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SEPTEMBER 2020

Ground Support WORLDWIDE

EQUIPMENT – SERVICES – HANDLING

THE GLOBAL ISSUE

- The Post-Pandemic Plan
- Get GSE Ready to Return
- How Fuel Contamination Threatens Grounded Aircraft
- Certifying Çelebi
- The Rise of the 'Preighter'
- Protecting Engineers and Airframes on the Ramp

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SEPTEMBER 2020

ONLINE EXCLUSIVES

Airports Step Up Use of Thermal Scanners to Mitigate Spread of COVID-19

By Michael Lende

Since the outset of the pandemic, international airports have been utilizing thermal imaging devices such as camera-mounted scanners.

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BLOGS

Applying Intelligent Visual Flame Detection in Military Aircraft Hangars

By David Mayfield

It is critical that military hangars have an effective system in place to protect their assets from inherent fire risks.

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PODCASTS

AVP Podcast - Examining GSE Safety

Arun Patel, CEO at Access Control Group, discusses best practices for GSE safety and the use of telematics to ensure safe operations.

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ARTICLES

Four-Wheel Drift: How COVID-19 Is Turning Airport Parking Upside Down (and What We Can Do About It)

By Jeremy Zuker

Just as the coronavirus pandemic has upended flying, it has also fundamentally changed how airports manage the vehicles that are parked in their public and private lots.

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Taking Airport Security to the Next Level

By Andy Gent

Whether terrorism, human trafficking or drugs, the security threats to the aviation industry are real and constantly evolving.

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Wear Your Mask – or Else

By Art Kosatka

Airlines for America is now developing policies and procedures for all its member airlines to uniformly adopt, which includes Alaska, American, Delta, Hawaiian, JetBlue, Southwest and United.

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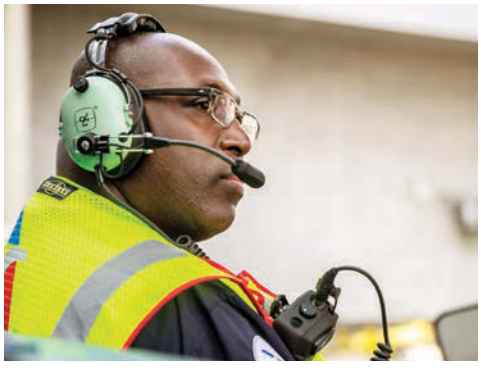

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▶ Upcoming Events

Canceled Events

IATA Global Airport and Passenger Symposium (GAPS)

NBAA-BACE

Postponed Events

RAA Annual Convention

Sept. 22-24
NATA Ground Handling Safety Symposium
Virtual Event

Sept. 29-30
2020 Global Sustainable Aviation Forum – Green Recovery
Virtual Event

Oct. 12-16
2020 ACC Annual Meeting
Virtual Event

Oct. 27-29
MRO TransAtlantic
Virtual Event

Nov. 10-12
TIACA Air Cargo Forum 2020
Miami, FL

Nov. 23-24
IATA Annual General Meeting and World Air Transport Summit
Amsterdam, Netherlands

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▶ TOP NEWS

Amerijet Earns IATA's CEIV Pharma Re-Certification

Amerijet International Airlines has completed its IATA CEIV Pharma re-certification for the handling of temperature-controlled healthcare and life science products. The re-certification reaffirms Amerijet's ability to safely handle high value, time-sensitive and temperature-controlled pharmaceutical cargo with speed, reliability and efficiency.

"The pharmaceutical supply chain consists of a historically demand-driven as well as a growing patient-driven model, due to the rise of personalized medicines, which makes speed and traceability even more relevant," said Amerijet's vice president of airport operations Rasheme Richardson. "We provide our customers with quality standards through uniformed processes, transparency and a compliant network."

In 2017, Amerijet was the first U.S.-based all-cargo airline to be awarded the globally recognized CEIV Pharma certification.

Swissport Secures €300 Million Additional Liquidity

Swissport received a binding commitment from an ad hoc group (AHG) of senior secured creditors, subject to final documentation, for the provision of an interim super senior facility of 300 million euros, which delivers immediate liquidity for Swissport to trade through the COVID-19 market crisis and the restructuring process. The 300 million euros adds to the more than 200 million euros liquidity Swissport still had as of Aug. 18.

In addition, an agreement "in principle" has been reached for a comprehensive restructuring and refinancing of Swissport, involving senior secured creditors, led by the AHG, lenders under Swissport's PIK facility agreement and HNA Group Co., Ltd., Swissport's current shareholder. The comprehensive restructuring will significantly deleverage the balance sheet and provide 500 million euros in new long-term debt financing, which will eventually replace the 300 million euros interim facility. Detailed terms of the comprehensive restructuring will be released in due course once documentation has been finalized.

Air BP and Neste to Offer Increased Volume of SAF in Europe

Air BP and Neste have signed an agreement to offer an increased volume of sustainable aviation fuel (SAF) to airport customers in 2020 and 2021. Air BP will make the Neste-produced SAF available at selected airports in Europe, including Stockholm (ARN) and Oslo (OSL). The increased supply of SAF comes in response to rising demand from existing and new airline customers, as well as from Norway, where there is a mandate requiring 0.5 percent of all jet fuel sold to be SAF.

"BP's ambition is to be a net zero company by 2050 or sooner and to help the world get to net zero. Air BP aims to support our customers and the wider aviation industry on their path to meet their low carbon goals. We believe sustainable aviation fuel will play an important role as the industry recovers from the impact of the COVID-19 pandemic.

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Through our successful ongoing collaboration with Neste, we are pleased to be able to offer our customers a substantially increased volume of SAF as they work towards reducing their emissions," says Martin Thomsen, Air BP's chief executive officer.

"The COVID-19 pandemic and its economic implications have not changed our ambition. We remain fully committed to combating climate change by providing tangible, immediately available solutions for reducing the greenhouse gas emissions of flying in cooperation with our partners. The use of sustainable aviation fuel will play a significant role in the industry's ongoing efforts in making air transportation fit for the climate and environmental challenges it is facing. We are looking forward to continuing our close collaboration with Air BP and jointly contributing to a more sustainable aviation," says Thorsten Lange, executive vice president, renewable aviation at Neste.

PEOPLE

Xcēd Names O'Donnell Company President

Xcēd, a leading aviation ground support equipment (GSE) provider in North America, announced that it has named Erin O'Donnell as company president. O'Donnell joins Xcēd after serving as the airport director of Chicago Midway International Airport for nearly 22 years. She will report to Jeff Walsh, CEO of Sasser Family Companies – of which Xcēd is a subsidiary.

"Xcēd is a dynamic GSE provider with an entrepreneurial approach that has expanded its footprint by offering customized financial solutions that give airlines and equipment operators of all sizes one-stop access to new, refurbished and used inventory. I am excited to be joining the Xcēd team at a time when the aviation industry is experiencing a reset, which is driving airports, airlines and equipment operators to rethink their equipment needs and investments," O'Donnell said.

"Along with the rest of Sasser's executive leadership team, I was extremely impressed by the breadth and depth of Erin's experience, and her grasp of the challenges that airports, airlines and equipment operators are confronted by daily. I am highly confident that under Erin's leadership, Xcēd is poised to continue its strong performance over the long-term," Walsh said.

Telford, R.J. Design Mark 25 Years of Business

Johnnie Telford was promoted to president and CEO of R.J. Design after years of controlling and making all decisions.

R.J. Design has been in business for more than 25, and likewise Telford has completed more than 25 years in the business.

While the past year has been difficult throughout the COVID-19 pandemic, Telford says she is still loving this business and still standing with the company's equipment.

McCabe Joins Stinar as VP of Sales and Operations

Jeff McCabe joined the new management team at Stinar at its new location in Blooming Prairie, Minn.

McCabe will concentrate on Stinar's defense and military relationships. McCabe is a retired soldier, having served more than 22 years in the U.S. Army Reserves – including deployments to Desert Storm with elements of the 18th Airborne Corps, Haiti with elements of 3rd Special Forces Group as part of the United Nations Uphold Democracy Mission and in 2003 served with the 1st Cavalry Division in support of Operation Enduring Freedom.

"McCabe's a proven leader both in business and the military. We're pleased to have him as our chief liaison for Stinar military contracts and after-the-sale customer support," said Stinar chief executive officer Craig Kruckeberg.

NEW DEALS

ATS Awarded WestJet Contract at Calgary International Airport

Airport Terminal Services (ATS) has been selected as the ground handling service provider for WestJet at Calgary International Airport (YYC). ATS already serves the WestJet brand in 19 cities across the United States and Canada, including an existing GSE maintenance operation in Calgary.

"We are thrilled to be awarded this contract and are committed to making the WestJet ramp in Calgary one of the best operations in our network," said Sally Leible, ATS president and CEO. "WestJet has played a vital role in our history, and we are proud to still be growing our partnership more than 20 years later."

The contract at YYC will begin in November 2020.

New Airline Contracts for WFS Ground Handling in Spain

Worldwide Flight Services (WFS) has won three new airline ground handling contracts in Spain.

In Madrid, WFS is now providing ramp and cargo handling services for Airest's Saab340 cargo flights. WFS also secured two new customer contracts in Seville. Air France has appointed WFS to provide full ground handling services for its four Airbus flights a week, connecting Paris and Seville throughout the sum-

mer schedule. WFS has also expanded its working relationship with WIZZ in Spain, which saw WFS supply ground handling services for over 1,700 flights in Madrid in 2019. WIZZ has now extended its contract to also include Seville, where WFS now handles the airline's twice-weekly A320 charter flights from Bucharest.

"In these challenging times, these new contracts are very welcome news for our ground and cargo handling teams in Spain and reflect our reputation for providing the most resilient levels of safety, security and customer service," said Josep Fargas, managing director Spain of WFS' ground handling division.

Menzies Aviation Awarded Contract with Air France-KLM in Canada

Menzies Aviation announced a new contract with Air France-KLM at Toronto Pearson Airport, which will run for three years, starting on Sept. 1, 2020 with Menzies set to provide ground handling operations and cabin cleaning services, representing approximately 900-plus flights per year.

"It is great to see us broadening and strengthening our existing relationship with Air France KLM," John Redmond, Menzie's executive vice president, Americas said. "This award is a testament to the success of our partnership so far and the hard work delivered by Menzies Aviation employees on the ground."

GTA dnata Set to Launch Vancouver Operations

GTA dnata, dnata's joint-venture company in Canada, has been awarded a five-year ground handling license and will establish operations at Vancouver International Airport (YVR). The company

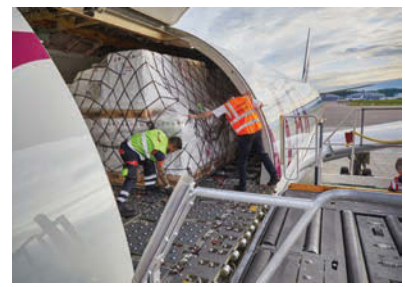
will provide ramp, passenger and cargo warehousing services to airlines with a team of highly trained, customer-oriented aviation professionals. GTA dnata will commence operations at YVR in the fourth quarter of 2020.

"We are thrilled to expand our network and launch operations in Vancouver," said Mario D'Urso, GTA dnata's chairman. "The time is right for us to make this move as our commitment to safety, quality and service excellence is now more important than ever. We thank the Vancouver Airport Authority for this opportunity and look forward to a successful start-up and much future success."

Swissport Wins Qatar Airways Cargo Business

Swissport and Qatar Airways Cargo renewed their agreement covering airport ground services and cargo handling at Schiphol airport in Amsterdam, Netherlands. The contract includes ramp handling and air cargo warehousing as well as the handling of general cargo, pharmaceuticals, dangerous goods and temperature-sensitive goods. The contract is valid until the end of 2025.

Via its Manchester and Birmingham warehouses, Swissport can also link Qatar Airways Cargo to regional airports across the UK utilizing its road feeder



services to Aberdeen, Belfast, Bristol, East Midlands, Glasgow and Newcastle, which are not served directly.

