

GPUs, PCAs,
PARTS &
ACCESSORIES

MAY 2016

Ground Support

WORLDWIDE

Supporting Aviation from the Ground Up



2016 LIFETIME ACHIEVEMENT

DICK CLOUD

For more than 50 years of
service in the ground support
industry and decades of
leadership at United Airlines.

AviationPros.com



Innovations That Work

Safe. Rugged. Reliable.

- Molded rugged connector with strain relief support.
- Field replaceable modular switches.
- No electrical wiring.
- Built-in thermal sensing and broken neutral protection.
- HARDNOSE™ Replaceable Plug.
- Integrally Molded.

HIGH PERFORMANCE 400HZ SINGLE JACKET CABLE ASSEMBLIES



PAGE **Reactive** Load Bank

- Dual Output, up to 108kVAR
- Accurate + 2%
- Test jacks for meter verification
- Simple to operate and read
- Supports two resistive load banks
- Dual digital displays
- Six and 12 KVAR Steps
- Outputs can be connected to provide overload testing at various power factors.
- Stand alone E&F safety circuit or resistive load bank selectable.

PAGE **Resistive** Load Bank

- 400Hz and 28VDC
- Innovative technology
- Portable with case
- Available features:
 - Digital or Analog
 - USB Connected
 - Lan & WiFi Connected
- Simple to operate and read
- Quiet operation ≤ 65 db



PAGE Industries, Inc.

www.pageindustries.com • sales@pageindustries.com

1-855-465-PAGE (7243)



SouthComm
Business Media
PO Box 803 • 1233 Janesville Ave
Fort Atkinson WI 53538
920-563-6388 • 800-547-7377
Vol. 24, No. 3

Editor

Alex Wendland
920.563.1644 ▶ alex.wendland@AviationPros.com

Assistant Editor

Vesna Brajkovic
920.563.1645 ▶ vbajkovic@AviationPros.com

Associate Publisher/Sales

Missy Zingsheim
920.563.1665 ▶ missy@AviationPros.com

Classified Advertising

Michelle Scherer
920.568.8314 ▶ mscherer@AviationPros.com

International Sales Manager

Stephanie Painter
+44 1634 829386 ▶ fax +44 1634 281504
Stephanie@painter-lowie.com

List Rental

Elizabeth Jackson
847.492.1350 ext. 18 ▶ ejackson@meritdirect.com

PRODUCTION & CIRCULATION

Art Director

Rhonda Cousin

Production Manager

Carmen Seeber
920.568.8373 ▶ carmen.seeber@AviationPros.com

Audience Development Manager

Debbie Dumke
920.568.1763 ▶ ddumke@southcomm.com

Production Director

Steve Swick

INTERNATIONAL AIRPORT GSE EXPO

Trade Show Director

Sue Ralston
920.563.1655 ▶ sue@AviationPros.com

AVIATIONPROS GROUP

Gloria Cosby ▶ Executive Vice President
Gerry Whitty ▶ VP, Marketing

Brett Ryden ▶ Publisher, Aviation Group
Lester Craft ▶ Director of Digital Business Development

SOUTHCOMM BUSINESS MEDIA

Chris Ferrell ▶ CEO

Ed Teerman ▶ CFO

Blair Johnson ▶ COO

Eric Kammerzell ▶ VP, Technology

Curt Pordes ▶ VP, Production Operations

Subscription Customer Service
877-382-9187; 847-559-7598
Circ.groundsupportww@omeda.com
PO Box 3257 Northbrook, IL 60065-3257

Ground Support Worldwide (USPS 0015-386), (ISSN 1934-2861 print; ISSN 2150-4016 online) is published 10 times per year in February, March, April, May, June/July, August, September, October, November and December/January by SouthComm Business Media, LLC. 1233 Janesville Ave, Fort Atkinson, WI 53538. Periodicals postage paid at Fort Atkinson, WI 53538 and additional mailing offices. POSTMASTER: Send address changes to Ground Support Worldwide, PO Box 3257, Northbrook, IL 60065-3257. Canada Post PM40612608. Return undeliverable Canadian addresses to: Ground Support Worldwide PO Box 25542, London, ON N6C 6B2.

Subscriptions: Individual print and digital subscriptions are available without charge to qualified subscribers worldwide. Please visit www.aviationpros.com and click on "Subscribe". Publisher reserves the right to reject non-qualified subscriptions. Subscription prices: U.S. \$46 per year, \$88 two year; Canada/Mexico \$67 per year, \$124 two year; All other countries \$98 per year, \$185 two year. All subscriptions payable in U.S. funds, drawn on U.S. bank. Canadian GST#R42773848. Back issue \$10 prepaid, if available. Printed in the USA. Copyright 2016 SouthComm Business Media, LLC.

All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recordings or any information storage or retrieval system, without permission from the publisher.

SouthComm Business Media, LLC does not assume and hereby disclaims any liability to any person or company for any loss or damage caused by errors or omissions in the material herein, regardless of whether such errors result from negligence, accident or any other cause whatsoever. The views and opinions in the articles herein are not to be taken as official expressions of the publishers, unless so stated. The publishers do not warrant, either expressly or by implication, the factual accuracy of the articles herein, nor do they so warrant any views or opinions offered by the authors of said articles.



10

▲ COVER STORY

10 Lifetime Achievement Award

Dick Cloud is honored for more than 50 years of service in the ground support industry and decades of leadership at United Airlines.

► INTERNATIONAL/FEATURE

08 United Baggage Handlers to Receive 30 Percent Pay Increase

About 30,000 United Airlines employees approved a new contract to raise pay over the next five years.

16 How Ground Handling Was Built Up Down Under

The Australian Aviation Ground Safety Council was formed to reconcile the differences in operational expectations in Oceania.

22 Sage Parts and UEA Shift Into Gear

A request for a replacement part has turned into a notable business partnership.

26 Saft Offer Li-ion Training for the Battery System and its GSE

While Li-ion batteries are entering the commercial aircraft market, dedicated training is required to ensure proper and safe maintenance of such batteries.

30 J&B's New Trio: Gaskets, Connectors and Kits

The release of three new ITW GSE J&B Aviation products represent advancements in durability and operational convenience for longtime users of J&B products.

► DEPARTMENTS

06 Business Buzz

28 Product Hangar

41 Classifieds

► COLUMNS

04 Associate Publisher's Note

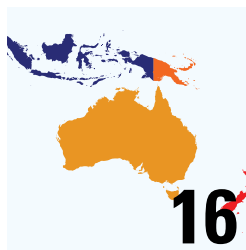
Now that the first quarter has ended, we're starting to see where we, as an industry are really at from a financial standpoint.

42 Editor's Note

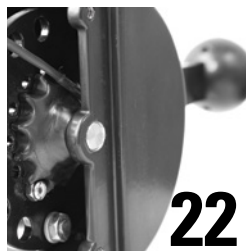
If the career of Dick Cloud can teach us anything it's that investing in your employees will pay dividends.



8



16



22



26

SOCIAL MEDIA &
ONLINE CONTENT



FACEBOOK
facebook.com/AviationPros



TWITTER
[@aviation_pros](https://twitter.com/aviation_pros)



LINKEDIN
linkedin.com/groups/AviationProscom



YOUTUBE
youtube.com/user/AviationProsVideos



▲ Associate Publisher -
Missy Zingsheim
missy@aviationpros.com
920-563-1665

Knock on Wood!

Now that the first quarter has ended, we're starting to see where we, as an industry, are really at from a financial standpoint. What does this mean for ground support? Have we already started to see an increase? Can we keep up with the demand?

With lower fuel costs allowing for lower airlines fares and stimulating flight demand, the industry is on an up-turn. When I talk to people, everyone is positive, and BUSY! But are you taking advantage of the current economic situation? Or are you still being cautious? If the demand is out there, will you take a larger risk to meet it? Maybe you already are, last year and this year we have seen many mergers and acquisitions among GSE companies and who knows how many more are yet to come.

We're less than six months away from our show and we are doing fantastic, the response has been overwhelmingly positive. This will be the largest show that we have had in many, many, many years. But while I would like to think that it is because we are finally one big, super GSE show, I don't think that I can really attribute it to just that.

I know that as far as longevity in this industry is concerned, the 10 years that I have been talking with companies and readers is a drop in proverbial bucket. But I scratch my head when I hear things like, "I can't get the amount of equipment I need when I need it."

This is where that "cautious" word comes into play. We know the airline industry is one of the most technically advanced in the world and that airports are constantly changing their infra-

structure to adapt to the ever changing passenger needs. But are GSE manufacturers expanding in kind? Are they hiring more workers to build more products and meeting demand? Are they expanding their facilities to accommodate the growth benefitting the entire industry? Are they keeping more inventories in stock?

From airlines to ground handlers, FBOs to airports, GSE manufacturers to suppliers. This is your year, take the risk and knock it out of the park!

SOCIAL MEDIA &
ONLINE CONTENT



FACEBOOK
facebook.com/
AviationPros



TWITTER
@aviation_pros



LINKEDIN
linkedin.com/groups/
AviationProscom



YOUTUBE
youtube.com/user/
AviationProsVideos



THE NEW WASP, INC.

WASP *IS NOW* FAST

GLOBAL SOLUTIONS



We're getting bigger and faster to serve you even better. **WASP** Inc. — manufacturer of the high-quality GSE you've used for decades — is now **FAST** Global Solutions. We grew our team and workspace by 60% last year, and we added \$12 million in advanced production equipment throughout 500,000 square feet of workspace. We're ready to partner with you at high speed.

*FIND OUT HOW THE WORLD'S LARGEST NON-POWERED GSE MANUFACTURER IS EVEN BIGGER... AND **FASTER!***

www.FASTsolutions.com // info@FASTgse.com // 320-334-2868

► Upcoming Events

May 15-18

IGCH 19th Ground Handling Conference

Toronto, Canada

May 15-18

AAAE 88th Annual Conference & Exposition

Houston

October 18-20

International Airport GSE Expo

Las Vegas

November 1-3

NBAA

Orlando, Florida

► Advertiser's Index

| | |
|--|-------|
| A T Juniper..... | 39 |
| AERO Specialties | 23 |
| Aeroservicios..... | 40 |
| Alberth Aviation..... | 40 |
| Columbus Jack..... | 31 |
| Engine Distributors..... | 44 |
| FAST..... | 5 |
| Fortbrand Services Inc..... | 40 |
| Global Ground Support..... | 28 |
| Ground Support Specialist..... | 27 |
| Haskel..... | 29 |
| Howell Instruments, Inc. | 19 |
| Hydraulics Intl..... | 36 |
| International Airport GSE Expo..... | 20-21 |
| ITW GSE Hobart..... | 25 |
| ITW GSE J&B Aviation..... | 7 |
| Kubota Engine..... | 9 |
| Lektro..... | 38 |
| Mercury GSE..... | 40 |
| Page Industries..... | 2 |
| Par-Kan..... | 39 |
| Phoenix Metal Products..... | 34 |
| Premier Engineering & Manufacturing..... | 15 |
| Sage Parts..... | 37 |
| Satellite Specialized Transportation Inc. | 40 |
| Skymark Refuelers..... | 24 |
| Tronair..... | 43 |
| U.S. Airmotive GSE..... | 35 |
| Unitron..... | 13 |
| Xcēd Aviation Services..... | 17 |

BUSINESS BUZZ

► TOP NEWS

Alaska Airlines to form new ground handling subsidiary

McGee Air Services, a dedicated airline services company to provide ground handling, aircraft cleaning and airport mobility services, has been formed as a wholly owned subsidiary of Alaska Airlines. To begin, the company will provide services solely for Alaska Airlines. As the company develops infrastructure and processes, McGee Air Services may open operations for outside contracts.



