

A publication of Duncan Aviation

Duncan Debrief

Fall 2011





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company founder:

Donald Duncan (1922-1981)



from the chairman


Todd Duncan

There is no question that the last couple of years have been full of challenges for our country, our industry and our company. Aviation has always been a volatile and somewhat fickle industry, dependent upon a multitude of economic, business and political influences. This will never change. However, we see lots of reasons to believe in a bright future for aviation.

I spend quite a bit of time working with various industry associations. As the Chairman of the National Air Transportation Association (NATA), a member of the Board for the National Business Aviation Association (NBAA) and a member of the Aircraft Owners and Pilots Association (AOPA) and the Aircraft Electronics Association (AEA), it is good to meet with other members and discuss industry issues. These associations do a good job of representing business aviation and many of the operators I serve with

are Duncan Aviation customers and prospects. They are all cautiously optimistic about the future and where the industry could go in the next 10 years.

That is one of the reasons Duncan Aviation is moving forward with plans to expand our Lincoln, Nebraska, location with the construction of a larger paint hangar. (To read more about the new paint hangar, see page one.) The industry has seen hard times recently, yet I am proud of the way our company pulled together and made sacrifices while supporting customers and gaining market share. We believe we are poised to provide even better support to the industry and are ready to once again invest in our people and our facilities.

We don't claim to know what the road ahead will bring. We do know that we are all in this together. We also know that Duncan Aviation will remain family-owned, solid, connected and a force to be relied upon. 



facilities manager

Larry Sterling

Larry Sterling has worked for Duncan Aviation for 26 years and finds that growth—his and the company's—has been a way of life for nearly all of those years.


“When I started, my job was on the ‘Wash Rack’ washing airplanes,” Larry says. “Now, I manage the 26-person facility team at Duncan Aviation’s Lincoln, Nebraska, location. Just as I have grown professionally and personally over that time, I have seen the company grow. The Lincoln facility has tripled its square footage. We acquired the full-service facility in Battle Creek, Michigan. And we consistently open new satellite avionics and engine Rapid Response Team locations nationwide.”

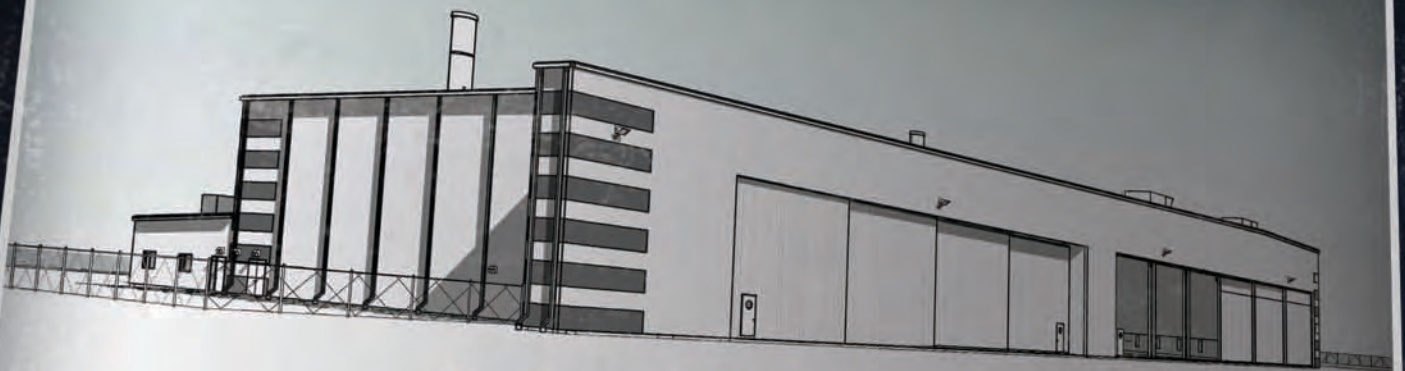
Larry is proud to see the company grow and proud to be a part of it. When Larry began supervising the Facilities Department, the team consisted of three custodians. The custodial team now numbers 12. The company has also created a technical staff supporting areas like vehicle

maintenance, environmental processes, water treatment, an electrician, preventive maintenance technicians and others.

“I like the day-to-day challenges I face and enjoy looking back at what we have accomplished,” Larry says. “I have the highest respect for my team and everyone else I work with. I also have the highest of expectations.”

Cleanliness, functionality and an overall great experience is what Larry strives to provide for everyone who visits, be they another team member or a customer. He says he enjoys coming to work every day because he likes what he does. Customers consistently comment on how nice and clean the facility looks. “Having the cleanest facility around is a priority and is just part of our culture,” he says.

So is growth. With the paint hangar groundbreaking this May, Larry is proud to be involved in the building process and looks forward to the opportunities it will bring for team members and customers. 



Duncan Aviation's
NEW
Paint Facility
Opening Spring 2012



PREPARING FOR THE FUTURE

DUNCAN AVIATION-LINCOLN BEGINS CONSTRUCTION ON NEW PAINT FACILITY

It was a hot and rainy summer for the Lincoln, Nebraska, construction crews working on Duncan Aviation's newest addition—a 45,000-square-foot paint facility being built on the south end of the general aviation side of the Lincoln Airport (LNK).

Todd Duncan, Chairman of Duncan Aviation and grandson of company founder Donald Duncan, said the new paint facility will help us better serve our customers for years to come.


“Over the last decade, many of our customers have purchased larger aircraft while our paint facilities in Lincoln have remained the same for 20 years. Given the mix of aircraft our customers now fly, we need to expand paint capacity if we want to continue to serve our clientele at our Lincoln facility with full exterior paint services,” Todd says. “We completed a similar paint facility at our Battle Creek, Michigan, location in September 2007. We want to provide the same nose-to-tail services for those large aircraft customers who want exterior paint and want to come to Lincoln.”

The new paint structure, which will cost roughly \$10.5 million to build, will allow input of some of the largest business aircraft in use today, including Gulfstream's 550, Bombardier's Global Express and Dassault's Falcon 7X. It will not necessarily add more paint slots to the Lincoln facility's paint service capacity, but will allow the ability to serve a larger mix of customers.

