements.

Currently, regulations require that sustainable aviation fuel is blended with fossil jet fuel, up to a 50-50 ratio. The blending ratio will ultimately determine the actual emissions reductions realized. Once blended, the fuel mixture meets the ASTM specifications.

The blending requirement ensures that sustainable aviation fuel works safely with older aircraft engines. However, the aviation industry is researching how sustain-



able aviation fuel can be used in its pure form to power aircraft in the future.

Importantly, the sustainable aviation fuel industry is making it easier for customers to access the fuel.

Last year, Neste began supplying sustainable aviation fuel to San Francisco International Airport, with American Airlines, Alaska Airlines, DHL and JetBlue committing to using the fuel. Additionally, Signature Flight Support has supplied more than 1 million gallons of Neste MY Sustainable Aviation Fuel to its FBO at the San Francisco International Airport.

Globally, more than 40 airlines now have sustainable aviation fuel experience, with an estimated 200,000 commercial flights using SAF since 2011 and 1.6 billion gallons of SAF committed to forward purchase agreements.

The Future is Sustainable

Neste sees significant growth potential for renewable fuels in the aviation market. Demand is there – from airlines, business aviation and end customers.

That is why Neste has invested to achieve 515 million gallons of sustainable aviation fuel production capacity by 2023, 15-times more than its current production capacity.

The company has also entered into strategic partnerships to increase the availability of sustainable aviation fuel in the US. For business aviation, Neste is partnering with Avfuel and Signature Flight Support to make Neste MY Sustainable Aviation Fuel to business aviation.

The future of air travel is clear: It will pick back up, be sustainable and increasingly run on SAF. Air travel allows us to have a globalized economy, connect with nature and experience diverse destinations, so it's critical we work together to get more planes running on SAF instead of fossil jet fuel.

Air travel plays an important role in our economy and lives, connecting people and cultures as well as supporting global supply chains. As more people become vaccinated and planes begin to take off again, today is the time to truly invest in the adoption of SAF to finally spread its wings. **GSW**



▶ ABOUT THE AUTHOR:

Pratik Chandhoke is the technical services manager for Sustainable Aviation Fuel (SAF) at Neste, the world's largest producer of renewable diesel and SAF. Chandhoke's responsibilities include technical management and customer support for use of Neste MY Sustainable Aviation Fuel in North America. Prior to joining Neste in 2017, he worked for 10 years at Rolls Royce in various roles. Chandhoke holds an MBA and Bachelors in Mechanical Engineering from Purdue University.

PrimeFlight Aviation



2021 PRODUCT LEADER OF

Designed to instill confidence in travelers, the PrimeFlightUV disinfection units utilize UV-C technology to inactivate viruses.

By Josh Smith

The effects of the global pandemic, brought on by COVID-19, were felt widely across the aviation industry. PrimeFlight Aviation Services wasn't spared from this impact, but the company was in a position to assist in its own recovery.

Services



All photos courtesy of PrimeFlight Aviation Services

THE YEAR

Having acquired ProFlo Industries in March 2020, the ground service provider had access to engineering and manufacturing capabilities. The ProFlo team put those capabilities to use and developed PrimeFlightUV – a disinfection system harnessing UV-C light.

“Our line of surface disinfection units was born from the pandemic and our desire to get our employees back to work,” says Terry Bosserman, president of ProFlo Industries, a PrimeFlight company.

“As a service company, our work and success are heavily tied to the health of the aviation industry,” he adds. “We understood that to get back to work, there was a need

to make the public feel safe when traveling. Our solutions are aimed at disinfecting key touchpoints throughout commercial travel, making airports a safer place for travel.”

Responding to the downturn in airline traffic, the company designed and developed its disinfection solution and put the first PrimeFlightUV unit into service in September 2020.

Now, there are approximately two dozen surface disinfection units in use today, with PrimeFlight teams at Hartsfield-Jackson Atlanta International Airport (ATL), Ronald Reagan Washington National Airport (DCA), San Francisco International



▲ **The UV-C technology incorporated into PrimeFlightUV leverages ultraviolet light disinfection technology.**

Airport (SFO), William P. Hobby Airport (HOU), George Bush Intercontinental Airport (IAH), Newark Liberty International Airport (EWR) and Ernesto Cortissoz International Airport (BAQ) in Colombia actively using them with approximately 20 more units in production.

For these efforts, PrimeFlight Aviation Services has been named the *Ground Support Worldwide 2021 Product Leader of the Year*.

UV-C's Place in Aviation

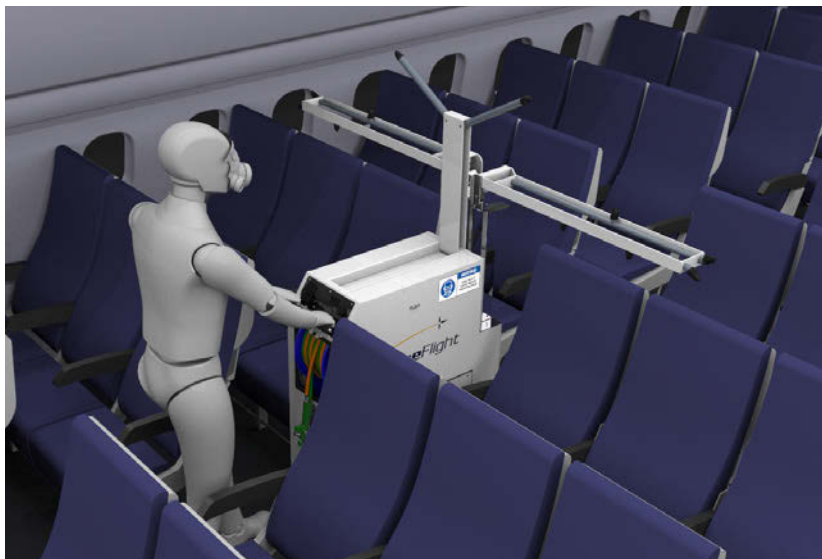
The first version of the PrimeFlightUV surface disinfection units launched was designed for wheelchair disinfection. However, PrimeFlight has several other units in various design phases.

"These additional units are aimed to disinfect security bins, luggage, galley carts, aircraft interiors and more," Bosserman explains.

Earlier this year, the Transport Security Administration (TSA) began testing the company's security bin/luggage disinfection system at DCA.

"We have additional designs in research and development," Bosserman adds. "We are prepared to meet the unique needs of our industry and customers."

The UV-C technology incorporated into PrimeFlightUV leverages ultraviolet light disinfection technology that has been used in medical facilities, water treatment facilities and the food and beverage industry for some time, according to Bosserman.



UV-C light destroys the outer protein coating of viruses, including the SARS-CoV-2 virus, effectively inactivating the virus.

"Because this proven technology is at the foundation of our designs, our mission was to ensure we were housing these bulbs in a way that targeted the items or areas to be disinfected and that we are controlling the output of the lamps while minimizing potential for UV-C leakage," he says. "We conducted extensive testing to ensure our units were effective in disinfecting various test items, and we continue to make adjustments to our designs to get the most trusted result possible."

Bosserman says to ensure the virus is properly inactivated, company engineers targeted UV-C light, and adjusted the wattage and treatment time to ensure the units meet or exceed disinfection thresholds.

PrimeFlightUV units offer an enclosed design, complete with UV-C shielding,

emergency stop features, deadman controls and secured power switches. Bosserman says these features are important to aviation customers.

"All of our designs feature UV shields to ensure that they are not only safe for operators, but also onlookers and passengers," he points out. "This is a key safety feature with the need to have our PrimeFlightUV units placed in high traffic areas."

The UV-C bulbs housed in the units are built to last for 10,000 hours and are easily replaced.

Bosserman says it is a point of pride for the company to have designed UV-C disinfection solutions specifically for the industry.

"Our designs are tailored to the aviation industry and are aimed at making the public feel safe while traveling," Bosserman says. "Since PrimeFlight employees, in many cases, would be among those operating these products, we have a unique understanding of the limitations we need to work around, how treatment times can affect operations and more."