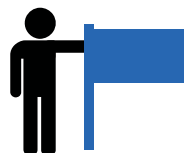
FAA Aims To Eliminate Leaded Aviation Fuel By 2018

Small aircraft are the last of the transportation industry to rely on lead fuel, something the Federal Aviation Administration (FAA) aims to rectify. Two new unleaded aviation fuel formulas, from Swift Fuels and Shell Aviation, have been select for further testing in an effort to end this reliance. Phase 2 engine and aircraft testing will begin this summer, as Congress appropriated \$7 million from the budget to support the program for the 2016 fiscal year. Testing is expected to conclude in 2018. The Piston Aviation Fuels Initiative (PAFI) is facilitating the development and distribution of the new unleaded fuels.



O'Hare Baggage Handlers, Custodians Strike; No Service Disruptions Reported

O'Hare International Airport workers went on strike March 24 as part of a national action to protest low wages, inadequate safety training and retaliation for organizing. Nearly 100 baggage handlers, custodians, cabin cleaners, security officers and wheelchair attendants walked off the job at O'Hare, joining their peers at eight other airports across the country participating in 24-hour strikes, Izabela Miltko, spokesperson for the Service Employees International Union Local 1, told the Chicago Tribune.



Ground Handling System Market Worth \$189 Billion by 2022

The multi-billion-dollar expansion of airline fleets and airports globally has set off significant growth prospects for the aircraft handling industry players, according to a new report by Grand View Research, Inc.



Both, airlines operators and airports are focused on procuring and implementing advanced technologies to meet the rising air traffic and ensuring greater profitability, performance, and efficiency amidst stiff competition. Renewable energy sources to power equipment and biofuel-powered snow removal equipment are cited in the report as emerging trends. Furthermore, the integration of additional technology infrastructure in ground support operations will increase demand for ground support and ground handling software applications. However, high initial and replacement costs for such equipment are presumed to challenge market growth over the forecast period. Advanced and innovative ground support equipment that is sustainable is comparatively expensive and cuts into the profit share of major commercial airline companies.

Indian Ground Handling Firms Mull Legal Battle Over New Rules

The Ground Handlers' Association of India (GHA), which represents eight Indian ground handling firms, is preparing to take the Indian government to court over the policy uncertainties plaguing the sector as a new national aviation policy is imminent. The GHA brought up concerns regarding allowing airlines to handle their own services at airports. Allowing contract workers in airport operations of airlines would lead to safety hazards, the association cautioned. It also proposes to allow charter operators to self-handle at all airports. "Our biggest concern is the unlimited entry of ground-handlers into the airport and third-party handling of airlines with the help of contract labor," GHA Secretary-General Arvind Kumar said to The Hindu.



European Airlines Protest Ground Handling Cutbacks at Rome Fiumicino

Airlines for Europe (A4E), the lobbying firm representing seven European carriers, has protested to Italian aviation regulator ENAC over proposed cuts to the number of ground handling agents at Rome Fiumicino Airport. ENAC is reducing the number of ground handling licenses from seven to three by mid-May, A4E said. The result of the proposed cut means airlines at Rome's main airport would require new arrangements for their aircraft. A4E warns that the move will restrict competition and likely increase.



► NEW DEALS

Air BP Acquires a Stake in RocketRoute

Air BP announced April 20, at the Aero Friedrichshafen Show in Germany, that it formalized its relationship with RocketRoute by taking a minority stake in the global flight planning business. The move strengthens the existing relationship between the two companies, enabling them to jointly develop new technology solutions that simplify the complexity of flight planning and fuel purchasing for private pilots, owners, operators and flight departments.



AeroGround Berlin GmbH Named Ground Handling Partner of Norwegian Air

AeroGround Berlin GmbH took on the aircraft and passenger handling services for Norwegian at the Berlin-Schönefeld Airport from the start of the summer schedule on March 27. The central sales department signed a long-term handling contract with the Norwegian budget airline. The services include the loading and unloading of aircraft, baggage and transport handling as well as the passenger services.



NEW WAYS TO STAY COOL AND CONNECTED

PC Air Hoses, Cable Inspection Test Kit, and Replaceable Contact Section from J&B Aviation



STAY COOL

Count on our PCA Hoses to keep your aircraft cool no matter what the configuration. A wide range of Elbows, Tapered Adapters and Support Mechanisms maximize versatility, while the J&B Aviation Flat Duct design is both durable and flexible.



KEEP CONNECTED

Connect securely to any 400 Hz power aircraft with our new Replaceable Contact Section, featuring a durable tapered edge and made from composite for an extended service life.

Facilitate inspections with our new Cable Inspection Test Kit, containing our Aircraft Connector Tester, Pin Gauge Tester, Tensionometer, Imaging IR Thermometer, Wire Cleaning Brushes and more – all packed in a rugged locked case.

ITW GSE J&B AVIATION

www.itwgse.com/jb

It's all about connections

AviationPros.com/10017483

United Baggage Handlers To Receive 30 Percent Pay Increase

About 30,000 United Airlines gate agents and baggage handlers approved a new contract to raise pay by about 30 percent over the next five years.

By Vesna Brajkovic

The 14 separate contracts for the Fleet Service, Passenger Service, Storekeeper, Maintenance Instructor, Fleet Technical Instructor and Related and Security Officer classifications also called for \$100 million in lump sum payments, retirement security and protections against outsourcing, according to the International Association of Machinists and Aerospace Workers (IAM) union.

"These contracts will provide a strong foundation on which to build future improvements that will better the lives of IAM members at United Airlines," Sito Pantoja, IAM general vice president, said in a news release.

United said it would not outsource more jobs in baggage handling or customer service until at least 2019, perhaps a stark contrast from

February 2015 when United planned to outsource 1,150 positions across 16 U.S. airports, according to the Wall Street Journal.

With medical benefits, a 401(K) and travel benefits, its members might cost \$35,000 a year more than an outsourced worker, according to the Machinists union.

But boosting employee morale was something CEO Oscar Munoz aimed for following the return to his position from medical leave.

"Since September when I became CEO, our team has been focused on our employees, improving the operation and the customer experience, and the results are starting to show," Munoz said in a new release, referring to the full-time return to his role on March 14.

The tentative agreement was reached on April 4.



United



KUBOTA ENGINES FOR
GROUND SUPPORT EQUIPMENT

A terminal should run like clockwork. So should your GSE.

When there isn't a minute to waste, Kubota makes every second count. Whether you choose a diesel or spark-ignited model, the industrial strength and solid reliability of Kubota engines can stand up to harsh weather and heavy loads while minimizing downtime and maintenance costs. Power new products or repower your used equipment. Keep it all in motion with the most reliable engines in the world.

Learn more at KubotaEngine.com



Kubota

THE ENGINE OF SUCCESS

Dick



Cloud:

Ground Support Worldwide's **2016 Lifetime Achievement Award**

For more than 50 years of service in the ground support industry and decades of leadership at United Airlines, we're honored to present Dick Cloud with the 2016 Ground Support Worldwide Lifetime Achievement Award.

By Alex Wendland

S

eptember 7, 1965; more than 50 years.

Dick Cloud started at United Airlines in the autumn of 1965, has been with the Chicago-based airline ever since and has no plans of leaving anytime soon.

Cloud returned to Chicago in the mid-1960s following his service with the United States Air Force and had been interviewing at firms like IBM and Teletype before interviewing at Nuclear Chicago. It would be his last job interview.

On his way out of the Nuclear Chicago interview, Cloud saw a United Airlines sign advertising jobs for ramp servicemen at \$2.50 per hour.

"I drove right into the airport," Cloud says from a United Airlines conference room. "No security, no nothing. I walked in, introduced myself and they said 'fill out the application.'"



▲ **Cloud learned mechanical troubleshooting in the US Air Force, including while stationed in Greenland in 1964. Credit: Dick Cloud**

"I was hired on the spot."

Cloud went from ramp serviceman to building maintenance mechanic in a matter of months and within five years had moved up to become a maintenance planner. Today Cloud is United's Engineering and Safety Manager Facilities and GSE.

"I'm looking around at these guys," Cloud says of his early colleagues. "One of them was a tailor, but he belonged to the Masons and the company president was head of the Masons."

"I had another guy that was a spray painter. He could do these tops and these desks and sand them down and spray them with lacquer and varnish and so forth. They could hang pictures and they could do baseboard, but nobody could read a wiring diagram. Nobody could troubleshoot a jetway. Nobody could troubleshoot a bag system conveyor, but me, so I became the jetway guy."

And you can believe Cloud's recollections. He's known throughout the aviation industry for his photographic memory, a trait that has been undoubtedly helpful, but the reputation for having one can prove to be a challenge.

"I can remember names and faces, but I cannot put names and faces together," Cloud says. "But I can tell you every single solitary wingspan of an airplane and what the cell heights are, the gearbox ratios and all that technical stuff."

"That has been a godsend, and that's the reason I get called all the time."

Cloud gets a lot of calls. Since 1968, he's been involved with every new fleet United has introduced. In November of last year, United's Hemispheres Magazine called



Cloud "The Master of the Jet Bridge," in recognition of his 50 years of service.

"His knowledge of aircraft, airport terminal and ground service equipment requirements is unparalleled by anyone working in the industry today," Andrew Alexander, a colleague at United told Hemispheres of Cloud's expertise. "He is a walking encyclopedia of the airline industry."

The Master of the Jet Bridge

It has been a life of learning for Cloud, who has seen GSE transform from actual hay carts to highly specialized equipment and immense shifts in both size and power.

"It was based on what the farming industry was doing," Cloud says. "We didn't actually have farm tractors, although with the Kubotas and the stuff we're going back to today, it's starting to look like we do have a small farm."

The jet bridge, however, has been Cloud's bread and butter for decades. When



New Ground Power for Regional Airports

ULTRA LITE™ SERIES



FROM UNITRON

Now, a state-of-the-art 28VDC GPU in an ultralite configuration. At Unitron, we have literally brought 28VDC Ground Power Units into the twenty first century with units that change 50/60Hz utility power electronically into 28VDC power to energize an aircraft while its generators are not in use.

FEATURING:

| |
|--|
| Input P.F. Correction |
| Input Voltage Auto Ranging System (3ø, 380-480 volt range) |
| Multi Language (Romanization) Display |
| Certified through CE Mark, UL and CSA listings |
| Self-diagnostic capabilities for minimizing downtime |
| ALDC Technology for plug head voltage regulation up to 75 feet |

**Contact us to find out more about the latest in mobile
Ground Power Units.**



For additional information contact Lee Kaddatz, Ext. 111
+1-214-340-8600 • 1-800-527-1279 • Fax +1-214-341-2099
www.unitronlp.com

Cloud started his tenure as a maintenance mechanic, United had just 18 jet bridges, 12 of which were out of service following a strike.

Within two days Cloud had all 18 bridges working again and a department asking how he was able to get it done so quickly.

"It was the same problem with all of them," Cloud says. "You've got motor generator sets and they've got commutators, and guess what? They're all oxidized because they've been sitting here for 43 days and you're not getting any power. That's the reason only one wheel's working. All I had to do was clean up the commutators and they all drive now."



▲ **Cloud with his wife, Linda, who often travels with him, on their way to Hawaii for their honeymoon in 1967. "She is without a doubt the reason for my career and success," Cloud says.**

Today Cloud is solving problems like the one he solved in 1968 all over the world. As airplanes continue to grow in all dimensions, airports stay the same size. Much of Cloud's work today includes fitting more and more pounds of airplane in the same size bag without losing gate space at landlocked airports.

"I have a saying that I've said for years: 'There's new technology and there's new people but there are no new problems,'" Cloud says. "It's those challenges that make this job so interesting, but so much more difficult to do today than what it was when

I started doing it 50 years ago."

Those challenges include the comparatively shrinking real estate available on airport ramps with larger airplanes. Cloud says that's the biggest challenge he faces at this point in his career. Airports in the United States and around the world are trying to fit the same number of Airbus A380s at their gates as they fit DC-10s back when these airports were designed in the 1960s, '70s and '80s.

