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ONLINE EXCLUSIVES



Protecting Engineers and Airframes on the Ramp

By Ian Nagle

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.

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PODCASTS



AviationPros Podcast - Avoiding DEF Contamination with Jeremy Hill

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BLOGS



Smile. There May Be a Biometric in Your Future

By Art Kosatka

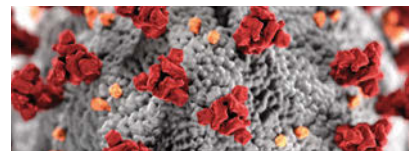
Buckle up, folks ... it's going to be a long and expensive ride, and I'm guessing it's going to look very different than any of us thought.

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FEATURES

Five Steps Airports Should Take Right Now To Prepare for COVID-19

By Stephanie Murphy & Ashlee Dlventhal



We have identified five critical steps airports should be taking right now to prepare to deal with disruption to their business operations from COVID-19.

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How Today's Tech Can Prevent Collisions

By Kent Tabor

The apron is a fast-paced working environment with many moving pieces. When collisions occur, they can cause serious injury and costly damage.

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IoT Helping Shape Airport Digital Transformation

By Kent Rawlings

To keep pace with the growing number of travelers and increasing flight volumes, airports are turning to technology like IoT to deliver better consumer experiences and improve operational efficiencies.

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PRODUCTS



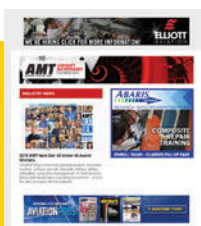
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► TOP NEWS

WFS Joins Coronavirus Relief Effort in Italy

Worldwide Flight Services' (WFS) team at Milan's Malpensa Airport is supporting the urgent medical effort to save the lives of coronavirus victims in Italy by expediting the handling of time-sensitive materials destined for hospitals and medical centers.

WFS expects to handle more charters into Italy as it continues to give its full support to the relief effort taking place across the country. Organized by the Chinese Government, flights also repatriated 187 Chinese citizens from Italy to Wenzhu in southern Zhejiang Province.



"Cargo handling specialists at airports around the world are playing a vital role in helping governments and the healthcare sector deal with the urgent medical response to the outbreak of COVID-19," Massimiliano Intorini, managing director of WFS in Italy, said. "We are ready to support more such flights to ensure life-saving equipment reaches patients as quickly as possible."

"The health and wellbeing of our staff, alongside the safety and security of our operations, remains our highest priority and we will continue to take the necessary measures to protect all the people involved in this essential work," he added.

Aeromexico to Use Passenger Aircraft for Cargo

Due to the health contingency and supporting the continuity of economies and businesses, Aeromexico will use part of its grounded fleet for cargo-only through its airfreight division, Aeromexico Cargo.

The service is operated as a charter, meaning on-demand and for shipping perishable products, live animals, high-value goods, technology and drugs, among others. Domestically, Aero-



mexico can transport cargo to 41 airports and internationally in the United States, Canada, Central and South America, Asia and Europe.

The Boeing 787-9 on which this first service will operate is one of the most modern aircraft in the world and friendly to the environment. This equipment emits, compared to other aircraft, 57 percent less noise pollution during take-off and landing and 20 percent less carbon dioxide (CO2) emissions. The airline also has its fleet of Boeing 737 aircraft to perform similar services.

Universal Supporting Humanitarian Medical Supply Missions During the COVID-19 Crisis

Universal Weather and Aviation, Inc. announced that it is donating services to support humanitarian medical supply missions during the COVID-19 crisis. Universal Trip Support is waiving its fees on trip feasibility assessments, research and consultation services as well as ground handling setup charges for any mission classified as a humanitarian medical supply flight.

"We are in an unprecedented and trying time for our industry and the world. Business aviation missions are still flying and are now more critical than ever as we battle the global coronavirus pandemic," said Universal Chairman Greg Evans. "These missions are saving lives. Together we need to find a way through the continually changing restrictions now in place that are impacting international operations around the globe."

Since the start of the pandemic, Universal team members around the globe have been diligently supporting missions of these types and finding solutions to make them happen. Universal Trip Support teams are available to help operators understand the current restrictions, which are changing by the hour, what they are allowed to do, any crew restrictions and local quarantines in place, what they can expect on arrival, the documents they will need, the questions they will be asked by authorities, and what services are still in operation and available.

"Now is the time for business aviation to come together and support each other. Not just for our industry, but for the people that fight this pandemic and those in need" said Evans.



► Upcoming Events

Canceled Events

International Aviation Snow Symposium

NBAA Maintenance Conference

NBAA-EBACE

Postponed Events

(dates TBA)

NPMA Petro 2020

AAAE Annual Conference

IATA Ground Handling Conference

NATA Air Charter Summit and Aviation Business Conference

IATA Annual General Meeting

July 20-26

EAA AirVenture

Oshkosh, WI

Aug. 18-29

NATA Ground Handling Safety Symposium

Ashburn, VA

Sept. 1-3

MRO Americas

Dallas, TX



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First Passenger Aircraft Full of Air Cargo Lands in Frankfurt

Loaded with around 30 tons of freight, a Lufthansa passenger aircraft landed in Frankfurt March 25 at 2:14 p.m. after a flight time of 11 hours and six minutes. In addition to the cargo compartments of the Airbus A330, the cabin including the stowage compartments above the seats were also loaded.

On board the aircraft were various highly urgent goods, mainly from the medical sector, including masks and other protective equipment.



Lufthansa Cargo is making every effort to strengthen security of supply by air. About half of the goods are normally transported in freighters, the other half in the bellies of passenger aircraft. Due to the far-reaching cancellations of passenger connections, valuable airfreight capacity is lacking. The Lufthansa Group and Lufthansa Cargo are therefore looking into the possibility of operating further flights exclusively for cargo transport on passenger aircraft.

Hactl Secures IATA CEIV Live Animals Certification

Hong Kong Air Cargo Terminals Limited (Hactl) has achieved certification under IATA CEIV Live Animals. As a result, Hactl becomes one of the very first companies to have achieved all three CEIV standards.

IATA CEIV Live Animals is a voluntary program designed to improve competency, infrastructure and equipment, quality management and training for the handling and transportation of live animals by air. Achieving and maintaining certification involves training, assessment and validation; re-validation audits are conducted every three years.

"Hactl has always been very confident of its live animals handling capabilities; CEIV Live Animals certification has inspired us to re-visit all aspects of our services to support our drive for continuous improvement," said Hactl's

senior manager – safety, sustainability and quality assurance, Benny Siu. "Adopting many enhanced measures in our new certification demonstrates our ongoing commitment to providing first-class services."

"I would like to congratulate Hactl for their successful attainment of their third CEIV certification and for being one of the first ground handlers to receive the CEIV certification in the area of Live Animals transportation," added Glyn Hughes, global head of cargo at IATA. "Coupled with their CEIV certifications for fresh and pharmaceutical products, this demonstrates Hactl's commitment to the highest standards of handling excellence for such important commodities transported. These most sensitive of cargos require the highest quality possible to handle them in a safe, secure and comfortable fashion. Well done to the entire Hactl team for such dedicated activity and the successful completion of the three CEIV programs."

Swissport to Equip Cargo Warehouses with Bluetooth Sensors

During 2020, Swissport will rig its cargo warehouses with Bluetooth readers supplied by Unilode and Descartes. The technology will increase transparency for Swissport customers using digitally tagged ULD. Geolocation of ULD enables real-time tracking and inventory control, enabling airlines and freight companies to plan the distribution of their vast ULD fleets more efficiently and cost effectively.

"Our cooperation with Unilode and Descartes and the introduction of global ULD tracking at our cargo warehouses create added value for our customers and drive the digital transformation of the cargo supply chain and the industry," said Hendrik Leyssens, Swissport's vice president of global operations – cargo.



In 2019, some 4.6 million tons of air cargo passed through Swissport's warehouses worldwide. Currently, nine facilities are CEIV Pharma-certified by IATA's Center of Excellence for Independent Validators.

► PEOPLE

Menzies Aviation Hires New CFO for US Business

Menzies Aviation announced Jennifer Gourley joined its Americas leadership team as chief financial officer, effective March 16. She will be based in Dallas-Forth Worth and will report to John Redmond, executive vice president, Americas.



Gourley will oversee the financial activities for the Americas region, where Menzies has operations at 115 airports in seven countries. She joins Menzies Aviation after 14 years with the Sysco Corporation, where she was senior director and project lead on its global transformation project.