These new five-year contracts begin Sept. 1, 2020.

"We are honored to again be entrusted by Qatar Airways Cargo, one of the leading air cargo carriers," said Rudolf Steiner, Swissport's senior vice president cargo for EMEA. "Through consistent performance and reliable quality delivered across all airports, we continue to prove the value of our services to our global customers."

SAS Awards Major Ground Services Contract to WGH

Widerøe Ground Handling (WGH) has signed a new contract with SAS to work in partnership delivering ground services at 12 Norwegian airports.

"We are very proud that SAS have reiterated their confidence and trust in us. The fact that we have regained the contract at 12 out of 15 airports shows that the effort invested by the whole company in recent years has paid dividends," says Marius Myhre, CEO of WGH.

This new partnership will take effect from Feb. 1 and encompasses the following airports: Kirkenes, Alta, Lakselv, Svalbard, Evenes, Bodø, Trondheim, Kristiansund, Molde, Stavanger, Haugesund and Ålesund. WGH will also retain a presence in Kristiansand, Bergen and Tromsø.

"SAS has great partnerships with our ground services providers at Norwegian airports. We look forward to continuing to ensure safe, secure travel experiences for our passengers in cooperation with WGH," said Gunilla Olsson, VP of global line stations at SAS Ground Handling.

How Lithium-ion Battery Packs can Improve GSE Performance

Environmental regulations have been a driver for eGSE conversions, but battery-powered equipment can offer additional benefits.

By Justin Forbes

As with the aircraft they support, ground support equipment (GSE) has traditionally been powered by internal combustion (IC) engines. But burning diesel, gas or propane results in carbon emissions that can have a negative effect on the global environment.

The use of IC engines in GSE is changing, as more airlines are choosing to electrify their GSE fleets.

One of the primary drivers of fleet electrification has been the need to comply with government agency regulations around emissions. IC technology has improved over the years to reduce the level of emissions, however, electric GSE is emission-free.

The California Air Resources Board will consider a measure later this year that will promote "the development and use of zero-emission airport ground support equipment (airport GSE)" as part of a strategy to help reduce emissions at several California airports.

Starting in September, airlines at Salt Lake City International Airport (SLC), "will transition to electric ground support equipment reducing 8,000 metric tons of greenhouse gases (GHG) annually."

While the elimination of emissions is an important consideration for making the switch to electric GSE, there are other benefits.

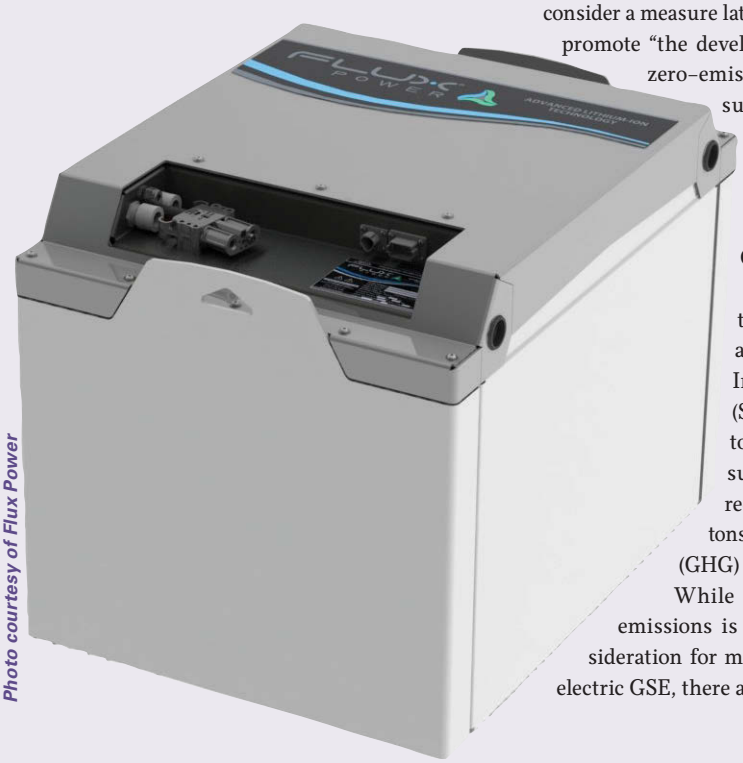


Photo courtesy of Flux Power

Electric GSE

Along with the elimination of emissions, electric GSE also helps do away with something else – noise. Compared to IC-powered equipment, electric GSE is much quieter. In a noisy environment, like the ramp at an airport, this can be a big plus for equipment operators.

Electric GSE can also be easier to maintain, as the drive system uses fewer moving parts that are subject to wear over time. Simplifying the maintenance routine can lead to higher GSE fleet availability, which is critical for equipment that supports multi-million-dollar aircraft. After all, a ground service provider wouldn't want to delay a departure because a baggage tractor is out of service for maintenance.

The typical usage patterns for GSE are also a good fit for battery power. Frequent starts and stops don't strain an electric powertrain the same way it does an internal combustion engine with a lubrication system, since much of the wear occurs during start-up.

Operators can benefit from using electric GSE as well. One of the most appreciated aspects of using electric GSE is the "inching device."

This feature allows operators to "stand behind luggage tugs and inch it into the hitch of the luggage trailer" ensuring they are in a safe position where they can see the hitch connection.

Lithium-ion Battery Benefits

Electric GSE offers some significant advantages over internal combustion-powered equipment. There are even more benefits to using lithium-ion batteries instead of lead acid batteries to power the equipment.

Photo courtesy of Flux Power

While it is true that lithium–ion batteries typically come with a higher price tag for the initial purchase, that price can be offset by a longer service life. Modern lithium–ion batteries for GSE can perform for 2,000–3,000 cycles and are often backed by warranty.

Lithium–ion batteries can remain in the equipment while being charged, and they can be "opportunity charged," meaning an operator can plug it into the charger for 15 or 30 minutes while on break. In comparison, some lead acid batteries don't support opportunity charging without damaging the battery's capacity and may require removal from the equipment for charging and cooling.

As mentioned previously, electric GSE has lower maintenance requirements than comparable equipment powered by diesel or gas. Lithium–ion batteries benefit from the design of sealed cells which means there is no requirement to adjust the electrolyte levels as must be done with lead acid batteries.

Lithium–ion batteries also have a higher level of energy efficiency – the can be as much as 50 percent more energy efficient, depending on the specific battery model.

That means that more of the energy coming through the charger is available to do work, such as pulling a train of baggage carts.

One downside of using batteries is that their performance level decreases with colder temperatures. Most lithium–ion battery manufacturers offer integrated heaters as an option to ensure that the battery packs are kept at the optimum temperature range. If you have ever been to O'Hare in January, you'll appreciate the value of a heater to keep the GSE batteries warm.

Making the Transition to Lithium-ion

If interested in implementing lithium–ion battery technology, the first step is to assess the condition of the current fleet of GSE. A good starting point is to consider the following questions:

- Do you have equipment that is near the end of its operating life that would be replaced?
- Do you have existing electric GSE that could easily accept a replacement lithium–ion battery pack?

Once you have answered the first two questions, it makes sense to evaluate the specifics of the fleet operations:

- How many hours per day is the GSE being used?
- What are the battery charging infrastructure requirements?
- What are the environmental/regulatory requirements (today, and in the future)?

A detailed return on investment (ROI) calculation can provide insight into the economic benefits of making the conversion to a different power source, whether it is lithium–ion or lead acid.

To get a true understanding of the total cost of ownership, do not forget to factor items like maintenance costs, replacement battery costs and refueling/charging infrastructure costs.

The demand for zero–emission, high performance ground support equipment is on the rise.

The transition from IC engines to lithium–ion batteries is becoming more common because of the significant benefits that lithium–ion provides.

As government regulations on emissions put GSE fleet electrification into the spotlight, now may be the time to start thinking about how to make the switch to a higher performance lithium–ion battery. **GSW**

▶ ABOUT THE AUTHOR:

Justin Forbes is the director of business development at Flux Power, where he is responsible for developing marketing and customer acquisition initiatives, along with creating new business growth strategies to increase sales. His prior experience includes marketing and product management roles at several industrial companies. He graduated with a degree in Mechanical Engineering from UC-San Diego and earned his MBA from Duke University.

THE POST-PANDE

Photos courtesy of UAS International Trip Support

MIC PLAN

Much work has been done by members of the ground handling industry to endure the effects of COVID-19, and the process of building back up has already begun.

By Mario Pierobon

COVID-19 has had a profound effect on aircraft ground handling in many ways in addition to significantly shrinking the volume of the business. Indeed, the industry has probably never faced such a challenging and unpredictable time.

Fabio Gamba, director general of the Airport Services Association (ASA), observes that COVID–19 has really been affecting the whole value chain, not only the airlines but all the contractors to airlines and the airports.

"The most difficult part is the uncertainty. In previous crises, one was typically faced with a situation that was definitely limited in time. This time we are faced with something that has multiple different facets and that is characterized by almost an impossibility to predict how long it will last," he says.

"We have done our best to mitigate the impact through managing our business tightly and ensuring constant communication with our colleagues and our customers," adds Mervyn Walker, chief operating officer (COO) at Menzies Aviation. "The international government schemes have been essential in supporting the industry and helping to mitigate people costs, which are often the largest expense."

While officials at Menzies remain confident in the long–term growth potential of the aviation services market, they do not anticipate a return to pre–COVID–19 levels for some time.

"We have been coordinating efforts with other ground handlers to ensure our sector is not forgotten; currently we are encouraging governments around the world to continue the job retention schemes that support skilled jobs until the end of 2021," says Walker.

"Implementation of a scheme of this nature would prevent job losses and ensure the sector can get back on its feet."

COVID-19 Influences

Since the COVID–19 outbreak began, the expert teams at dnata have worked to develop and implement specific health and safety programs, to minimize touchpoints and enhance services, processes and training across its operations.

"We have run disinfection programs, introduced new personal protective measures and further improved aircraft cleaning services to safeguard our skilled staff and deliver safety for our airline partners and their passengers," says Dirk Goovaerts, dnata's regional CEO for Asia Pacific.

Photo courtesy of dnata

Ground handling companies have worked closely with airports to maximize safety for passengers throughout their airport journey, from check–in to boarding.

"Check–in desks have been installed with protective barriers and waiting areas have been modified to help passengers observe social distancing. The boarding process is facilitated by our boarding agents who wear the required PPE and ensure that passengers board in small numbers," says Goovaerts.

In addition, there has been an enhanced aircraft cabin cleaning service.

"The process involves extensive cleaning with a stronger disinfectant and includes a comprehensive wipe down of all surfaces – from windows, tray tables, seatback screens, armrests, seats, in–seat controls, panels, air vents and overhead lockers in the cabin to lavatories, galleys and crew rest areas," explains Goovaerts. "The on–board cleaning chemicals are approved by the relevant authorities and proven to kill viruses and germs. They leave a long–lasting protective coating against new contamination of viruses, bacteria and fungi on surfaces, and are eco–friendly.

"We also introduced aircraft fogging services," he continues. "A dedicated quality team and shift managers oversee the cleaning on the majority of flights."

Duke LeDuc, regional operations manager at UAS International Trip Support, observes that as a consequence of non–essential travel being halted to a large extent, the reduction in movement of commercial traffic also reduced airspace congestion but added ramp congestion at some airports.

"Another consequence of the reduced commercial capacity was the tightening of the supply chain, which caused an increased demand on cargo traffic. So many of the normal approval flow processes needed to shift very quickly. There were more government entities that were now becoming part of the approval process," he says. "This added time and complexity to each of the flights that were not as evidenced before."

Many of the handlers have had to adjust working hours due to local restrictions and curfews.

"Because of the frequent changes in regulations and varied interpretation by local authorities, it is critical to engage an experienced local handler to help navigate a smooth arrival and clearance through the customs, immigration and quarantine process," adds LeDuc. "New visa issuance in some countries have been suspended, so special waivers may need to be obtained through diplomatic channels."