"A lot of airports are taking over the responsibility of designing the gates, and they're making them all common-use gates," Cloud says. "You lose so much capability doing that. How can I ensure that if I'm going to put a 787 there that they put the ground power unit in and the air conditioning unit and the capabilities on the boarding bridge to service that airplane?"

And when Cloud is part of a redesign or buys a new bridge, he's lucky if he can get one when he needs it.

United got the last two slots for bridge production with JBT for 2016. The next available delivery is April 2017. In response to the scarcity, Cloud has a \$60 million refurb plan to outpace bridge production. Have we mentioned he's already been doing this for 50 years?

"I've taken a 40-year plan for 400 bridges, 10 bridges a year, but if your bridge is 25-years-old, I'll do a modification to them with all brand new cabs, electrical controls, upgrades, new tunnel rollers," Cloud says. "I'll extend the life of a bridge up to at least 40 years."

Feast and Famine in Aviation

When GSE purchasers can get on the list for equipment, there are fewer and fewer people making it, according to Cloud.

"In this industry, there're fewer manufacturers than we had to deal with for 50 years," he says. "If you went back before 9/11, we probably have half the number of manufacturers. We probably have half the number of airlines that we had at that point in time."

Consolidation and extended business cycles have left the aviation industry an industry of legacy, according to Cloud. There's direct lineage from when he started, to who is still making GSE. The names and

the faces continue to change, but "because of their name and their capabilities and being able to keep up with the trends in the industry, it has kept them alive and kept the airlines alive."

Today, aviation is feasting. Money is flowing and the good times are rolling. Yet hiring lags. "We can't guarantee that next year," Cloud says. "So how far out do you plan?"

Oddly enough, Cloud's job gets more difficult when the tide is rising across the industry – he can't get the equipment he needs when he needs it.

"The famine you can almost deal with," Cloud says. "The feast is more difficult to deal with because now we're starting to spend money and everybody's starting to spend money, and nobody has the production facilities or the raw material capabilities."

When United wants to order 23 bridges manufacturers have told Cloud that he can get two in the quarter and five for the year, but there's no more production left.

The Calm in the Storm

"Probably the biggest challenge and one of the most interesting tasks I had when I was called on day four of Hurricane Katrina to be part of the very first evacuation flight out of there with an airport that had no communications, no power," Cloud says. "We flew in with a 757, I had two field service mechanics, and we were going to bring as many people as we possibly could get on that first evaluation flight out of there. It ended up being 104 people coming back to Chicago."

"Those were the first people who came off of the rooftops, who had not seen anything that you can call civility in four days. I had 26 wheelchair passengers and no boarding bridge, no power whatsoever, but one of our local FBOs down there got a passenger stand. We put the passenger stairs up to door number 2 and I operated 26 wheelchair passengers up and down to door number 1 with the old wheelchair pallet to get those people on the airplane."

With no control tower, no cell phones and no power, Cloud and his team kept in touch with the FAA through global support radios.

"We bring them back to Chicago and ABC comes on and I'm on Good Morning America the next morning."

Because the trip was such a success, Cloud and the United team were sent to get more Hurricane Katrina evacuees following the storm. The second trip gave them more than four hours on the ground so they took the time to get batteries replaced in some of their ground equipment as well as get a jet bridge running for all evacuation flights to use. Cloud sent a mechanic back down there and they had three more bridges running within two days.

Three weeks later Cloud was asked to restore the airport to working order so that United could be the first airline to start operating from New Orleans again.

"I had 14 trips over seven months," Cloud says. "I took all my contractors starting in week three, I flew some of them through Atlanta. I flew some of them through Memphis. I had two guys drive down with a four-by-four panel truck."

Three weeks later, Cloud had airplanes coming into New Orleans. The boarding

most satisfying thing."

The recognition is nice, Cloud says, but it's the people you get to work with that keeps him around the ground support industry and aviation as a whole.

"Everybody says, 'you've been here for 50

years, why are you still doing this?' Well, one of the reasons is because I still can," Cloud says. "I still enjoy it. I enjoy the challenges. One thing about this job and in this industry is that one person can make a difference."

GSW

One thing about this **job** and in this **industry** is that **one person** can make a **difference**.


bridges were rebuilt and all the damaged ones were replaced.

"I had all brand new carpeting in the boarding area," Cloud says. "Everything was clean and sanitized."

Downstairs, however, the United work area was a disaster. Everything, from the floor tile to the ceiling was waterlogged. Cloud was hanging drywall himself, even with a team including a carpenter, three carpet installers, an electrician and five field service mechanics. In all, their New Orleans renovation project took over seven months.

Cloud says it was the most satisfying project of his storied career.

"Because I was given the full, total authority and the capability to just do what you got to do," he says. "Get it done. That was the



**MODEL MT65P21
"EXPRESS HEAT" DEICER**

The "Premier" Model MT65P21 "Express Heat" Deicer utilizes the Versalift Extended Reach Model VST6000 Aerial lift, providing 65' of working height. More important, the MT65P21 incorporates the **Premier** boom forward design to provide the maximum amount of reach off the front of the vehicle utilizing the rapid deploy down riggers. During mobile operations, side reach of 34' and vertical reach of 46' can easily be accomplished.

Premier
ENGINEERING & MANUFACTURING, INC.
Simple, Dependable and Affordable

"Express Heat" reliability, easy access maintenance, extend reach capabilities, and lowest cost of operation is why we are the "Premier" deicer manufacturer.

Tel - 715-735-6440, www.premier-deicers.com

AviationPros.com/10017675

How Ground Handling Was Built Up Down Under

Despite recent attempts at international standardisation, ground service providers face a variety of alternative operational standards to follow which may result in a line operator being at best confused, or at worst alienated. The Australasian Aviation Ground Safety Council (AAGSC) was formed in 1980 by the safety managers of Air New Zealand, Qantas Airways, Trans-Australia Airlines, and Ansett Airlines.

By Mario Pierobon

The aircraft ground handling industry is notoriously less integrated than the flight operations business. This is due in particular to the lack of international operational and safety standards enforced by regulators and, together with it, the existence of very many service providers. The Oceanian region has had an aircraft ground handling industry group for several years which has historically played a leading role at increasing operational commonality within the region (and beyond) as well as at developing safety improvement initiatives, such as limitations on baggage weights, which are common place now but were not at the time the initiatives were launched.

Ready For Takeoff

The idea of launching an industry group started from the recognition that there was a need for operators to work together. "The Council's origin can really be traced back to the early 1980s when the representative from Trans Australia Airlines (TAA), John

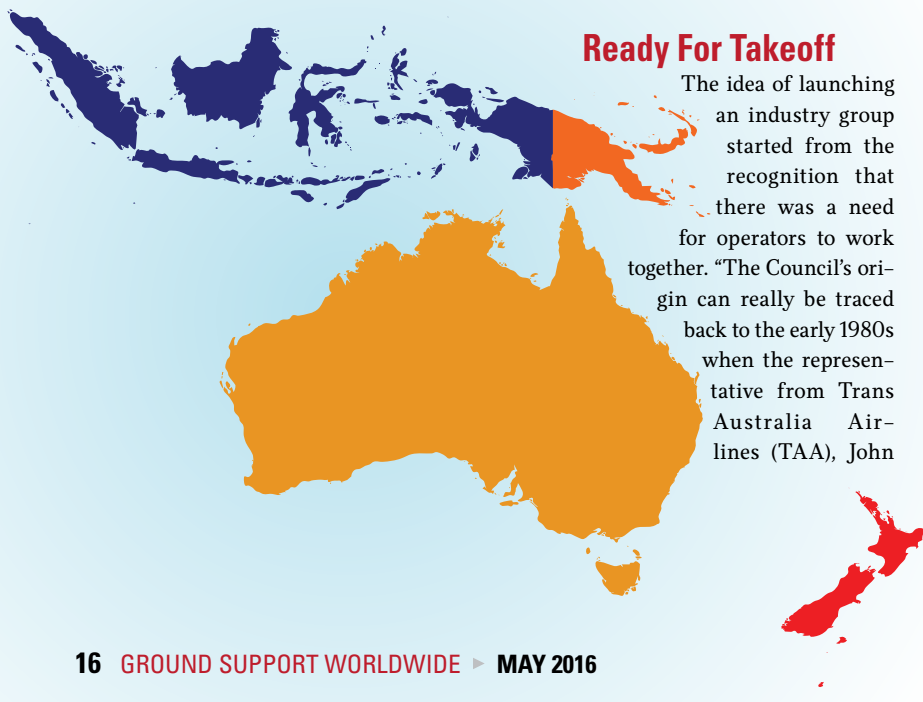
Edwards, came to meet me in New Zealand to discuss possible bench-marking aircraft ground handling procedures," Norman Hogwood, formerly Air New Zealand senior ground safety adviser who was the first to be elected chairman of the council, says. "From there we decided to draw in the two other major airlines in the region, Qantas and Ansett Australia. Thus the Council was established."

"The group was started back with the purpose to share information on our operations and determine what the best course of safety action would be" says Ulrich Ojczyk, a founder of the AAGSC then working with Ansett Airlines.

Like in all industries, each organisation has their own way of operating which can lead to some confusion due to different expectations.

"So we formed the council where we would discuss the base operations and expectations – come up with what we considered as a group to be the best safety solution which we then took back to our organisations to seek implementation," Ojczyk says.

Hogwood adds that when the AAGSC started, the respective airlines were all self-handled, i.e. Qantas, TAA and Ansett all did their own handling. Air New Zealand was handled by Qantas at the Australian stations and Air New Zealand handled Qantas within New Zealand. Contract ground handling companies were largely unknown, in fact Air New



Zealand handled all the “foreign” carriers operating into New Zealand, until independent service providers appeared in the early 1990s.

From the very beginning it was agreed that meetings would be held quarterly, hosted by the member airlines in rotation. It was further agreed that the core business of the council would focus on activities pertaining to airport ramp and terminal operations. The nature of the council’s business agendas, however, quickly identified the need to expand membership further by including those organisations who share the same airport working environment. Thus membership was opened to fuel companies, catering companies and handling agencies. Progressively, it had become custom to invite representatives from the major airport companies in the region to attend meetings in the capacity of invited guests and by 1997 it had become clear that, due to the evolution of the aviation industry and the far-reaching legislation changes taking place, the Council’s membership policy should be changed to allow airports to become full members.

“So from there it developed and is still running today. The last meeting was held in Brisbane in February 2016 and the basic principles are still operating, namely the sharing of information and discussions on practices to ensure a safe operation. We have been fortunate over those early years as we received recognition from many organisations and in particular an award from the Flight Safety Foundation” Ojczyk says.

Pioneering Achievements

Historically the AAGSC has pioneered multiple safety initiatives that have improved the ramp as a working environment. One such achievement concerned airport driver’s licenses.

“Airport workers could then drive on the airport so long as they had their normal car driving license; this was causing problems as they were unaware of the specific activities of aircraft movements,” Ojczyk says. “So we approached airport authorities and recommended that airport workers driving on the airport should be trained and given the knowledge of airport activities and the recommended driving practices. This was an initiative that went ahead.”

Another initiative led by the AAGSC was with regard to baggage weights.

“It was clear that the amount of manual handling injuries was unacceptable and on examination you could see that the baggage loader would just grab a bag and move it to the trolley and then into the aircraft hold and did not have any indication of its weight,” Ojczyk says. “Clearly you can have several bags of the same size and some may have a load of 15 – 20 kilos in weight and then there would be the others that could have 20 – 50 kilos of weight, suddenly the loader gets a severe jerk and injury. We introduced the bag limit of 25kgs and any heavier baggage would have to be tagged with a ‘heavy bag’ tag with its weight. Cabin baggage size was also reduced to ensure it fitted into the overhead lockers.”

In the mid-1990s, all member airlines of the AAGSC agreed to adopt a maximum checked baggage weight of 32kgs per single piece in order to reduce back injuries to loading staff. This recommendation was subsequently accepted by the International Air Transport Association (IATA) and incorporated in their Airport Handling

Revolutionizing GSE leasing and asset management.