"I am inspired by opportunities to build upon Menzies' legacy and position in the industry and further the mission to provide excellence from touchdown to take-off. I am honored to join a talented team during an exciting time of customer-centric focus and transformation," said Gourley. "The chance to partner with over 30,000 associates to serve our customers, communities, and shareholders is also incredibly energizing."

"I am delighted to welcome Jennifer to our Menzies Americas team," Redmond said. "This is an exciting time for us as we continue to invest and grow our footprint in this region."

Kothari Appointed Managing Director of Jettainer Americas Inc.

Shailendar Kothari was named the new managing director of Jettainer Americas Inc. on March 1. The Jettainer daughter company is based in Delaware and includes branches in Dallas, Chicago, Miami, New York and Los Angeles. In his new role, Kothari is responsible for the company's operational activities, as well as





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“With Shailendar Kothari, we have been able to win an internationally recognized cargo expert, who has extensive operational and strategic experience and knowledge. He is well networked within the aviation and airfreight industry worldwide,” said Thomas Sonntag, CEO at Jettainer GmbH. “I am delighted that Mr. Kothari will represent Jettainer Americas Inc. for North and South America and will successfully lead the company’s business.”

► NEW DEALS

PrimeFlight Aviation Services Acquires ProFlo Industries

PrimeFlight Aviation Services acquired the assets of aircraft refueling equipment supplier ProFlo Industries, LLC as well as a majority stake in the South American Free Trade Zone based ProFlo LATAM. The acquisition is being made through PrimeFlight’s ground support equipment maintenance subsidiary, Global Aviation Services, LLC based in Eagan, Minn.

“With the addition of the ProFlo team to our GSE maintenance division, we will be able to better control our inventory of refueling equipment and support the continued

growth of our existing fueling operations,” said Dan Bucaro, president and CEO of PrimeFlight Aviation Services. “We also will be able to leverage the ProFlo team’s expertise to continue to grow our GSE maintenance division, which saw a rapid expansion with our acquisition of Global Aviation Services in October of 2019.”

ProFlo Industries is a global supplier of aircraft refueling equipment including new and refurbished refuelers, bowzers, hydrant dispensers, hydrant carts, fueling ladders, fueling skids, floating suctions, storage systems and aviation fueling modules. ProFlo Industries also offers spare parts for all major makes and models of equipment as well as inspections and training.

“We are excited about the acquisition and look forward to the opportunity to accelerate our growth through enhanced capacity and capabilities,” ProFlo Industries President Terry Bosserman said. “Leveraging the extensive combined footprint of PrimeFlight and Global Aviation Services, we will be better positioned to provide industry leading after-sales support and service.”

UTG Aviation Services Awards Deicer Contract to Mallaghan

Mallaghan has been awarded a €3M contract by UTG Aviation Services holdings for the provision of six deicing units.

The equipment will be used by the UTG Domodedovo ground handling company at Moscow Domodedovo Airport which transports over 30 million passengers every year.

“Winter conditions in Moscow are one of the worst on the European continent in regards of icing precipitation. Some seasons we have more than 100 deicing days and our ground support equipment must be able to withstand these harsh conditions,” said Artyom Rakov from UTG Domodedovo, of UTG Aviation Services holdings. “Aircraft safety is always imperative, thus efficient procedures and innovative technology allow UTG Aviation Services holdings to ensure a seamless experience for passengers despite the challenging weather conditions.”

“This is a significant contract for Mallaghan as it is our first entry to the Russian deicer market,” said Owen McKenna, sales director at Mallaghan. “The requirements were quite unique and challenging so the technical specification is therefore entirely bespoke. We’re very proud to partner with UTG Aviation Services to introduce our deicing product to the Russian market and look forward to further developing this relationship.”

COMPANY SPOTLIGHT

ASO SAFETY SOLUTIONS

Collision avoidance technology is becoming increasingly prevalent in the ground support equipment (GSE) industry. Protecting airplanes from ground damage results in big savings, and officials at ASO Safety

Solutions have taken steps to help GSE fleet managers retrofit their equipment with collision avoidance capabilities.

The company’s modular collision avoidance retrofit kit was on display last fall at inter airport Europe in Munich. The system, which can be retrofitted to any existing GSE equipment, uses proximity sensors to determine when the unit is getting too close to an aircraft, and tactile sensors to detect a touch or a crash. A special sensor control unit monitors the sensors, triggers visual and acoustic warning signals and ensures the signal exchange to the electronics of the GSE equipment.

The company, which was founded in 1984, manufactures safety contact edges, mats and bumpers as well as drive controls, signal transmission systems and light curtains.

“One of our core competences is the development of custom solutions, which are tested and developed under realistic conditions in our in-house test center,” company officials explain.

The company also announced it recently achieved a milestone of expanding its production and storage area in Lippstadt by 4,800 m² in 2019, resulting in approximately 10,000 m² total space for additional growth.



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The Accelerating Danger of Diesel Exhaust Fluid Contamination

Proper training and education can prevent tragedy.

By Curt Castagna

Last May, two Cessna Citation 550 twinjets on air ambulance missions received fuel at a Southwest Florida airport that had been contaminated with diesel exhaust fluid, or DEF. While the two jets experienced engine failure, fortunately both landed safely. This marked the third time in 18 months that DEF had contaminated the fuel supply of a jet fuel truck and caused multiple-inflight aircraft engine failures.

DEF is a clear urea- and water-based fluid used in the emission reduction systems of modern diesel-engine vehicles as required by federal environ-

mental mandates. When mistakenly added to jet fuel, it may trigger the formation of crystals that plug fuel filters and damage other engine components – potentially causing engine shutdowns. DEF is not an additive, but is stored in a specialized tank on the chassis of diesel engine vehicles and then injected into the engine exhaust to help reduce noxious emissions.

Details from previous jet fuel contamination incidents find the greatest risk is line service personnel mistaking DEF for Fuel System Icing Inhibitor (FSII). Since both are clear and colorless liquids, it is nearly impossible to detect if DEF is mistakenly added to a FSII storage tank. While none of the recorded DEF contamination incidents have resulted in an aircraft crash or fatalities, they reveal the urgency of developing procedures to take preventive action.

Recognizing that the introduction of DEF into an aircraft fuel system is not an isolated incident and poses serious safety risks, the Federal Aviation Administration (FAA) has addressed the problem in a special airworthiness information bulletin (SAIB HQ-18-28) and safety alert for operators (SAFO 18015). In addition, the National Air Transportation Association (NATA) offers DEF Contamination Prevention training coursework through its Safety 1st Supplemental Safety Training Program free of charge to those, particularly employees of fixed-base operators (FBOs) and other fuel providers, who can help prevent future incidents. NATA offers the following best practices to reduce the risk of aircraft misfueling with DEF.

Storage of Aviation Fuel Additives

- DEF and other fluids, oils and chemicals shall be stored in a separate location from FSII (FSII, Prist, Dice, DiEGME) and other aviation fuel additives.

► **DEF is not an additive, but is stored in a specialized tank on the chassis of diesel engine vehicles and then injected into the engine exhaust to help reduce noxious emissions.**



All photos courtesy of NATA

MITIGATING THE RISKS OF DEF CONTAMINATION



The identified risk of DEF contamination involves line service personnel mistaking DEF for Fuel System Icing Inhibitor (FSII, Prist®, Dice® DIEGME) and adding DEF to the FSII storage tanks on mobile refuelers. DEF and FSII are both clear, colorless liquids and if DEF is mistakenly added to a FSII storage tank, contamination can be very difficult, if not impossible to detect.

NATA recommends that labels for DEF and FSII storage containers shall be intact, clearly legible and leave no question as to what product is in the container.

For more information, please contact NATA at safety1st@nata.aero



◀ **NATA recommends labels for DEF and FSII storage containers be intact and clearly legible.**

- Any equipment (containers, funnels, etc.) used to transfer DEF or FSII shall be clearly labeled and “product dedicated,” meaning that DEF transfer equipment shall only be used with DEF and FSII transfer equipment shall only be used with FSII.



- Locks for DEF and other fluids, oils and chemical storage areas shall be keyed differently than for areas containing FSII and other aviation fuel additive.
- Keys for locks shall be labeled and kept on separate key rings.

Fluid Handling

- Only approved and trained personnel shall handle DEF or fill equipment DEF tanks. All transfers of DEF shall be recorded in a log including date, time, transfer to/from and the name of individual completing the transfer.
- Only approved and trained personnel shall handle FSII or fill jet fuel refueling equipment FSII tanks. All transfers of FSII shall be recorded in a log including date, time, transfer to/from and the name of individual completing the transfer.