According to Adolfo Aragon, senior vice president at Universal Aviation, COVID–19 has forced the business aviation industry to find ways to overcome the downturn in international travel due to the restrictions.

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"Starting in April of 2020, volume dropped 87 percent from April 2019. Since that time, there has been a slow uptick each month. Most movements from April through June were humanitarian operations and medevacs," he says.

LeDuc highlights that some countries are indeed now opening up to additional traffic.

"Some of the obvious residual effects of the reduction of travel are shortages that may limit catering options available at some of the more remote airports," he says.

"A number of handlers and fuelers have had to reduce staff and this can cause service issues," LeDuc adds. "Most airports are experiencing some sort of reduction in operating hours."

Aragon also observes that one of the ways handling companies have compensated for the loss of business traffic was by pivoting and supporting more cargo operations between locations where traditionally ground support is not arranged.

"We began supporting more airlines which were using commercial aircraft to deliver medical cargo," he says.

The 'New Normal'

According to Aragon, aviation has always had a strong safety culture and, therefore, adopting new health processes to protect employees and customers from COVID – i.e. the 'new normal' – was not difficult.

"The challenge was rather finding a standard consensus on best practices among the varying different global organizations and health departments at the locations we serve," he says. "We were proactive when the pandemic hit and ahead of the industry as far as adopting health standards for our network.

"We created our standards by analyzing recommendations from various agencies such as the WHO, CDC, IATA, ICAO and other local health authorities," Aragon continues. "We were ahead in many cases helping the airports develop their own protocols and then submitting them to their governments for their approval."

When travel restrictions began to be lifted, the industry was met with new difficulties that it had not faced in the past – many of which pertained to the speed at which one could adapt to a restart.

"For instance, when a given airport has been totally stopped during the lockdown and it reopens again at a slower pace, then one needs to be able to follow that return by having back the people at work, but not all the previous teams because they would be too many," says Gamba. "Ground service providers are required to make sure that they can have the right level of people commitments; but this is extremely complicated as it requires to have very precise scheduling. And, normally, the situation is that airlines are constantly updating their schedules."

With schedules changing sometimes by the day, the airport teams have been working closely with airlines on planning for forthcoming flight schedules.

"Everyone in the industry has had to become very flexible in order to manage the significantly reduced workload. Government support schemes have been a lifeline for the industry," says Walker. "With reduced schedules, many employees have been placed on furlough, which has prevented the loss of thousands of experienced, well trained and security cleared staff."

The schedule changes and the related difficulty at forecasting are due to several factors, according to Gamba.

"The first one is that there are no means for member states of ICAO to agree on a common level and interpretation of epidemiology. So, what a country defines as being enough for a complete lockdown would be something that another country in a similar situation would consider as a simple epidemic and would not therefore shut itself down entirely," he explains.

"Another element of uncertainty is due to the quarantine that has been imposed

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by a number of countries over passengers coming from other countries," Gamba adds. "The lists of the countries whose originating passengers are required to quarantine are different from Country A to Country B and obviously this makes the situation extremely complex."

According to Le Duc, some of the "new normal" includes closer scrutiny of the medical screenings by governmental authorities at the airport.

"More entities involved with the approval processes for flights will add processing time and increase costs long-term. Many countries are expecting the aircraft to be sanitized prior to arrival," he says. "Although there is no evidence COVID-19 is transmitted through food, it is a high-visibility item that can be an area of concern for many travelers. The operators should take the time to help the flight attendants connect with reputable catering sources and coordinate with the caterer and the flight attendants to minimize person-to-person contact."

The operators should also ensure the catering does not utilize shareable trays and limits offerings to individually wrapped snack plates, according to Le Duc.

"Offering pre-packaged meals as catering options is highly encouraged and so is utilizing disposable flatware and plates whenever feasible. Moreover, they should train the ground team members to park the aircraft and maintain distance and ensure they do not interact with the passengers or baggage," he says. "When on the ground, they should institute a rope at the bottom of the stairs to deter unauthorized personnel from entering the aircraft and provide a cart for passengers to secure their own luggage. They should also limit the handling of passenger luggage so as to have them maintain responsibility of their own luggage and personal items and ensure that flight crew, line service and maintenance personnel have gloves available and required while handling the baggage, as necessary."

Aragon emphasizes that one of the current big challenges under the "new normal" is COVID-19 testing.

"Most places require a negative COVID-19 test within 48 hours before allowing entry. This is a challenge for operators, especially in the United States, where test results can take up to a week to get back," he says. "We have established testing centers at several of our FBOs around the world, that can deliver results in 24-hours or less. This greatly enhances the operators' ability to travel, especially in Europe."

Photo courtesy of dnata

Important Relationships

Ground handlers have continued to deliver air services and have taken on new roles to support airline customers amid the COVID-19 challenges.

"We have also continued to support airlines in maintaining global trade and the flow of essential goods by delivering cargo services. What we see, as a result of COVID-19, in express air cargo now and for the foreseeable future is the surge of freighters and charter flights. The demand for PPE, hand sanitizers, medical equipment has significantly increased. Neither governments, nor businesses or individuals could afford to wait weeks for these supplies to arrive via sea cargo. We have played a critical role in keeping the supply chain going," says Goovaerts.

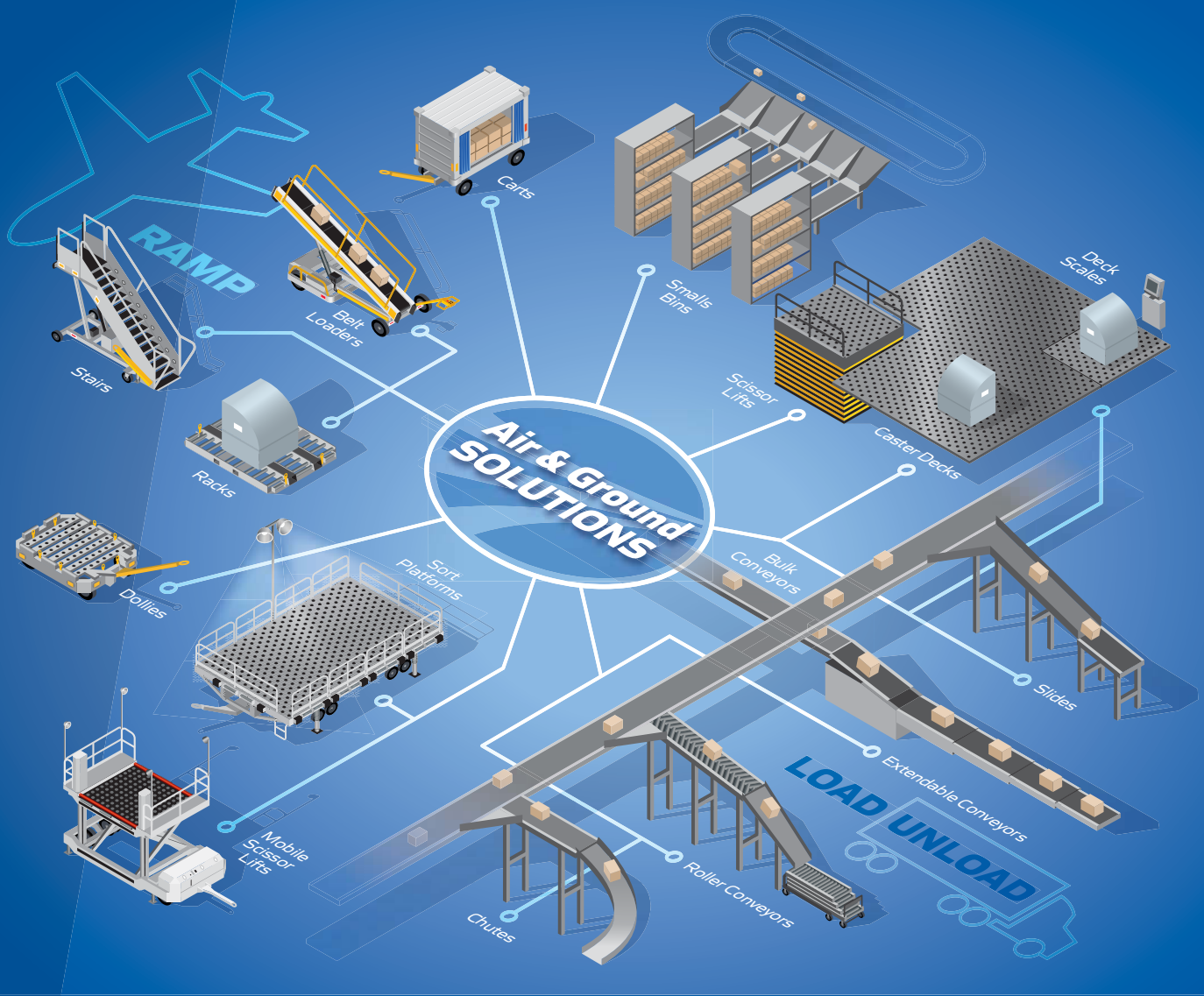
"In response to the strong air cargo market demand for the rapid, reliable and efficient transportation of essential commodities, several airlines have introduced additional cargo capacity by using passenger aircraft with seats fully or partially removed from the cabin," he continues. "To adapt to changing customer needs, we have enhanced services, improved processes and trained employees to safely and efficiently handle passenger planes carrying cargo only."

The implementation of new health and hygiene measures have been key as airlines look to rebuild passenger confidence in air travel.

"Ground handlers have had to be responsive and supportive of the implementation of social distancing measures and rigorous cleaning regimes, among other new protocols," says Walker. "We have also had to put in place measures to bring our own teams back to work safely. The focus across it all has been on balancing the safe and effective implementation of these measures while ensuring that operational efficiency is not compromised."

The operators expect to have their partners develop a COVID-19 plan that closely mirrors their own, according to Le Duc.

"They want to see a strict adherence to the standard protocol. The passengers who utilize business aviation the most have largely the same profile of some of the highest risk people. So COVID-19 protocols are



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expected without exception," he says. "The handlers should train their employees to be able to verbalize the procedures they have in place for the virus and make sure the employees are prepared to not only practice but also to be able to describe the plan to curious guests and crew members."

Every business aircraft operator is adopting some kind of protocol related to safety.

"Every country is adapting new requirements and changing them overnight in some cases. We are trying to eliminate steps during the process, always in compliance with the authorities and local requirements. We have worked to reduce the ground time and reduce the exposure for passengers and crews. The handling process in some cases is a little bit more complicated due to health protocols in place by the local authorities," says Aragon.

"Something that was discussed in the beginning was the need for aircraft sanitization during a trip. We do not see that happening frequently," he continues. "Most operators are doing that at their home base and not during a trip unless they feel there has been any time of additional exposure. Aircraft are being closed when on the ground and nobody, but the crew and passengers, are allowed to get in."

Impacts on Investment

Gamba observes that one of the main issues is that while overall there has been around $140 billion (USD) invested in different forms – through grants or loans by governments – into ailing airlines, only a very tiny fraction has trickled down to contractors.

"What one can see is that the airlines are remaining afloat and a number of them are now reopening. The situation that is a sort of a conjunction between the airlines who are expecting some solidarity from the ecosystem and an ecosystem that has many difficulties to respond to those expectations," he says.

"As it currently stands, we have a surplus of equipment due to the decline in demand and flight volumes, and this will continue to be the case for some time as the industry gradually returns to pre-COVID-19 levels," Walker points out. "However, we will continue to invest as well as strategically moving equipment to where it is needed across our 200-station strong network. Safety and security are our absolute priorities, therefore we will also ensure we are investing in the right equipment so that the teams have everything they need in order to do their job safely."

dnata has invested in the training of its staff to develop a wider pool of in-house skillset to be able to redeploy its employees across its operations.

"With a strong emphasis on e-learning, the upskilling of our people helps us

stay agile and build a workforce that can be redeployed internally on a wider scale. The current situation has also enabled the acceleration of technology, where we investigate and implement new procedures supported by automation," says Goovaerts. "Furthermore, we have recently invested in GSE across our APAC operations and will continue to do so."