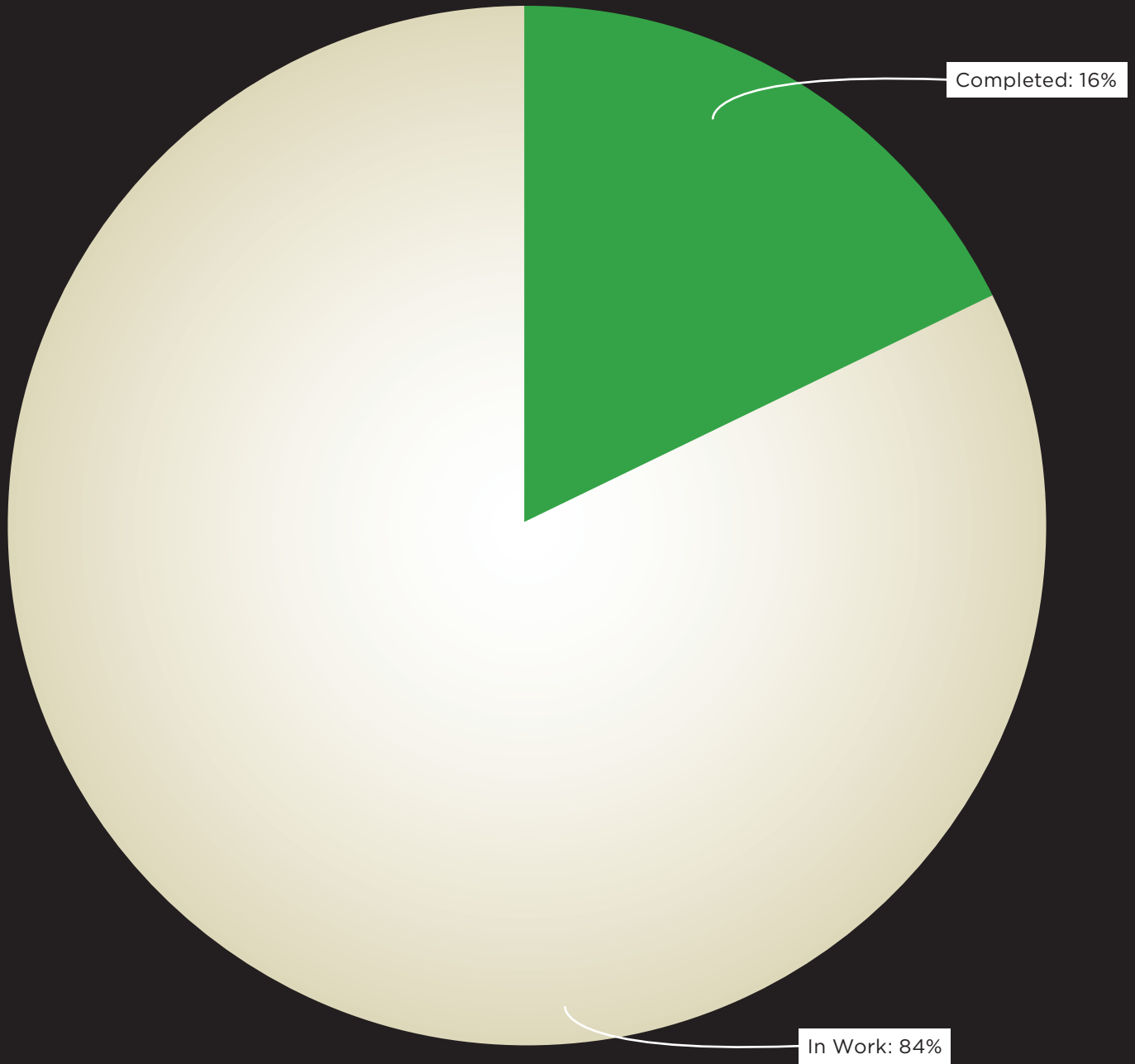
The hangar, which will be completed in late spring 2012, will have the latest down-draft air flow technology, including automatic monitoring and alarms, to provide the best paint environment possible for aircraft. To increase efficiency, the hangar is designed to accommodate multiple aircraft at once, utilizing a two-zone airflow system. With this design, Duncan Aviation paint teams can perform stripping, sanding, painting and detail work on multiple aircraft simultaneously.

The new paint facility follows on the heels of Duncan Aviation's announcement last fall of its new “chrome-free” paint process. Duncan Aviation partnered with paint experts and over the past several years they have collectively developed a new chrome-free paint process that is better for the environment, better for the paint technicians and better for the aircraft. Duncan Aviation has also worked closely with the Federal Aviation Administration and last fall received approval to amend its proprietary FAA-Approved Paint Process to include the new processes and products.

For more information on Duncan Aviation's aircraft paint capabilities, please visit www.DuncanAviation.aero/interior.

For more information on Duncan Aviation's “chrome-free” paint process, please visit www.DuncanAviation.aero/fieldguides. 

Given the mix of aircraft our customers now fly, we need to expand paint capacity if we want to continue to serve our clientele at our Lincoln facility with full exterior paint services. Todd Duncan, Chairman of Duncan Aviation



16% Completed
Job Status Report

Managing My Project,

Managing My Time:

myDuncan.aero

On January 23, 2011, a Challenger 604 landed at W.K. Kellogg Airport in Battle Creek, Michigan. Jim Milardo, Maintenance Director for Great Point Advisors, accompanied the aircraft to Duncan Aviation. The Challenger, scheduled for a 2400 hour and 24-month airframe inspection, had an expected downtime of 16 days.

Jim was greeted by Project Manager Jerry Tollas and led to a small conference room for a meeting. The debrief lasted about an hour. Plans were reviewed and incoming squawks were communicated to the teams. Jim was set up on myDuncan.aero and the project was a-go.

This was Great Point Advisors first time to Duncan Aviation and Jim's first introduction to Duncan Aviation's web-based project management tool, myDuncan. "During that first introduction to the system, I was immediately impressed by its ease of use," he admits.

Jerry comments how quickly Jim took to the application. "I set up his account, which sent him an email with a user ID and password. He followed the links and away he went," he recalls.

Just hours later, Jim departed from Duncan Aviation, leaving the Challenger 604 in the capable hands of the Duncan Aviation technicians. Jim did not come back to Duncan Aviation during this project. He didn't have to. "I kept track of the progress, approved items remotely and even delivered the aircraft, all from my office," states Jim.

myDuncan.aero made this possible. It is a free service, uniquely developed and maintained by Duncan Aviation's Information Technology teams. It serves

"I kept
track of the
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the aircraft,
all from my
office."
- Jim Milardo,
Maintenance
Director for
Great Point
Advisors

customers to enhance overall experience. It improves communication, efficiency and accessibility whether a customer is on-site or not.

For Jim, who was not on-site for this project, myDuncan meant that he was able to manage the project from home while still taking care of his other aircraft. “I was able to access the project through myDuncan at any time and do real-time approvals without having to be on-site,” explains Jim.

Streamlining Communication

myDuncan streamlines information, organizing it for customers. The process involves a minimum of paperwork and can be accessed from anywhere with an internet connection.