Procurement and Labeling

- DEF should be purchased in quantities that differ from FSII (i.e., 2.5-gallon containers vs. 55-gallon drums).
- Labels for DEF and FSII storage containers shall be intact, clearly legible and leave no question as to what product is in the container.
- All equipment DEF tanks shall be labeled “DEF ONLY.”
- Refillable FSII tanks on jet fuel refueling equipment shall be labeled “FSII ONLY” or “DiEGME ONLY.” Where replaceable 5-gallon FSII tanks are used, the manufacturer’s label shall be intact and clearly legible.

Staff Training

- Initial and recurrent training for all staff shall include the purposes of and differences between FSII and DEF (including their different storage locations and package labeling) and the dangers of aviation fuel contamination with DEF.
- In addition to the above, initial and recurrent training for individuals handling DEF and or FSII shall include DEF fill points on all equipment requiring DEF, FSII fill points for jet fuel mobile refuelers and other refueling equipment as applicable and the use of clearly labeled, dedicated equipment when transferring DEF or FSII.
- All staff shall follow the personal protective equipment recommendations found in the Safety Data Sheets for FSII, DEF and other fluids and chemicals.

NATA is also working closely with government and industry stakeholders – including the Aircraft Owners and Pilots Association (AOPA), National Business Aviation Association (NBAA) and General Aviation Manufacturers Association (GAMA) – to develop additional resources to mitigate DEF contamination incidents at airports.

If you believe that jet fuel has been contaminated with DEF, the FAA recommends

that owners and operators first contact their aircraft, engine and APU OEMs to determine the appropriate inspections and maintenance actions to remove urea-based crystalline deposits from the fuel system. This action may include removing and replacing fuel system parts of components affected by exposure to these deposits. Second, report to the FAA any service difficulties, fuel system repairs and rule system inspection results related to this work. Third, discard any jet fuel that has been removed from an affected aircraft and ensure it is not used on other aircraft or vehicles. Finally, discuss with your local fueling providers what protocols are in place to prevent and test for jet fuel contamination.

Clearly, DEF contamination poses a very real and significant threat to aircraft safety. Similar to the historical success of proper training for other fuel-related procedures that NATA has undertaken, effective mitigation measures must be swiftly enacted. In order to best assure that fueling is completed based on the highest level of safety standards, FBOs and aircraft operators must ensure their employees are properly trained and that proper protocols to prevent DEF contamination are stringently observed. **GSW**



▶ ABOUT THE AUTHOR:

Curt Castagna, president and CEO of Aeroplex/Aerolease Group, is a member of the Los Angeles County Airport Commission, president of the Van Nuys and Long Beach Airport Associations, and board chair of the National Air Transportation Association. A certified private and instrument-rated pilot, he has instructed courses in aviation administration at Cal State Los Angeles for over two decades.



KNOW THE RULES

Ground handling rules and regulations change rapidly. Staying up to date is a necessary and regular task.

By Walker Jaroch

Aviation is an industry known for the speed at which it moves and its inherent risks. On the ramp, the risk is high and the rate at which rules, regulations and training moves is quick to ensure ground handlers are on top of the latest measures to ensure their wellbeing.

But how fast do the rules actually move and how do ground handlers keep up with the latest of their industry?

Guillaume Crozier, divisional vice president, operations and product development at dnata, says staying current is “an every-day task.”

“We are following the industry and IATA recommended framework such as the IATA

Ground Operations Manual (IGOM) and IATA’s Safety Audit for Ground Operations (ISAGO). Every year they’re being refreshed and renewed. Beyond this, you have civil aviation regulation, airport regulation and customer requirements. There is a lot of regulation to be followed and for the sake of clarity and the big picture, it’s changing constantly,” says Crozier.

dnata provides ground handling and cargo services at 88 airports in 14 countries around the world. Last year, Crozier says dnata serviced around 700,000 aircraft turns. As a result, dnata works hard to ensure employees stay current – not only with industry and company standards but the myriad of global, local and regional regulations they operate to.

"It's a challenge, of course. We take it from various angles," says Crozier. "First of all, it has to be a systemic approach in a sense that we have a robust process in place to make sure that we are aware of and follow up on all the changes, from every stakeholder. We articulate our communication

channels processes in a way that we can connect quickly, get the information out quickly and update our frameworks quickly."

Crozier says that's on the reactive side; on the proactive side, dnata is fully engaged in industry discussions and is part of working groups such as IATA and the Airport Services Association (ASA).

"We also actively participate in several industry forums throughout the year to

really influence and also debate on what should be," Crozier adds.

Staying Up to Date

ASA, a globally recognized trade association for the independent ground and air cargo handling industry, works to promote a safe, secure and sustainable future for the industry. As such, ASA plays a crucial role in helping to craft ground handling regulations, describes Fabio Gamba, ASA's director general.

"We are very closely associated with the works of IATA, Airports Council International (ACI) or ICAO regarding standard-setting. ASA is also regularly informed and, at times, involved with the European Commission and, more specifically, European Aviation Safety Agency (EASA) regarding legislation that impacts ground handling," Gamba says.

When it comes to making sure ground handlers are current with the latest safety standards of their industry, one of the challenges is disseminating that information throughout a company. Gamba says it's important for the industry to have one single source of standard setting, and ASA recommends IATA's safety standards and recommended practices.

"ASA closely collaborates with IATA and our inputs are reflected in the regular updates of the Airport Handling Manual (AHM)," says Gamba. "Ground handlers should be well aware of the IATA Ground Operations Manual. More generally, though, the best way to stay on top of any regulatory or standard developments is to join the community, as members receive updates regularly. Joining ASA is a no brainer for any GHSP, irrespective of size and location."

ASA also pushes out the latest update through their social media accounts and newsletter and Gamba encourages ground handlers to subscribe for up to date information.

For dnata, Crozier says the process starts with technology.

"Innovation and communication is key to our success for us as an organization. And we have those 45,000 people across the network who depend on modern and reliable technology, good systems and sound processes. Safety is very important for us



Photo courtesy of dnata



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GOING DIGITAL

By Walker Jaroch

and we have two key focus areas, a safe place and a safe behavior,” Crozier says. “I will say to meet specific customer requirements, and the latest regulation changes, we consistently drive and focus on culture as a key enabler to ensure safe operations.

“We look for automation,” he continues. “We look on connection and interface between the HR and document management systems to make sure whenever an employee is starting their shift, they can quickly access the latest bulletin, read them and potentially ask questions if they are not clear with the assignment.”

Crozier adds that for employees who have been away from the job for a week or more, dnata has a policy that when the employee returns, they are given time to catch up on the latest news and be briefed by team leaders and supervisors.

Being worldwide, though, returns to the challenge of balancing industry-wide and regional regulations and standards. It’s a challenge the entire ground handling industry faces, Gamba says.

“The trickiest aspect of all, by far for a ground handling service provider, is when its employees are subject to different standards and practices from different airlines at a given airport. This includes questions of how many cones should be around the aircraft, how chocks must be set in place, and how many, for example. That makes consistent training quite difficult,” explains Gamba.

Striking between the two is dnata’s own manual for their employees – the minimum standard that the company expects its workers to follow.

“It’s a set of documentation starting with process maps, SOP, work instruction and training materials. These frameworks are being built with all of our SMEs across the network. We’ve invested a lot of time and effort with an aim to set high minimum standards for dnata. Of course, those minimum standards are IATA compliant and ISAGO compliant, but also bring in the best practices we see from each country,” Crozier explains.

He continues that dnata maintains a global framework, built on 80 percent of global requirements with the remaining 20 percent addressed through local operating procedures specific to the region dnata employees find themselves in.

Web Manuals is making staying current with the latest aviation regulations easier by way of digitizing it.

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Genmark

Krister Genmark, Web Manuals’ director of operations, Americas.

Genmark says that on average, users save more than 2,400 hours per year once trained as a registered Web Manuals’ user – with dedicated staff members updating documents digitally and sharing them with every other staff member instantly – as opposed to editing a Microsoft Word file or Google Doc and re-printing huge paper manuals.

“The Edit and Author function allows for the writing and editing of controlled flight documents in an online, cloud-based platform. Users can write, revise, publish, distribute and control their entire suite of documents through Web Manuals, minimizing the number of personnel working on separate manuals and the amount of back and forth – saving time while improving quality. Web Manuals has several automated modules which further saves time and energy. Other features include a full audit trail,

customized workflows and automated email notifications when anything is changed in a manual,” says Genmark.

The Web Manuals software caters for ground handlers, as well as other members of an aircraft operations team, with all regulation and compliance-related information relevant to ground handlers available digitally and in one place, Genmark adds. Regulations are updated in line with regulatory updates, which will promptly notify the manual owners of the relevant changes that apply to their manuals.