Of course, many expansion plans and capital expenditure (CapEx) acquisitions have been put on hold due to the current situation.

"We need to assess the forecast on demand, location by location, and decide where we should continue investing. We definitely expect a recovery of the industry, faster for business aviation compared to commercial aviation. Domestic trips in the USA and intra region in Europe are ramping up fast. More and more we will see a niche of customers who traditionally flew commercial, trying to book charter or fractional general aviation," says Aragon. "We will see more of this growth internationally as the countries start opening their borders and lightening the restrictions."

Gamba highlights that governments tend to emphasize that they can only promise financial support to airlines under a number of conditions.

"And within these conditions, there are 'green' conditions. One should indeed think in terms of a longer-term perspective and make sure that we have an environmentally friendly industry; but in current extreme conditions there is only one thing that matters and that is to make sure that there is a tomorrow for the industry," he says.

"We are involved in discussions with EASA on a number of policies that we can put together in order to help our CO2; footprint to improve, specifically via the acquisition of electric GSE," Gamba concludes. "We are discussing with the European Commission on ways to get the likes of 'green bonds' to help invest in new equipment. We are having these discussions in parallel to the pandemic rather than because of the pandemic." **GSW**

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GET GSE READY TO RETURN

Equipment that was placed in long-term storage will need to be prepped for a return to service as the airline industry picks up.

By Josh Smith

As the airline industry was impacted by the coronavirus pandemic, the number of flights was drastically reduced as demand dipped.

As a result, less ground support equipment (GSE) has been needed on the ramp at airports.

Ground service providers began putting GSE into long-term storage this spring, and in some cases may still be storing equipment for an extended period of time.

The timetable for airlines' return to pre-pandemic traffic levels is uncertain. But as people return to the skies and flight traffic increases, ground handlers and GSE maintenance personnel will need to take steps to safely return equipment service.

There is no one-size-fits-all solution when it comes to storing ground support equipment, explains Leigh Hoey, GSE manager for WestJet and Encore.

"It is greatly dependent on geographic location and the individual situation for each company involved," Hoey says, adding IATA has published guidelines for storing GSE. "Storage method is influenced by environmental factors, fleet size, degree of business downturn, GSE maintenance staffing levels, space available for parking and anticipated length of time before equipment is required again."

Hoey notes that as an alternative to storing, personnel may rotate units in and out of operation where possible to minimize the amount of time one unit sits and to reduce the work in prepping units for storage.

When opting to store GSE, Kevin Cecil, engineering manager – loaders at JBT, notes most units will have storage instructions in the manual. For JBT equipment, the company covers two types of storage – one month and indefinite.


Photo courtesy of Textron GSE

"Generally, you will want to service the engine; disconnect the battery; chock drive wheels; retract all cylinders where possible; and do any other corrosion prevention that can be done," he says. "If you have the ability to keep the units out of the elements – such as rain, snow, sand, heat, cold – this will also help. But it is not available for many."

"At minimum, units must have stabilizer added to prevent fuel degradation, which can lead to operational issues and costly repairs when equipment is slated to return to operation," Hoey adds. "If possible, units should also be started and moved to prevent tires from getting flat spots."

Overall, Mark DiMaria, technical support manager at Textron GSE, notes the typical preparation process consists of a number of best practices focused on the lubrication system, hydraulic system, fuel system, cooling system, air/vent/exhaust, battery, transmission and tires, among others.

If these practices are not followed, GSE can be damaged and acidic fluids may corrode parts of the unit.

"So, when you go to start them up, it causes some premature wear and takes lifecycle away from some of the major components," DiMaria says.

He also recommends ensuring the cab is empty before storing and taking steps to prevent rodents and insects from nesting in or around the out-of-service equipment.

Back to Business

JBT's Cecil points out a plan to return equipment to service will be influenced by a number of factors. To determine the number of pieces of GSE needed, an operation should review current conditions; determine the amount of preventative maintenance (PM) required; and establish budgets and timelines.

When it comes to operational and safety checks, Cecil says it is always best to follow the manual for a specific piece of equipment.

"Operationally, you will need to check fluids, lubrication, tire inflation and such," Cecil says. "From a safety standpoint, you

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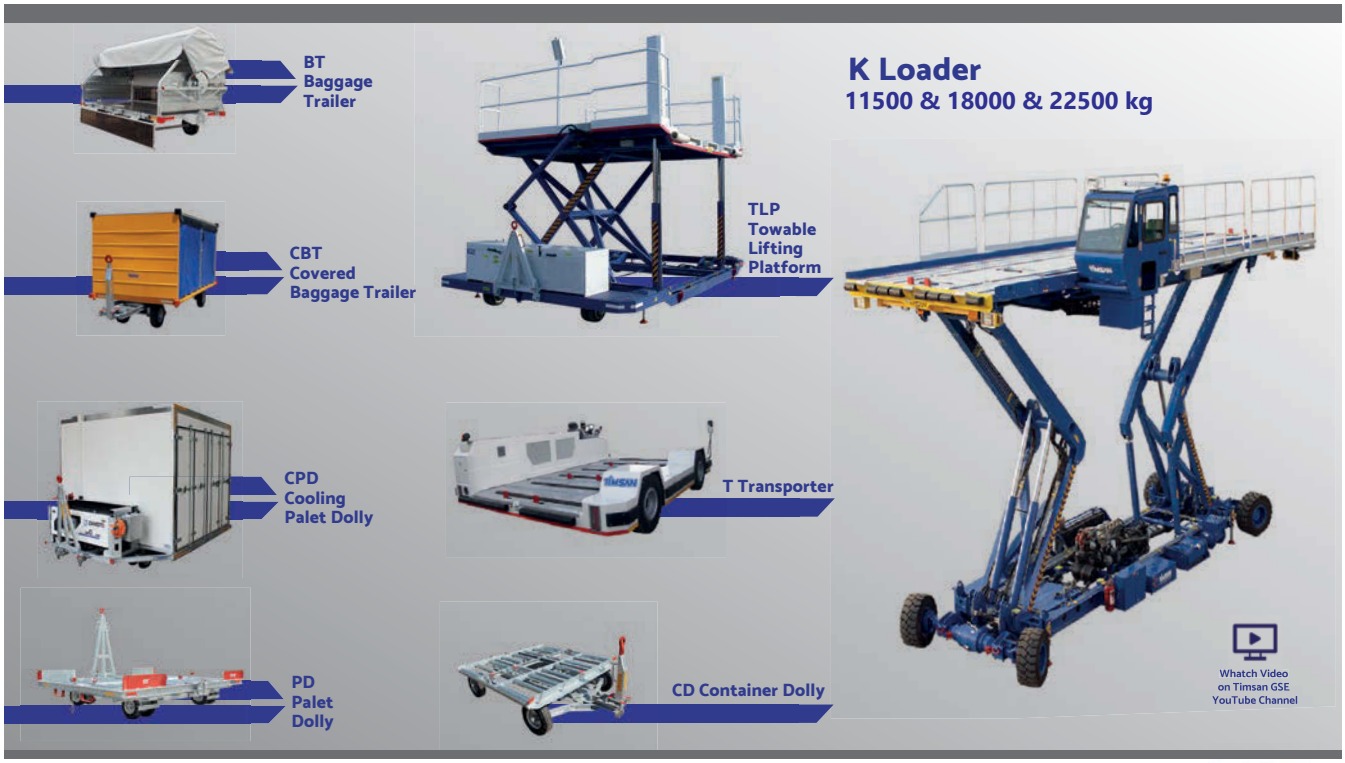

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will need to look for leaks, make sure the brakes and emergency stops all work and let's not forget about environmental gremlins like wasps that can sting, rodents that can eat wires or birds building nests."

Textron GSE's DiMaria explains ground service providers must calculate what equipment is required based on flight volume, duration between flights, aircraft models, gate locations and turnaround needs.

Once that amount of equipment is determined, most of the process is simply reversing the measures taken at the time of storage.

"Most of your initial steps are really doing a good visual of everything, so you can see if anything has happened while it's in long-term storage," he says.

"You just want to make sure you go through 100 percent of the functions, get the equipment up to operating temperature and then come back and do a good, thorough visual inspection on it to make sure you don't have any leaks."

WestJet's Hoey says companies should review and create their own plans based on reversing the specific steps taken by their operation to store the GSE.

"One key factor to consider as equipment is reinstated is to review GSE maintenance staffing levels to ensure enough resources are in place to perform necessary safety checks and repairs," he says.

Ideally maintenance schedules should continue during storage periods to preserve the assets, Hoey explains. But he notes that in reality, schedules may have been halted to save money.

"If a maintenance schedule was halted on any equipment, the units must be thoroughly inspected and serviced prior to returning to operation," he says. "Each organization will need to assess their own situation and determine the best course with priority being to ensure the safety of each unit."

"If equipment was only parked and didn't go through the prep for long-term storage, then full preventative maintenance should be conducted before putting the unit back into service," advises DiMaria. "Review the equipment manual and follow the guidelines for your specific equipment.

PROTECTION FOR STORED GSE

Selecting the right cover can help increase the lifecycle of equipment when its returned to service.

By Josh Smith

Photo courtesy of AeroShield Covers

Although primarily designed to protect aircraft engines, officials at AeroShield Covers note their products are used for other applications, such as safeguarding stored ground support equipment (GSE).

The concept behind protecting GSE or an aircraft engine is the same. The goal is to protect an asset from various weather conditions and other harmful elements.

However, all storage environments and equipment present their own challenges, explains Blair McKay, president of AeroShield Covers, so covers should be designed to address the specific needs of each application.

"An improperly chosen cover may result in more damage to the equipment being covered than no cover at all," he says. "There is no 'one cover fits all' solution, so make sure you have a supplier that will work with you closely to ensure you select the proper cover for your application."

Even with indoor storage, birds, rodents and other pests can cause havoc in both motorized GSE and aircraft engines.

"Enclosing the equipment in a protective cover can significantly reduce damage to this expensive equipment," says McKay.

When selecting a cover for stored GSE, personnel should consider how often the equipment will be stored, the climate conditions and the protection of the equipment.

McKay also suggests selecting a cover that can be easily installed without excessive training, provides a secure fit and is lightweight and durable for easy removal and reinstallation. What's more a cover that offers accessibility for periodic maintenance checks may further assist ground service providers.

"Access doors are developed with customer desires in mind, allowing GSE personnel to access the equipment in key areas without necessitating the removal of the cover," McKay says.

Also, a cover that is breathable can prevent moisture from being trapped and possibly causing corrosion on GSE units.

"AeroShield offers 'Smart Cover' solutions that provide chemical drying agents in conjunction with sensors that measure temperature and humidity levels, providing automated notification to users when humidity levels reach a point that drying agents need to be changed," notes McKay.

Photo courtesy of JBT

"If preparation for long-term storage was followed, it is not necessary to service them during the storage period," he adds. "Once returned to service, the normal service schedule should be followed for your equipment."

The time needed to return a GSE unit to service, varies widely, Hoey explains. The type of equipment, steps taken to store it and maintenance requirements all factor in.

"The more complicated the unit, like a deicer, will increase the checks. Whereas something less complicated, like a bag tug, may take less time," Cecil agrees. "Depending on how you stored it and if you had been following PM cycles will also determine this."

Prepare Personnel

As flight volumes increase and equipment is returned to service, more ground handling agents will also return to the ramp. Certifications may have lapsed while GSE was out of service or while personnel were away from the job.

"It is always best practice to retrain employees, so that they are ready to safely operate once GSE is ready," DiMaria of Textron GSE says.

"Textron GSE offers a full suite of training materials, that can be used to support maintenance activities, including return to service procedures."

"Each organization needs to review and determine what is required based on their own policies, along with local and federal regulations," WestJet's Hoey adds.

A company's policy regarding current training may be focused on technical aspects of the equipment or safety requirements, JBT's Cecil says.