Manufacturing Efforts

Both the PrimeFlight Aviation Services and ProFlo Industries teams have extensive experience in the industry, being established for more than 40 and 20 years, respectively.

PrimeFlight's acquisition of ProFlo in March of 2020 allowed the industry veterans to work together on a solution to the challenges faced during the COVID-19 pandemic.



▲ Portable wheelchair disinfection units are in use at several airports, and the TSA is currently testing PrimeFlight's security bin disinfection units at DCA.

"This acquisition allowed PrimeFlight to not only support the rapid growth of its fueling operations, but added manufacturing capabilities for projects such as PrimeFlightUV," Bosserman says.

In addition to acquiring US-based ProFlo Industries, PrimeFlight also has a majority stake in ProFlo LATAM, based in Colombia and within the South American Free Trade Zone. ProFlo LATAM started in 2016 as an expansion project of ProFlo Industries in Latin America, and they support manufacturing projects exported to Africa, Asia, East Europe and Latin America.

"Their team of 14 full-time engineers, including mechanical, electrical, electronic and 3D design, as well as their QC manager with more than 30 years of experience in automation and assembly line productions, paired with their 75 highly qualified technicians, including electricians, mechanics and certified welders, have been instrumental in the design and roll out of

PrimeFlightUV," says Bosserman. "With a nimble team and in-house production of these units, we are able to offer customizable designs to meet specific airport and aviation requirements."

More units are in transit to the United States from the ProFlo LATAM facility.

Initial feedback has been positive, according to Bosserman. He says the company has worked with its operations team and several customers to continue to refine the original wheelchair disinfection unit, in particular.

"In the early design stages, we added several safety features, including a deadman control and reverse capability to ensure our designs meet the needs of our industry," he says. "We have tested our wheelchair disinfection unit at several hub airports to ensure it can be seamlessly integrated into operations, and as we received positive feedback, we began to roll them out to additional airports."

The company's portable wheelchair disinfection unit is currently in use at several airports across the U.S., and the TSA is currently testing PrimeFlight's security bin disinfection units at DCA.

Additional prototypes are in development for aircraft cabin, galley cart, baggage, cargo and equipment disinfection.

"We are proud to have put the first designs of their kind in use so quickly after the introduction of COVID-19," Bosserman says. "As a service company, we are proud to be able to tailor UV-C disinfection solutions to our industry." **GSW**



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2021 TEAM LEADER OF

BRIAN BOURBEAU



▲ Brian Bourbeau (center) has led Premier Jet Center's line service department through a period of rapid growth.

Photo courtesy of Premier Jet Center

With a flexible management style, Bourbeau has helped his team expand successfully to support a growing FBO.

By Josh Smith



As Premier Jet Center has switched hands from one ownership group to another, many changes have occurred.

For one, business doubled for five consecutive years from 2015 through 2019, and even through the turmoil brought on by the COVID-19 pandemic, the FBO saw business remain steady throughout 2020. With that growth, staffing and equipment needs have grown, too.

But throughout this period of change, one thing has remained constant – the leadership that Brian Bourbeau brings to the line service department.

As the FBO, located at Flying Cloud Airport (KFCM) in Eden Prairie, Minn., has grown, Premier Jet Center's line services manager has grown his career with it, developing professionally while overseeing a rapidly expanding team.

"He has developed the team and with that created four supervisor positions. This has allowed continued growth opportunities for team members and created a focus on developing the supervisors in order for them to get leadership experience," says Michael Lawrence, general manager at Premier Jet Center.

"Through his leadership and the respect of the entire line service department team, Premier Jet Center's line department has been consistently highly rated in FBO surveys, has grown both our based tenant and transient customer base, reduced overall turnover in the department and has significantly increased the team member job satisfaction," he adds.

For his ability to foster growth and aid in the FBO's evolution, Bourbeau has been named *Ground Support Worldwide's* 2021 Team Leader of the Year.

Professional Development

As line services manager at Premier Jet Center, a position he's held for four years, Bourbeau oversees day-to-day operations within the FBO along with staffing responsibilities within the line department.

"I also focus on supporting the customer service team with developing our customer base and ensuring we are focusing on the service aspect of the job," he says, noting he moved into a supervisor and later a managerial role when Fargo Jet Center acquired the FBO in 2014.

Bourbeau found a career in aviation after serving five years in the Army. Having originally enlisted for an aviation operations role, he switched to Military Police and considered a career in law enforcement.

"I was planning to go back to where I grew up in Huntsville, Ala., and pursue a law enforcement career when I got out. But I met my wife through a friend in the military, and because she

is from the Minneapolis area, I ended up moving up here,” he recalls.

“Aviation still intrigued me. So, I thought, ‘Why not use the G.I. Bill and reset and do something that actually looks very interesting to me? That’s how I ended up in aviation when I moved up here.’”

Bourbeau earned his aviation management degree and got his dispatch license. He left to work in scheduling and dispatching but returned to the FBO soon after.

He started as a line tech at Premier Jet Center under previous ownership and was promoted to a line supervisor role.

“I held the supervisor role for some time and then was promoted to the manager role within the line department when Fargo Jet Center came in,” he adds.

During his tenure at the FBO, operations have changed drastically.

“We started with only pumping 8,000 to 10,000 gallons a month of jet fuel,” Bourbeau says. “Now, we average about 140,000 to 150,000 gallons a month.”

Team Growth

Bourbeau credits leadership at Fargo Jet Center for fostering growth, both for the FBO and his own career.

“They really gave me free reign of going after our competition’s customers and growing the department,” he says. “It was three other guys and me that started with the line department. We went from there to 25 people.”

Within his department, Bourbeau oversees line techs, customer service representatives (CSRs) and a CSR supervisor.

“We have four shift line supervisors that are responsible for running the ramp daily operations each day of the week,” he explains. “I have one training supervisor that is responsible for onboarding and training new hires, and I have one ground support equipment (GSE) mechanic.”

When Bourbeau’s tenure in aviation began, he didn’t receive a lot of mentoring. However, when Fargo Jet Center purchased PJC, he worked closely and collaborated with Fargo Jet Center’s line manager Jeremy Sobolik, learning a great deal along the way.

“He was more of a mentor, and he helped me figure out how we should be doing things,” Bourbeau says. “We worked

through the whole IS–BAH certification process for Premier Jet Center – actually developing systems and manuals and getting things into place for truly running the line department.”

Bourbeau adds that Sobolik has been a tremendous resource because supervisors often have similar experiences.

“We see the same issues, the same problems, the same successes, the same failures. We’re able to bounce each other’s ideas off one another, and figure out the best way of approaching something,” Bourbeau says, adding he frequently collaborates with members of the NATA’s safety committee, too.

With a larger line department, Bourbeau says onboarding requirements have needed to be improved.

On his first day as a line tech, Bourbeau recalls a supervisor having him begin with washing a plane. Then that task was interrupted when the ramp suddenly got busy.

“He would say, ‘We’ve got to marshal a plane in.’ Then it was, ‘Oh, this is how you fuel an aircraft,’” Bourbeau says. “I was just hoping I knew what I was doing.

“Now, we have a training supervisor,” he continues. “The training supervisor is with you that first week from 9–5. Then the next two weeks, your training supervisor is with you on your shift. The shift supervisor is assigning you tasks, but your training supervisor is with you the whole time.

“Then you get turned over to the shift supervisor and they mentor you for the next couple weeks.”

Bourbeau also notes trainees wear yellow shirts, so experienced staff know who is still learning on the job.

Bourbeau expects a lot of his team. He says that while a line tech is often viewed as an entry-level position, the responsibilities and requirements of that employee is often more.

“Moving multi-million dollar jets and having the responsibility to fuel and take care of high-profile clients, that’s not an entry level position if you want a certain caliber of service,” he says. “You can call it an entry-level position, but you’re going to get that entry-level candidate working for you. If you want a certain level candidate, you need to be able to pay and support that.