Looking for ways to make doing business easier and more profitable? Then you'll want to take a closer look at Xcēd.

Xcēd Aviation Services is a single source provider of flexible GSE financing and customized asset management services, including:

- Single investor financing
- Short- and long-term lease financing
- Short- and long-term rentals
- Used GSE trade-ins
- Sale and leaseback
- Buying and selling inventory
- Equipment refurbishment
- Refurbishment financing

We're also experts at uncovering hidden assets, which allows us to provide a wide range of incremental asset management service... services most banks and other lessors simply can't or won't offer.

XCED
AVIATION SERVICES

A Sasser Family Holdings Company

www.xcedaviation.com

425 North Martingale Road,
8th floor
Schaumburg, Illinois 60173
844.213.9233
solutions@xcedaviation.com

Now Servicing the
U.S. and Canada.

AviationPros.com/11535271

Manual (AHM) in 1999. This figure was reduced to 23kgs in 2008, and the change was again reflected in the IATA AHM of the same year, according to the AAGSC.

High visibility garments also received the scrutiny of the AAGSC. Prior to the AAGSC's involvement, the Australian New Zealand standards required the minimum size of material for high visibility garments to be 4 square metres.

"These dimensions are OK for a large person; however in many cases on a small person it created a hazard as the vest could and would catch on door handles," Ojczyk says. "We therefore managed to convince the Australian New Zealand standards committee to change the 4 square metres requirement to the minimum size of a person's shirt size. We also introduced the additional high visibility colour as the requirement was that it had to be red or orange. This caused problems when a person was in the vicinity of an aircraft such as Qantas' as the vest colour blended with the aircraft tail so you missed the person. Now we have two colours lime/yellow and orange/red with reflective tape strips."

Additional key safety achievements of the AAGSC included the removal of book matches off aircraft due to a minor fire incident experienced by Ansett as well as the standardisation of pushback procedures and general ramp operations. The AAGSC in its history has also been approached by many aviation organisations for assistance in resolving several safety issues, Ojczyk adds. These included UK ground handling agents who had seen items on the AAGSC web page and made contact to get details on particular issues that they were involved in. Representatives of the council have also delivered presentations and speeches at major aviation industry seminars worldwide, including the annual conference of the IATA International Ground Handling Council (IGHC).

Hogwood notes that another significant achievement was the production of a series of 24 recommended industry practices which are now available on the AAGSC website under the "Resources" header.

"These have been quite widely quoted within the industry, and used by other organisations" Hogwood says. An important

The AAGSC is the **only** such forum in the Oceanian region and it has **developed** and **implemented** new safety standards which have been **adopted** by other groups, like **IATA**.

initiative is also the annual safety award in which members select an outstanding safety innovation or service nominated by AAGSC members, notes Hogwood.

Current Focus

The most recent safety seminar of the AAGSC was held in Brisbane, Australia in February 2016. It was attended by about 25-30 people and topics included the transfer of livestock, challenges in setting up regional operations, how to better control trailers and dollies to prevent disconnect, risks associated with working at height on FMC/Champs, safety management systems (SMS) and health and safety legislation. The group meets every quarter and the next safety seminars will be held this year in May, August and November.

Ivar Busk, who recently retired from SAS after a career spanning several decades with responsibilities in airside safety and aviation insurance, says that the meetings are now held only in Australia and New Zealand despite the region has several other places with an emerging aviation industry, such as Samoa and Fiji.

"Fiji was host for a seminar some years ago and the event was attended by a major group of participants," Busk says. "No doubt

Air New Zealand and Qantas have been the driving horses but many other airlines and aviation service providers should be more active."

Busk notes that the AAGSC is the only such forum in the Oceanian region and it has developed and implemented new safety standards which have sometimes been adopted by other safety groups, like IATA's, with regard to positioning safety cones around aircraft.

"My opinion is the AAGSC should be much more credited for the work they do as many good initiatives have been raised via the AAGSC, FOD focus comes to mind; but as the area is not in the centre of the world it is difficult to recognise it more widely," Busk says. "My membership dates back to the late 1990s and I found it very valuable to see how this other part of world acts. I also hope to bring some know-how from the European continent into AAGSC with my participation."

Learning From Collaboration

While the business environment is such that you need to compete, safety should never be an area of competition. The history of the AAGSC reveals that when competing service providers get together to work on safety the result is that there is a benefit for all as a stronger case can be raised to counterparts in the likes of regulatory bodies and changes be more thoroughly and widely implemented. The AAGSC has an established history and multiple regional and international initiatives have been similarly implemented more recently in the aircraft ground handling industry. While international industry standards are not yet fully defined one can hope that the very fact that the industry is more consistently working together will lead to the availability of such standards sooner rather than later. **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 marioprnb@gmail.com.



COMPREHENSIVE GSE SERVICES



Howell Instruments, Inc.
www.howellinst.com

In a world of BER nightmares, the Howell GSE Service Team rises to the challenge of comprehensive GSE overhaul and repair.

Any Brand. Any Make. Any Model | Non-Traditional Non-Standard Equipment | ASE Certified, OEM Trained Technicians
Over 60 years combined experience | Superior Workmanship | On-Site Assessments | 100% Recertified



IAEMA

INTERNATIONAL
AIRPORT
GSE
EXPO

Ground
Support
WORLDWIDE

October 18-20, 2016

RIO ALL-SUITE HOTEL & CASINO

LAS VEGAS, NEVADA, USA

www.GSEexpo.com



Media Partners

airport
business

Airside

Ramp
Equipment
NEWS

AIRPORTS
INTERNATIONAL

The only show dedicated to ground support equipment

International Airport Equipment Manufacturers' Association (IAEMA) and Ground Support Worldwide are joining forces to produce this not-to-be-missed event, which will bring the entire industry to Las Vegas, Nevada for three days of networking, opportunity and enjoyment.

Register to attend for free*!

PROMO CODE GSW16

*Qualified Attendees (Airlines, Airports, FBOs, Ground Handlers, Military)

Why Attend?

International Airport GSE Expo is the only event solely focused on Ground Support Equipment for aviation.

Atmosphere—Focused, Energized, Informative, Helpful.

Global—Air transportation and ground support are global by nature.

Networking—Visitors and exhibitors are here for only one reason ... the interval between landing and take-off.

Equipment—Get hands-on, kick the tires, go for a drive.

150+ exhibitors!



Maintenance—Think about what can be learned from in-depth conversations with the manufacturers, suppliers, and distributors that know your equipment better than you do.

Technology—There is always something new to be discovered that can have a direct impact on the success of your business.

EXHIBITORS

EQUIPMENT

- Air Power Unit (APU)
- Aircraft Jack
- Baggage Carts
- Baggage Chutes
- Belt Loaders
- Buses
- Cable Reels & Hoists
- Cargo/Container Loader
- Catering & Cabin Cleaning Trucks
- Chocks
- Communication Equipment
- Deice/Anti-ice vehicles
- Dollies
- Fuel Carts & Stands
- Fuel Handling/Monitoring Systems
- Ground Power Units (GPU)
- Lavatory Service Vehicles
- Maintenance & Cargo Platforms/Lifts
- Medical Lifts
- Nitrogen/Oxygen Carts
- Passenger Boarding Bridges/Ramps/Stairs
- Potable water trucks
- Preconditioned Air (PCA) Pushbacks
- Refuelers/Defuelers
- Safety Equipment
- Tow-Bars
- Trailers
- Transporters
- Tugs/Tractors
- ULD & Containers
- Utility Vehicles
- Vehicle Lifts
- Wheel & Brake Equipment

PARTS & ACCESSORIES

- Air Starts & Accessories
- Axles & Drive Trains
- Batteries & Battery Chargers
- Castors
- Connectors & Cable Assemblies
- Couplers
- Deicing/Anti-icing Fluid
- Engines & Engine Parts/Components
- Gate Boxes & Load Banks
- GSE Parts & Accessories
- Hooks & Hitches
- PCA Hose/Reels/Ducts
- Portable Lighting
- Wheels & Tires

SERVICES/TECHNOLOGY

- Consulting
- Fleet Management
- GSE Leasing/Financing
- GSE Reman/Refurb/Overhaul
- GSE Rental
- IT/Software



Sage Parts and UEA Shift Into Gear

A request for a replacement part has turned into a notable business partnership between two manufacturers.

By Kyle Riegel

The culmination of that partnership: A heavy-duty shifter—designed specifically for airline baggage handling tractors—that offers increased reliability and a longer lifespan.

It all started when a major U.S. airline approached Sage Parts, a company long-known for their replacement parts for ground support equipment, for a solution to a longstanding—and costly—issue.

The problems: (a) the shifters in the airline's baggage handling tractors could not withstand the

extreme conditions characteristic of the airport ramp environment; and (b) aggressive shifting by baggage handlers led to excessive wear and tear on the shifters' levers.

"The original shifters work well when used for their original intent—material handling in enclosed, indoor spaces," Michael Bloomfield, executive vice president of Sage Parts, says. "But on ground support equipment, they have a very short life. They aren't suited for long cycle hours and the outdoors with exposure to ramp chemi-



"We already manufacture shifters for equipment in other industries," Daniel Hanawalt, business development manager at UEA, says. "We knew it would be a unique challenge to work toward designing a durable shifter for such a harsh environment where shifters

really take a beating."

To solve the problems facing them, Sage and UEA worked from two different angles. First, reduce wear, and second, capture the wear. They conducted tests to find a solution that would either eliminate the wear altogether or would transfer minimal wear

cals, UV light and everything else airports throw at them."

The OEM shifters in the baggage tractors rely on a metal shift lever sliding against a metal gate for shifting operation. The continuous metal-on-metal sliding action leads to the lever essentially being sawed off—a dangerous, costly part failure.

Another failure point airlines were noticing in the OEM shifters, according to Bloomfield, was a rubber grommet that provides resistance during shifting. The grommet weathered quickly in airport environments, making it easy for an operator to accidentally shift.

Sage Parts sought out a partner that could help design and manufacture a heavy-duty shifter. This led the company to United Equipment Accessories (UEA), which engineers and manufactures standard and custom solutions for shift controls and other components.

hy-brid (def):

the offspring of two breeds, producing a different species.

Our new species of GPU has thrived, and is killing the competition. Superior in performance and more efficient than the rest, our JetGo ground power units offer clean, cool starts and the lowest operating costs in the industry.

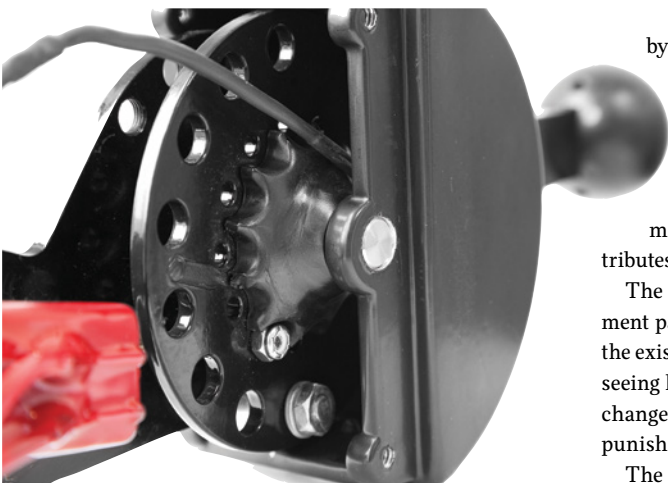


**AERO
SPECIALTIES**
GROUND SUPPORT EQUIPMENT

+1 208-378-9888 | www.aerospecialties.com



AviationPros.com/10016920



onto a part that could be easily replaced.

After intensive testing and several iterations, the two companies co-developed an airline-specific solution—the RAMPTECH® Heavy Duty Shifter—which is manufactured

by UEA and sold by Sage Parts.

“The shifter really adds value for the airline customer,” Bloomfield says. “We turned a high-failure component into one that has a long life, significantly reduces maintenance costs, and greatly contributes to ramp safety.