Web Manuals can be accessed via a web browser and across a wide range of devices. The company’s most recent software update, Web Manuals 8, introduces smartphone capabilities that are accessed via an Android and iOS app.

Web Manuals is currently being used by charter and wet-lease operators, business jet operators, several global and regional airlines, maintenance and repair organizations, training schools, cargo and helicopter operators. The software is scalable and can be adapted to suit any company, regardless of size.

“Customers can aid ground handler training by making their training documentation available digitally, meaning they can be accessed at any time, from anywhere, rather than requiring in-person training for small updates to training modules,” says Genmark.

"We are a risk-based organization so everything we do goes for risk assessment. That's really important for us," Crozier adds. "Once you have your baseline and you receive any request, or change any specific local oversight program requirements, we can immediately identify the impact on our operation and through a collaborative review process including subject matter experts from safety, training, assurance and operations, we define requirements for adjustments in operational procedures to manage the risk to a level of ALARP."

In the near future, helping to smooth over some of the regional differences in Europe will be the EASA's adoption of ground handling standards.

"From a regulatory perspective, the European Safety Agency, EASA, is amongst the only ones today that considers ground handling as being an essential element of

air transport safety and that regulates it. They are currently putting the final touches to a Rule-Making Task that will shape European standards around such aspects as training. The International Civil Aviation Organization is also working on the drafting of its own standards and recommended practices," Gamba explains.

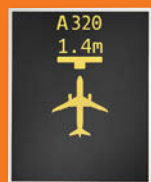
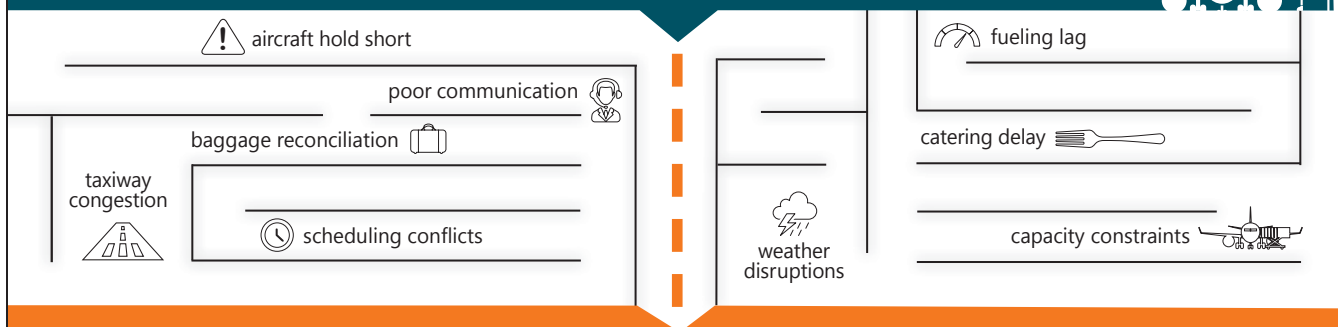
"A brand-new legislation in the European Union on ground handling will be promulgated at the end of 2021 and an assessment of Directive 96/67/EC on a possible revision of market access should be conducted throughout 2020," he adds. "There is also a review of Regulation 376/2014 on the reporting, analysis and follow-up of occurrences that

is being considered by the European Commission and which may have an impact on ground handling service provider's operations."



Photo courtesy of ASA

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Time for Training

Keeping up to date is crucial, but if not put into practice, merely knowing what the latest word on ramp safety is doesn't do much. Employees need to be well-trained along with well-read.

"With increasing demands, improving training is becoming more crucial," says Gamba.

Crozier says dnata's training is, of course, a mandatory part of the job.

"There is a full matrix of mandatory training, which needs to be managed in a specific order from a safety and security point of view to make sure that we create a safe place and secure environment for people to operate in. This is supported with strong human resource process based on candidate profiling," describes Crozier. "We have five types of jobs. So, depending on the type of job, we make sure we recruit the right people with key attitudes and behaviors. Once we have recruited the right people and they have completed all the mandatory training, received their passes, badges and clearance

to move on, then we start with a mix of competence assurance elements and shadowing elements."

Crozier says to help onboard new employees, dnata takes their most tenured and experienced employees and involves them to influence, coach and embed the soft skills, attitudes and culture which is the DNA of dnata.

Visible oversight on the ramp is key to the person-on-person element of training.

"Leadership oversight is very important to support competence development, especially on the ramp activity. As a company, we emphasize to all our supervisors and leaders the importance of visibility on the ramp to develop, coach and mentor on a continuous basis. We all use various technology platforms, but really

developing the right culture and behaviors requires personal intervention."

While leadership oversight is crucial to influence and ensures an employee is up to date and ready for the challenges of working on the ramp, the training itself is not without its hurdles to overcome.

"If you don't have the right system, it can become very bureaucratic. As an organization, we work hard to ensure databases are fully connected and intuitive to make it easier for everyone. The key challenge is the administration and making it as simple and digital as possible to ensure we can clearly demonstrate both our due diligence as well as the assurance that our employees have the right skills. As a global organization, I think we are moving in the right direction and always seeking new technology to support us in reducing cost associated with training while providing a high level of training that is easily absorbed by our workforce," Crozier says.

As such, computer-based training is a crucial element to dnata's training approach and they have various devices across their network to brief staff.

"We have various apps to help our people stay connected and share information," Crozier says. "We have a document management system, as well, which is very important to help us to manage the tracking and manage the compliance aspects of our business. It also provides some assurance that the appropriate staff are receiving the relevant information and responding to the information provided.



Photo courtesy of ASA

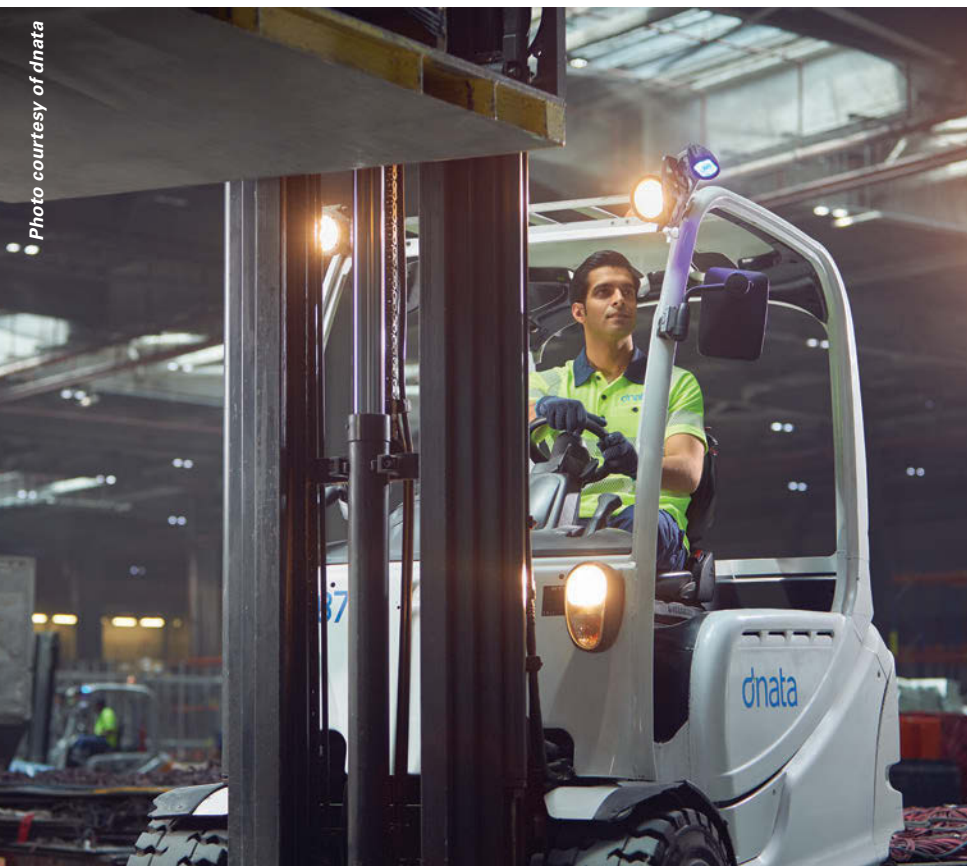


Photo courtesy of dnata

All of these suites of tools are required today to face the information challenge.”

Gamba adds that computer-based learning and the myriad of other technological innovations to the ground handling industry make for a more efficiently trained workforce, provided companies are able to take advantage of them.