"At JBT, we want anyone operating or maintaining equipment to be properly trained," he notes. "To that extent, we offer onsite – at JBT – and digital training platforms to assist."

Some airlines may be able to anticipate their operating schedule and provide recurring training to employees prior to equipment returning to service, adds DiMaria.

Cecil believes the process of returning equipment to service and retraining employees will be different for everyone, so planning takes on increased importance.

"Setting up a plan to evaluate the fleet you have, the units you will need, work to be done and then setting a path forward is what is needed," he says. **GSW**

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How Fuel Contamination Threatens Grounded Aircraft

Because fuel is static and may be warm for extended periods without being in flight, difficult to detect "hotspots" of microbial contamination can occur.

By David Mitchell

COVID-19 continues to decimate the global aviation sector. At its peak, more than 16,000 passenger jets were grounded worldwide, according to industry researcher Cirium.

Many of these aircraft have been in "active storage" with some fuel remaining in the tanks. Although that fuel is often treated with biocide, the threat of microbial contamination still exists. This is because fuel is warm for extended periods without being in flight and fuel is also static, so "hotspots" of contamination may occur that are very difficult to detect.

But how can the operators ensure that the planes and fuel are safe when operations begin? And how can they manage contamination testing regimes with aircraft scattered over airfields away from usual lab testing facilities?

Microbial contamination is not a new problem for aircraft and the vast majority of airlines test for this phenomenon in line with International Air Transport Association (IATA) and manufacturer guidelines. Now the disastrous COVID-19 pandemic has left their assets out of service and strewn across airfields around the world.

Microbial contamination covers multiple types of organisms, including bacteria, mold and yeast – the presence of which will vary according to individual site conditions based on factors including temperature and humidity. The lead organism is most often *Hormoconis resinae* (H.res), which has a filamentous (long stranded) fungi structure. This acts as a binding material for other micro-organisms to cling to, which results in the formation of layers of biomass in the fuel.

This can block filters and fuel lines, adding to maintenance activities, costs and risks to safety. Furthermore, and particularly important with grounded aircraft, these biomass layers generate organic acids that pit corrode the metal surfaces they touch, causing damage to fuel tanks and other ancillary equipment.

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If left untreated, this can lead to costly damage to structures, potentially cost millions of dollars or a complete write-off in extreme cases. In normal operation, unscheduled aircraft downtime equates to loss of precious revenue, but also the possible additional pay-out for passenger compensation if flights are significantly delayed or canceled.

Frequency of Testing for Microbial Contamination

Accurate testing at the correct intervals can help engineers determine the correct testing frequencies – the objective being to intervene at the earliest and cheapest opportunity, well before the contamination is classified as "heavy" and requires intensive remedial actions.

If heavy contamination levels are reached, a full clean of a three-tank aircraft can cost in excess of $100,000 plus three or four days of lost revenue while the aircraft is on the ground. In total this could be anywhere up to around $2 million.

Airlines manage the risk of contamination through periodic testing of fuel. The interval between tests will depend on the aircraft manufacturer's guidelines and a risk assessment carried out by the airline.

The risk is higher for aircraft located in hot, humid regions where the micro-organisms can really thrive.

In the Asia-Pacific region, for example, the time from cleaning a fuel tank to heavy contamination can be as little as three months. Therefore, testing every month is not uncommon.

In colder regions, such as Scandinavia, the risk assessment may mean testing once every 12 to 18 months may be sufficient.

In normal operation, aircraft may fly up to eight times per day. At altitude, temperatures way below 20 degrees C stop microbiological growth. However, the frequency of flights during the COVID-19 outbreak has dropped significantly and, subsequently, the risk of microbial contamination has greatly increased for assets in active storage with some fuel still in their tanks.

This has meant the interval for fuel testing has dropped as low as once every 14 days: 24 times greater than standard recommended testing intervals. What is more, these aircraft are not necessarily at their usual base location for maintenance, making it difficult and costly to collect and send fuel samples to laboratories. This is further compounded by current travel restrictions in various countries.

The practicalities of third-party laboratory testing during unprecedented periods of inactivity has created a new challenge for airlines. The transport of fuel samples not only adds costs and logistical problems to operations, these samples also need to be transported in a controlled environment so that micro-organisms present in the sample are not compromised, leading to a false test result.

Quite simply, many airlines are finding that the increased frequency of testing for aircraft across multiple airfields is not physically or financially possible, or just very difficult. Even if fuel has been treated with biocide, the biocide is only effective on the amount of fuel actually in the tank, which may be only 15 percent of full payload, contamination levels still need to be monitored to ensure it is still working.

Immunoassay test kits, such as Fuelstat from Conidia Bioscience, offer an onsite alternative to laboratory testing. Now listed as an appropriate test method for all aircraft types, immunoassays have long been used in the medical industry to provide quick and accurate testing to detect specific molecules. Fuelstat uses antibodies that bind to a specific antigen to detect its presence and produce a measurable signal in response to this binding that can be used to assess fuel contamination levels.

Microbial contamination correlates to the activity of microbial growth in the sample. The amount of antigen produced when micro-organisms grow in the fuel is mea-

sured for a known sample size. This shows the presence of micro-organisms actively growing in the fuel and gives indication of contamination levels. Immunoassay testing provides accurate levels of contamination for all major aerobic contaminants that are known to be fuel degrading and cause issues to fuel systems.

Immunoassay test kits are a low-cost, accurate testing option, providing results in line with industry guidelines on acceptable levels of microbial contamination, with a clear "yes" or "no" as to whether the fuel is contaminated. The kits indicate the level of contamination using a "traffic light" system, giving the engineer the necessary data to decide whether biocide dosing or a complete fuel drain and tank clean is needed. No special training, handling, storage or disposal, beyond the usual procedures for disposal of fuel, of the test kits is required. The very nature of how the test works means that there is minimal risk of cross-contamination.

An added benefit during the current global situation is that testing can be carried out by a single person and without the creation of a paperwork trail, reducing the risk of infection due to the coronavirus. These test kits have the unique added benefit of a free result app, available for a wide range of mobile devices on iOS and Android. Users scan the test kit and get instant digital verification of the test results which they can store and share. Managers have access to the report portal to track test results across all of their assets in real time, from anywhere around the globe.

The process comprises taking a sample of fuel from the aircraft drain point, placing into the testing kit sample bottle and shaking. Four drops of the fuel are then put into six wells and, after 10 minutes, a clear result is given.

The kits come with training videos to help interpret results, but the free app is provided to read test results from a mobile device. The whole process can be completed within 15 minutes. For the equivalent laboratory test, this could take anywhere between four and 10 days, or even longer during times of social distancing and at a time when many laboratories are experiencing high workloads due to the pandemic.

The reduction in movement of aircraft during the COVID-19 outbreak has re-opened concerns over microbial contamination and the damage this can do to aircraft systems, especially when they are in hot, humid regions that facilitate the rapid growth of micro-organisms.

Increased testing frequency of out of place aircraft presents a real challenge for the traditional laboratory testing associated with this phenomenon. Immunoassay test kits offer a practical, accurate, low cost solution that can be easily used onsite by a solo worker.

Results are relatively instantaneous and the payback in preventing unnecessary biocide treatment or avoiding costly contamination is almost immediate.

Even as events unfold and we move towards a "new normal" as social distancing and the effects of the pandemic diminish, many airlines are realizing that these kits offer a practical long-term solution to meet their testing requirements – with a process that is resilient to any future disruption to normal operations. **GSW**

ABOUT THE AUTHOR:

In his role as aviation market manager, **David Mitchell** deals with all commercial aviation and associated services for Conidia Bioscience Limited. He is responsible for technical liaison with customers regarding potential fuel microbial contamination issues, including training and implementation of testing solutions. Mitchell works closely with the global distribution partner, Boeing Distribution Inc (formally Aviall), as well as attending global and virtual conferences and discussions with IATA and other aviation associations.

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Certifying Çelebi

Çelebi Aviation has become the first ground handling company to be recognized and certified by IATA's new Training Validation Program.

By Walker Jaroch

In April of 2019, the International Air Transport Association (IATA) launched their Training Validation Program (TVP), a certification program which recognizes excellence in workplace learning practices and compliance with international and industry training standards.

"It enables organizations across the aviation industry to assess and improve workplace learning capacity, develop learning facilitators and specialists, improve workforce performance and competencies. It also provides employees with high-quality and effective training that meets industry standards," explains Yaniv Sorany, IATA senior manager, cargo training and validation programs.

Sorany adds that the main objectives of the TVP are to:

- Address industry concern and requirements to ensure sustainable growth
- Establish a globally consistent, recognized and standardized certification program
- Raise the bar in the industry and give visibility to certified organizations
- Develop standards of operation for management of training, instructional design and development, facilitation, evaluation and performance measurements
- Advance the adoption of competency-based training and assessment
- Elevate workforce competency and improve performance of air transport
- Promote cooperation and mutual recognition among stakeholders

Çelebi Aviation, and its training division Çelebi Aviation Academy, became the first IATA recognized ground handling company to successfully achieve Center of Excellence recognition for the training organization. In addition, Çelebi was recognized with a Certificate of Validation for Passenger Handling training – attesting that both the content and the process for employee training meets the standards set by the IATA Airport Handling Manual (AHM).

Each certification involves a comprehensive assessment of the organization's training system, standards of operations and management.

Derya Tekin Yusuf, board member, training and development for Çelebi, says the company has a priority to improve standards and ensure high-quality training.

The company's pursuit of greater training programs overlapped well with the objectives of IATA's TVP, leading to Çelebi's enrollment in the program.

"Çelebi aims to establish high standards for management of training and development, elevate staff competency through efficient and robust training programs, advance the adoption of competency–based training and assessment approach, improve safety, efficiency and sustainability in ground handling and cargo operations, enforce compliance with the industry training standards and requirements and raise the level of professionalism and service quality in the industry," Yusuf says.

The Path to Certification

Candidates for TVP certification include, but are not limited to, airlines, airports, cargo terminal operators, civil aviation authorities, freight forwarders, ground handling companies and other operators across the entire supply chain, dedicated to air transportation. The TVP process covers three distinct phases: assessment, validation and certification.

"The TVP strives to achieve standardization and uniformity in the scope, depth and quality of the assessments conducted," says Sorany. "To ensure all organizations are assessed in a consistent and objective manner, standardized assessment checklists and criteria have been developed to guide the assessor and the organization through the assessment process."

Assessment of a training organization covers the following key areas of the participating operation: organization and management; training design; training development; assessment, or testing, and evaluation; training effectiveness; qualification of instructors and evaluators; training documentation and records; and facility and infrastructure.

The assessment of a training course then covers: initial and continuing qualification; instructional personnel; training documentation and records; and training modules and content.

The TVP then consists of certification at two levels: recognition of a training organization (TVP–Organization) and validation of a training course (TVP–Course).

"The recognition of an organization allows companies to assess and improve training standards and quality management in the critical areas of operations in the organization.

"It provides an organization with the opportunity to acquire Center of Excellence – Training Organization recognition from

IATA, attesting that the workplace's learning program is benchmarked against and meets IATA's training standards, after the organization's learning systems have been assessed by IATA," says Sorany.

A training course validation allows an organization to assess and improve the initial and continuous qualification program, instructional materials and content in aviation operational–related training courses in the

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area of security, safety, cargo, ground operations, facilitation, environment, economic, etc.

Çelebi's certification path began by meeting with IATA TVP experts to discuss the requirements of the program.

"We consider IATA TVP as a learning journey; hence one should make a plan about the journey. With this mindset, we started making a plan by understanding where we stand in terms of our strengths and weaknesses, where might we have challenges and how we can overcome these," says Yusuf.

Yusuf says the conversations with IATA were both surprising and exciting, and described the entire experience as a great opportunity to gather feedback from the industry experts. To their surprise, officials at Çelebi found themselves already nearly in line with the standards laid out by the TVP.

"We were amazed to hear from the IATA team that our training materials and procedures were almost aligned with criteria. We were very pleased to see that Çelebi is a truly living school in the aviation industry. There were minor changes to be made in documents in order to adapt to the checklists," says Yusuf.