The shifter is designed to be a replacement part, so it integrates seamlessly with the existing equipment. Airlines using it are seeing less tractor downtime, fewer shifter changes, fewer vehicle accidents and less punishment on tractor drivetrain.

The advanced design, which uses a versatile nylon material, minimizes abrasion from sliding metal parts repeatedly rubbing together. The shifter’s synthetic rubber spring-like bushing withstands extreme environmental conditions, provides UV protection and allows the lever to snap in

and out of the neutral position while keeping the lever safely locked in forward or reverse when needed.

Internal testing conducted by UEA showed very little wear on the redesigned shifters after a simulated three years of use (110,500 cycles, reverse to near forward). The simulation test shifted the shifter from reverse to near forward with a force of 14 pounds, while constantly pulling the shifter into the neutral position with a force of 5 pounds. The air cylinder was positioned so the lever couldn’t fall into the neutral slot.

Separately, Sage’s internal testing found the RAMPTECH® shifter has a 20.5 percent lower wear rate than the OEM shifter on airline tractors, coming in at a 3.1×10^{-10} m²/N wear rate.

“Sage Parts focuses on reducing costs for their customers, and together, we achieved that,” Hanawalt says. “It also feels great



Worldwide Leader in Aircraft Refuelers



Ask About Our Leasing & Rental Options



913-653-8102



skymarkrefuelers.com



sales@skymarkrefuelers.com

AviationPros.com/11174155



▲ *Example of a shifter with a wear groove in the lever.*

when you know your products help increase people's safety."

For even more safety, the forward, neutral and reverse symbols are illuminated by an LED light for clear and easy visibility, and the electric safety neutral switch increases safe operation of the shifter.

The relationship between Sage Parts and UEA has proven to be as long lasting as the replacement shifters. The two companies have already been working together for nearly three years.

"Sage Parts brought knowledge of the punishments parts received in this specific application," Bloomfield says. "UEA is a true expert in shifters, and we liked cooperating with an expert."

The RAMPTECH® Heavy Duty Shifter

Airlines using the **RAMPTECH Heavy Duty Shifter** are seeing **less** tractor downtime, **fewer** shifter changes, **fewer** vehicle accidents and **less** punishment on tractor drivetrains.

can be found in airports across the country and world. While it's too early for conclusive data, these shifters are already anecdotally extending the usable life, improving the safety and lowering the cost of ownership

of the airline's baggage tractors.

Sage Parts and UEA continue to collect data and feedback from the field and internal testing to make additional improvements to the shifter. **GSW**

THE AESTHETIC POWER SOLUTION

HOBART 2400 POWER COIL

90 kVA Solid-state GPU and Cable Coil - in one enclosure

PLUG & PLAY
UNIQUE VOLTAGE QUALITY

ITW GSE is a strong and reliable partner with deliveries of more than 80,000 units to customers world-wide. We monitor the market trends and provide world-class know-how.

www.itwgse.com/hobartpowercoil

It's all about connections

AviationPros.com/10662843

Saft Offers Li-ion Training for the Battery System and its GSE

While Li-ion batteries are entering the commercial aircraft market, dedicated training is required to ensure proper and safe maintenance of such batteries

By Jean-Marc Thevenoud

Saft is offering the first Li-ion aircraft battery training that includes the battery system and its ground support equipment named battCARE. The company designs and manufactures batteries in more than 14 production sites distributed worldwide and also offers training for airliners, MRO operators as well as technicians and engineers working in battery shops.

All aircraft batteries, whatever the technology, require checking and maintenance in order to make sure they are safe when installed and they perform their required functions especially in emergency conditions on board the aircraft. Maintenance checks also permit any problems to be identified and corrected. Apart from the question of safety, the avoidance of failure on board the aircraft, with consequent costly impact on delays, reduces operational costs.

The Batteries

Li-ion batteries have been used for large industrial applications in railways, telecommunication, electric vehicles, military aircraft, and satellites for many years. For example, more than 1.6MWh of Saft Li-ion batteries are currently in orbit, delivering reliable on-board power for more than 125 different GEO satellites. However, the use of Li-ion battery systems for commercial aircraft is quite new and requires modifying the way maintenance is performed compared to Ni-Cd batteries.

The Airbus A350 XWB is the first commercial aircraft to be equipped with Saft Li-ion batteries. The Li-ion batteries have the same functionalities as the Ni-Cd batteries: starting the APU, regulat-

◀ **Saft conducts training on the battCARE at the Aerocampus on the outskirts of Bordeaux, France.**
Saft



ing the DC network, and providing backup power for vital on-board electrical systems in case of emergency. In addition, they also bring numerous advantages in comparison to other battery technologies. For example, on the A350, the installation of four Li-ion batteries has reduced the aircraft weight by more than 80 kg, and has allowed access to direct on-board controls from the cockpit panel with simplified maintenance procedures compared to Ni-Cd.

Indeed, Ni-Cd battery maintenance procedures and functional tests are based on different steps from periodic checks, regular checks, and general overhauls performed in battery shops. Saft has been offering training courses for more than 20 years with the content evolving with new product introduction and more modern training support material.

For Li-ion batteries, the maintenance procedures are totally different: the regular checks, periodical checks, and general overhaul are replaced with a single check every two years. Furthermore, the battCARE® has been developed allowing on wing or off wing maintenance capabilities. The on wing maintenance has the advantage of allowing the checks of the batteries directly on the aircraft reducing the maintenance duration as there is no need to remove the battery from the aircraft to bring it to a battery shop, saving about two hours per aircraft.

Also, contrary to Ni-Cd batteries, the Li-ion batteries are sealed and contain cells and electronics. All of that leads to dedicated Li-ion battery training (LBT) to ensure proper and safe maintenance programs.

“Our aim is to help operators of the Airbus A350 XWB and other future aircraft equipped with Saft Li-ion battery systems to enjoy a lifetime of safer, reliable, and trouble-free operations,” says Laurent Bressoud, product and support manager for Saft’s aviation batteries and developer of the LBT content.

The Training

The LBT is categorized as specialized training and satisfies ATA 104 level 4 objectives. It is performed by highly skilled technical trainers and aims for the trainees to become autonomous to safely maintain and operate Li-ion batteries during their life-cycle and learn the necessary theoretical and practical



cal knowledge to optimize the battery’s life (performance, safety, and operating costs). All the trainers have a technical background with operational skills which allow them to

▲ **The first lithium-ion battery training session that Saft conducted in France.**
Saft



Ground Support Specialist

GS350: The NEW Generation Belt Loader






“Innovation for a Safer Ramp”

How much are aircraft strikes costing you?

- GSS Aircraft Strike Avoidance System is designed to stop aircraft strikes before they happen, limiting human error.
- GSS System can detect size, distance, relative trajectory and relative speed of objects in its field of view.
- Designed to withstand the harsh ramp environment, from vibration, temperature fluctuations, moisture, dust & dirt.



3D Smart Sensor



Imaging System provides height and distance monitoring for airport vehicles

2205 Cole Rd., Horn Lake, MS

Phone: (662) 342-1412 ● www.GSSONLINE.com

AviationPros.com/10017370



answer theoretical as well as very practical concerns. They also have been involved in the Li-ion battery development since the beginning.

A room with hands-on capability has been dedicated to the LBT at Aerocampus, the center of aviation operations and maintenance training on the outskirts of Bordeaux, France. Surrounded by vineyards, the site covers 64 acres with 20,000 m2 of training facilities. It brings together major players in the aeronautical sector, from training agencies, industrial partners to schools and universities. In addition to initial training in aeronautics, it is also the location of short-term technical training courses performed

◀ **Technician plugs in the Saft battCARE in the A350. Note two of the four batteries in background.**
Saft

by companies such as Airbus Defence & Space, Sabena technics, and Saft.

The two-day training program covers the battery integration in the aircraft, principal components of the battery and the battCARE, the electrochemical basis, the explanation of the storage conditions and procedures including the concept of balancing the cells, the alarm management, the principle of the dedicated Helpdesk as well as the basics on shipping instructions and transport.

A full section is dedicated to the battCARE, as it is a new equipment with specific functionalities. A step-by-step approach allows mastering the equipment from the connections to the battery to a review of its software. The battCARE has been designed to perform periodic battery checks, capacity and impedance measurements, commissioning charges, and storage charges. The

Simple Complexity



GLOBAL
GROUND SUPPORT

540 East 56 Highway • Olathe, KS 66062
globalgroundsupport.com • 913.780.0300

MIDAS is a telemetry system that allows anyone with approved access to view live data on any of their deicing trucks with any Internet-connected device. This advanced telemetry system can be purchased on new vehicles or retrofitted on any manufacturers' equipment. MIDAS monitors performance, location, surface areas, aircraft ID's, operators and more.

MIDAS
TELEMETRY



AviationPros.com/10017340

training reviews when and how to perform safely in confidence for each operation.

Special care has also been taken into consideration regarding safety, as this is a main concern from the airlines due to the innovative nature of using Li-ion batteries for commercial aircraft. Safety has been the focal point of the battery development program and the Saft Li-ion battery for the A350 is the first Li-ion battery that is compliant to DAL A, the highest achievable Design Assurance Level. Furthermore, extensive tests have been realized in laboratory, on ground and during test flights by Saft and Airbus.

Step-by-step training allows **mastery** of the equipment from **battery connection** to **software review**.

To optimize the interactions between trainees and trainers, no more than eight persons can be trained per session and time is dedicated to answer questions or to go into specific subjects in greater depth. Five sessions have already been organized with success and more are planned.

"The Saft trainer had a high level of product knowledge and the presentation and support material were very clear and helpful," said David, a distributor's product manager, whereas an airline battery shop engineer highlighted the fact that he has been reassured about the Saft Li-ion battery safety thanks to Saft's years of expertise and the well-documented training.

Upon completion of the LBT, after a final assessment, the trainees receive a 'Certificate of Completion'. A visit of the Saft factory in Bordeaux concludes the training, allowing for a full understanding of the aircraft battery production.

This training, today dedicated to the Airbus A350, will be extended to other aircraft and helicopters as the Li-ion batteries are getting more popular within the aeronautic commercial market. **GSW**

Saft manufactures industrial batteries including aircraft batteries, with more than 300,000 Ni-Cd aircraft batteries produced. It designs and manufactures batteries in more than 14 production sites distributed worldwide and also offers training for airlines, MRO operators as well as technicians and engineers working in battery shops. For more information visit www.saftbatteries.com.

Pressure on Demand



High-pressure liquid and gas handling equipment

Haskel
an Accudyne Industries brand

haskel.com

AviationPros.com/10018391

J&B's New Trio: Gaskets, Connectors and Kits

The release of three new products from ITW GSE J&B Aviation coincides with J&B celebrating 25 years in business this June. All three products represent advancements in durability and operational convenience for longtime users of J&B products. One of them represents a radical departure from "the way things have been done."

By Alex Wendland

The J&B Snap-On Gasket

For years, ramp agents had to scrape off old neoprene gaskets and glue new ones on. The process took hours, if not overnight. With the new connector, agents can quickly pry off the old gasket and replace it with a new one in minutes, if not seconds.

"We'll still have those die-hard faithful that want to use the neoprene for a while," David Janis, sales director at J&B Aviation, says. "That's fine too, we'll still sell those gaskets and still sell those connectors but as we move forward, we'll be moving into the snap-on gasket connector."

This isn't J&B's first shot at a snap-on gasket, but a rivet assembly held the design back from catching on the same way the new version is expected to.

"Years ago we had a snap-on gasket assembly but it was done in a different way that we hadn't gone through and really redesigned the PCA connector," Janis says.

Whereas previously ground handlers had to pull entire PCA connectors out of service to replace a gasket. The level of inventory required for operation and replacement is too high. An easily replaceable connector gasket will reduce downtime on PCA in addition to allowing GSE managers to lower replacement part inventory when J&B releases the new connector featuring the snap-on gasket this summer.