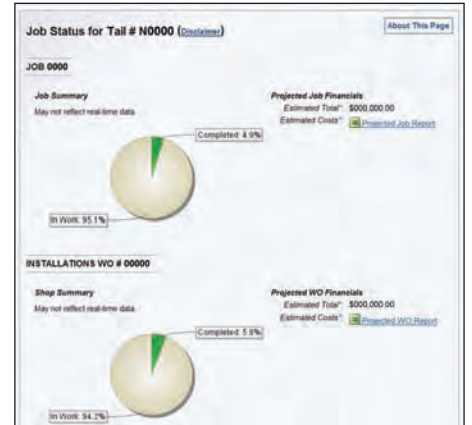
Through the system, e-mails alert customers to item updates and icons indicate when new items have been posted or when messages are added.

With paperless approvals, items are grouped, making it easier to manage lists. Customers can work through items at their own pace and comments allow customers to post questions and notify their project managers of decisions.

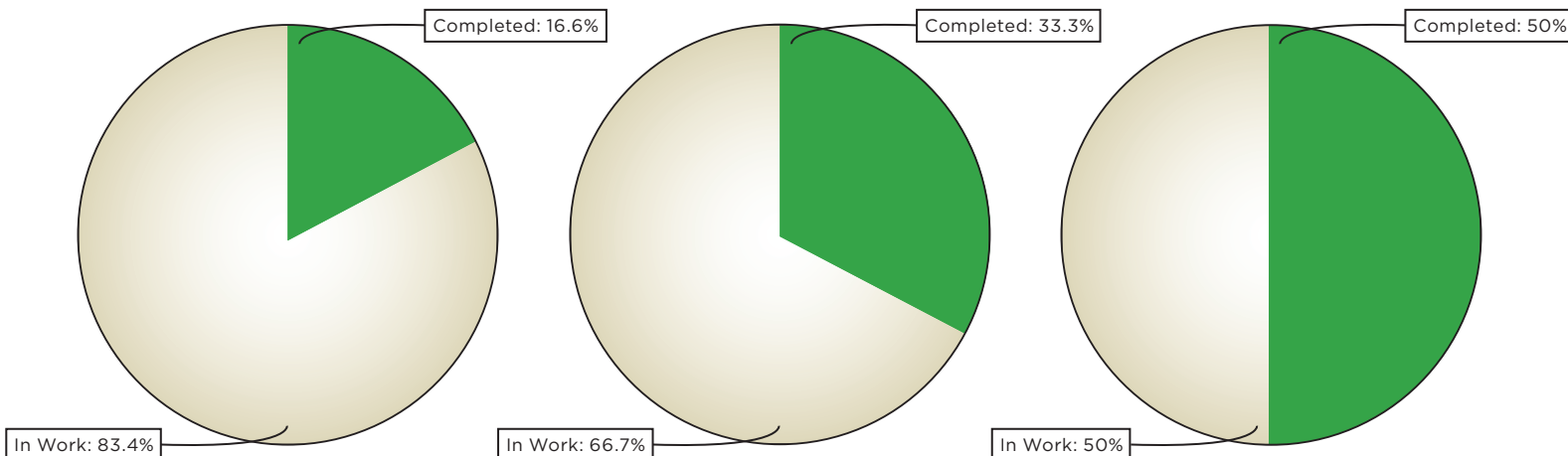
According to Jim, the paperless approval process worked flawlessly. “I would read the squawk and if I needed more information, I could email Jerry for more details and even pictures if needed,” explains Jim. “Then I could make a determination whether to work the item or not...it is just that simple.”

New in 2010, Job Status Reports track a project’s current standing and represent the data through charts and projected financials.

Jim says he appreciates the “work in progress” charts the most. These indicate the number of hours for items that are in work and their completion status. In addition,



Stay up-to-date on your project with job status charts and projected cost reports. Pie charts provide an at-a-glance reference on work progress, and Excel downloads offer a summary of estimated costs, for both the overall job level and work order level.



projected financials represent a general cost estimate and can be downloaded in an Excel file by the customer.

“I like that I can keep track of real-time cost, so I know where we stand in relation to the quoted pricing,” Jim says.

In addition to Job Status Reports, project managers can provide detailed status reports unique to the customer’s needs. Jim says that Jerry will provide him a report for anything that he needs. The ability to create these reports is simple, providing project managers the ability to report statuses on specific work orders and even progress with key items.

As a project progresses, customers like Jim can use the project contacts feature to e-mail key contacts such as project managers, tech reps and team leaders. These contacts can then be saved as a personal contact in a customer’s profile and will be available for use during their next maintenance event.

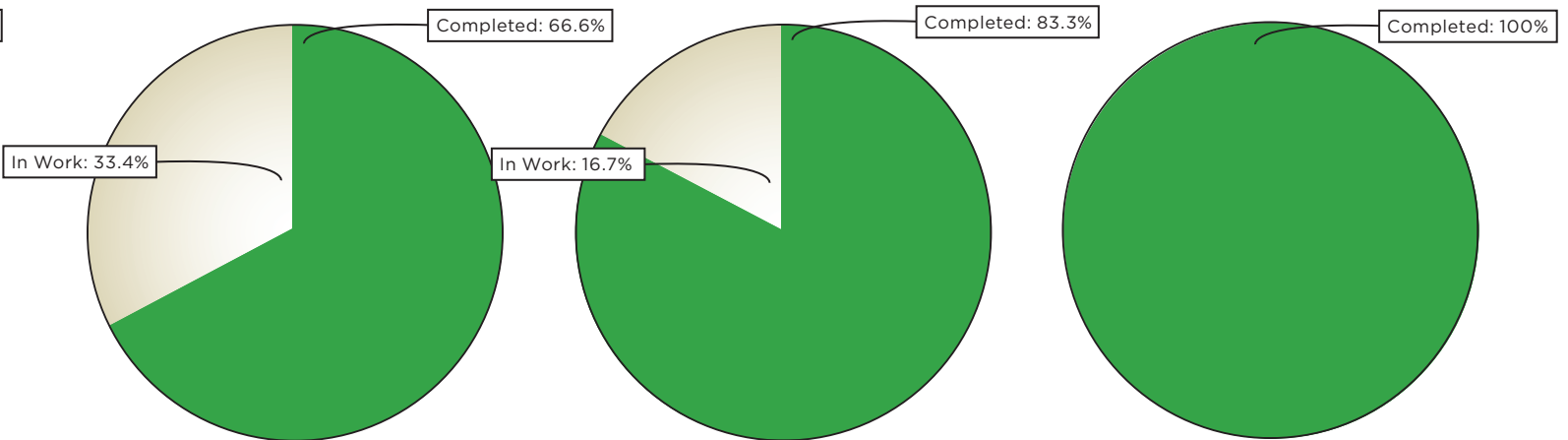
myDuncan Adds to the Duncan Experience

Jim was impressed not only by myDuncan.aero and its ease of use, but also the “good work ethics and great pricing offered by Duncan Aviation.”