“One thing we’ve done is stretch out the pay to enable guys to stay here longer.”

Bourbeau credits this strategy for keeping key members of his team intact throughout the FBO’s rapid growth and battling staff turnover.

“You’re able to keep senior guys on every shift,” he says. “Your clients aren’t seeing new line techs being turned over every couple months.”

The FBO’s equipment needs have grown the last several years as well. As Premier Jet Center has established its fleet, Bourbeau has continued looking at supplementing the fleet with new or upgraded equipment.

“When I started, I had a Kubota tractor for aircraft towing, a 3,000-gallon Jet A truck and a 750-gallon low lead truck,” Bourbeau recalls.

Now, the fleet includes that Kubota tractor, which is no longer used for towing, two LEKTRO tugs, two conventional tugs, three 5,000-gallon refuelers and a deicer.

“I was able to watch some auctions and get a deice truck off an airline surplus from Houston, Texas, for a great price. It was one of those rare finds, and we’ve had a solid Type I/Type IV deice truck for a few years,” Bourbeau says. “Because we have this capability, we do all the deicing for the whole airport, even the other FBOs.”

Fluid Leadership

With a military background, it may not be surprising to learn Bourbeau feels strongly about observing a chain of command and holding individuals accountable for their work. These two principles ring true when he communicates with his team.

If, for example, a change in procedure is disseminated, and Bourbeau notices it’s not being performed on the ramp, he works with his supervisor to correct it.

“I’ll go to that supervisor and say, ‘Have we addressed with the line techs?’” he says.



"I'm big on chain of command, big on responsibility," he continues. "I don't want to undermine the supervisors by talking directly to line techs."

However, when it comes to receiving information, Bourbeau says his door is always open to the entire team.

"We have a fluid way of doing things. If a line tech sees that there's a better way of doing something, I encourage them to bring it up because I don't know everything on the line and my supervisors don't know everything on the line," Bourbeau says. "So, we're constantly changing and adapting, as long as it's safe and as long as it's a recognized standard in the industry."

A routine day begins with conducting morning quality control checks on all fuel equipment, and then working on morning arrivals and departures. Bourbeau's team handles approximately 35 based tenants at the facility along with 90 percent of the corporate operators based at Flying Cloud.

"Often times, our team is split working remotely at various hangars on the south side of the airport, supporting corporate and charter flight operations," Bourbeau says. "We support two other departments – a full maintenance Part 145 repair station and a paint and interior shop – throughout the day, along with having a flight school based on site."

On a normal day, Bourbeau says he takes a hands-off approach. But once activity picks up, he's ready to oversee the ramp until it returns to a manageable position for the supervisors to take back over.

"I'm very involved and my phone's usually ringing non-stop. When it's slow, I try to let them run things. But when you work with a group of 20- to 25-year-olds, you have to stay involved," Bourbeau says.

Bourbeau has been involved in a number of large-scale events, including the Super Bowl in 2018. He also recently returned from Augusta, Ga., where he assisted oper-

ations during The Masters – experiences that help with ramp planning at KCFM.

"At our facility, we're very limited by our ramp size. It gets tough when you're balancing the amount of traffic we see," Bourbeau says. "It's all about teaching the supervisors this is how we manage workloads; this is how we keep things moving and we don't block anyone in. I try to bring that to the table."

Bourbeau's ability to coordinate large scale events has allowed him to branch out beyond his duties with Premier Jet Center.

He helps operate the BRAIV Foundation, a non-profit dedicated to brain cancer research and assistance for injured military veterans. What's more, his business venture Jet Event Technologies (JET) provides planning and FBO consulting for large events.

"To be given that opportunity in an industry like this, and to have the support of our leadership team is very valuable," Bourbeau says. **GSW**

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Photo courtesy of Gammon Technical Products



2021 LIFETIME ACHIEVEMENT

JIM GA

With a passion for education, Gammon has worked for decades to ensure aviation fueling safety.

By Josh Smith

A successful flight begins with the work performed on the ground, and supplying clean, dry fuel is a fundamental element of that safety.



According to Jim Gammon, president at Gammon Technical Products (GTP), there are three things of no use to a pilot – the runway behind; the altitude above; and the fuel still in the refueler truck. And so, he has delivered steadfast work centered on making the industry as safe as it can be.

“Jim is a born leader – the type of guy that everyone respects, that everyone listens to,” says Jeff Langtip of C&L Sales and Services Pty Ltd. “Jim is involved in everything related to the industry and in my view, the most genuine and respected in this industry. I have never ever heard an unfriendly or unkind word in a conversation about Jim.”

For his dedication to aircraft fueling safety, Gammon has been recognized with *Ground Support Worldwide's* Lifetime Achievement award.

“Hundreds of people before me set a high standard and a noble goal, make air travel safe. Many of them deserved an award more than I do,” Gammon says. “I hope to inspire younger people to dedicate themselves to the same goal.”

◀ **Jim Gammon (center) photographed with (from left) his wife Wanda Gammon, daughter Sandi Gammon, Kyle Rogachenko and Stan Zelek at the 2018 Aviation Fuel Handling Training Symposium.**

Photo courtesy of C&L Sales & Services

GAMMON

His Father's Influence

The company that bears the family name began in 1960, when Howard Gammon, Jim's father, quit his job as chief engineer at Purolator Filters.

"He built our company from nothing in our garage and basement," Gammon recalls, noting he started working part-time for his father around the age of 12.

"Dad took it upon himself to be my professor and did so until 2018, when he passed away at 95," Gammon continues. "I have nothing but respect for my dad. He is my hero."

Early on, Gammon loved the aviation industry and found it interesting. He found work as a teenager at Central Jersey Regional Airport – known then as Kupper Airport, near New Brunswick, N.J.

"When I was 16, I had a summer job at a tiny airport, refueling light aircraft and cleaning the bellies of Cessna 150 trainers," he notes. "And I got my pilot's license that summer, working at the airport. I had a pilot's license before I got my driver's license."

At Gammon Technical Products, Gammon worked his way up from shipping, to assembly, to valve rebuilding, to constructing refueling cabinets, to engineering and education. He ultimately became president in 2002.

"I started with my dad full time in late 1974 when I was 21. I was attending engineering school at the time. But I just could not apply myself to subjects I didn't find interesting, and now I know why. Today it's called Attention Deficit Disorder (ADD)," Gammon recalls. "Back then, my Dad called it another name, a lack of discipline."

Under the tutelage of his father, whom Gammon describes as a very careful, old fash-

ioned businessman, he learned everything he needed to succeed in the business.

Gammon's ability to understand machinery, flow and contamination made his fascination with the aviation industry a perfect match for a career path.

"I think understanding flow dynamics is most important. If you cannot look at a system and pick out the restrictions and how filters and control valves work, you'll never fully understand how the system works," he says.

Gammon is proud of the work his company has produced for the industry.

"We have designed and built many of the small and relatively inexpensive items used in fuel handling, from the sample QD to the Gammon Gauge and Viper additive injector. We were the first to bring Intrinsically Safe (IS) power to aviation water sensing probes and deadman handles," Gammon says, noting the importance of IS power remaining so low that it cannot spark a fire.

"Jim now, and his father Howard before him, have been the leaders in fuel quality and innovation for everything related to aviation fuel," adds Langtip.

Educating the Industry

Gammon says his objective has always been education – not sales. For these efforts, Langtip considers Gammon an industry icon.

"Leadership, honesty, integrity and intelligence. Now add common sense with some life experience to that mix – rare traits for one person," Langtip says. "This is Jim Gammon."

In addition to his responsibilities at GTP, Gammon was invited to be part of the National Air Transportation Association (NATA) Line Service Training Program, which he accepted on a volunteer basis for more than 20 years. He has also given hundreds of seminars for various companies around the world, including major oil companies and airlines.

"It is just good business to help people know why they are doing things – and what to look for," he explains.

Devoting attention to detail was a valuable lesson passed on to Gammon by his father Howard.