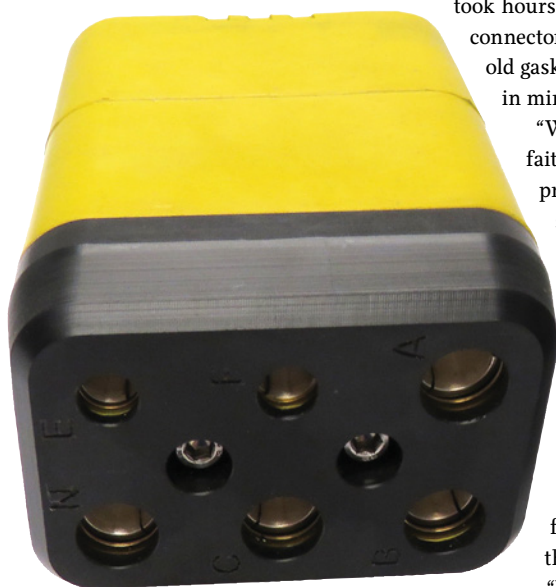
"It will be much faster to simply pry off the snap on version and snap on a new one and be

right back in business than it would be to wait for the glue to try and all those kinds of things" Janis says.

Connect Four Hundred

J&B has patented the replaceable contact sections for 400 Hz cables, which are now available. The replaceable polychloroprene connectors prolong the life of cables by replacing the worn contact section which is often dragged on the ground or otherwise slammed and jammed. The connectors are removed and replaced on existing J&B cables as one assembly with four screws. The instructions for installation are included with the connector purchase.

"We've gone through and developed an extra hard cap that sits over the top of this replacement contact section that gives a little more life rather than the neoprene that's around the contact wear-



ing out by being dragged on the ground," Janis says. "Instead, this hard cap can be dragged and worn out and then it can be replaced with a couple of screws. So you can go through and actually extend the life of your replacement contact section even longer than what it has been in the past."

The replacement contact sections are quickly replaced in under five minutes and have been used by the United States military since 1991.

"With today's widespread use of external 400 Hz systems, plug and receptacle wear has increased resulting in problems with the electrical connection," according to "400 Hz Connection Aircraft Electrical Maintenance Procedures," an SAE information report. "A worn or loose contact on one or more of the pins in the connectors can cause high contact resistance which results in a hot plug; in some cases fire or loss of a phase or control voltage (E&F) which causes the aircraft to reject the external 400 Hz power."

The specially designed tapered edge on the 400 Hz connector fits securely on any aircraft on the market today that utilizes 400 Hz power. This 400 Hz replaceable contact section comes with a cap made of a highly durable composite selected for its strength, durability and longer life. Through innovative design, more durable materials and an additional protective cap, the new J&B Aviation composite J&B Replacement Contact Sections were created to:

- Extend the life of replacement contact sections
- Reduce wear and tear on cables
- Increase savings on cable repairs and replacement
- Reduce maintenance down time

"We're seeing about a four to six month additional usage time before these caps are wearing out," Janis says. "You're already getting almost double the life out of the piece that you could previously."

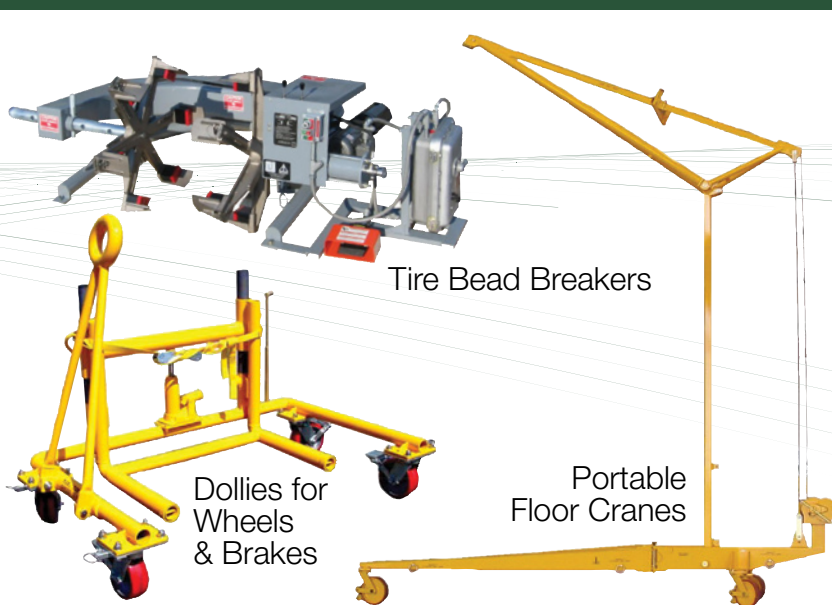
Inspection Gadgets

J&B has long sold a bevy of cable inspection and maintenance gear. Finally, however, all of those products have been bundled together into one comprehensive kit, which you can get on your ramp at any time. The J&B Aviation Cable Inspection Test Kit has packaged everything needed



▲ **The J&B Aviation Cable Inspection Test Kit bundles five inspection tools into one protective case.**

MORE THAN JACKS



Columbus JACK | Regent

GLOBAL SUPPLIER OF GROUND SUPPORT EQUIPMENT

"The Strength of Experience"

**Call Us Today
for a quote!
614.443.7492**

www.columbusjack.com

AviationPros.com/10134078

to test and inspect your cables in a heavy-duty, lockable case. The J&B Aviation Cable Inspection Kit includes:

- JB471 Aircraft Connector Tester
- JB472 Pin Gauge Tester
- JB473 Tensionometer
- JB474 Flir Imaging IR Thermometer
- Wire brushes – clean out contacts
- Step by step instructions for inspecting cables and connectors

“We’ve gone through and put together a cheat sheet that shows you ‘this is when you should be checking for wear and tear, this is how you should check the wear and tear,’” Janis says. “We basically put together a how-to two page sheet on how to maintain

your cables.”

The J&B inspection kit creates a transparent, accountable environment for GSE mechanics, purchasers and managers.

“We have seen a lot more emphasis placed on maintenance within the ground support equipment size of the business, as they try to stretch their dollars and account for product and the accountability that goes along with maintaining the fleet,” Janis says.

According to Janis, the maintenance emphasis has come with somewhat of a generational shift.

“As we see more and more new people coming in, they’re looking for ways that they can justify that they’ve done their due

diligence by sending out the appropriate maintenance guidelines,” he says.

J&B: Celebrating 25 years

J&B is celebrating their silver anniversary this June and the party will go all the way to the International Airport GSE Expo in Las Vegas this October, at least.

“We’ll definitely be doing something at the show,” Ann Roberts, marketing manager at ITW GSE Americas, says. “Hobart is celebrating 70 years, and J&B is celebrating 25 years, so we’ll have a celebration at the show in October and a few other things sprinkled throughout the year.” **GSW**

PRODUCT HANGAR



PCA610 PCAIR ACCESSORIES

Page Industries

PAGE Industries’ P2000 PCAir hose reels and P3000 PCAir yoke assemblies are unique in design, ease of use and quality. PAGE’s PCAir hose reel and yoke offer unequaled strength of a metal tube design that allows for smooth, rounded corners that don’t damage the PCAir hose or harm the operator.

AviationPros.com/12079337

MOBILE CONVERTERS Unitron Power Systems

Through an innovative design, built-in test equipment (BITE) and modular construction, Unitron products assure maximum power availability and minimal repair time for the latest military aircraft including the F-22 A Raptor and the JSF F-35A. The PwrKart Series includes lightweight 115/200v AC, 400 Hz, 28v DC, and 270v DC mobile converters for aircraft ground power applications in the hangar or ramp area.

AviationPros.com/12079237



AERO JETGO 550MTI 28V DC DIESEL HYBRID GPU AERO Specialties

The AERO Specialties JetGo 550Mti 28.5V DC diesel-electric hybrid aircraft ground power unit (GPU) provides continuous and peak power in addition to offering advanced aircraft protection systems. JetGo GPUs have been specifically designed to meet the increasing demand in the aviation industry for a quieter, yet powerful, “green” ground power unit.

With an EPA Tier 4i rating for low-emission non-road diesel engines, JetGo GPUs meet all current air quality emission standards. Its design, from both a functional and aesthetic standpoint promises to set a new standard for 28V DC ground power units.



AviationPros.com/12111438

Please Join Us For The 3rd Annual
GSE Leaders Golf Invitational



Monday, October 17

**Las Vegas National
Golf Club**
(New Location)

Tee off: 12:30 p.m.

NEW LOCATION!



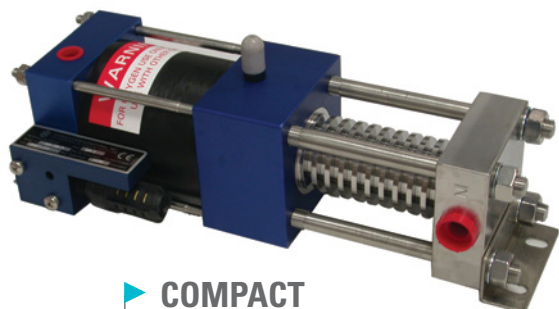
The Invitational will be held on Monday, October 17, 2016 the day before the International Airport GSE Expo, at the historic Las Vegas National Golf Club, located less than 10 minutes from the exhibition and the world famous Las Vegas Strip. The tournament will be a 4-person best ball with a tee off time of 12:30 p.m. This event is at no charge to qualified attendees for the trade show: includes a light lunch, drinks, golf, door prizes, dinner and trophies.

We encourage you to partake in this incredible opportunity and get involved with the best networking opportunity available at International Airport GSE Expo. This will undoubtedly be the most talked about event of the week, so don't hesitate and secure your place in this magnificent event.

If you have questions about participating or becoming a sponsor, contact:

Missy Zingsheim | 920-563-1665 | missy@aviationpros.com

Brian Piety | 707-469-7243 | brian@pageindustries.com



COMPACT OXYGEN/NITROGEN GAS BOOSTER

Hydraulics International Inc.

Hydraulics International's compact air and/or hand driven oxygen/nitrogen booster rated to 3,450 psi. Ideal for filling or topping off O₂ bottles from as low as 300 psi. Operated by a low-pressure shop air compressor or manually. Air consumption is less than 6 scfm operating at 60 cycles/minute.

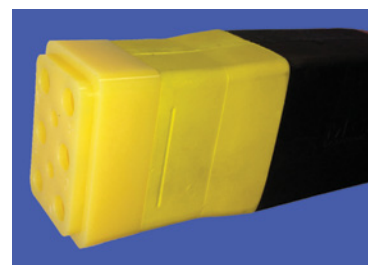
AviationPros.com/10025559

HIGH-IMPACT CABLES

MCM Engineering Inc.

The MCM GOLD X Nose used on MCM 400Hz Aircraft cables, is made from a material with high impact strength to help protect the power and relay contacts. A very low coefficient of friction makes it very resistant to abrasion.

AviationPros.com/11191325



DIESEL 400 HZ GROUND POWER UNIT

JBT AeroTech, Ground Support Equipment

The new diesel-powered, trailer-mounted, 180kVA ground power unit from JBT AeroTech® is the solution for powering today's next-generation aircraft. JBT's D-180, has been designed to continuously supply the 180 kiloWatt service demanded by new commercial aircraft. Reliable 400 Hz power is produced from a diesel engine-generator combination available in either Tier 3 or Tier 4 configurations that meet the most stringent environmental requirements.

AviationPros.com/12104548



MORE THAN 20 YEARS OF QUALITY GSE PRODUCTS!



NARROW BODY TO WIDE BODY
STAIRS

LAVATORY AND WATER SERVICE
CARTS & TRUCKS

MAINTENANCE LIFTS

BELT LOADERS

PHOENIX

METAL PRODUCTS, INC.