“I would recommend Duncan Aviation to any of my counterparts,” states Jim. “myDuncan is a very handy tool that makes my job easier.” His advice to other operators is pretty straightforward: go to Duncan Aviation and take the time to learn how easy myDuncan.aero is to use.

“The reduction in costs is huge,” Jim says. “Instead of spending time in a hotel room or service center, it frees me up to do other things while at the same time managing the work at Duncan Aviation.”

“Instead of spending time in a hotel room or service center, it frees me up to do other things while at the same time managing the work at Duncan Aviation.”
- Jim Milardo
Maintenance Director for Great Point Advisors





The Art of Engineering

"Duncan Aviation's Engineering team provides our customers with solutions and response times that create an advantage over the competition that is recognized globally as the premiere choice for Certified Engineering Solutions."

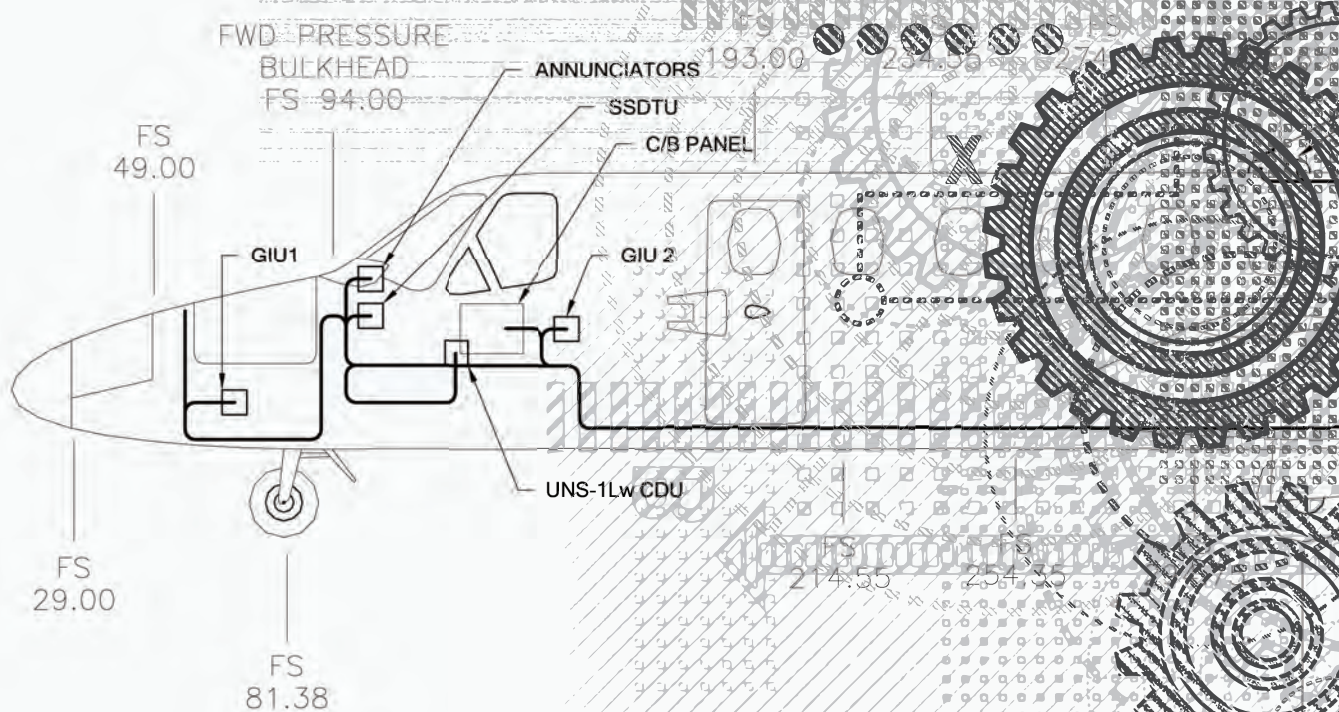
- Ryan Oestmann, Engineering Services Manager

When you think of engineering, images of someone in an office, hunched over numbers, logs, algorithms, rules and regulations quickly spring to mind; someone very organized with a plan to make a plan so that the plan works. There is an opinion of engineers being isolated, rigid and unmoving; that they don't go beyond boundaries or think outside the box. After all, they are governed by rules, regulations and absolutes.

In reality, though, engineering is an art and engineers are some of the most creative people around. They have produced breath-taking architecture and innovative designs around the world, all within the strict confines of science.

At Duncan Aviation, there is a team of maintenance, repair and overhaul (MRO) engineering "artists" who work in concert, behind the scenes, to research, design, develop, produce and certify work aboard the most popular business aircraft flown today. They set the standard in quality, experience and innovation for interior modifications, avionics innovations, parts manufacturing and certification for business aviation.

The work of an engineer sometimes goes unnoticed. Yet there



isn't a project that can proceed and succeed without them.

Engineering for Interior Modifications

John Moffett, Jr., an Interior Structures Engineer working at Duncan Aviation's full-service Battle Creek, Michigan, facility, has designed interiors for all major business class aircraft. "The biggest challenge to designing an interior modification or new construction for an aircraft is engineering the best use-of-space and ease-of-maintenance into every project, all the while maintaining an aesthetically pleasing design that meets the customer's expectations."

It is not unusual for a customer to bring his or her personal preferences from home or office and want them interpreted for installation aboard an aircraft. Although most requests are not impossible, every customer is different and each project takes a very creative approach to engineering a design that is safe, compliant and what the customer wants.

All Duncan Aviation interior engineers are very hands-on. They work closely with the sales teams before the

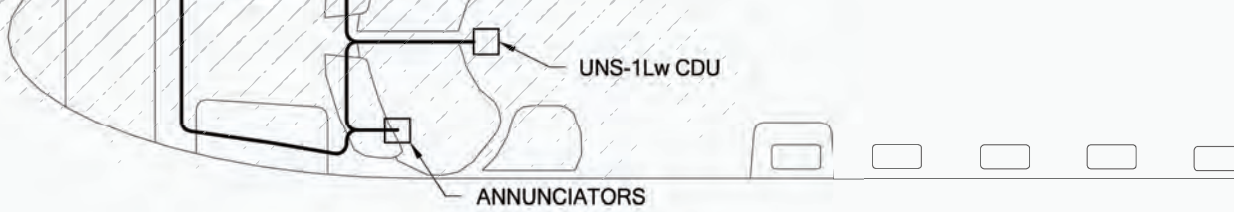
sale is made to ensure the customer demands are possible while still able to meet Federal Aviation Regulation (FAR) requirements. The effort taken at the beginning to make sure a design is feasible saves a considerable amount of time and expense for the customer in the end. This is one of the advantages of having engineering services on-site at both of Duncan Aviation's full-service facilities, Battle Creek and the company headquarters in Lincoln, Nebraska.