◀ **Jim Gammon (left) addresses industry professionals gathered at the 2018 Aviation Fuel Handling Training Symposium.**

GSW file photo

"My dad said long ago, do the job right and everything else sorts out in the end," Gammon recalls.

"Shell had an old training video called 'The 10,000th Time.' The point was that while you may do 9,999 tests without finding contamination. One single bad test result makes them all worthwhile," he says. "The fact that contamination is rare and that when it does occur it is not widely reported, allows complacency. That should be our greatest concern."

Gammon's focus on education has led to other endeavors as well.

"Our company, Gammon Technical Products, also is well known for producing an educational publication, the Gamgram," he says. "There are 72 articles, so far, written over the past 45 years covering all aspects of aviation fuel handling, quality control and how all the equipment works, and why. It is considered around the world as a primer for everyone getting into aviation fuel handling and has been translated into at least three languages."

In 2017, Gammon coordinated the first Aviation Fuel Handling Training Symposium.

"I didn't anticipate how much of a draw there would be," Gammon said shortly after the inaugural event, adding it was created to serve as a networking and training opportunity rather than a revenue generator.

The event grew in 2018 and 2019, and after taking a year off the Aviation Fuel Handling Training Symposium will take place in Las Vegas later this year in conjunction with the International GSE Expo.

"It's been a labor of love to bring this symposium together and provide a means for people to communicate and share information and learn from each other," Gammon said during the 2018 event.

The biggest challenge in helping keep the industry educated, is the vast amount of information available coupled with a declining number of subject experts.



"When I got into the business, there were at least three times as many professionals involved, but budgets have pared this down to a point where there are too few truly knowledgeable people," he says.

However, Gammon points out that being involved with the American Society for Testing and Materials (ASTM) has proved beneficial as he explains the organization is filled with experts with knowledge on various aspects of fuel handling.

Focus on Safety

According to Gammon, all the people in fuel handling share one thing – they are not appreciated.

"The industry is seen as a necessary, smelly evil. The single greatest expense to an airline is fuel," Gammon says.

"It should be recognized that fuel handlers are the only element of flight safety that is unregulated by the FAA – and yet they have the best record," he continues.

The fueling industry's attention detail must be sharply focused to avoid catastrophe.

"Our jet fuel is so clean and pure that it is amazing that we are all able to do this, every day, all around the world, and do it so well that the FAA chooses not to regulate us," he says. "They have no need to. Our record proves our worth."

"This is an industry that is invisible, unless something goes wrong," Gammon continues. "I place a lot of the credit with my teacher, my mentor, my dad – and all the others who share the responsibility to 'keep 'em flying.'"

Gammon says he has had the pleasure of working with hundreds of people, both military and commercial, at various organizations including the ASTM, Coordinating Research Council (CRC), SAE International, National Fire Protection Association (NFPA), NATA, Energy Institute (EI), Joint Inspection Group (JIG), National Petroleum Management Association (NPMA) and the International Air Transport Association (IATA). While his work

has been recognized by awards from both the ASTM and NPMA, Gammon applauds the many others working in the industry for working to achieve flight safety.

"I am proud to say that our industry has many true professionals. I am proud to work with so many people who disregard company rivalries and politics to keep air travel safe," he says.

"I also owe a lot to our employees and to my wife, Wanda, who runs a significant portion of our company and has tolerated all my traveling over the past 47 years," Gammon says, adding he has no plans to retire yet.

"Receiving this award is to be recognized as a member of an unheralded fraternity of men and women around the world dedicated to flight safety. People from every race, religion, nationality and from the youngest beginner to those long gone who took the time to teach me and so many others. I accept this award in their honor and I am proud to be considered one of that group of professionals." **GSW**



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All photos courtesy Airport Services Association

Working Towards the Return

Around the world, aviation's workforce is hurting with some regions faring worse than others. A return to pre-pandemic levels is in sight but making a successful return will take work of its own.

By Walker Jaroch

As vaccines continue to be distributed around the globe and hope grows that the COVID-19 pandemic will soon be behind us, the aviation industry is eager to come out of the pause imposed on it over the past year-plus. But, to do so effectively takes ensuring that the workforce is up to handle the post-pandemic air travel boon.

The industry's recovery, and as such the workforce, is disparate with some locations faring better than others.

"Overall, I would say the situation is quite good, both in Southeast Asia, the Pacific and the U.S. or North America, and still quite bad in Europe and Latin America and in Africa," says Fabio Gamba, director general, Airport Services Association (ASA).

While no region is back to pre-pandemic levels, Gamba notes that in Europe the workforce is still down 50 percent from where it was in 2019 – with some specific locations below 65 percent.

In the European Union (EU), Gamba says that it has been a series of ups and downs. During the summer of 2020, the industry looked promising with some seeing a light at the end of the tunnel as vacation-fueled travel picked up despite quarantine measures still in place at the time. Though this, in part, led to the EU experiencing its second wave of COVID-19, which Gamba says was easier to handle thanks to the lessons learned from the

virus' initial arrival. But now a third wave of the virus is having a substantial impact.

"I think what really hit us hard was the third wave, because even though that was not totally unexpected, that really depressed the whole industry, which was not in a position to really sustain for much longer these, let's say, lockdown measures," Gamba says.

Vaccination efforts have helped to temper the effects of COVID-19's third resurgence and Gamba says ASA has been working in tandem with colleagues around the world to try and require that aviation personnel who are frontline be considered for inoculation immediately after health personnel.

"Which worked in some areas and worked less well in other areas, to be honest," Gamba adds.

Michael France, managing director of safety and training, National Air Transportation Association (NATA), says that within the U.S., recovery has also been very locally dependent.

"Some areas we're seeing slowdowns much larger than others. Other areas we're seeing near steady business. So, each and every company is facing its own unique challenges relating to the traffic levels, workforce, any pandemic-related issues," he says.

"I think right after the pandemic hit, the big concern amongst the FBOs specifically was, 'Wow, we've got a

lot of great, seasoned line service technicians. How do we maintain them?" because they didn't know what was to come," adds Ryan Waguespack, senior vice president of aircraft management, air charter services and MROs, NATA. "Some places have seen a massive uptake in growth and traffic, destination type locations, and others have continued to be challenged on traffic and flow, as business travel has not yet returned."

Factoring the Return

Despite the patchwork state it finds itself in, returning the industry to its pre-pandemic state is, on the surface, more straightforward – bringing back the passengers. It's a task that is simultaneously simple and quite complex, says Gamba, and dependent on two factors. The first is coordination between nations.

"For instance, if a country or even a number of countries decide to have health passports implemented, then this health passport needs to be implemented in a way that is acceptable to the other countries, so that they need to have confidence among themselves. So that whenever someone goes to the airport with this passport, it shows that this person has done what it pretends it has done," says Gamba.

The second factor is longer term and involves solving the puzzle of how a carrier from a country with fewer pandemic measures can fly to countries observing them.

"If this area is still in lockdown and some are in confinements, it is not appealing to people. Because if you're flying there and then you realize that the whole, the hotel and restaurant sector is closed, it's not attractive, right?" Gamba says, "And so, people would not fly there. We try to avoid these places. I'm not even talking about quarantines because that speaks for itself.

"So, I think it's both a question of trying to restore flying confidence by showing that there is a harmonized coordinated way to make sure you can trust people who are flying, having gone through tests or for vaccination. And then to make sure that the degree of epidemiology of the countries that have opened up their frontiers is relatively similar," Gamba continues. "Simple and complicated at the same time."

Sans the return of passengers and the coordination needed to bring them back, the



▲ A return to pre-pandemic levels depends on meeting the new demands of flyers, such as contactless travel.

ground handling workforce will continue to stagnate or flourish depending on the localized state of a region's aviation industry.

Though, passenger return is not the only factor that Gamba says is being eyed with trepidation.