300 INDUSTRIAL AVENUE 3
FT. PIERCE, FL 34946
PHONE: (772) 595-6386 / FAX: (772) 595-6389
EMAIL: phoenixgse@earthlink.net
WEBSITE: www.phoenixgse.com

AviationPros.com/10117661



HOSE REEL

U.S. Airmotive GSE

U.S. Airmotive offers hose reels that are capable of storing up to 80 feet of 12- or 14-inch diameter lay flat ducting. The all-aluminum construction, powder-coated white reel can stand alone or connect to bridge PCA adapter bar locks for storage and protection. It is available with 6- or 8-inch casters that resist wear and tear on concrete and asphalt; pneumatic tires are optional. Long wearing bronze alloy bearings eliminate the need for lubrication. Expanded metal support prevents ground contact with coupler or hose. It measures 32 inches wide, 41 inches deep, and 45 inches high.

AviationPros.com/10226743



NONMETALLIC PCA ADAPTORS

Sage Parts

Engineered best to perform best. Patented non-metallic design with lightweight high-impact polyethylene and amorphous nylon construction for unmatched durability and safety. Resists corrosion and virtually eliminates dangerous rough edges that are common with metal adaptors as they drag along the ground. Fits any aircraft, attaches instantly. Airtight fit, will not shake loose. Maintenance-free, never needs paint, will not dent. Withstands hot and cold temperature extremes. Available in all sizes for every need.

AviationPros.com/11409968



AVIATION DUCTING AND HOSE PRODUCTS

HBD/Thermoid Inc.

For more than 90 years, Aeroduct® Hose/Ducting have been standard products used by ground personnel worldwide. Aeroduct® Jet Starter Hose is designed for wide temperature ranges (+500 degrees F to -80 degrees F), easily handled by one person, offers high burst strength (+400 PSI), resists abrasion, fuel and mildew.

AviationPros.com/11410016

ECO-FRIENDLY GPU

Start Pac/Rotorcraft Enterprises LLC

A patent pending eco-friendly aircraft ground power unit that uses up to 75 percent less fuel than traditional equipment has been launched by leading global ground support manufacturer, Start Pac. Start Pac's new lithium 26V hybrid ground power unit, the Hi-Brd 3 GPU, is one of the few units that meets current Tier IV EPA emissions standards. It is available in two models: The unique self-propelled version, which makes it simple and easy to maneuver for shorter distances as well as towable for longer distances and the Rover, which is an electric cart mounted drivable unit for longer distances that can also tow luggage and lav carts. The Hi-Brd 3 GPU also runs much more quietly and efficiently than traditional equipment and the simple easy to use key ignition allows for fast on the job training and operation. The unit is also equipped with a built-in battery warmer and charger.



AviationPros.com/11419782

NEW CRUSH PROOF LAVATORY DUMP HOSE

**You can Run over it,
Smash it or Drag it
and STILL USE IT!**



CRUSH PROOF LAV HOSE

WATER HOSES, COUPLINGS AND FITTINGS

LAV COUPLINGS AND FITTINGS

GSE PRODUCTS

GSE PARTS

ATTACHABLE PLUGS AND RECEPTACLES

AC/DC CABLE PROTECTOR COVER

JET STARTER HOSES AND COUPLINGS

NEW

FULLY WELDED PCA HOSE

SERVING THE GSE INDUSTRY FOR OVER 50 YEARS

HOSES: LAVATORY DRAIN-BLUE & POTABLE WATER-PCA-AIR/HEAT-JET STARTER
 COUPLINGS FITTINGS AND CONNECTORS • CASTERS • WHEEL CHOCKS • DAVID CLARK
 LAV METERS • PARTS FOR TUG • HOBART • TRILECTRON • PARKAN • FMC • CLYDE

CONVEYOR BELTS • SAFETY VEST • DIRECTIONAL WAND • TOW BARS • CARGO NETS
 STRAPS • TIEDOWN RINGS • MATERIAL HANDLING AND MORE



U.S. AIRMOTIVE GSE
YOUR ONE STOP SOURCE SINCE 1963

MAIN FLORIDA OFFICE
P.O. Box 660474

Miami Springs, Florida 33266
Tel: 305.885.4992 Fax: 305.885.9537
Email: sales@usairmotivegse.com

CALIFORNIA SALES OFFICE

2110 Artesia Blvd. # B209
Redondo Beach, California 90278
Tel: 310.327.8407 Fax: 310.327.8439
Email: paula@usairmotivegse.com

www.usairmotivegse.com

AviationPros.com/10017906



REPLACEMENT PARTS FOR GENERATORS

Servicore G.S. Corp.

We provide OEM replacement parts for all Hobart, Trilectron and Air-A-Plane equipment; most common parts are stocked in our Miami warehouse. Great prices and outstanding customer service.

AviationPros.com/12193948

BELLYCOOL PCA ADAPTER

ABC Industries Inc.

Cool ramp workers in a plane's belly by diverting air from the gate's existing PCA ducting with the Bellycool adapter. Available in 14-inch and 12-inch to 8-inch reducers, as well as 14-inch and 12-inch inline connections. Bellycool features a 4-inch port for wire-reinforced ducting that runs to the plane's belly.

AviationPros.com/11654157



DIESEL-POWERED GPU

BatesField GPU

The Diesel 2000 Series from BatesField GPU comes standard 28.5v DC output voltage with 12v DC available as an option. It features 3,045 cranking amps, 200 amps for pre-start operations; 20 feet of DC output 4/0 jumper cable with three-pin aircraft plug. 50-foot AC input cable if hangar power option is ordered and customer provides plug; Kubota diesel engine is standard; and 16-inch pneumatic tires and tapered bearings. It measures 60"L x 49"W x 54"H; and weighs approximately 1,575 pounds. Options include 12v DC output, brake, 120/240v AC household type power and ability to power inside from hangar power without the engine running.

AviationPros.com/12137074



Hydraulics International, Inc.
OXYGEN & NITROGEN BOOSTERS

INCREASE PROFITS

Gas Boosters provide up to 40% MORE FILLS

Primary use for filling or topping off...

Onboard Oxygen Bottles • Struts • Escape Chute
High Altitude Low Opening (HALO) • Life Rafts • Tires

Even if your source gas pressure drops below 300-PSI



2G SERIES

Electric Driven

- 5000-PSIG rated
- 15 SCFM discharge rate
- Quiet, only 60 dba
- No belts or pulleys
- 2-Stage and double acting configurations



5G SERIES

Air Driven

- 5000-PSIG rated
- 36 SCFM discharge rate
- Portable
- Single acting, double acting and 2-stage configurations



HIHPG1 SERIES

Air Driven

- Two (2) bottle hand truck
- Fits bottles 9.3" in diameter and 51" in height
- Accommodates single / double acting and 2-stage configurations
- Automatic shutoff safety valves



HYDRAULICS INTERNATIONAL, INC.
9201 Independence Ave., Chatsworth, CA 91311 USA
(Phone) 818.407.3400 | (Fax) 818.407.3428

www.hiigroup.com



Made in the U.S.A.

HYD-3865.3

AviationPros.com/10017435



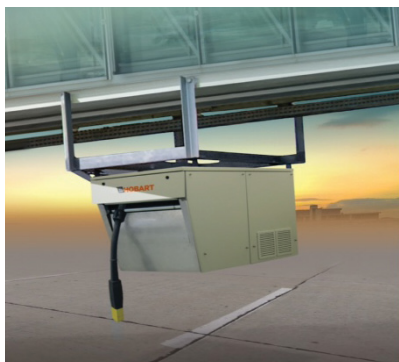
CABLES

ITW GSE J&B AVIATION

J&B Aviation has been providing quality products and accessories for the Ground Support industry since 1991. J&B Aviation is best known for quality and innovative 400Hz, 270V DC and Banded cables. J&B Aviation has patented many designs and offers replaceable contact sections for 400 Hz cables to prolong the life of cables, cable protection from scuff jackets to scuff rings and more. Our unique 400Hz cable assembly designs are the most popular in both the commercial and military markets.

ITW GSE J&B Aviation, now part of ITW GSE, is a division of Illinois Tool Works or ITW (NYSE: ITW), a diverse Fortune 200 company that employs nearly 49,000 people and is based in Glenview, Illinois, USA, with operations in 57 countries.

AviationPros.com/12135760



HOBERT 2400 POWER COIL ITW GSE Hobart

Introducing the Hobart 2400 Power Coil, combining the superior 2400 frequency converter operation with a low maintenance cable coil design with UL approved cable. The Hobart Power Coil is designed for quick and easy installation by combining our 2400 GPU, cable handling system, interconnection cable and aircraft cable all in one compact unit. This saves space, streamlines installation and protects the cable from damage and the elements.

AviationPros.com/12064782



THE FOD-RAZOR™ AIRPORT RUNWAY SWEEPER F.O.D. Control Corporation, The

An affordable, high-quality version of the popular friction mat sweeping system that busts your FOD, not your ground support equipment budget. The FOD-Razor™ is proudly manufactured in the USA. We ship worldwide and guarantee our equipment with an iron-clad warranty.

AviationPros.com/12193117

400 HZ / 28.5 VDC COMBO GROUND POWER UNIT Tronair Inc.

Tronair offers several ground power units, both solid state and engine driven. Our new 400 Hz/28.5 VDC combo GPU provides the flexibility of dual power outlets that can be used either independently or simultaneously. With this unit no longer are two GPUs required to service a mixed fleet of aircraft.

AviationPros.com/12193213



ENVIRONMENTALLY FRIENDLY PCAS Verde GSE

At Verde GSE, our goal is to provide the freshest, most comfortable air for our customer's needs in the most efficient, environmentally responsible manner possible. Our green machines are good for the environment and good for your bottom line. Verde GSE's line of PCA units are born from the toughness and simplicity demanded by the military, utilizing the highest quality components and most advanced technologies available. With a rock-solid foundation in energy efficient technologies, we are able to provide a PCA solution with unmatched efficiency, flexibility, and serviceability.

AviationPros.com/12014687



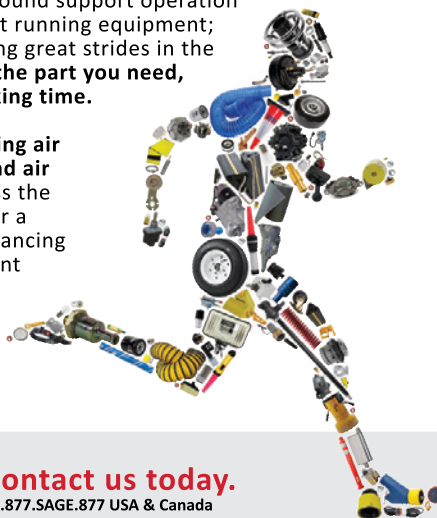
RUN MORE EFFICIENTLY.

Sage provides the parts that keep your ground support equipment moving.

Sage Parts provides the aviation industry with the **parts and resources** to run their ground support operations better than ever before.

We understand that a successful ground support operation is only made possible with excellent running equipment; that is why we are constantly making great strides in the parts we supply so **we can deliver the part you need, when you need it - in record-breaking time.**

Our replacement parts are **optimizing air start units, ground power units, and air conditioning units** in airports across the globe. Prepare your ground fleet for a 24/7 marathon on the ramp by enhancing your units with superior replacement parts. Remember, the first step to strengthening the power supply behind your ramp operation is working with Sage for all of your replacement part needs.



**SAGE
PARTS**
Anticipating needs, meeting demands. Reducing cost.

sage

Contact us today.
+1.877.SAGE.877 USA & Canada
+1.631.501.1619 International

sageparts.com

AviationPros.com/10017739

JETEX-6D CUMMINS QSB DIESEL- 28.5VDC POWER ITW GSE Hobart

Performance Features:

- Low Emission Certified Engine (Tier 3)
- Lift-off doors and removable panels provide complete access to engine, generator and control compartments
- Corrosion free fuel tank
- 10 hour run time for nominal loads
- Low fuel warning and shutdown
- Delayed stop (for turbo protection) and emergency shutdown
- Reliable Hobart manufactured AC rectified generator with automatic voltage build-up
- Numbered, color-coded wiring remains traceable for the life of the unit
- Towbar activated braking system
- Superior voltage regulation
- Adjustable current limiting for safe starting of any DC aircraft
- Low noise design (less than 80 dBA)
- 5th wheel steering

AviationPros.com/11535282



ULTRALYTE® ABC Industries Inc.