There are several aviation maintenance facilities that work with third-party engineering firms to provide this same service. It can be done, but with a lot more steps, less flexibility and a lot less control. Work has to pass through their process, which can often mean more hoops and more red tape to get the same work completed.

John explains why being on-site in Battle Creek makes his job easier and the final product better. "It is not impossible to have an interior installed that is designed by a third-party engineering company, but the amount of time and the possibility for error or misunderstanding is high." Every project is a team project that consists of many departments throughout the company. From design to engineering, production and certification, having

all the team members under one roof eliminates the waiting in getting answers and streamlines the process from beginning to end. Duncan Aviation's Engineering Department has worked with all areas of the company on hundreds of projects; they are aware of the needs and processes and what is expected from them to best work together and play to each other's strengths.

Because there are no two aircraft exactly alike, having the customer's aircraft in the hangar and available for personal inspection is also invaluable. Engineers are able to get hands-on measurements and visually inspect how the space is currently utilized while noticing any previous modifications, if present. At this time, for instance, they are able to determine if the current configuration is placarded for tracking in-board or out-board, and if aisle clearance is in compliance. This gives the customer the opportunity to have this corrected during the current project. These subtle observations can have an impact on the refurbishment or new modification that is planned. Off-site, detached engineers are unable to provide this same level of service



without incurring a considerable increase in downtime and expense.

Duncan Aviation's interior engineers also use various 3D modeling software. These are robust programs that allow them to engineer the plans to show all the internal space and what is happening inside and out of each component, including how glasses will hang and dishes will ride during flight, how lighting will appear and how drawers will function. 3D modeling software provides photo-realistic modeling that can illustrate such things as correct veneers and translucent glass. This shows the customers what the finished product will look like before it is taken to a blueprint level.

Once the plans are approved by the customer, they are converted to a drafting blueprint from which the shop will build. This engineering model/blueprint information is provided to various shops within Duncan Aviation to begin production.

Engineering for Avionics Upgrades

Just like a new aircraft interior or an interior alteration, any modification or addition to an aircraft that requires electricity has to go through the hands of an engineer. That includes new glass cockpit upgrades, satellite data communications and the switch in the back that turns on the light to the lav. If it has electricity, a systems engineer designed it.

Tom Henry, a Senior Avionics Systems Engineer located at Duncan Aviation's Lincoln facility, has seen it all. He's designed new glass cockpit upgrades for several make/model aircraft, integrated the latest in Wi-Fi technology for cabin enhancements and he's even had a request from a customer to install a 50-inch widescreen TV that can be retracted into the ceiling. Needless to say, not all the requests can be engineered, no matter how hard you try.

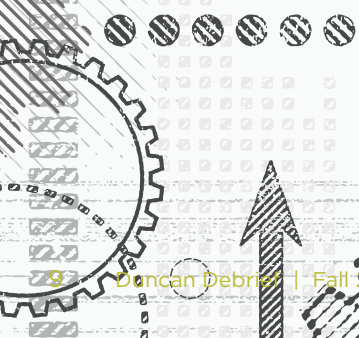
In addition to designing innovative avionics solutions, systems engineers must also prove the design is feasible and able to function properly aboard the aircraft. This supporting documentation proves it is acceptable under the regulations and, therefore, "legal." This has to be kept in mind at all times. Just because it's a part doesn't make it an airplane part, Tom says.

For every avionics project, a cross-departmental team is formed to work together, covering all aspects of the project from start to finish. Tom credits this "team approach" for Duncan Aviation's success at consistently delivering the highest quality avionics products and services. "Sales, Design, Engineering, Production and Certification departments all work in parallel," he says. "We don't work on single events or individual projects and then pass it on. We depend on each other to effectively and efficiently contribute to the process from quote to certification."

The greatest challenge to systems engineering, according to Tom, is determining exactly what the customer is requesting. Customers always have an idea about what they want or how they want their new technology to perform, but they don't always know what to ask for. Before Engineering can begin the design process and make the project certifiable, a specific function must be determined, down to the smallest detail. This is why having Engineering on-site and readily available to partner with Avionics Sales is so important. Working together, they determine all facets of the customer's request in order to provide the most accurate and comprehensive quote.

These meetings help to answer questions and clear up any issues that arise during the sales process. Communication is immediate and issues can be explained quickly and more efficiently with a conversation and/or demonstration. Taking the time to get the quote correct up-front gets a lot of the unknown questions out of the way, providing a quicker and more efficient start once the contracts are signed.

Tom says his job is made easier by being on-site and involved throughout the entire process. "As engineers, we don't just drop off a set of drawings and leave. We go over the plans and address anything unusual or out of the ordinary so everyone has a clear understanding of what's going on. When necessary, I go to the aircraft to help troubleshoot systems. I've sat



in an aircraft with avionics install technicians studying wiring diagrams, going through the aircraft operation and testing switches to determine what is happening, why it's happening and what needs to be happening."

Tom, like all Duncan Aviation systems engineers, takes ownership of every project and welcomes every opportunity to consult with sales, assist production and provide certification documentation. "We may work independently in our specific areas of expertise, but we are a part of a larger team representing Duncan Aviation. We depend on each other from beginning to end."

All Roads Lead to Certification

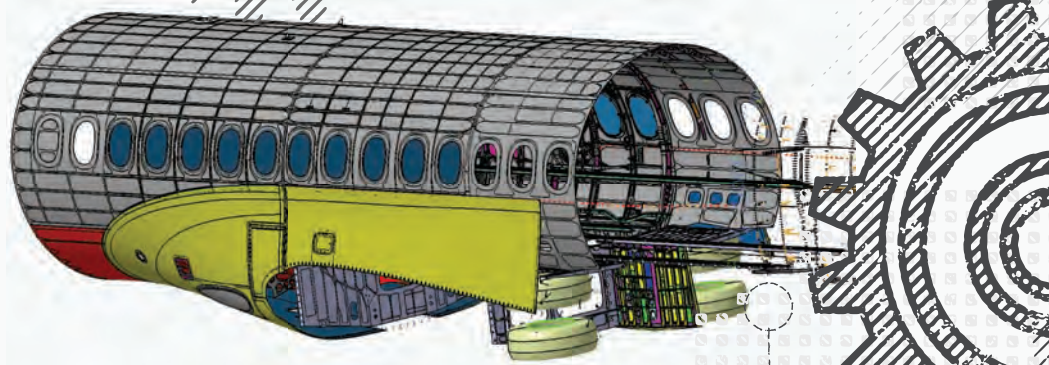
Shawn Carraher, Duncan Aviation's Certification Programs Manager, was once told by a "wise man" that all roads lead to certification. "Aircraft avionics and interior modifications can't happen without it," he says. "Engineers may create the most innovative drawing and design for a component to go into an aircraft, but if it can't be certified, then it's just a drawing."