“E-learning is another way for ground handlers to up-skill and expand their career progressions options. In fact, more electronic devices are available nowadays and are on the market to help employees operate safely on the ramp. One can think of the anti-collision devices that now equip most of the motorized ground service equipment (GSE). The technology is there, and it is fairly mature. The problem is, as often, related to cost and the investment it takes for a GHSP to get equipped. In a cut-throat competitive environment as ground han-

dling is, a certain race to the bottom may impede the timely acquisition of these devices,” Gamba says.

Technology is set to have a growing role in the industry with training, with exciting applications on the horizon that are just now beginning to gain a foothold.

“There are some exciting virtual reality (VR) developments. IATA launched Ramp VR, a virtual reality ‘plug-and-play’ training platform, which is already being used in ground handling training processes. Training with virtual reality allows workers to simulate a range of situations that simply cannot be recreated for training purposes on the ramp, such as snowstorms and lightning strikes while providing a calm and secure environment where they feel comfortable making mistakes,” says Gamba.

Crozier says VR is an area that dnata is exploring.

“We are still looking at VR across all our services to explore the viability with the industry. We are not yet using it actively in production, but we can foreseeably recognize the benefits from it,” says Crozier. “When you think about it, you can start realistic and visual ramp training and retraining without actually being on the ramp, whereas we need to get the airport pass before starting physical training. With VR, you can visualize the steps and activities which would be more effective, efficient and supports higher retention of learning. Still, this will not replace on the job training, where you really have to put your people in the context of the operation. This still needs a bit of work, but from a logistics and reality training point of view, VR has the potential to be a very good tool.” **GSW**



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How the Industry is Charting a Course for Cargo Handlers

All photos courtesy of Hactl

IATA's Cargo Handling Manual and Smart Facility Operational Capacity program aim to standardize cargo handling and reduce complex audits.

By Josh Smith

Guidelines for cargo operations evolve to assist best practices for handling freight as well as ensure the safety of the personnel loading and unloading bulk shipments from aircraft.

To assist ground handling agents (GHAs) with these objectives, the International Air Transport Association (IATA) regularly updates working parameters in the IATA Cargo Handling Manual (ICHM) and recently launched a new program to improve global standards across cargo operations.

Now in its fourth edition, the ICHM is a high-level cargo handling procedural manual designed for airlines and GHAs that do not have one, or would like to deploy a uniform standard for all their locations, explain officials at Hong Kong Air Cargo Terminals Limited (Hactl).

Hactl, along with seven other GHAs and eight airlines, is a member of the IATA Cargo Handling

Council (IHC) and assists in the creation of new guidelines within the ICHM.

"Hactl had created its own operating manual over 30 years earlier, when such manuals were almost non-existent," a Hactl spokesperson says. "It has been regularly updated ever since to take account of changing regulation, industry environment, technology, etc."

"Hactl conducted mapping of ICHM against its own operating manual in 2018 using the mapping tool provided by IATA, which revealed that over 95 percent of content was already covered: with the only significant variance being content in Hactl's manual relating to Hong Kong industry practices and specifics," the Hactl spokesperson adds.

Adoption of practices outlined in the ICHM has increased since its creation and continues to advance thanks to industry feedback.

According to IATA officials, four updates were made to the 2020 edition of the ICHM, including:

- Export rules and risk mitigation for embargoes and dual use items.
- References to Live Animal Regulations (LAR), Perishable Cargo Regulations (PCR) and Temperature Control Regulations (TCR), as well as detailed instructions for the handling and build-up of unit load devices (ULDs).
- Electronic Air Waybill (e-AWB) standard operating procedures to clearly promote e-AWB and its implementation.
- A training matrix based on the workflow in cargo using the Competency Based Training Assessment (CBTA) methodology.

“I believe the updated information regarding the use of ULDs, serviceability checks and ULD build-up are very detailed and will certainly help in reaching a new level of safety in handling and operations,” says Brendan Sullivan, head of e-commerce and cargo operations at IATA.

He adds that the training requirements for cargo handling based on the CBTA methodology, endorsed by the International Civil Aviation Organization (ICAO), is welcomed in the industry as training is a pillar for a safe and efficient cargo operation.

“Appendix C in the IATA Cargo Handling Manual, which addresses the safety, efficiency and integrity of air cargo logistics,

is vital to airlines and cargo handlers and may have significant impact on the industry,” adds a spokesperson from Singapore Airlines (SIA).

Smart Facility Operational Capacity

In addition to the ICHM, IATA has launched a new program to improve global standards in cargo handling operations. The Smart Facility Operational Capacity (SFOC) program is designed to reduce the complexity and duplication of audits for cargo handling facilities.

IATA officials note the SFOC program has two components. The first is to standardize the global audit program and the second is a commitment to audit reduction.

“The SFOC audit is based on the Smart Facility Standards Manual (SFSM) which contains all questions assessing cargo handling standards,” says Sullivan. “The SFSM constitutes the largest common denominator of individual airline audits questions, i.e. all audit questions that are generic to individual airline audits are covered in the SFSM.

“Airlines that support Smart Facility perform a gap analysis between the SFSM and their own audit questions to identify exactly which standards are assessed during the SFOC audit. Based on the results, the airlines can determine exactly how much

they can reduce their audit scope for SFOC certified handlers,” he continues. “This applicable reduction is then manifested in the Audit Reduction Commitment (ARC) between the airline and IATA and available to Cargo Handling Facilities (CHF) to determine upfront the benefits of becoming SFOC certified. Gap analyses performed during our trial phases and continuing now in the live program indicate at least 50 percent reduction with some airlines coverage exceeding 80 percent.”

The SFOC also ensures entities are compliant with the ICHM and adhere to IATA's Resolutions and Recommended Practices regarding cargo handling through on-site audits performed by industry experts using the SFSM checklist and questions, assessing each item of cargo handling equipment, infrastructure and procedures to operate them in accordance to IATA's standards and recommended practices.

“Each SFSM question is designed to validate a specific cargo handling standard or recommended practice found within the different IATA Regulations,” says Sullivan, noting ICHM, TCR, ULD regulations and Dangerous Goods Regulations (DGR) as examples. “It also works hand in hand with



IATA's CEIV (Center of Excellence for Independent Validators in Pharmaceutical Logistics) programs, to deliver the most efficient experience possible."

IATA launched the program with SATS Singapore as the first CHF to be certified and

Singapore Airlines as the first airlines to sign the ARC. IATA is extending the program by actively involving more airlines and CHF's, including sharing an explanatory video encouraging carriers to support the initiative.

"The success of SFOC really depends on its

acceptance by carriers, as they are the parties conducting audits," a Hactl spokesperson says.

"Hactl fully supports the concept, which would reduce the number of audits to which it is subjected and reduce the cost to us and the parties originating those audits," the spokesperson continues. "Accordingly, we made our SuperTerminal1 facility available to IATA for the running of a pilot audit in 2018."

Sullivan says the initial response to the SFOC program has been positive.

"The member airlines of the IATA Cargo Advisory Council fully support the initiative to reduce redundant audit efforts for the industry," he says. "And CHF's welcome the introduction of the ARC, which gives clear visibility on how much audit reduction to expect for each supporting airline." **GSW**



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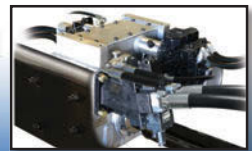
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An Analytical Approach to Ground Damage

IATA's Incident Data eXchange uses global and regional trend data to set safety and security performance targets.

Some 10 years ago the International Air Transport Association (IATA) introduced the ground damage database (GDDB) for the collection of aircraft ground damage reports, the determination of trends and the enabling of analysis.

Recently, the GDDB has been channelled into IATA's Incident Data eXchange (IDX), which uses global and regional trend data analytics to set safety and security performance targets.

IDX is IATA's safety and security incident data management program. IDX is a worldwide, aggregated, de-identified database of incident reports – including flight operations, cabin, ground operations safety and security occurrences. It offers a secure environment, providing participants with a seamless experience to view aggregated data against standards and benchmarked with other counterparts.

In IDX, IATA has brought together both ground and flight safety information in a more comprehensive and user-friendly format.

"Ground damage events represent a significant safety issue and cost challenge for the industry," IATA officials explain. "Having a comprehensive database of such instances enables the identifi-

cation of risk factors involved in ground damage events and benchmarking of best practices to avoid them."

Safety and security information is shown in terms of key performance indicators. This is helping IDX participants to benchmark their own performance and establish safety performance targets in accordance with the International Civil Aviation Organization's (ICAO) requirements for safety management systems (SMS).