UltraLyte's® innovative triple-layer construction provides a heavy-duty durability that is uniquely lightweight. Features include lock-stitched reinforced seams, wick-resistant outer shell fabric, and engineered connection points designed to reduce air loss. The fabrics are UV stabilized for protection against sun degradation and treated for mold and mildew resistance.

AviationPros.com/12013145



SOLID STATE 28VDC GPU Current Power LLC

Current Power is a leading manufacture of solid state GPU's. Our GPU will accept any three phase voltage around the world in a single unit. Also standard is our push to set current limit which allows you to precisely set the current limit before starting the aircraft.

AviationPros.com/12065185



LEKTRO Since 1945 The Ultimate Aircraft Tug



Models Ranging
15,000 to 210,000 lbs.

- Electric • Towbarless • Certified
- Universal • Easy to Use
- Simple to Maintain • Rugged

www.LEKTRO.com

1-800-535-8767 1-503-861-2288
sales@lektro.com

AviationPros.com/10017652

JBT 45 KVA HANGAR GROUND POWER UNIT JBT AeroTech, Ground Support Equipment

The 400 Hz, solid-state JBT AeroTech 45 KVA aircraft ground power unit (GPU) was designed to meet the needs of corporate hangars and maintenance facilities. JBT AeroTech is a leading aircraft GSE manufacturer and has been designing and manufacturing aircraft ground power units including the 45 kVA Cube and other ground support equipment for over 25 years.

AviationPros.com/12065156



FOX CART™ MARK II FoxCart GSE, LLC

The FoxCart™ GPU is designed to provide smooth, high current DC power to aircraft during engine starts or ground maintenance. Designed as a low profile unit, it requires minimum ventilation and is easily moved about in a crowded hangar by one person.

AviationPros.com/10333886



GASOLINE SERIES GPU BatesField GPU

The Gasoline 2000 Series BatesField GPU features standard 28.5v DC

output voltage with 12v DC available as an option and 3,045 cranking amps; 200 amps for pre-start operations. Unit is very easily maneuvered by

hand or tug. It comes standard with a minimum of 12-inch pneumatic tires (two rigid/two swivel) and a simple kick stand brake that lifts the front with the tow handle when tow handle is raised in the upright position. Pneumatic 16-inch tires available with heavy-duty undercarriage with tapered bearings available with and without brake as an upgrade option. For more information call (405) 258-2600 or visit www.gasgpu.com.

AviationPros.com/12137080

DIESEL GPU TUG Technologies Corporation

The Davco GP400-120 is a diesel-powered generator that provides regulated 120 kVA, 400 Hz, 115/200V AC, three-phase power to aircraft. Simplicity, ease of service and maintenance, durability and performance were the primary design objectives. With the 28.5V DC rectifier option, the unit can also provide power to aircraft requiring 28V DC at 600 amps continuous and 2,000 amps peak.

AviationPros.com/10704707



400 HZ POWER SYSTEMS Page Industries

Since 1976 PAGE Industries supplied the commercial and military markets the highest quality 400 Hz and 28V cable assemblies, central 400Hz power systems, gate park systems, baggage chutes, and PCA hoses, connectors and reels.

AviationPros.com/11196723



QUALITY. VALUE. PERFORMANCE.

800-291-5487
www.par-kan.com

AviationPros.com/10017637

www.juniper-liverpool.com

Part no: JMP/CFM56/D/4777/C200. NSN: 1730-99-668-7936

The Juniper 2x25 gallon wash rig with accessory tooling for all engine types.

Times are tough. You need flexible, cost effective engine washing. You need Juniper.

Tel: +44(0)151 733 1553
Email: gse@juniper-liverpool.com

AviationPros.com/10017984

PRODUCT HANGAR



PCA, AIRSTART, GPU SUPPLIES U.S. Airmotive GSE

U.S. Airmotive has been your one-stop GSE supply source for more than 41 years. We stock air start hoses, scuff covers, PCA/heater hoses in both lay flat and accordion style along with fittings and adapters for both. We also manufacture AC/DC GPU cable assembly plugs and receptacles.

AviationPros.com/10025193

SATELLITE SPECIALIZED TRANSPORTATION, INC.



EXPERIENCE AND EXPERTISE IN YOUR GROUND SUPPORT SHIPPING NEEDS

Satellite Specialized Transportation Inc. provides truck load, LTL, flatbed, containers, van, over dimensional loads, stretch trailers, air-ride, double drops, rigging, tarps, multi-axle, removable goosenecks, forklift, crane, power only, ocean freight, tarps, hazardous materials, emergency services, refrigerated vans and much more.

Providing Reliable Service for 25 Years

Bend OR – 800-578-8956 – Sales
Sedona – AZ 800-292-0955 – Sales
Medford OR – 800-578-0955 – Sales
www.Satellitetrans.com

AviationPros.com/10018510



FORTBRAND
SERVICES INC
www.fortbrand.com

516 576-3200

info@fortbrand.com

SALES RENTALS LEASING FINANCE CONSULTING

AIRCRAFT TOW TRACTORS

TLD TMX-350-28 (61,000 lbs GVW)
TLD TMX-150-16 (35,000 lbs GVW)

BAGGAGE TRACTORS

Tug MA50, gas
TLD JST-25, diesel

BAGGAGE CARTS

5' x 10', open sides w/curtains

AIR CONDITIONERS

Trilectron DAC200 20-ton w/heat
TLD 302 24-ton w/heat
TLD 804 65-ton w/heat
TLD 802 115-ton w/heat

CONVEYORS

NMC-Wollard TC-888, diesel

GPU

TLD 90Kva & 120Kva
TLD 90Kva/28V dual output
JetGo 550Mti-RJ 28V

AIR STARTS

Stewart & Stevenson TMSS 255
TLD 180 PPM

PASSENGER STAIRS

Phoenix Metal PAS200 wide body
Stinar SPS-2513

LAVATORY TRUCK

Wollard TLS 770

FOR SALE OR LEASE

AviationPros.com/10017302



TOOLS & EQUIPMENT DESIGNED BY MECHANICS FOR MECHANICS

GROUND SUPPORT EQUIPMENT



✱ **Mobile Air Conditioning Cart now available** ✱
4 ton unit • 60 gallon integrated condensation tank • internally stored 25' air hose

www.AlberthAviation.com • 832.934.0055

AviationPros.com/10016971

Mercury GSE

Ground Support Equipment

www.mercurygse.com

for current stock of air starts, bag tugs, beltloaders, bobtails, crew and passenger stairs, gpu's, loaders — main and lower deck, tow tractors and other items.

SALES LEASE RENTAL APPRAISAL

WE BUY SURPLUS GSE

PH: (562) 653-0654 FAX: (562) 653-0665
E-MAIL: dtaylor@mercurygse.com
12519 Cerise Ave., Hawthorne, CA 90250

AviationPros.com/10017592



AEROSERVICIOS USA INC.

- Sells, rents and leases used and new Ground Support Equipment.
- Provides GSE to general, commercial, cargo and private aviation, ground handlers, airports, airlines, FBOs and other businesses worldwide.
- Reconditions or Overhauls all types of GSE.

AEROSERVICIOS IN NUMBERS

- 19 years+ in business
- 400+ customers
- 40 countries
- 9,000+ units sold
- Main and Auxiliary Shop of 143,000 sq. ft. located at the Miami International Airport Area.
- 3 acres of equipment storage
- 100+ full-time skilled mechanics



Ground Support Equipment

3750 NW 49 ST, Miami, FL 33142
Phone: 305-637-3040 | info@aeroservicios.com

AviationPros.com/10016926



▲ Editor - Alex Wendland
awendland@aviationpros.com
920-563-1644

Invest in Your People

If the career of Dick Cloud, the 2016 Ground Support Worldwide Lifetime Achievement Award honoree, can teach us anything it's that investing in your employees will pay dividends.

This month I had the privilege of profiling Dick Cloud, United Airlines' engineering and safety manager facilities and GSE. Dick's been with United for more than 50 years (!), nearly twice as long as I've been alive. There are plenty of remarkable things about Dick's run with United: he's been with the same company for his entire career, his career has spanned more than 50 years and countless accomplishments and awards.

Dick Cloud has been through the biggest booms and busts in the aviation industry, but one thing has remained the same: United invested in Dick Cloud.

When things aren't so good, Cloud says, he's seen 10 percent staffing cuts across-the-board. And when those cuts come, companies go out of business and product lines are picked up – but not normally the people. It can create a cycle of hiring, laying-off and re-hiring, but without the cushion of the seniority from their previous tenure.

"But that's not only us," Cloud says. "That's everybody. I don't care whether it's the medical industry. I don't care if it's the airline industry. I don't care if it's the ground equipment industry."

So you do what you have to do to get through the lean times, but "when you start going back into the feast," as Cloud says, is that guy you laid off going to still be around or has he now got another job someplace else with better benefits or higher pay, and now you need to start all over again by training

someone brand new and restarting that cycle?

"I have one guy in my tech support group who has been laid off and re-hired 5 times," Cloud says. "Right now, he's only got about 4 months seniority with the company."

That guy has to start over every time. What is he supposed to think of his employer? Is there any loyalty there? Can any be expected of him?

Cloud said it as well as anyone I've heard when we met in April to present the Lifetime Achievement Award:

"We fail to tell people thank you for coming to work today. Thank you for doing your job, and we fail to understand a lot of times why we always dwell on the negative rather than on the positive. There's too much of that in this entire industry and in this entire world right now."

SOCIAL MEDIA & ONLINE CONTENT



FACEBOOK
facebook.com/
AviationPros



YOUTUBE
youtube.com/user/
AviationProsVideos

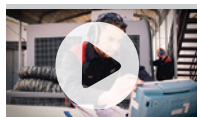


TWITTER
@aviation_pros



LINKEDIN
linkedin.com/groups/
AviationProscom

MEDIA CENTER



Comprehensive GSE Services
AviationPros.com/12194947

TOP ARTICLE



Baggage Mishandling Rate
Cut by 61 Percent
AviationPros.com/12198197

ONLINE PRODUCT GUIDE



Ramp Safety Products
From AERO Specialties
AviationPros.com/10025309

THE POWER TO MOVE YOU

- *OEM approved*
- *For all your aircraft needs*
- *Towbar and towbarless*
- *Rugged and dependable*
- *Patented technology*



Now under one roof

TRONAIR®

www.tronair.com

1.800.426-6301

Jet PORTER
A TRONAIR COMPANY

www.jetporter.com

1.800.426-6301

EAGLE
A TRONAIR COMPANY

www.eagletugs.com

1.800.671.0431

ENGINE DISTRIBUTORS INC.



YOUR Tier IV Solution

Reliable • Durable • Clean • Green

Engines That Are The Solution To Your Tier 4 Diesels.



5-YEAR,
5000 HOUR
WARRANTY
FOR THE
GSE MARKET



Ford Advanced Technology Engines.

Our line of LSI industrialized Ford engines are available and serviced through a Global Dealer Network.

Featuring a complete line of EPA and CARB Certified 1.6, 2.5, 3.7 and 6.8 L LSI Engines ranging from 20 to 200 hp. Available in Gasoline, LPG, CNG, Natural Gas and Dual Fuel. Secured Volumes, Longer Life Cycles, Dry Fuel and Flex Fuel Valve Trains – You Can Find It At EDI. Performance you can count on!

Engine Distributors Inc. 400 University Court • Blackwood, NJ 08012
Phone: (856) 228-7298 or (800) 220-2700 • www.edi-dist.com