When asked by others what the Certification Programs department does, he uses the metaphor of the tag on a mattress. "The tag on your mattress was placed there by someone who declared your mattress to be good for use," Shawn says. "This tag indicates the mattress was designed within a

UNS-1Lw NCU
LPV MONITOR

Engineering & Certification Capabilities & Experience

- 366 STCs (the first was issued in 1981)
- Configuration Control
- Requirements Analysis
- Document Control
- Design - CATIA, SolidWorks and AutoCAD
- Structural Analysis - FEM, Rigid Body
- Safety Analysis - FHA, FMEA, SSA
- Flammability Test Planning and Reports
- Limitation, Operation and Continued Maintenance Documentation

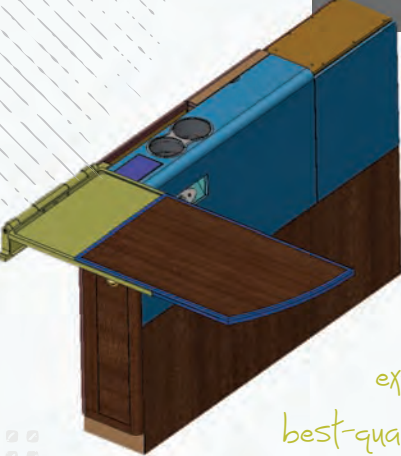


Catia Model



OEM Engineering & Certification Services

In addition to providing engineering and certifications support for avionics and interior modification projects performed for Duncan Aviation customers, we have a group of engineers who work directly with major OEMs, providing the engineering and certification needed for some of the more exotic or unique OEM customer requests.



"Duncan Aviation's OEM Engineering team allows our OEM partners to outsource research and development and new product solutions to a dedicated, focused team with the expertise and resources to find the best-quality solution with the least production cost in an agreed-upon time and budget."

- Garon Lane, OEM Engineering Manager

set of regulations. It was made to the exact specifications of the design. It will hold up under normal wear and tear and will not spontaneously combust. It complies with all rules and regulations that govern the making of mattresses. Someone from the mattress company made the final decision to certify your mattress as being compliant with a signature and date." The Duncan Aviation Certification Programs team, under the authority of the FAA, is that final say for all aircraft modification and type-design change projects at all Duncan Aviation locations.

The Organization Designation Authorization—ODA-501013-CE—held by Duncan Aviation is an appointment by the FAA authorizing us to inspect and declare all work "compliant and legal" on behalf of the FAA. Duncan Aviation is among an elite group given the authority to approve design data, analysis and test procedures, witness compliance testing, as well as make a finding of compliance to the regulations and issue Supplemental Type Certificates (STC), and Major Repairs and Alterations (MRA) for interior and airframe modifications and avionics systems and system upgrades. Duncan Aviation also recently received authority for Parts Manufacturing Approval (PMA), which allows for the manufacture of parts.



Divan End Cabinet

So what does that mean to you?

The one thing on the minds of all aircraft owners and operators making modifications or alterations to their aircraft is where they can get the highest quality service at the most cost-effective price. With downtime and price being the most important pieces affecting that decision, customers are seeking an MRO that can cut through the red tape, get things done the right way the first time and get them flying again without unnecessarily extending their stay. Duncan Aviation's ODA allows us to do just that. We maintain tighter control over maintenance schedules and have the flexibility to quickly address any issues that arise and develop a plan to overcome them. Aircraft operators choosing to work with a facility without designated authority or not in direct contact with the FAA will quickly learn the time required to get an STC or MRA certified through these channels takes longer than it does to complete the actual modification.

Currently, the most popular avionics projects are Wi-Fi installations. Duncan Aviation has performed hundreds of these modifications aboard most major make/model aircraft. Our experience and ODA authorization

allow us to design, install and certify these projects in as little as five to six weeks. Duncan Aviation has delivered larger STC or MRA projects, such as avionics cockpit upgrades, in a dramatically reduced downtime, often by as much as 50 percent.

Behind The Scenes


Most customers don't always understand the work that goes on behind the scenes to plan, prepare and perform an aircraft modification project. They have their eyes on the delivery date and the bottom line. That is what we focus on, too.

Quotes are oftentimes very complex, requiring an STC or MRA as well as foreign approvals. Shawn helps to bridge the gap between Sales and Engineering to make sure all bases are covered. "There are 195 countries in the world and we have a lot of bilateral agreements," he says. "It is necessary to understand the requirements of these countries and how they line up with the FAA. I get involved as much as possible on the front end to provide a solid quote and time estimate to the customer."

As soon as the contracts are signed, certification coordinators take over. They coordinate individual STC or MRA projects from contract to certification, managing the mounds of requirements

and paperwork generated throughout the process. They create an in-depth plan approved by the FAA that covers every detail from what data is collected, rules written and inspections planned. Everyone is involved until the final delivery of the aircraft. The collective goal is to always manage the project to the written plan and ultimately deliver a safe and compliant product.

Engineers always desire to design a product that meets every customer's expectations, but never at the expense of safety or compliance. Throughout the entire process, all work performed on any STC or MRA project must meet with the approval of an ODA designated Unit Member. Unit Members are Duncan Aviation employees who represent the FAA's final authority and, with a signature, certify the final product to be in compliance according to the law, meeting all safety requirements.

Duncan Aviation engineers work with numbers, rules and regulations. They are extremely well organized and have a plan, a back-up plan and a contingency plan. The boundaries that govern their work are rigid and controlled by the law. However, they are some of the most forward-thinking and creative minds in business aviation. Their advanced designs truly are a work of art. 





Emerging Avionics Upgrades & Industry Outlook

2011

Duncan Aviation's avionics experts anticipate the avionics installation outlook for the next few years will be very active, thanks to a number of new technologies and associated products available to the business aircraft market.

The new breed of Liquid Crystal Display (LCD) glass cockpit retrofits is easier to install, High-Definition (HD) entertainment options are certified, and a multi-regional in-flight internet offering for smaller aircraft is now available, to name a few. A number of upcoming mandates are also on the horizon.

Popular Upgrades

The most common upgrades in Duncan Aviation's avionics shops should come as no surprise. Wi-Fi with high-speed internet/data (HSD) tops the list, followed by Wide Area Augmentation System (WAAS) / Localizer Performance with Vertical Guidance (LPV). Other popular upgrades include LCD glass cockpit retrofits and HD entertainment and Cabin Management System (CMS) upgrades.