"This platform offers a secure, robust environment and improved user management, providing operators and industry stakeholders a seamless experience to contribute data, track the quality of their data submissions and consume various relevant analytics – all through a single portal," say IATA officials.

The contributors of IDX are airlines and ground service providers (GSPs) that participate to the database and consume IDX reports.

"Airlines and GSPs were participants of GDDB, and it is still the case also for IDX. Data contributions consist in the submission of ground damage reports, containing the relevant information of each event, and participants submit their data through the IATA One Identity customer portal,

By Mario Pierobon

a secure environment for data sharing,” note IATA officials. “Data is consolidated as aggregated and de-identified information, and this level of aggregated data is shown through interactive dashboards that can be found in the same secure environment. Standard reports have also been distributed regularly to the industry to show the latest ground damage trends and hotspots.”

IDX is an element of IATA’s Global Aviation Data Management (GADM) program which is used to help identify and monitor emerging safety issues as part of IATA’s Six Point Safety Strategy.

“This is a comprehensive approach to identify organizational, operational and emerging safety issues. IDX has been established in close cooperation with the member airlines and strategic partners through the IATA Safety Group (SG) and the Safety, Flight and Ground Operations Advisory



Photo courtesy of ABESATA

Council (SFGOAC). This strategy is predicated on the SMS principles and methodology of performance-based management and oversight,” says Ricardo Miguel, president of ABESATA, Brazil’s national entity representing the GSPs, which shares tasks and information on a daily basis with IATA Brazil and ABEAR, the Brazilian association of domestic airlines.

To date, there are some findings of IDX that are of interest to the aircraft ground handling industry.

“An effective GSP SMS greatly contributes to prevent aircraft damages and, when they occur, the severity is much different between those GSPs with SMS implemented and those without one,” says Miguel. “Also, cargo and baggage loading equipment continue to represent in more than 50 percent of damage reports those pieces of equipment that cause the damage.”

The latest trend found in 2019, highlights that the aircraft damage rate has been relatively stable since 2015, with damage rates found on arrival being higher than the damage rates actively reported by airlines and or personnel of GSPs.

“Additionally, GDDB data was used to perform a quantitative analysis on the safety performance of IATA Safety Audit for Ground Operations (ISAGO) registered operators and non-ISAGO registered operators,” say IATA officials. “With the integration of GDDB with the ISAGO registry, we were able to display specific metrics in which ISAGO membership was improving ground operations safety performance. A few examples were the reporting culture, the more robust damage inspection upon arrival and consistent implementation of operating procedures. This helped the ISAGO program to show objective and meaningful indicators.”

For IDX participants, it is possible to implement specific initiatives based on IDX findings.

“The IATA Safety Group, the Safety, Flight and Ground Operations Advisory Council and the Ground Operations Council continuously analyze this information and set strategies and objectives to improve ramp safety,” says Miguel. “As an example, for 2020–2022, the ground operations objectives include delays reduction, cost reduction per turn, safety improvements and damage and injury cost reduction, the reduction of environmental impact, the

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promotion of rational standards and the support to IATA products and services.”

Through IDX it is possible to identify some regional aircraft ground damage trends. For example, in the Latin America and Caribbean regions the amount of ‘reported’ aircraft damages are more than those “found.”

“This was the only region where the number of damages reported was higher than the number of damages discovered during ground operations, which is a positive indicator,” point out IATA officials.

“IDX participation helps individual ground handling companies to improve safety performance as each participating organization have the possibility to use the IDX reports to compare it with their own information and with their similar organizations,” adds Miguel.

IDX participation has effect on safety decision making as each organization has the possibility to use this information as part of their safety risk management.

“In particular, IDX participation enables to collect and analyze safety data and information, determine the likelihood and consequences of accidents and incidents – risks assessment, determine potential mitigation to make unacceptable risks acceptable, develop reasoned arguments for safety actions to be considered by management; and take management decisions on what to do,” says Miguel. “Also, they can use this information to support their safety assurance activities, especially in the safety performance monitoring and measurement activities.”

The active participation in the IATA safety data sharing program can help airline and GSP organizations to identify issues that are experienced by the industry, that a single operator may have not experienced yet, allowing for early mitigation of specific risks.

“The benchmarking provided in IDX, with de-identified and aggregated data, allows contributors to perform this risk identification and implement consequent actionable insights,” say officials at IATA.

ABESATA is involved in several industry initiatives in Brazil to address aircraft ground damage issues.

“The IATA regional office and some local offices are engaging civil aviation author-

ities and airports to recognize the IATA Ground Operations Manual (IGOM) as an alternate means of compliance (AMC) and pushing for the ICAO Ground Handling Manual (Doc. 10121). GSPs and airlines are encouraged to promote with their Civil Aviation Authorities on this effort,” says Miguel.

Unfortunately, he adds, in Brazil, the National Civil Aviation Agency of Brazil (ANAC) has not emphasized this issue with GSPs, transferring this role to airlines or aerodrome operators.

The promotion to participate in the IDX database has been part of the ISAGO workshops delivered in Bogotá, Colombia, in September 2019 and in Atlanta, Ga., in February 2020.

“ABESATA, as a member of the ANAC Advisory Council, has constantly urged the civil aviation authority to include the aeronautical accidents and incidents prevention and investigation system in the GSPs’ inspection list,” concludes Miguel. **GSW**



▶ ABOUT THE AUTHOR:

Mario Pierobon is a safety management consultant and content producer. He currently is working on a research project investigating aircraft ground handling safety. You may reach him at mariopbrn@gmail.com.



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Photo courtesy of Salt Lake City International Airport

Stay Ahead of the Weather

AWWs are provided for ground decisions and are designed to ensure the safety of passengers, airport personnel and others who may be endangered by weather events.

By Ed Brotak

National Weather Service (NWS) local Weather Forecast Offices (WFOs) provide routine aviation weather products which are designed specifically for aircraft flight operations – takeoffs, landings and inflight conditions near the airport.

WFOs can also provide Airport Weather Warnings (AWWs) for “weather phenomena, which can adversely impact airport ground operations.” AWWs are provided for “ground decisions” not “in-flight operations.”

To accommodate the variety of terminal circumstances, an AWW is issued based on weather criteria specific to each airport. These criteria have been predetermined by mutual agreement between the WFO and the local airport management and are formalized by a Letter of Agreement (LOA). According to National Weather Service Instruction 10-108, published in 2019, the AWW will “include the triggering phenomenon, location, start time (end time as needed) and may include additional remarks.”

AWWs are designed to ensure the safety of passengers, airport personnel and others who may be endangered by weather events. Their issuance also necessitates changes in operations or procedures on the ground. Refueling of aircraft can be halted

by a lightning threat. Snow and/or ice will lead to deicing procedures on aircraft. Snow removal may be necessary to complete standard operations. Aircraft and supporting equipment may need to be tied down during high wind events.

The LOA is basically the contract between the WFO and the airport. It establishes the weather elements to be warned for, dissemination mechanisms and points of contact. This LOA may be amended at any time by mutual consent of all parties. It is either specifically stated, or at least implied, that the described weather event may affect not only the immediate airport ground operations but the surrounding area within 5 statute miles of the airport center. The AWW was designed to complement the standard NWS forecasts and warnings. Airport management should continue to refer to these products.

AWWs are issued with as much lead time as possible. This does vary depending on the weather element being dealt with. The actual lead time by element will be determined in advance by agreement of the WFO and airport and this will be reflected in the LOA. Thunderstorm-related warnings typically have a short lead time, hours or even minutes. Major winter storms or tropical

cyclones typically can be forecast further in advance and this allows for longer lead times for storm-related issues – at least several hours. The AWW will be updated and canceled when necessary.

Although criteria for an AWW will vary by airport, criteria could include thunderstorm threats such as strong winds, lightning and/or large hail; strong non-thunderstorm winds; heavy snow; and freezing rain. Other elements such as fog, freezing fog or tropical storms/hurricanes can also be included.

The climate of region will determine what weather hazards must be dealt with, and this varies tremendously.

For example, in the weather-active region of central Oklahoma, Will Rogers World Airport (OKC) in Oklahoma City experiences many of the above listed threats. Their LOA includes AWW issuance criteria of thunderstorm winds of 35 knots (sustained or gusts) with a proviso if winds of 60 knots are expected after the initial AWW is issued, it will be updated; ½-inch hail with a proviso if 2-inch hail is expected after the initial AWW is issued, it will be updated; non-thunderstorm sustained winds of 35 knots or gusts to 40 knots; freezing rain, freezing drizzle or sleet; or snow accumulating to 2-inches or more.