The biggest challenge for Çelebi was the localization process as the company operates on two continents, in four countries and with more than 40 stations.

"As we must be in compliance with local authorities, we encountered differences at some points related to criteria such as experience level of trainers," Yusuf says. "In order to overcome these kinds of issues, we work closely with our Academy team members in

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the countries, as well as IATA experts, in order to reach a common point and make adjustments locally."

Çelebi completed both of its certifications within three months, which is generally the average time a TVP certification takes, notes Sorany.

"As Academy Team, we made huge efforts to complete this process very quickly and efficiently by regularly conducting follow-up meetings within in the team as well as with IATA. However, this duration may change for each respective company, according to their readiness," says Yusuf.

Post Certification

Since becoming TVP certified, Yusuf says that benefits have been vast for both Çelebi's employees and the Aviation Academy.

"It ensures that our training and professional development activities are cost-effective, goal-oriented and productive; standardizes performance across the subsidiaries; improves quality of products and services and sets clear expectations for employees, enabling them to make better decisions and work more effectively," Yusuf says.

Specific benefits that Çelebi has seen are a boost to employee performance; reduced costs for management and improved managerial functions for its Academy; increased company-wide productivity; greater avoidance of workplace accidents; better customer service; and employees are keeping up-to-date with the latest knowledge.

"We continue to advance the adoption of competency-based training and assessment, elevate workforce competency and improve performance of air transport and promote cooperation and mutual recognition among stakeholders as well as addressing industry concerns and requirements to ensure sustainable growth," Yusuf adds.

Çelebi Aviation Academy is now working towards certifications for other ground operations, such as ramp handling, load control and cargo, among others.

"After establishing a globally consistent, recognized and standardized certification program, we do believe, we raise the bar in the industry and give visibility to certified organizations while developing standards of operation for management of training, instructional design and development, facilitation, evaluation and performance measurements," says Yusuf.

TVP certifications last for two years, with IATA conducting spot checks during the validity of the certification.

"Re-assessment takes place after 24 months to ensure compliance with the latest standards and the program requirements," says Sorany.

Currently, there are more than five companies undergoing TVP certification, with several others reviewing the requirements and next steps to benefit from certification.

Sorany adds that the IATA is continually revamping, updating and revising their materials and tools so that they maintain its relevance for all stakeholders. Most recently, IATA updated its materials to reflect the changes due to COVID-19 and to address the training requirements for virtual learning during the lock-down.

"The aviation industry has been growing year-on-year and despite the grounding of flights for several months during the height of the COVID-19 pandemic, the industry is expected to pick up and increase significantly in the coming decades. Pre-COVID-19 forecasts estimated that in the next 20 years the industry will support 97.8 million jobs and though it may take longer to reach these numbers, we still expect significant growth," says Sorany.

"This growth will bring many challenges that will need to be overcome to ensure that aviation is prepared to meet future demands. Key among these challenges will be attracting, developing and retaining appropriately skilled staff in the air transport and logistics industries."

IATA officials are also looking ahead to ways in which they can enhance the program through more partnerships, cooperation and mutual recognition from international and national authorities to enable the expansion of the TVP program to optimally support the industry in training its growing workforce. **GSW**

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Photo courtesy of Emirates

The Rise of the 'Preighter'

How airlines around the world are utilizing passenger aircraft to help meet cargo demands.

By Josh Smith

As airline passenger figures dipped this spring as a result of travel restrictions spurred by the COVID–19 pandemic, cargo demand remained high.

However, a capacity crunch was preventing cargo demands from being fully met.

Reacting quickly, many airlines pivoted and began the process of commissioning passenger aircraft to carry cargo, including mail, medical supplies, personal protective equipment (PPE) and other goods. But before these aircraft, colloquially referred to as "preighters," can take flight, several safety details must be considered.

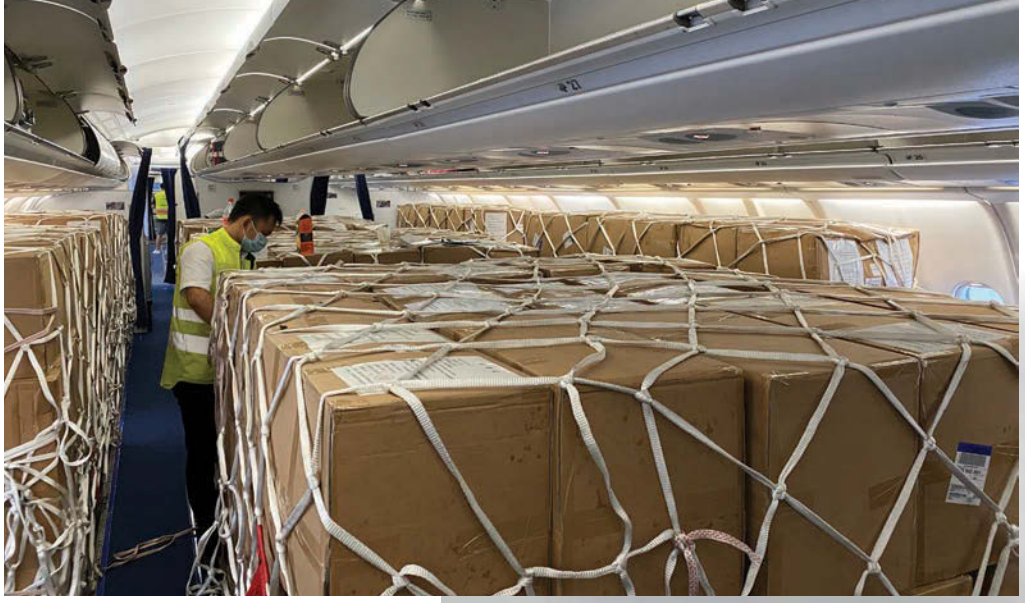
The International Air Transport Association (IATA) has provided direction to airlines in a document titled "Guidance for Safe Transport of Cargo in Passenger Cabin," reminding operators to conduct a safety risk assessment when repurposing aircraft.

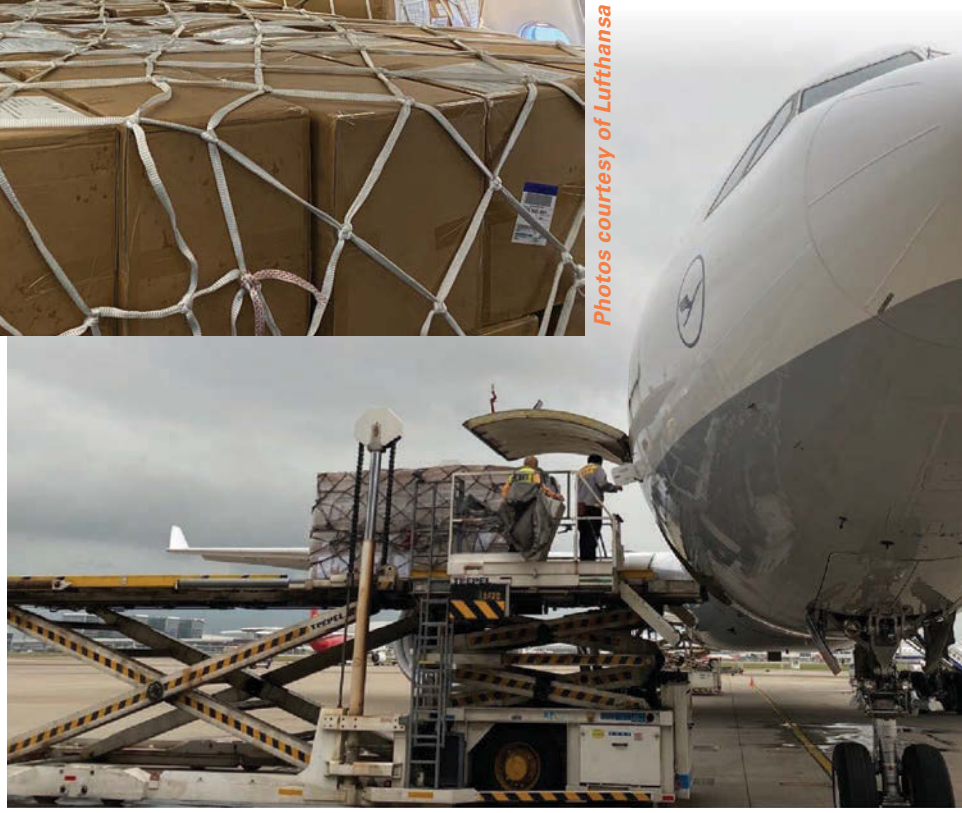
IATA officials note all safety regulations associated with a change in aircraft utilization must be complied with before utilizing the passenger cabin of an aircraft for carrying cargo.

IATA also notes that modifications to the passenger cabin, such as the removal of passenger seats, must be approved by an airline's National Aviation Authority and all operations procedures need to be documented and properly published.

Among other details, IATA's general recommendations also include using crew members to survey all areas of the cabin during the flight and ensuring the crew has access to those areas in the case of fire or other unanticipated event.

Photo courtesy of Emirates





Photos courtesy of Lufthansa Cargo

"Besides an approval from the responsible authorities, the layout of the aircraft needs to be changed and the operating organization has to do a risk evaluation and has to approve the conversion as well," notes Judith Wedlich–Blender, project leader for the conversion of aircraft at Lufthansa Cargo.

Wedlich–Blender explains there are three allowable scenarios for loading cargo in the passenger section of an aircraft.

One option is for cargo to be stored on seats, between seats and in bins. Cargo can also be stored in specific seat containers or seat bags. The third option is for cargo to be secured on the floor when the aircraft's seats are removed.

"Technical Standard Orders (TSO) certified nets and lashing belts, or tie down straps, are used to secure cargo on passenger seats on the floor of the passenger cabin," add officials at Emirates.

Only certain cargo is allowed in passenger compartments, explains Wedlich–Blender. She points out this is a safety issue for a number of reasons. For example, the fire extinguishing system in the passenger cabin is not as specific as those located in cargo aircraft.

IATA's guidance notes that dangerous goods and cargo–aircraft–only dangerous goods cannot be transported in a passenger cabin. Rather, they must be carried in the cargo compartment and only if the operator carries their National Aviation Authority's approval to do so.

"Special procedures have been developed to comply with safety and security standards," says Wedlich–Blender.

Emirates officials note that special guidelines regarding the positioning and usage of various ground support equipment (GSE) to assist with the loading and unloading of cargo on the converted aircraft are in place for ground service providers. These guidelines ensure a safe and efficient aircraft turnaround.

Examples of these new GSE guidelines include revised loading and unloading sequences to maintain aircraft ground stability and guidance on the docking and usage of main deck loaders (MDLs) on the cabin service doors.

"The loading and unloading sequence was adjusted in consideration of aircraft ground stability and aircraft turnaround efficiency," say officials at Emirates. "Simultaneous loading and unloading of cargo in certain compartments as well as the cabin could be achieved in support of a safe and efficient turnaround."

Wedlich–Blender explains that depending on authority approval and the specific airline, the type of cargo that can be transported in a preighter is limited.

Emirates officials note that standard GSE, such as MDLs, passenger steps and aircraft catering trucks, can be utilized to transport cargo items between the apron and passenger cabin for loading/unloading.

Still, the loading and unloading process can be demanding.

"On average, we require between 12 to 20 agents to load and/or offload the cabins," explain officials at Emirates. "There are many variables on which these numbers depend, including the type of ground support equipment that is being used to load/offload the cabin."

"When handling converted passenger aircraft, a lot of manual work is needed, which is more time– and resource–consuming, compared to the handling of freighters," agrees Wedlich–Blender. "This results in increasing ground times of the converted aircraft."

IATA reminds its member airlines that monitoring subcontractors and the cargo services they perform is critical so that cargo is transported safely.