The most popular in-flight internet upgrade solutions include Aircell Gogo Biz™ and Inmarsat SwiftBroadband, says Steve Elofson, Avionics

Installations Representative at Duncan Aviation's full-service facility in Lincoln, Nebraska.

Aircraft Wi-Fi operations must be installed by Supplemental Type Certificate (STC), which are specific to each aircraft configuration. Duncan Aviation has engineered eight Wi-Fi STCs with five more STCs in work.

WAAS / LPV upgrades also require an STC if certification for lower minimums (LPV) is desired. Universal Avionics was first to offer WAAS FMSs and Duncan Aviation has invested in the development of numerous STCs with their FMS products over the past few years.

The most recent Duncan Aviation WAAS/LPV certifications include the Honeywell NZ-2000 6.1 for the CL 600-/601-1A and Falcon 900B. Additional STCs for WAAS/LPV are also available for Rockwell Collins FMS-equipped aircraft such as Challenger 300/604/605, Falcon 50EX & 2000, Hawker 800/850/900XP and the Beechjet 400A.



TCAS 7.1 Mandate
(forward-fit aircraft)

2012



CPDLC Mandate
(forward-fit aircraft)

2013

2014

Glass Cockpit Retrofits & HD Cabins

LCD glass cockpit upgrades are not new to our industry, says Steve. For a number of years now, aircraft have been manufactured with LCD displays and Duncan Aviation has been working with the major avionics manufacturers to develop and certify retrofit solutions for select legacy airframe types.

The new breed of LCD panel retrofits are easier to install, says Steve. They focus on the later model airframes with highly integrated and capable systems but with a significant weak spot: CRT displays.

These later-model systems include the Collins Pro Line 4 and the Honeywell Primus 1000 / 2000.

“The benefits are terrific,” says Steve. “They provide crisp and clear Jeppesen Charts on the panel with own ship position, XM weather, EVS and, coming soon, synthetic vision.”

HD entertainment and CMSs are also now certified and available, bringing the latest in audio/video technologies to the aircraft cabin. New touch screen controls can replace push-button style passenger control units (PCUs), and complete cabin controls are now available through devices such as the iPad. These cabin upgrades are best scheduled with interior refurbishment or maintenance events where the interior is removed.

SB200

SwiftBroadband 200 (SB200) is a relatively new in-flight internet offering that has entered the avionics market within the past year. What makes it noteworthy is its size and price, says Steve.

Where high- and intermediate-gain services have been popular in the larger airframes, the antenna size has been a limiting factor for smaller aircraft, says Steve. SB200 systems are compact, using a smaller blade-type antenna that is easily certified and fits well on smaller aircraft where space is an issue.

“If an operator has a smaller aircraft, like a Citation, Hawker or Learjet, this might be a good choice, especially if they’re traveling outside the United States,” says Steve.

Although SB200 is much slower than what people can expect from their home internet connections, it’s less expensive and it works internationally. With a connection speed of 200 kbps, passengers can send and receive e-mails and attachments, but it’s not well suited to graphic-intensive web surfing such as pages containing video, says Steve. VPN connections are supported, although operators should ask their IT department about speed considerations.

The SB200 is also a good add-on option for those that either have or are installing the very



TCAS 7.1 Mandate
(in-service aircraft)

2015



CPDLC Mandate
(in-service aircraft)

2016

2017

popular and fast Aircell Gogo system. When both systems are installed, you get the best of both worlds: when in the United States, the Aircell Gogo system provides up to 3.1 mbps service and when outside the United States, the wireless connection automatically switches over to the SB200 providing international 200 kbps service.

CPDLC, ADS-B & TCAS 7.1 Mandates

Many customers have been hearing about upcoming European mandates and are concerned about the availability of solutions and associated costs.

First on the horizon will be Traffic Collision Avoidance System (TCAS) 7.1, which is a software update to existing TCAS II systems that corrects safety issues in the TCAS logic. TCAS II has been required for aircraft traveling in European airspace for many years, and the 7.1 upgrade is required for forward-fit aircraft in 2012 and for in-service aircraft by 2015.

Following shortly afterwards is the Controller Pilot Data Link Communications (CPDLC) mandate, which is a datalink application that allows pilots and air traffic controllers to exchange text-based messages. Recent guidance suggests that mandates will be required for forward-fit aircraft in 2014 and for in-service aircraft by 2015. In most

cases, CPDLC solutions are only available for the newest aircraft and detailed pricing and options for most systems aren't available yet, says Steve.


Close on its heels is Automatic Dependent Surveillance-Broadcast (ADS-B), which will replace radar as the primary surveillance method for air traffic control in most of the world. It will be mandated in Europe in 2018, two years before the U.S. mandate.

Retrofit solutions for CPDLC and ADS-B are currently in development by avionics manufacturers such as Collins, Honeywell, Universal Avionics and Garmin. Options and pricing are expected to become available within the next year.

Planning & Budgeting

As the industry waits for solutions to become available, operators need to be asking themselves where they fly, what mandates are coming due for those airspaces and what upgrades will be required.

Most operators will want to install these solutions during a major event, says Steve. "Understanding what needs to be done and what equipment is involved will help operators anticipate downtime and costs and avoid surprises."

For more information, please call a member of the Avionics Installation Sales team in Lincoln at 402.475.2611 or in Battle Creek at 269.969.8400. 



ADS-B Mandate
(Europe)

2018



ADS-B Mandate
(United States)

2019

2020



Pratt & Whitney Canada

A United Technologies Company

A Duncan Aviation Tradition Just Got Better.

For more than 30 years, Duncan Aviation has had a tradition of providing seamless overhaul management and Hot Section Inspection services for Pratt & Whitney Canada (P&WC) engines through our relationship with P&WC and a network of authorized service providers.

Duncan Aviation has performed HSI services on-wing for PT6, JT15D and PW500 series engines for years. We have also provided customers with line maintenance for PT6, JT15D, PW500 and PW300 series engines at our full-service aircraft maintenance facilities in Battle Creek, Michigan, and Lincoln, Nebraska, and we have eight strategically based U.S. Engine Rapid Response teams on-call and equipped to travel to a customer's location to perform engine R&Rs and HSIs at a moment's notice.

These services are about to get even better, says John Bieber, Duncan Aviation's Vice President of Airframe Services in Battle Creek.

P&WC and Duncan Aviation Partner

Pratt & Whitney Canada and Duncan Aviation share common values when it comes to customer support and quality, John says.


Both are committed to providing excellent customer service and superior products.