"What we're looking at really with some angst and anxiety is that we start receiving longer-term schedules from our customers, from the airlines. What was characteristic of the pandemic, especially in 2020, but we see that today as well, is that the airlines were postponing releasing schedules of their flights. And so, we would get a schedule from a customer at the very last moments, which makes it extremely complicated for a ground handler then to be able to adapt in the very short period of time," Gamba explains.

This short notice can lead to bottlenecks, even with the limited number of flights taking place over the past year.

"So really, what matters to ground handlers, to airline contractors in general, is to get or to be in a possession of flight schedules long in advance, or long enough in advance. To be able to then adapt and have the right workforce ready at the right time. Otherwise, it makes no sense, right?" Gamba adds. "So, for us, that's really what we're looking at."

He notes, though, that it all again comes back to restoring the passenger demand so airlines can return to business as it was pre-March 2020.

The Labor Problem

Barbara Hunt, VP of business operations, Advanced Air, located in Hawthorne, Calif., says they have had challenges filling both ground support and pilot positions at its FBO, with the pandemic affecting each group uniquely.

Prior to the pandemic, the pilot shortage in business aviation was felt by Advanced Air, but the shortage disappeared when COVID-19 struck the industry.

"When the pandemic took its toll on the travel industry as a whole and airlines specifically this changed drastically and almost overnight. Suddenly the pilot pool was filled with qualified and trained professionals seeking alternate employment," says Hunt.

It's been a boon for the time being, but Hunt knows that when the pandemic has ended, there will once again be a shortage.

"The airline industry will recover and these pilots who found temporary homes with Part 91 or 135 operators will be called back and will rejoin their initial career path. We need to be prepared for this by creating reasons for them to stay with us and partnering with larger cargo and passenger airlines to create a career path for attracting young people to the industry, training them and connecting them with the majors, if that is their goal," she says.

When it came to the company's ground handling needs, the inverse happened, Hunt details. A large pool of potential ground sup-

port personnel evaporated – and Hunt says she doesn't foresee it returning quickly.

"For FBO ground support, we had a waiting list of potential candidates that virtually disappeared. As much as we would like to get people re-employed, we just do not see the same level of interest generated as there was prior to the pandemic. What changed and where these candidates went still remains somewhat of a mystery. Perhaps there is some level of concern in working for an essential business with potential front-line exposure," comments Hunt.

Aside from the concern of working in a front-line role, Hunt suspects another factor is driving the dwindling interest in group support work.

She says that for some, collecting unemployment benefits higher than entry-level starting pay is creating an unexpected challenge for employers like Advanced Air.

"This situation will likely change in the coming months and we anticipate that qualified and available candidates will be ready to get back to work. In the meantime, our top priority is to ensure our pay structure and benefit packages remain competitive in the market, and we are focusing on safety training and use of technology to increase efficiencies," Hunt adds.

Jason Sparks, director of field safety – west at Signature Flight Support, notes the chal-

lenges around rehiring talent is a trend that his company has seen, as well.

"Many businesses had to furlough employees while activity was down. In some cases, it has been a challenge to bring them back and now that many organizations are hiring, that brings another challenge to recruit top level talent and train them appropriately," Sparks points out.

Wages, turnover and other labor-centric concerns have only been exacerbated by the pandemic, Gamba adds.

"Obviously, it's always a holistic approach. If one element of the value chain is going through issues, then it tries to reverberate these issues onto the rest of the value chain. So obviously what we find out is that airlines which are in a predicament, just as the rest of the sector of, the industry are coming back to us and saying we need to be in solidarity with them.

"They argue that we should be able to perform the same job that we were doing before the pandemic, but at a lower rate. Otherwise, they threaten to not honour their commitments. So that has a very direct effect on the workforce, on the salaries, on the margins, on the profitability and then enhances on the interest or the attractiveness of this industry," Gamba says.

France adds that pay is part of the equation for hiring and retaining employees, with

the other side of the problem being creating a workplace people want to be a part of.

"Pay is part of that, but it's not just about pay it's about how do we provide people a path moving forward so that this is not just a job that they show up to and punch a clock, because if you're setting yourself up as your employees being a commodity, then the employees are going to act like a commodity.

"They're going to look for the highest dollar they can get with the easiest amount of output. But if you create a culture where they're seen as a valued member of a team with an opportunity for their future, then that's when, what we're seeing anyway, that's when you see turnover begin to decline and companies being successful at maintaining the workforce," France says.

Hunt says that Advanced Air is getting back to pre-pandemic operations and is actively hiring in multiple departments, with as many as 10 new hires in the past month.

"We are optimistic that this trend will continue for several years but understand that the industry is cyclical and change will come again. Each time this industry is significantly impacted by world events, it creates an opportunity to learn and adapt. What we learn becomes part of a plan for the next cycle," Hunt says.

Training for Tomorrow

What exactly the post-pandemic world will look like remains an unknown and it's one of the major factors weighing on the industry.

"I think from a priority standpoint, FBOs and business in general is trying to understand this post-pandemic world and all of the uncertainty that is contained within it," France says. "I think we all find ourselves having these discussions saying, 'How has what's happened over the last year going to impact the future going forward? Are we just going to curve slowly back upward to right where we were, or are we going to see some fundamental changes in the way we travel, or changes in the way we work?'"

"We've seen a lot of investment in training through the pandemic lull, if we want to call it that. So, I think that kind of sets up where we are and what's going through the minds of these businesses right now."

Sparks adds that a thoughtful evaluation of the current training program update as nec-



▲ *During the downturn in air traffic over the past year, many organizations used the time to reinvest in their training programs.*

essary to fit the needs of today's workforce is needed.

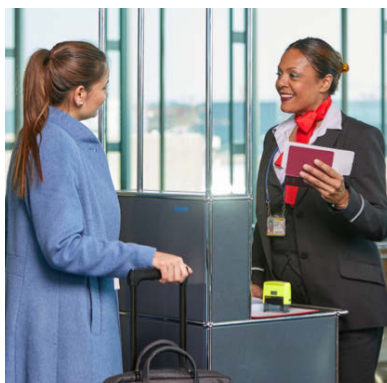
"If we consider corporate level employees, most switched to completely virtual environments which led to some people feeling video conference fatigue. Those employees missed the human and team connection so very important to find ways to get them involved outside of a virtual environment. Considering field level employees, while they were not in a virtual environment, many locations experienced lower than normal operations. These employees need to be refreshed on all policies and procedures, specifically focusing on situational and injury awareness as operations continue to increase," he continues.

With the need being to regain passengers, cleanliness has become a top priority in the fight to restore travelers' trust. Maintaining certain levels of cleanliness and making sure that facilities are attractive as business travelers come back has been some of the main feedback Waguespack has heard.

"About 90 percent of the travel through 2020 has been personal and now business travel is scheduled to start with an uptake in Q2. And the standards, what business travelers are looking for, it's kind of a higher standard and so operators are having to look at how they address clients. Therefore, there is a ripple effect of how do we engage through the FBOs, right? Car rentals, black cars, etc.," Waguespack says.

With that said, the downtimes that the pandemic has created has provided more time for training, specifically for things such as safety and cleaning. Training opportunities were further bolstered by the launch of the NATA Safety 1st Training Center last year.

"The training became a way to take advantage of that time and say, 'Look, let's invest in these employees and, and bring them onboard.' Now, what we're seeing is, especially with the rollout of the new safe diverse training center is it's actually given businesses a chance to begin that process of moving from a more compliance-based training program into a truly continuous training model that can influence culture over time. Add to that, now the Safety 1st Clean and the recognition that how helping teams, they're helping companies' teams understand why business travelers are taking advantage of private in general, our business in general aviation and how import-



▲ **Fewer lockdown measures and more passengers are needed for a return to normal across the globe.**

ant even the simplest little things like social distancing, and masks and cleaning and so on are to travelers that are taking advantage of what we have to offer," says France.

Noting that recruitment and hiring is merely the beginning of the employment pro-

cess, Hunt says a business must continually prioritize retaining employees and growing that person's career.