It should be noted OKC utilizes a private weather service to provide lightning data, therefore lightning is not included in the AWW criteria. This is typical in regions where thunderstorms are common.

“The goal is a 40-minute lead time before the phenomenon moves/develops within 5 miles of the airport. Two hours for winter precipitation,” says Jim Thrash, operations manager at OKC.

In contrast, for San Diego International Airport-Lindberg Field (SAN) in the benign climate of Southern California, the AWW criteria includes sustained surface winds of 25 knots or greater; wind gusts of 30 knots or greater; lightning within 5 miles of the center runway complex; and any potential hail including size and accumulation (this is very rare). An AWW for wind will include wind direction if possible and any restrictions in visibility due to wind-borne matter. With thunderstorms being uncommon in San Diego, private



▲ **High winds during a storm at OKC blew a Cessna Citation off the ramp.**
Photo courtesy of Will Rogers World Airport

lightning detection would not be cost effective, so the NWS is relied upon.

Lead times for AWWs at SAN will be no more than 30 minutes before the onset of the event or less depending on the situation, says

Dean Robbins, airside operations manager. One exception would be if strong winds are forecast for the overnight period. An AWW could then be issued as much as 12 hours in advance to allow for adequate preparations.







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A separate service that the NWS provides SAN is a “heads up” on situations when the ceiling or visibility (C/V) is predicted to drop below minimums. Although this is covered in the terminal aerodrome forecast (TAF), airport management desired a special notification of such conditions for planning purposes.

Although SAN has only one runway, one approach is equipped with an instrument landing system (ILS) and has lower minimums than the opposite direction. If wind conditions permit, some aircraft could still use the runway.

This, of course, would result in significant rescheduling with obvious impacts on ground services. This particular weather advisory is the one most often used at SAN, according to Robbins. And since this is based on TAFs, such warnings can go out hours ahead of the event. Robbins says they

are in the process of revising the LOA to add this service.

How do airport managers decide upon the specific weather criteria which will initiate the AWW process at the WFO?

“We decided on 35 knots since we routinely see 25–30 knots sustained here,” explains OKC’s Thrash. “Once you get about 35, things start getting blown around more. As for the snow, 2 inches is more likely to see accumulations on the pavements, versus 1 inch. Once we get accumulations, it can cause greater operational impacts. One other factor, the levels we decided on also tends to reduce the number of AWWs that get issued. It reduces the workload on all of us.”

“As winds increase, it has a lot to do with direction as well,” adds SAN’s Robbins. “If we see a cross wind, we see the risk of containers and equipment that’s not properly



chocked or braked being blown out onto the aprons and the ramp.”

As for C/V dropping below minimums, he says, “we start seeing more delays.”

How do airport managers respond to AWWs?

Both OKC and SAN stop refueling operations when nearby lightning is noted.

“For severe (thunder) storms, we would mostly likely use an AWW to initiate an evacuation of passengers from the terminal,” says Thrash. “We would also get ATC to issue a ground stop and/or divert airborne aircraft away from OKC.”

“Airlines will determine if they need to bring staff inside,” points out Robbins.

“For winter weather, an alert that frozen precip is expected in the next 2–4 hours would initiate a recall of maintenance staff for snow removal operations – if we haven’t already started that process,” says Thrash.

“For winds, we send out an informational notice reminding everybody to make sure all of their equipment is properly secured and even in the terminals, make sure you’re closing doors,” Robbins says.

As for the C/V issues at SAN, Robbins says about the advanced warnings, “from a planning perspective we can get ready for these types of events.”

Also stated in the LOA is the communications process – who at the airport should receive a phone call, etc. For OKC, calls go out to the operations officer, airport police and the FAA academy duty officer. Once the appropriate airport officials are notified, it is their responsibility to relay the information to those who need to take precautionary actions.

For SAN, an automated email message will be sent to airport operations managers



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and a phone call will go to the director of airport operations.

The issuing WFO is required to verify all AWWs. Summaries of these verifications are done four times a year. For example, the WFO at Norman, Okla., issued a total of 42 AWWs for OKC in 2018 and 2019. June had the most with 10, while zero were recorded in September and October. Severe thunderstorms accounted for 19 AWWs, winter precipitation nine, general thunderstorms seven and non-thunderstorm winds seven.

By NWS definition, a “severe” thunderstorm has winds of at least 50 knots and/or hail of at least 1-inch in diameter. A thunderstorm with winds of 35 knots and/or hail of ½-inch is defined as “approaching severe.”

In contrast for the past three fiscal years, running October through September, the WFO in San Diego has only issued 12 AWWs for strong winds, seven for lightning and zero for hail. There has been one already in 2020.

Doug Harris, an operations manager at Salt Lake City International Airport (SLC), says they have taken a different path to get their weather information. They have contracted with a private meteorology firm, WeatherNet.

“They are more accurate and more airport specific (than the NWS),” Harris says.

Typical of a private company, WeatherNet can tailor products for a specific client. For SLC, this starts with a daily general forecast. Unscheduled briefings are utilized when a significant event like a winter storm is forecast. WeatherNet also provides alerts, which are comparable to the NWS AWWs.

For SLC, an alert is issued if sustained winds exceed 20 knots; if lightning is observed within 5 miles of the airport; if

a severe thunderstorm or tornado warning has been issued by the NWS; or if any “adverse winter weather” is currently expected if it had not been in the forecast or had been under-forecast.

If any of these occur, calls will either be made to the Airport Control Center or Airport Operations.

“We are staffed 24/7/365 and can be contacted for weather support by airport personnel any time,” explains Scott Jensen, operations manager with WeatherNet.

WeatherNet provides one or more of the above services to dozens of airports around the country.



▶ ABOUT THE AUTHOR:

Ed Brotak is a retired meteorology professor, turned freelance writer. He specializes in aviation weather hazards and has written dozens of articles on this topic.



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A Reel Solution for PCA Hose Storage

Reelcraft's PCA Hose Reels increase safety, efficiency and productivity for workers on the ramp.

By Eavan McGrath

Proper care for pre-conditioned air (PCA) units and hoses is essential to produce clean, comfortable air for passengers boarding aircraft. To help ensure this, Reelcraft makes PCA Hose Reels to protect the hose from damage as well as lengthening the viability of the hose so passengers can avoid dusty, unfiltered air.

"Reelcraft was approached with this need to manage the hoses in such a way to increase the safety, efficiency and productivity of the workers on the tarmac," Kevin Eubanks, technical services engineer at Reelcraft, says. "Because of this we have been designing PCA Hose Reels since 2006 and have established ergonomic handling of PCA ducting."

The hose reels help extend the life of the hoses themselves, saving time and money for the airports that rely on them, Eubanks notes.

"The design keeps the ducting protected and reduces the wear and tear on the hoses," he adds.

The reels also help keep PCA hoses organized and stored out of the way while not in use. By increasing the safety and the productivity of the PCA Hose Reels it shortens the time workers are on the tarmac, so planes can get turned around faster.

There are two types of style of PCA Hose Reels, either motor driven or hand crank rewind.

The motorized PCA reels are available with either 50 hz or 60 hz motors and a variety of voltages to accommodate the airports power supply, Eubanks explains.

"All flow path seems are sealed for maximum sealed air transfer and thermal efficiency," he says.

The reels are also available with a fixed based

or swivel bracket. They offer stainless-steel hardware with an aluminum frame with individually powder coated components. The reels also come with an optional mounting bracket with a 340-degree swivel base, a 400 V AC motor and a chain and sprocket drive system with complete motorized retraction. The lightweight, motorized reels weigh 120 kg without the hose.

"The motorized hose reels are welded aluminum, have a lightweight design, a mechanical limit switch, a 14" flow path and an oversized rolled edge for hose protection," Eubanks says. "Because the reels are made from aluminum, they can be offered with a powder coat finish for added corrosion resistance."

The reel will accommodate up to 100' of lay flat 14" inside diameter PCA ducting, Eubanks notes. The reel reduces friction with a self-lubricating 14" bearing.

"Zinc-plated steel tie-rods span from flange to flange to offer superior structural support," Eubanks adds.

The overhang edges are rolled to guard the expensive ducting during daily use. A spring-loaded pin lock keeps the ducting from unwinding while not in operation on the hand crank units. The pin lock is oversized, so it is easy to use with gloves, accommodating operations in all weather conditions.

"The durable chain guard promotes safety and protects the internal working components from the elements," Eubanks adds.

The inlet is permanently attached to the main PCA source so that the reel provides fast and safe payout in crank return.

"The tethered hand crank is removable and can be changed out with a hand wheel nob as an optional accessory," Eubanks says. "Models are available with right- or left-side inlets to accommodate to right- and left-hand bridge installations."