Officials at IATA say the airlines' innovative response to such an unprecedented global health crisis ensured that vital medical supplies were able to move in a quick and safe fashion to help the fight against the COVID–19 pandemic. **GSW**

Protecting Engineers and Airframes on the Ramp

In light of the current worldwide health crisis affecting global aviation, cost and time-efficiency for aircraft maintenance, repair and modifications will be absolutely critical elements in helping the sector to recover over the months and years ahead.

By Ian Nagle

Just like humans, airframes manufactured using composite materials are susceptible to different types of superficial skin wounds. Surface abrasions, that we call "hangar rash," are usually limited to minor damage caused to an aircraft while on the ground and often within the vicinity of a hangar, hence the term. It's sustained usually as a result of vehicles or ground equipment (GSE) coming into contact with the fuselage, engine nacelles or wing surfaces, resulting in cosmetic scratches or punctures to the laminate.

All photos courtesy of JB Roche

Sometimes very difficult to detect visually, serious "delamination" is one of the most common types of composite damage and results from a major impact force, such as striking a hangar door or even a mid-air bird strike.

This causes a separation or fracture of the laminated reinforcement layers or plies.

According to data submitted to the Flight Safety Foundation (FSF) by international airlines, there are approximately 27,000 ground accidents annually, which amounts to one incident per 1,000 departures. These events, all of which are preventable, are responsible for some $10 billion in damages, most of which has to be absorbed by the owner/operator, as rectification costs would generally fall below the threshold for insurance claims.

While MROs have performed composite repairs for years, these were usually only carried out on the airframe if the part was too large and/or expensive to remove. Materials and technology have moved on significantly, so repairs on the line are increasingly seen as the norm, thereby reducing static aircraft, also known as aircraft on ground (AOG).

Composites in aircraft manufacture came of age with the introduction of Boeing's 787 and the Airbus A350 XWB. Its use has extended far beyond flaps, ailerons and other control surfaces, engine nacelles and empennage, to encompass the entire forward wing structure and fuselage.

As well as achieving a reduction in weight to improve fuel efficiency, another major benefit of composite airframes is a drastic reduction in corrosion and fatigue-related maintenance.

In fact, Airbus claims a 60-percent reduction in these tasks for the A350 XWB, cutting both the time required to perform maintenance checks and the total number of checks required over the aircraft's service life. While the 787 and A350 XWB are still very young, it is widely acknowledged that the real test will come in the next 5–10 years.

Having said that, irrespective of an aircraft's construction, airports are becoming increasingly congested, so the statistics from the FSF are unlikely to reduce significantly. Where vehicles and equipment need to be in close proximity, accidents will still happen, despite initiatives designed to prevent collisions on the ramp.

Working on aircraft with more expansive and increasingly complex composite structures creates challenges for MRO providers.

One is the need to perform an increasing number of repairs on the aircraft versus in a hangar.

Another is to reduce the duration of repair without any compromise in qual-

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ity. A third is to increase the size limit and application for approved bonded repairs to more complex and primary structures.

By its very nature, repairing a composite structure usually means greater downtime because of the curing period demanded by specific resins and adhesives. The adhesive and prepreg (pre-impregnated) layers used in bonded composite repairs, where a repair patch is adhesively bonded to replace the damaged material, can take eight to 12 hours to cure.

Furthermore, the processes involved in non-destructive inspection of the affected area, removing damaged material and preparing for bonding are typically lengthy.

Therefore, technologies designed to abbreviate repairs and reduce turnaround time are increasingly sought after by airlines.

Of critical importance during the adhesive curing process is the need for absolute cleanliness to ensure the integrity of the bond is not affected by any foreign matter.

Mobile inflatable cleanrooms provide a simple, fast and cost-effective solution for enabling outdoor composite repair on the line, when a hangar is not available.

These ensure the optimum environment for repairing composite parts which have been removed from the aircraft. These lightweight and 100-percent weatherproof units deliver all of the benefits of a conventional cleanroom but can be erected

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in just 15 minutes to free up space in a hangar or shipped directly to a repair site.

The structure can be set up right next to an aircraft, enabling the on-site repair of components that have been removed from the aircraft without having to take them to another facility. To be able to take something from a box, inflate, heat and air-condition it in all weather conditions and have it operational within minutes, is of massive benefit to airlines and their skilled engineers working with composites.

On the subject of heating, advances in technology have also facilitated the introduction of an inflatable oven that can be heated up to 200 degrees C. In support of composite repairs, this can be mounted on any part of the fuselage or used as a free-standing unit, enabling fast treatment of composite material, which is extremely time and cost-efficient.

Similarly, there has been a significant rise in the requirement for airframe modifications which facilitate better inflight communications capability. The availability of on-board WiFi for passengers is being used as a key customer benefit in airline marketing but retrofitting airline fleets for connectivity requires approval in the form of Supplemental Type Certificates (STCs). With many MROs and airlines focusing on the provision of WiFi on their aircraft and antennas continually being upgraded, it is a process that is seeing rapid acceleration within the industry.

Carrying out such complex modifications presents practical engineering challenges. WiFi antennas need to be fitted to the crown of the aircraft, either inside or outside the hangar. When inserting these into the airframe, engineers need to mitigate against dust contamination, while working within strict humidity and temperature tolerances. Again, the versatility of inflatable protection modules not only provides additional safety and security for engineers working on top of the aircraft, but it also ensures the ideal conditions for this modification to be executed successfully.

In light of the current worldwide health crisis affecting global aviation, cost and time-efficiency for aircraft maintenance, repair and modifications will be absolutely critical elements in helping the sector to recover over the months and years ahead. Those of us who are innovators in design and manufacture will play a crucial role in supporting the industry during the most challenging time we have ever faced since the Wright Brothers first took to the skies. **GSW**

▶ ABOUT THE AUTHOR:

Founded by **Ian Nagle** to serve the Irish haulage industry back in the mid-1980s, Cork-based JB Roche diversified into manufacturing framed canvas products for the marine industry. Its investment in design and patterning software and automated cutting equipment laid the foundations for JB Roche's move into the aviation sector, when it developed an inflatable hangar solution for Aer Lingus. Since inventing and patenting the world's first precision fit, all-fabric inflatable aircraft hangar in 1999, JB Roche continues to manufacture advanced inflatable shelters for the global aviation sector.

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Let's Roll

With a drop-in caster design, the PD-8010 cargo dolly from Par-Kan Company helps ground handlers easily transfer containers to and from the aircraft.

By Josh Smith

A smooth transfer of a container or unit load device (ULD) from a cargo dolly to the aircraft makes the challenging job of loading air-freight significantly easier.

So, while the first version of the PD-8010 cargo dolly was developed more than 15 years ago, engineers at Par-Kan Company solicited feedback from its customers and completely revamped its line of cargo dollies to better serve the ground handling industry.

The biggest improvement was focused on the caster design of the units.

"The current version of the PD-8010 with the drop-in caster design has been in production since November of 2018," says Abbie Hepler, director of sales and marketing at Par-Kan Company.

"We asked our customers what their biggest pain points were. The consistent feedback we received was that ULD containers get hung up on dolly casters, which makes the process cumbersome for the operator," she continues.

"Our drop-in caster design creates a nearly seamless platform to eliminate this concern and allows for quick and easy loading from any direction."

The drop-in casters offer a rating of 440 pounds each and the casters are capable of swiveling 360 degrees. What's more, these casters move easily under the weight of ULD containers.

"In the event a caster needs to be replaced, you can quickly swap it out with two bolts," Hepler says. "Also, since the drop-in casters create a nearly seamless platform, this lessens the direct impact to the caster by the pallets and containers, prolonging the overall life of the casters."

Par-Kan's PD-8010 cargo dolly is the largest unit in the company's product line, which offers six different models to be compatible with pallets and various container sizes.

"Our PD-8010 dolly can be configured for side- or end-loading with a roller deck or all direction loading with a caster deck," points out Hepler.

Standard features for the PD-8010 include a heavy duty pallet stop and VR locks, while fork pockets protect the undercarriage. The unit also offers solid tires, a spring-loaded e-hitch and a torsion relief tow-bar with a tow-bar activated braking system.

"During our product development journey, prior to the official launch, we did make improvements to the braking system and improved the overall strength and robustness of the components for improved quality and safety," Hepler explains.

The PD-8010 comes with a powder-coat finish, although

Photo courtesy of Par-Kan Company

Photo courtesy of Par-Kan Company

Hepler notes some customers – like those living in coastal areas and near salt-spray elements – may opt for a galvanized finish to prolong the life of the equipment.

Par-Kan's line of cargo dollies can handle virtually any size pallet or container. Depending on the capacity of the aircraft and the containers being used, the PD-8010 provides versatility. At 128 inches long, 102 inches wide and 21.5 inches high, a PD-8010 dolly can handle anywhere from two LD-1 containers, one LD-39 and many other sizes of ULDs and pallets in between.

Cargo dollies require minimal maintenance. If GSE maintenance personnel keep the grease zerks lubricated at all key points, a dolly will remain in good working condition.

Hepler notes that Par-Kan designs its equipment with ground handling service providers in mind and uses feedback from its customers to continuously improve equipment to make their difficult job easier, whenever possible.

"Our customers really like the ease of use with our caster deck design," she says.

When spec'ing a cargo dolly for an operation, Hepler notes it is important to understand what type of containers are being loaded and unloaded to ensure all concerns are addressed.

"We will need to know what size of containers they need the dolly to accommodate and we can assist our customer with selecting the correct dolly for their operational needs," Hepler says.

"Selecting the appropriately sized dolly from the start will set the ground handler up for success going forward." **GSW**

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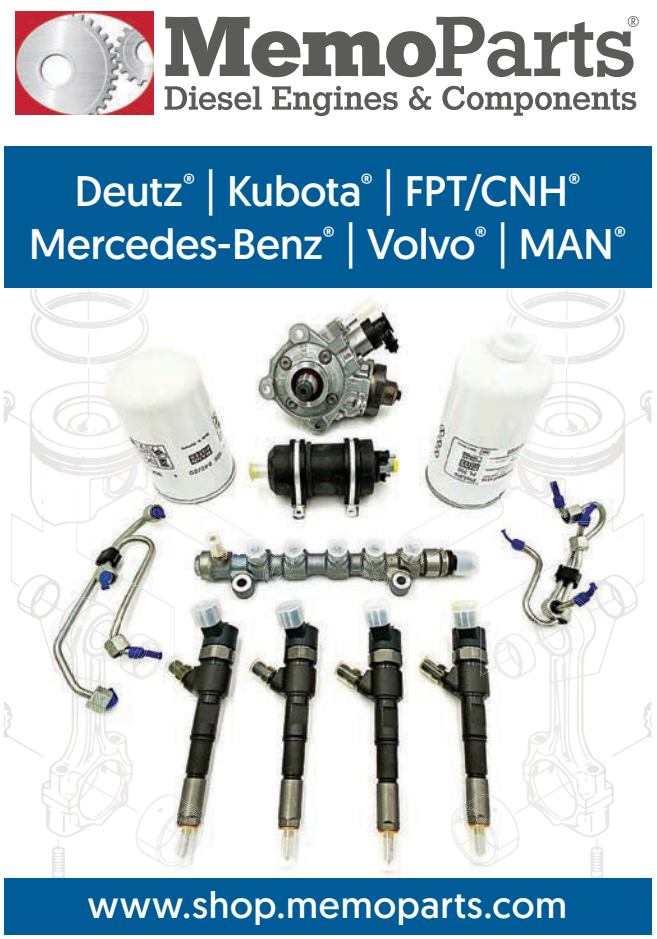

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PALLET RACK

Wilcox Ground Services

The Wilcox ULD pallet rack/storage rack is available in various standard or custom sizes to accommodate any ULD style with load capacities up to and exceeding 15,000 lbs. Gravity rollers come standard with sealed, shielded greased bearings. It can be custom built for extreme temperature ranges, heavy loads, high speeds, dirty, corrosive and wash–down environments. Available pallet rack options include, but are not limited to, height adjustable legs, gripstrut walkways, locks and stops.