"Initial and ongoing training is imperative to ensure our staff feels both confident and empowered. We have leaders in each of our business lines who are responsible for training, coaching and ongoing mentoring long after initial training has been completed," Hunt says.

"We rely not only on our internal training programs, but also use all industry resources available to maintain and enhance proficiency in all areas," she continues. "We have nurtured a learning and growing culture within the company so that employees with aspirations can see opportunities for career growth and are, in fact, encouraged to share their goals and desires so that we can help them achieve." **GSW**



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How Africa's Handlers are Mitigating Security Risks

Effective training plays a key role in reducing security threats and related consequences.

By Mario Pierobon

▼ **The issue of security is taken very seriously by all stakeholders in the airport environment, with numerous forums addressing the matter at different levels.**

Photo courtesy of Swissport

Africa is a large and diverse continent and the security challenges posed in any given country are generally unique to that country and often even to a single city.

There are patterns, however, which are common to the ground handling industry that can be addressed by considering security threats, the implications of the threats, the role of training as a security measure and the effects of COVID-19 on security management in Africa.

According to officials at UAS International Trip Support, security incidents for aviation operations in Africa are limited, as over the past years there have been few reported cases and those incidents were concentrated in specific areas that had larger, underlying security issues.

"Though risk levels differ from country to country, potential threats to operational security can broadly be connected to health risks, political and economic

instability, lack of investment and resources and corruption," say officials of the Africa team at UAS, which has headquarters in Johannesburg, regional offices in Lagos and Nairobi and station managers on the ground at 11 locations on the African continent.

"Health risks such as COVID-19 and Ebola do not just revolve around the possibility of infection but include entry and exit restrictions and protocols that may change suddenly and disrupt a mission unexpectedly, thereby potentially putting crew, passengers and cargo at risk."

Security Threats

Political and economic instability represent the biggest security threats to aviation operations in Africa.

"One must also consider the condition and state of the aviation infrastructure at the business of operation," says Heinrich Maritz, aviation security manager at Airlink airline.

In the context of unstable political and socio-economic conditions Menzies is constantly monitoring these situations across individual nations and the continent as a whole.

"The aim is to ensure that our plans to mitigate the effects of these events are as robust as possible. However, more recently we have been presented with new and unexpected obstacles to overcome due to the global pandemic, as several African countries have experienced high infection rates and subsequent restrictions," says Wilma Kruger, vice president of security management systems at Menzies Aviation.

Protests and armed clashes between pro- and anti-government factions throughout the continent can often pose serious and unpredictable risks to travelers, say UAS officials.

"Instabilities created in conflict zones and troubled spots in Africa have led the emergence of local militia and armed groups constantly seeking soft and profitable targets. Additionally, insurgent groups have made attempts at attacking airports and aircraft in the past but have never succeeded," UAS Africa team representatives say.



In the planning of an aircraft ground handling company, it is important to be aware of threats including terrorism, crime and corruption which can occur in any country.

"Such crises can unfold rapidly, so we ensure that our response protocols are thorough and streamlined across our operations to neutralize these threats as quickly as possible," says Kruger. "Equally, we sometimes encounter infrastructure challenges in the form of power outages and network failures, so our teams in the region are quick to react and implement measures that allow us to continue delivering our services despite these difficulties."

Economic instability, poverty and social inequality can also pose a threat to aviation operations in Africa.

"They can also lead to low investment in airport resources, i.e., growing traffic without corresponding growth in capacity building, equipment, technology and infrastructure to deal with the growth," officials with the UAS Africa team say. "Sometimes adequate security checks are not being made and there is a low level of compliance by authorities with security policies, and international standards and recommendations, which could be related to the lack of funds, inadequate training and limited technical expertise."

"Also, corruption is a sad reality in some cases, with bribery threatening operations when security checks are used to extort passengers and compromise IDs and checks in exchange for gratifications."

According to Christian Zweifel, head of Swissport in South Africa, the issue of security is taken very seriously by all stakeholders in the airport environment, with numerous forums addressing the matter at different levels.

"Ground handlers are heavily involved in these multi-discipline forums. The local airport authority and operators undergo regular ICAO, TSA and local CAA audits," he says.

Implications of Security Threats

Security threats are bound to negatively impact ground handling operations. Indeed, the mere fact that there are security threats present is a concern by itself.

"One must consider the possibility that in the presence of a security threat situation, the

threat could be internal, i.e., have infiltrated ground operations. With this in mind, oversight is crucial as well as the use of a reputable ground handler," says Maritz.

Aircraft can be extremely vulnerable when on the ground, so operators can expect stringent security measures at airports in Africa. The level of security does differ between airports and, in some countries, the security checks could extend the check-in time by more than an hour, according to UAS officials.

"In most cases, extensive security checks are annoying to most passengers and crew especially when similar check points are placed within a few minutes of each other," they say.

Menzies provides services at airports in different states on behalf of airline operators and must comply with the requirements of the national civil aviation security programs (NCASP), airport security programs, aircraft operator security programs and regulated

agent programs; all of these programs are directed by ICAO Annex 17.

"The NCASP of each contracting State is given legal force by virtue of common law, statutory acts and regulations, as applied to situations impacting on civil aviation," says Kruger. "In the event of a security threat, we would follow state guidance and protocols accordingly. We operate within a secure area thanks to state and airport authoritative bodies monitoring for threats both externally and internally."

Security threats have the potential to lead to damaged or lost equipment and airport infrastructure, injury or loss of life in the event of any attacks.

"Threats could also imply the possible disruption of air services such as distribution of critical medical and relief supplies in conflict zones and disaster areas, as well as commercial activity," say UAS Africa officials. "It would be great to see African governments deploying



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more resources to keep threats minimal – like airport security installations to eliminate insurgent forces and criminal activity.”

Kruger observes that Menzies personnel is involved in the creation of a culture, which values transparency and openness.

“We ensure that they feel empowered to report and investigate incidents should they arise,” she says. “The recent introduction of our employee support program provides additional support to safeguard both the physical and mental health wellbeing of our people, enabling them to do their job to the best of their ability.”

From an operator’s perspective, the best way to mitigate ground handling security threats is to use various layers to ensure accountability, according to UAS officials.

“We regularly dispatch VIP supervisors and station managers to oversee operations and ensure the service being delivered is on par with our customers’ expectations. Our risk

mitigation solutions also provide security briefs and deployments according to their unique requirements, adding an extra layer of security and peace of mind,” they say.

Security Training for Personnel

Training is key to mitigating security threats.

“Airport and ground handling staff need to be continuously trained to increase the awareness level of the threats and familiarize with the different ways in which security can be compromised,” UAS Africa team members say.

South Africa Civil Aviation Authority accredited security training is provided to all staff, under the auspices of ICAO Annex 17, notes Zweifel.

“With general awareness training provided to passenger and ramp staff and cargo specific training provided to staff performing cargo handling functions. Training is undertaken every two years,” he says.

Security training aims at making airline and airport staff aware of the various acts of unlawful interference, as well as methods of attack and the perpetrators that may commit these attacks, says Maritz.

“Training also includes what to do in various scenarios and the reporting structures. ICAO Annex 17 and Document 8973 standards are followed with regard to aviation security training,” he says.

In security training, Menzies follows the NCASP of the state and as such ICAO and local civil aviation authority standards.

“Internally, we follow the Training Learning Development Plan for Menzies Aviation, a set of practices streamlined across the group, which includes industry leading safety and security training modules whilst also covering role specific modules that touch on security aspects, e.g., training for appointed and non-appointed persons,” says Kruger. “The training that we provide enables our personnel to follow the procedures developed from the NCASP and aircraft security program, plus any directives issued by the airport authorities or civil aviation authorities.”

Training creates awareness of how aviation can be compromised by security issues, according to UAS officials.

“The role is to educate and make everyone aware of the security and safety of the passengers, pilots and employees at the airport on how to manage different situations, how to identify and report potential accidents and incidents, as well as how to manage big groups of people in danger in the event of a threat or accident taking place,” they say. “Security training is also crucial for ground handling personnel to understand, identify and help prevent threats. Handling personnel interface with nearly all airport users and their role in this area is unquantifiable and therefore should not be compromised.”