The reels can either be stationary or equipped with wheels - operating automatically or manually.

"The manual PCA reels are on wheels and provide an easy transport of the hoses," Eubanks



Photo courtesy
of Reelcraft



Photos courtesy of Reelcraft

says, adding the manual reels have upgrades including a hand wheel or heavy duty casters.

The reels can be affixed to the jet-way bridges for motorized versions or directly to the bogey for the manual reels, Eubanks points out. If the reel is operated automatically it is wired into the airport's electrical grid.

Minimal training is required to operate the reel. One or two people are required to operate the reel, depending on how the controls are set up.

"Light maintenance is required to keep the PCA Hose Reels in good working condition, such as lubricating chains and bearings," Eubanks says. "Well maintained reels can last for many years."

When purchasing a PCA Hose Reel it is important to keep in mind that low temperatures, or being in colder climates, may require a specialized motor for it to work properly at appropriate levels. Also, Eubanks notes, the reels are designed for specific lengths of hoses.

"It is important to make sure you have the correct length of hose you are managing," Eubanks says. "Most are designed for lengths between 75' to 100' of hose, depending on the style of ducting."

Primary customers of the Reelcraft PCA Hose Reels include airports throughout the globe, Eubanks notes.

With a durable structure, the Reelcraft PCA Hose Reel can perform in all weather conditions with a high life expectancy working year after year, Eubanks says. **GSW**

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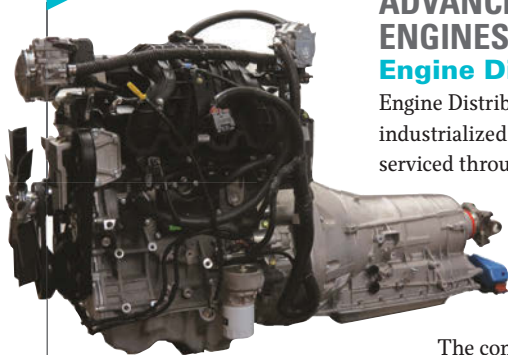


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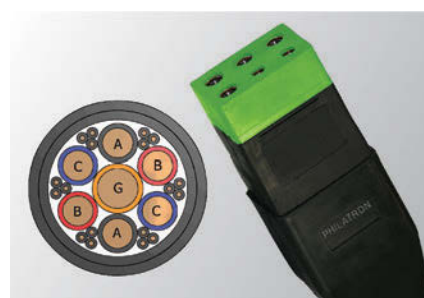


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DIESEL POWER CART

Aviation Ground Equipment Corp.

Aviation Ground Equipment Corp. adds the 72 kW Diesel Power Cart to its product offering. This low-cost, hardened cart, is designed to operate in the most stringent military theaters, including flight deck conditions and all land-based operations. The 72 kW Diesel Power Cart features an integrated power converter, allowing for up to three primary modes of operation: 400 Hz output, 28v DC output and 270v DC output. It is F-35 and Lockheed approved.



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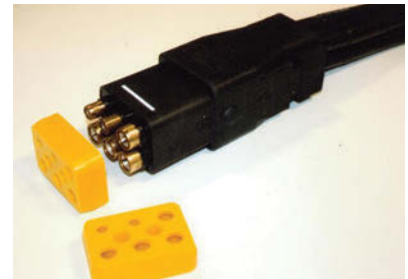


S POWER M-B-DC

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The mobile version of the Hitzing S POWER provides high voltage quality and a high level of supply security. The S POWER M is available either for indoor use (S POWER M-S) or outdoor use (S POWER M-B). The latest 28 VDC technology can be added to all available S POWER units. Due to the latest inverter technology, the unit fulfils all technical requirements and overloads and is still very lightweight and compact.

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PCA HOSES

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AmCraft Manufacturing fabricates pre-conditioned air (PCA) hoses. The company offers both Wire Supported Hoses and Lay Flat Hoses. Both are intended to assist with the movement of conditioned air, either cool or warm. AmCraft manufactures a complete line of standard size hoses, hose sections and hose accessories, too, and the company can also customize hose configurations to fit specific needs.

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An Industry in Need of Support

Aviation has never faced a crisis like the one posed by COVID-19.

The last several weeks have proven how quickly our lives can change – both personally and professionally.

First and foremost, all of us at *Ground Support Worldwide* extend our well-wishes to those who have been personally impacted by COVID-19. We hope everyone who has become ill recovers quickly and those who have remained healthy, continue to be safe.

In our last issue, I used this column to express my excitement for the upcoming trade show season. Of course, those plans have been derailed by travel restrictions and quarantine mandates. But before those went into place, representatives from *Ground Support Worldwide* and our sister publication *Airport Business* attended the NBAA Schedulers and Dispatchers Conference. The theme of the conference was resiliency, which was fitting given the developing health crisis.

Of course, we know this is not the first time aviation has faced a major challenge. This crisis will be difficult. Already a large portion of the ground handling industry has been negatively affected as airline passenger traffic plummets and demand for ground services declines. But other opportunities may arise. For example, the importance of cargo remains high – not just for consumer goods, but important pharma and medical supplies. Many airlines have begun using passenger aircraft to transport cargo, providing some work to a portion of ground service providers.

Ground handlers, airlines and airports need each other to survive. Enduring the initial impact of COVID-19 is the beginning of a much longer process to return to regular operations. We must work together to ensure businesses survive and jobs are saved.

IATA, NATA, NBAA and many others are working around the clock and are advocating on behalf of the aviation industry. These groups are issuing regular bulletins to help aviation businesses stay informed about developments like the United States' \$2 trillion stimulus program, CARES Act. Stay connected with these industry resources. Be sure to visit AviationPros.com regularly for the latest announcements and updates and subscribe to our publication's daily e-newsletters to get this important news directly in your inbox.

As we've learned, things can change quickly. While it is unknown at this time exactly how long it will take to get back to normal (or what normal will look like in the future), I'm confident our industry can remain steadfast and navigate these uncertain times.

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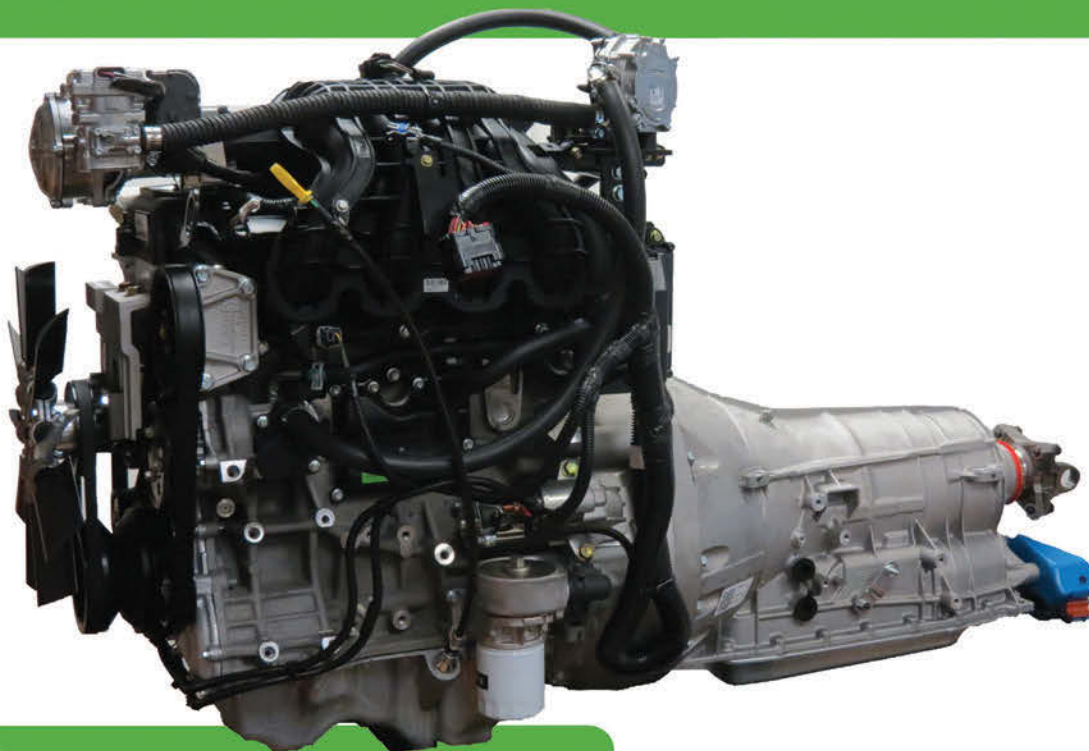
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