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BAGGAGE TRACTOR - STANDARD GSE, MODEL STD-KM20

Aeroservicios USA Inc.

This tractor offers a Nissan K25 gasoline, 4–cylinder engine. It includes Cyclone air cleaner, alternation with regulator, integrated ignition assembly, neutral safety switch, super pre–heater control system, oil water deposit ion separator, lasso type hand brake, power–assisted steering, hydraulic torque converter, pin type two–stage towing bar and more.

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ROLLERTRACK CONVEYOR

Power Stow Americas, Inc.

Power Stow's belt loader extension enables airport ground handlers to load and unload bulk baggage and cargo faster and more efficiently, while also reducing the physical strain on the ground handling staff. Simple, safe and logical for users, the Rollertrack Conveyor system has reduced body injuries by more than 50 percent and provides ground handlers, airports and airlines an option for up to 35 percent faster baggage handling times.

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TISABAS

Ramper Innovations

TISABAS offers a next generation baggage handling solution. It is a full featured, folding conveyor system that was designed from the ground up to be more efficient, safer and affordable than anything else on the market. TISABAS is simply loaded into the belly of the plane and folded up and out when needed to transport baggage into and out of the plane.

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CARGO CHUTE

JBT Corporation

The JBT Cargo Chute is a solution to assist in the unloading of packages from the passenger cabins of aircraft. It works by utilizing existing or new passenger steps with the chute mounting to the stair flights, while still maintaining access for operators up and down the stairs. Operators are able to safely slide packages in a controlled manner, eliminating the requirement to either walk down the steps while carrying goods or having additional operators on the steps passing the goods to each other. It can be retrofitted to almost all makes of aircraft passenger stair and requires no permanent modifications or damage to the step.

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HEAVY DUTY AIR CARGO/CONVEYOR CASTERS

Casters In Motion

The Heavy Duty Air Cargo/Conveyor Casters are specifically engineered for inverted applications such as cargo sorting decks, cargo dollies and conveyor lines. They are virtually maintenance free and reduce the frequency of replacement.

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RIP-STOP BAG CART CURTAINS

Estex Manufacturing Co. Inc.

Estex Manufacturing's new FR700 Rip–Stop Bag Cart Curtains dramatically increase the life of the curtain while decreasing the repair/replacement expense and labor cost. The unique nature of this new material prevents punctures from spreading and provides handlers the opportunity to repair the curtain as opposed to replacing like traditional curtains.

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RAMPTECH BELT LOADER SAFETY HANDRAIL SYSTEM

Sage Parts

The Ramptech Belt Loader Safety Handrail System from Sage Parts meets or exceeds OSHA requirements. The fixed rail system is designed to optimize operator safety by assuring that the rails are always engaged. Safety is further enhanced by numerous other key features.

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CONVEYOR BAGGAGE TRANSPORT SYSTEM

R.J. Design LLC

The Conveyor Baggage Transport System saves time and labor along with cost. Safety is the first priority for ground personnel and ground equipment. This unit closes after use and it is not exposed to weather conditions and helps eliminate congestion under passenger boarding bridges.

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BELT LOADER

Aviramp

The Aviramp Belt Loader is part of the company's Turnaround Kit. The Turnaround Kit comprises three specific components: an Aviramp boarding ramp/bridge, a belt loader and a set of steps, offering single use training to operate all three units. The belt loader has an additional aluminium ramp, which allows crew safe access to easily load heavy electric mobility aids onto the belt without any lifting required. The loader is also height adjustable, both front and rear, to make it versatile to use on various aircraft types. There is also an auto breaking system built into the equipment, with an emphasis on maintaining and improving safety and negating damage, for both the user and equipment.

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PALLET TRAILER

Clyde Machines Inc.

Clyde Machines's pallet trailer offers a cargo capacity of 15,000 lbs. and trailer capacity includes LD1, 2, 3, 4, 5, 6, 7, 8, 10, 11 and 29. Trailers feature protected lead on rollers and casters mounted in protected cross members and tine way openings protect casters from forklift damage.

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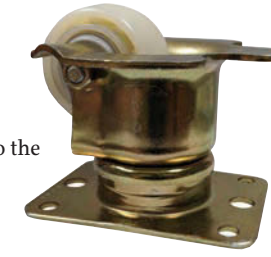
CARGOMAX GOLD

RWM Casters



RWM's CargoMax is a strong, durable air cargo caster. The CargoMax caster features a robust foot guard built specifically for use on sorting decks. The foot guard prevents foot entry into the caster mounting hole on decks and assists in providing a safer, more productive working environment on sortation decks. CargoMax air cargo casters can take the heaviest blows from all types of cargo containers with the highest impact resistance in the industry.

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BAGGAGE TRAILERS

TBD

TBD's 1,800–3,200kg capacity modular baggage trailers provide durable functionality for all loading/unloading operations. Galvanized against corrosion, covered against precipitation, incorporated brakes and simple effective construction mean that service life is maximized providing years of guaranteed unit availability with minimal maintenance. All products are compliant to IATA and EU CE standards.

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P6000 BAGGAGE CHUTE

PAGE GSE

The PAGE GSE P6000 Baggage Chute utilizes modern manufacturing techniques making this a quality chute and easy to install. The P6000SP Service Platform can be mounted to any baggage chute for storage of chocks, safety cones, wands and includes a secure FOD bin.

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MTT TRACTOR

Eagle Tugs, a Tronair Company

The Eagle MTT is the next generation of eco-friendly electric utility tractor for baggage, cargo and aircraft movement. Powered by an environmentally-friendly 80V A/C electric drive, and 5,000-lb. drawbar pull, the MTT provides the same performance and reliability Eagle tractors are known for, but with zero emissions. The MTT not only features a small 130-inch turn radius, but also allows users to carry up to 1,000 pounds on the rear cargo deck.

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TBC 6000 TOWABLE BELT CONVEYOR

Timsan

The Timsan TBC 6000 Towable Belt Conveyor offers a tow-bar, provided by a fifth wheel system mounted to the chassis for easy steering and a brake system that is applied when the tow-bar is in the upright and released position. The belt forward/reverse movements are provided by a hydraulic motor and the height and angle adjustment are provided by hydraulic cylinders. The electrical system is powered by a standard battery of 12 V DC.

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POWER PUSHER WITH FREIGHT ATTACHMENT

Power Pusher, Div. of Nu-Star Inc.

Nu-Star's signature Power Pusher With Freight Attachment improves operator safety, reduces manpower and increases ground support productivity with less downtime by transporting heavy loads fast and without excess exertion or muscle strain. Enabling a single person to maneuver from 500 up to 50,000 pounds with total control, the electrically powered, compact tug can replace large, expensive material handling equipment.

AviationPros.com/12434640

ALPHACART

FAST Global Solutions

The FAST AlphaCart is engineered with rotomolded construction for strength, durability and corrosion-resistance, but less weight to reduce wear and tear. An interlocking framework allows for easy repairs, while the channeled shelving, interior lighting and integrated handles enhance operator safety and performance.

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ADVANCED CARGO LOADER SIMULATOR

Tecknotrove Systems

The TecknoSIM Advanced Cargo Loader from Tecknotrove aims to train operators on a variety of aircraft, cargo and loading conditions. This advanced simulator is a replica of actual equipment, combining original equipment controls and levers. The visuals are projected on three high definitions LED screens. The display gives a highly realistic and immersive 120-degree view to the operator. The operator cab can be mounted on a static platform or on a TecknoSIM integrated motion platform. TecknoSIM Instructor station controls the operator cab of the simulator, enabling the instructor to register trainees, set scenarios, environmental conditions, inject faults, track and print the trainee's performance.

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SHERPA BAGGAGE AND CARGO TOW TRACTORS

Goldhofer Aktiengesellschaft

The Goldhofer Sherpa Baggage and Cargo Tow Tractors are based on a compact and modular vehicle concept. The Sherpa range of tractors enables users to find the tow tractor for individual requirements – depending on drive train, engine power, ballasting, cabin form and exhaust class. Additionally, there are many options for operators' comfort. The narrow body is stable and offers an easily accessible cabin with a good view. The Sherpa is available in three different diesel engine versions, as well as the fully electric Sherpa E, which features a maintenance–free lithium battery.

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AIR CARGO CASTERS

Kalpar Engineers

This redesigned Air Cargo Caster offers a triple sealing system to handle the harshest environments. After a major package handling customer asked for a solution concerning premature failures and improving the life of the product, the company's initial test units are still performing six years later and reducing overall cost and improved safety concerns throughout the facility.

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TC-999 MOBILE BELT LOADER

Wollard International

The TC–999 is a fast and economical way to load and unload baggage. The roller–conveyor extends around corners – stays level with the aircraft and helps boost crew efficiency. The TC–999 has an unique tubular chassis that deflects impacts. Available in gas, LP, dual fuel, diesel and electric (AC & DC). Electric field retrofit kits are also available.

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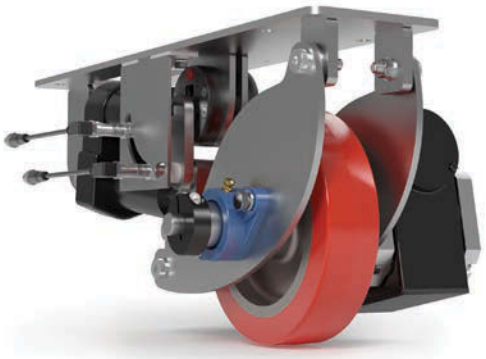

DRIVE CASTERS

Caster Concepts Inc.

Drive Casters from Caster Concepts, can ramp up productivity and prevent employee injury simply by automating the process. Drive Casters are easy to install and fit on just about any piece of equipment and allow a single operator to start, maneuver and stop a heavy load effortlessly using a control panel and tank steering.

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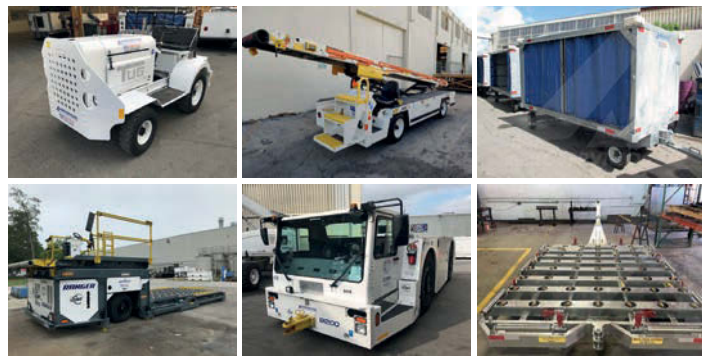

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In This Together

While the timeframe may not be clear, the industry is working diligently to return to pre-pandemic levels.

In researching and assembling our annual Global Issue, it is always intriguing to note the similarities and differences the industry is facing in various locations around the world.

From this month's cover story, focusing on the state of the industry, to our features on returning equipment to service and converting passenger planes for cargo use, this issue really demonstrates the efforts taking place to get the aviation industry back to pre-pandemic levels.

From country to country, governments have taken varying approaches to the pandemic. Travel restrictions have been inconsistent at times and difficult to anticipate. Many of us are isolated at the moment, yet everyone is working from their corner of the world to achieve the same outcome – a recovery for the industry.

It isn't surprising to learn that 88 percent of our annual reader survey respondents have felt a moderate or high impact financially from the pandemic.

But progress is being made. In fact, only 10 percent of those surveyed said they do not have a pandemic plan to assist with business continuity. The remaining respondents either have implemented a plan or are currently working to create and put one into place.

The immediate outlook in the industry seems to vary depending on individual business situations.

Nearly 70 percent of those polled believe business will return to normal relatively quickly once travel restrictions are lifted, although half of these people feel it could take a full year to get there. On the other hand, almost a quarter of the reader's polled feel business-as-usual will never fully return. Others fall between these two groups, believing a recovery is coming, but not for a more considerable amount of time.

As with other challenges, we know the pandemic will end, and flight traffic will increase.

Be well. Be safe. And let's keep working together to return stronger than ever.

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