Regular and recurrent security training to update staff with emerging threats should be mandatory for all handling personnel and should be a prerequisite for issuance of an airside pass, according to UAS officials.

“Training helps to sensitize everyone in the airport environment to be able to identify and report potential threats to the airport. It is also important that when there is a security breach, the handling staff will know what to do and how to handle passengers and crew,”

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say members of the UAS Africa team. "They should be able to direct passengers and crew to safety and quickly inform the right people of the threat. This can only be achieved through training. This sort of training helps ramp staff develop a better situational awareness and utilize best practices to ensure the operational security of the flight and make the passengers and crew feel comfortable."

The Effects of COVID-19

COVID-19 has forced airports to consider a 'touch-free' approach for the physical screening of passengers, observes Maritz.

"Airports are depending more on technical/mechanical screening than physical screening. The rest of the security operations remain the same," he says.

According to UAS officials, to a certain extent the pandemic has made the business more secure.

"The free movement of people has been restricted and protocols are more closely

adhered to. Although the traveling public has significantly reduced, security agents have intensified their efforts at the checks while also ensuring the spread of COVID-19 is tamed. This is mitigated by an increase in security personnel to monitor and control the crowd ensuring they act in a manner as required by the country whilst also limiting the risk of the other security threats," members of the UAS Africa team say. "However, it is important to ensure that while focus and attention is given to addressing the COVID-19 threats continued attention is also paid to conventional aviation security threats."

Conversely, the impact of the pandemic has meant that unemployment has increased across the continent.

"Additionally, the vaccination rollout across Africa has been more successful in some countries than others, and there are concerns that the pandemic will cause further instability in terms of crime and corruption. Should these threats materialize, the reper-

cussions would transcend from national to global level, as there are growing concerns that airport workers could be colluded into criminal activity," says Kruger.

"Insider threat risks have greatly increased, which is a challenging consequence of the macro-level disruption caused by the pandemic. We are continuing to work with our people and partners around the group to deliver the best-in-class services that Menzies is known for, whilst managing the complications and issues presented by the pandemic," concludes Kruger. **GSW**

▶ ABOUT THE AUTHOR:



Dr. Mario Pierobon provides solutions in the areas of documentation, training and consulting to organizations operating in safety sensitive industries. He has conducted a doctoral research project investigating aircraft ground handling safety. He may be reached at mariopierobon@az-all-in-one.com.



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Hard-Headed Power

PAGE GSE's 28V DC and 400 Hz power banded cables feature the company's Hardhead technology, offering a safe, reliable way to power an aircraft.

By Jessica Purgett

Any aircraft that has the capability of using external ground power to supply its electrical loads needs a reliable ground power cable.

PAGE GSE's 28V DC and 400 Hz power banded cables were designed to safely carry electrical power from a fixed or mobile power supply to an aircraft.

"This power needs to match the same critical performance specifications the onboard generators produce in flight," says Brian Piety, president of PAGE GSE. "When the power is provided externally to the aircraft, it must be safe and efficient. By providing ground power to the aircraft while it is on the ground, it allows the aircraft to turn off its APU, providing the operator with a more efficient, less costly solution."

Piety also notes using ground power is more environmentally friendly than running an APU.

The 28V DC and 400 Hz power banded cables differ from others on the market because of PAGE GSE's Hardhead technology – a feature designed to better protect the cable's electrical components.

While other power cable assemblies may use a screw-on plastic cover over

the electrical contacts, PAGE's Hardhead tip is molded into the connector. This protects against liquids entering the electrical components, which could lead to corrosion and electrical shorting.

"We utilize our Hardhead tip molded into the end of the aircraft connector where the vast majority of the wear takes place. This is the first item that wears out on a standard cable assembly and is the key reason older cable assemblies have to be replaced," he explains.

"Only PAGE integrates the hard tip into the connector without the need for screws," Piety continues. "PAGE also has a proprietary compound that enables our tip to last much longer. Additionally, the PAGE assemblies come with thermal protection in the connector body."

This thermal protection kicks in if the cable reaches 110 degrees Celsius, automatically switching off the power.

"In case there's a bad connection – which can be caused by various things – heat would build up in that area. So, we have a thermal switch in there that will trigger the electrical ENS circuit to break and that stops the power before damaging the aircraft or possibly injuring a person," Piety says.

In addition to these safety features, the cable is also ergonomically designed for ease of use.

"We spent the time to update these connectors, which for the most part have not changed in technology or appearance for perhaps 30 years, by incorporating locations on the connector body that were designed to place your hand to achieve a



better grip to make it easier to engage and disengage the connector from the aircraft," he notes.

PAGE GSE has been manufacturing 400 Hz single jacketed cable assemblies for eight years, but only last year did the company enter the banded cable market.

According to Piety, banded cables are mostly used on mobile pieces of equipment whereas the single jacketed cables are used primarily on bridge-mounted and hangar 400 Hz set-ups. The banded cables are more flexible and fit in the trays on mobile equipment easier than the single jacketed cables.

Piety says PAGE GSE patiently waited to enter the banded cable market until the company had a product that could compete well with others. He mentions before entering a certain market, it is important to pay attention to it, listen and respond to customer requests, then bring products to the market that differ from what is currently available, which is why the 28V DC and 400Hz power banded cables have military certification.

"We took our knowledge of cable assemblies and challenged ourselves to build the best one possible," he continues. "By coming in recently, it allowed us to start with a clean slate and design the best connector possible inside and out."

The cables did not have to meet military standards to enter the market, but Piety says they sought military approval to differentiate its power banded cables.

He notes the cables went through certain testing to achieve this certification. These

"Today, most large commercial aircraft operate on **400 Hz AC** power. Smaller regional jets, corporate aircraft and some helicopters still use the **28V DC** load profile."

— Brian Piety

tests take into account the type of materials used in the cable and what stranding is used, among other items.

The 28V DC and 400 Hz cables are also built to SAE (AS5756) standards. SAE standards are set by industry experts to ensure end-users receive a safe, quality component that is built to a high standard, according to Piety.

"These tests include a vast array of parameters from hot and cold temperatures, impact tests, electrical performance, chemical resistance and environmental exposure just to name a few," he says.

PAGE GSE sells the 28V DC and 400 Hz cable assemblies to airports, airlines, ground handlers, fixed base operators (FBOs), original equipment manufacturers (OEMs) and the military all around the world.

These operators choose between the 28V DC or 400Hz cables depending on what aircraft they fly.

"28V DC power was the original power produced by aircraft while flying to power all its electrical demands," Piety explains.

"As the electrical demands grew, the need to supply this demand while keeping the generator compact, resulted in a new power profile of 115/200VAC at high 400 cycles," he adds. "Today, most large commercial aircraft operate on 400 Hz AC power. Smaller regional jets, corporate aircraft and some helicopters still use the 28V DC load profile."

Piety says PAGE GSE's customers are satisfied with the product and the feedback the company has received has been favorable.

"There have been no requests for even one change," he says.

While these cables do not require any regular maintenance, Piety says operators should always visually inspect the connector on an ongoing basis to see if it has been damaged.

He notes cables may be dragged on the tarmac or even driven over by a tow tractor. He also mentions users should periodically verify the sockets within the connector have the correct grip.

"When it comes to external ground power cables," he says, "most customers understand the environments and harsh usage these cables endure." **GSW**



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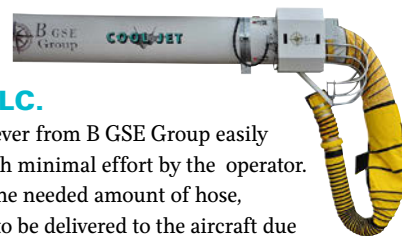
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COOLJET HOSE RETRIEVER

B GSE Group, LLC.

The CoolJet Hose Retriever from B GSE Group easily deploys and retracts with minimal effort by the operator. The unit deploys only the needed amount of hose, allowing more cooling to be delivered to the aircraft due to reduced temperature losses and pressure losses from length and kinking, and hose wear. It removes a rolling hose basket or reel from the ramp along with its attachment yoke, and it elevates and protects the hose during storage. The hose retriever facilitates PCA usage, which reduces APU run-time.

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JETMAX1200

Aeromax GSE Inc.

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400HZ ALTERNATORS

WEG Electric Corp.

WEG's unique vertically integrated production and high-quality designs combined with well-proven manufacturing processes result in a modern world class alternator product range for GPU 400hz applications. Available from 30 to 320kVA, 1,846 to 2,400 RPM, WEG alternators are designed to provide the highest performance with a compact and robust mechanical design. WEG 400hz alternators provide reliable power for demanding applications. Consult with WEG today to find out more.

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28.5V GROUND POWER UNIT

Current Power LLC

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Reelcraft Industries, Inc.

Reelcraft's PCA reels handle 75' of 14" I.D. pre-conditioned air ducting and are designed for ergonomic handling of air ducting. When properly installed, Reelcraft's PCA reels supply continuous clean pre-conditioned air to stationed aircraft, keeps expensive PCA ducting protected and improves safety on the tarmac. Aluminum construction and a safety yellow, baked-on powder coat finish combine to provide corrosion resistance. Heavy duty casters are available for easier mobility.

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28.5V DC TIER 4 FINAL DIESEL GROUND POWER UNIT

Tronair Inc.

Tronair's Tier 4 Final Diesel GPU simultaneously uses the 400Hz AC system and 28.5V DC system; powered by a Doosan engine and backed by a three-year warranty. A Digital Display and Diagnostics module monitors key metrics. One button operation reduces training and maintenance costs.

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GPU SERVICE

Servicore G.S. Corp.

Servicore G.S. Corp provides service to ground power units (GPUs) including calibration, load bank test and overhaul. All services are performed by trained technicians.

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Philatron Wire & Cable
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400 HZ CABLE

Service Wire Co.
Service Wire Company's six-around-one twisted 400 Hz cable is specifically designed to power modern airports and hangars. The unique cable is an assembly of multiple soft drawn copper conductors, stranded and insulated with cross-linked polyethylene, twisted in a six-around-one construction and phase identified per customer specifications. Used as a power source for aircraft ground power supplies at airport terminals and other similar applications. The 400 Hz cable is available in #4 AWG through 500 Kcmil, 600V/1kV XHHW-2 and 1kV USE-2/RHW-2.

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Kato Engineering
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UFC SERIES Unitron Power Systems

Unitron's 400Hz frequency converters contain power ratings from 20kVA to 400kVA, making the series perfect for any commercial, industrial or military application involving a variety of aircraft ground power applications. Dependent upon rating, these units are available in mobile, towable, fixed and bridge-mounted configurations. In addition, Unitron offers 28VDC, 270VDC and combination AC/DC GPUs.

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RAMPTECH 400HZ GPU AIRCRAFT CABLE ASSEMBLY Sage Parts

The Ramptech 400Hz GPU Aircraft Cable Assembly is a high-quality design which meets SAE AS7974 (MIL-C-7974) standards, and includes a hardened tip for extended service life. It includes a high performance Hardhead GPU connector engineered for maximum moisture, chemical and abrasion resistance with superior contact and built-in thermal protection. The Ramptech 400Hz GPU Aircraft Cable Assembly is engineered to meet and exceed the rigorous demands on the ramp.

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PCA REELS AND DUCTING Hall Technical Services

Hall Technical Services' Xtreme PCA Hose is the latest in new hose technology to combine extremely durable lightweight materials into a superior ramp ready PCA hose. This Xtreme PCA Hose is designed for the tough ramp environment with reinforced seams that are lock stitched with new improved high strength UV protected polyester thread to prevent breakage.

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Aviation's Role in a Sustainable Future

As leaders establish and pursue new environmental goals, now is the time to make sure your team understands how to become part of a greener industry.

The COVID-19 pandemic has brought its share of negative news and struggles to our industry. But the glass-half-full approach to the decline in commercial air travel is the opportunity aviation has to adopt new technologies and implement new initiatives.

Environmental goals are chief among these new initiatives, and as Pratik Chandhoke noted in this month's Industry Expert Column, sustainable aviation fuel (SAF) can help achieve many of these green objectives.

I had the opportunity to virtually attend the European Business Aviation SAF Summit last month, and came away impressed with the work being done to promote sustainable fuels in business aviation.

As part of the event, industry leaders shared their strategic vision to increase the use of sustainable aviation fuel across Europe.

These goals include incentivizing both the SAF supply chain to promote steady market growth as well as additional research for further development of SAF technologies and feedstock. Presenters also noted the importance of prioritizing SAF and increasing capacity, and the need to support systems that allow operators to buy SAF.

What's more, the SAF Coalition has produced a sustainable aviation fuel guide to further inform industry leaders about the steps we can take to reduce emissions and limit aviation's impact on the environment.

More information about this important topic can be found at www.futureofsustainablefuel.com.

The use of SAF will continue to rise with both near- and long-term environmental goals spurring adoption. Now is the time for fuel handlers, FBOs and other stakeholders to educate themselves about the production, use and benefits of sustainable aviation fuel.

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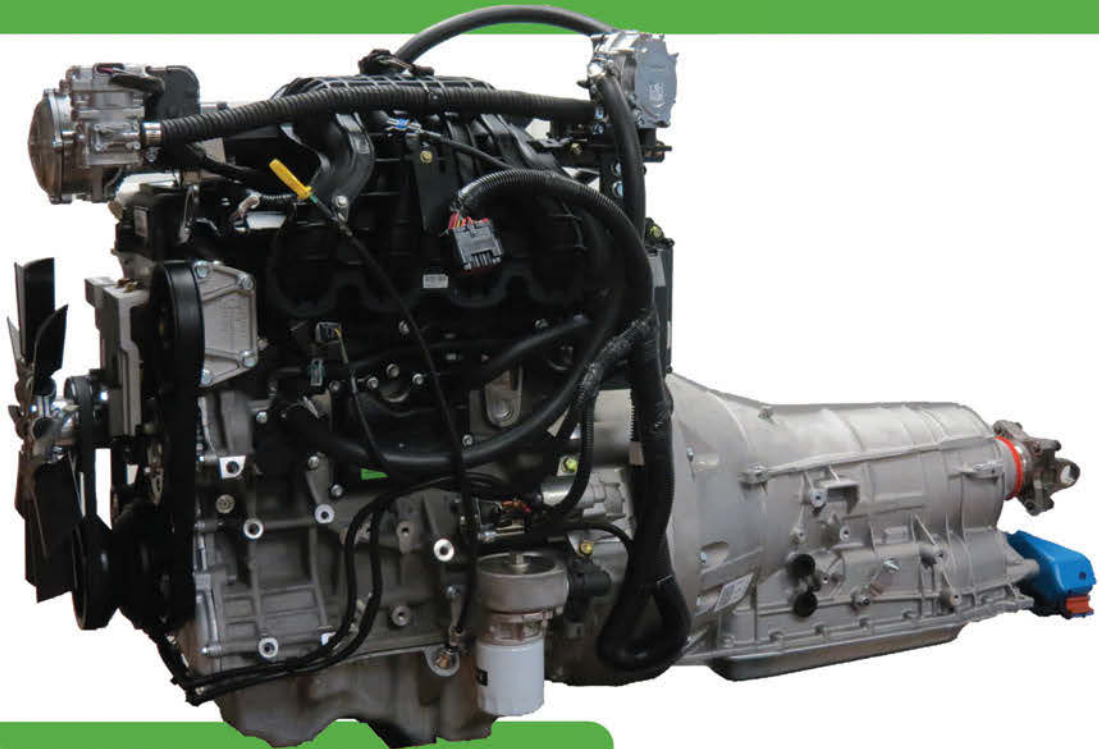
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