In October, Pratt & Whitney Canada and Duncan Aviation joined forces at our Battle Creek facility when P&WC officially opened its first-ever Pratt & Whitney Canada HSI shop located on-site in a major business aviation Maintenance, Repair and Overhaul (MRO) facility. The P&WC shop has 3,700-square-feet of work and office space, is fully staffed by a team of Pratt & Whitney Canada engine technicians and is located in Duncan Aviation's hangar in Battle Creek.

"Providing Duncan Aviation with on-site support for maintenance manual-level work is an important milestone for Pratt & Whitney Canada," says Curt McClung, Director of Customer Service Operations for P&WC. "Not only does it take our responsiveness levels to all-new heights, it also helps us contribute to Duncan's business by making it possible for them to minimize customers' (aircraft) downtime."

Duncan Aviation's John Bieber agrees. "Our customers stand to benefit the most," he says. "Shortening downtime and controlling expenses are on the forefront of every operator's mind. Having a P&WC HSI shop located in Battle Creek and staffed by the OEM cuts the time and expense necessary to send out parts for factory inspection. Now all we do is walk them down the ramp."

John continues, "Pratt & Whitney Canada is a great company that produces a solid product. Looking into the future, this partnership with Pratt & Whitney Canada positions us for success in providing our customers with the best and most comprehensive engine maintenance services.




Even though the P&WC shop is located in Battle Creek, all Duncan Aviation locations, including our maintenance facility in Provo, Utah, and our Engine Rapid Response teams across the country will benefit from having a built-in P&WC support system at their fingertips.

“Having Pratt & Whitney Canada within our network gives us direct and immediate access to the OEM,” says Bill Walker, Duncan Aviation’s Pratt & Whitney Canada Engine Tech Rep. “I’m able to walk down the hall and have a conversation with the OEM expert while connected to any of Duncan Aviation’s locations. It doesn’t get more hands-on than that.”

The arrangement is ideal to provide Duncan Aviation customers with real savings, Bill says. Not only do Duncan Aviation technicians have unprecedented access to OEM technicians and engines are delivered out of maintenance quicker, but parts shipping costs are nearly non-existent.

The More Things Change, the More They Stay the Same

Pratt & Whitney Canada has been, is still and will always be a part of the Duncan Aviation tradition. We continue to work with all major Pratt & Whitney Canada programs and authorized service facilities to provide overhaul management services to customers seeking the highest in P&WC engine expertise, creating a one-stop shop environment for our customers.

For more information, contact Kevin Worthington, Turbine Engine Service Sales Rep at 269.969.8453 or Phil Suglia, Manager of Service Sales at 269.969.8458. 

“ Providing Duncan Aviation with on-site support for maintenance manual-level work is an important milestone for Pratt & Whitney Canada. Not only does it take our responsiveness levels to all-new heights, it also helps us contribute to Duncan’s business by making it possible for them to minimize customers’ (aircraft) downtime.”

– **Curt McClung, Director of Customer Service Operations for P&WC**

“**M**any companies are taking environmental responsibility seriously, developing eco-friendly practices and demanding them from vendors and partners. Duncan Aviation, which has an official “Green Team” to monitor and address environmental issues, is no exception.

“Duncan Aviation believes that our business practices should make good business sense and be socially responsible. Toward these ends, we launched the Duncan Aviation Green Team to promote green practices,” says Jeannine Falter, Vice President of Business Development.

Members of the Green Team represent a variety of departments from Duncan Aviation’s three main facilities in Lincoln, Nebraska, Battle Creek, Michigan and Provo, Utah. Jeannine says all members care deeply about Duncan

Aviation and want to help the company succeed while continuing its quest to always do the right thing.

The team is focused on how our business potentially affects the environment and how to best address concerns. The team’s goal is to establish green policies to include curbing the unnecessary consumption of

resources, using what we have more efficiently and recycling everything we possibly can. The

team is also responsible for communicating with other employees and customers about what actions the company is taking and how we can all implement “green” policies at work and at home.

“The benefits of making ‘green’ decisions are good for us and for those who will follow us,” Jeannine says. “In our business lives, we can often make even bigger strides in reducing our negative effects on the environment. And those changes can help customers by decreasing costs and making work more efficient.”



The Paint Challenge

While being customer focused, all of the Duncan Aviation production departments have contributed to the goal of making the company more “green.” The Paint department presented the most significant opportunity to reduce hazardous materials.

Chrome, also known as chromate or hexavalent chromium, has been in the news for years and its threats to the environment and human health are well-known. The Occupational Safety and Health Administration (OSHA) and the Environmental Protection Agency (EPA) have adjusted tolerance levels downward in recent years, which compelled the business aviation industry to make some significant changes to its paint processes as well.

Even prior to the new regulations, however, Duncan Aviation was committed to safeguarding the health and welfare of its customers and team members, so research on chrome-free paint began many years ago.

In 2010, Duncan Aviation received FAA approval for its new, low-chromate paint process. Duncan Aviation now uses PreKote as a pretreatment alternative to the etch and alodine methods previously used and a new Sherwin-Williams primer, which replaces the traditional zinc chromate primer. For more information about chrome free paint process, you can download a field guide called “The Truth About Chrome Free Paint Systems,” written by several Duncan Aviation paint experts at www.DuncanAviation.aero/fieldguides.

Companywide Differences


Most of the changes put in place by the Green Team are subtle yet significant, Jeannine says, and were identified by having small groups of people around the company question current practices. She says Duncan Aviation has made great strides. Following are some additional ways our greener policies are making a difference.

- **Lighting.** Throughout many facilities, teams have replaced old, energy-hogging light fixtures with more energy-efficient lighting. Estimates on savings range from \$14-15,000 per year. We are also working to safely dispose of light bulbs and tubes. In 2009, the Lincoln facility recycled 1,857 fluorescent light tubes. By 2010, that number was up to 3,695 tubes. Battle Creek prevented 1,398 fluorescent tubes from going to a landfill in 2010 by recycling them.
- **Energy Use.** Duncan Aviation has looked at many ways to decrease energy consumption. Occupancy sensors to

automatically turn off lights when no one is present have been installed in low-traffic areas. Placards that remind team members to turn off lights when they’re the last person out of an area were installed in all restrooms, conference rooms, and lunch rooms. Many hangar fan motors have been replaced with variable frequency drives (VFDs) to control the fan motor speeds so they’re not operating at full speed all day, every day. And programmable thermostats that were installed in offices and hangars have gone a long way to reduce overall energy consumption throughout the company.

- **Recycling.** In a push for greater awareness, more recycling bins have been placed in offices, hangars, shops, lunchrooms and conference rooms. Battle Creek recycled a whopping 27 tons of cardboard and office paper in 2010, and Lincoln recycled 33 tons. Metal recycling has also seen a push. The Battle Creek and Lincoln facilities now have bins in shops and on hangar floors so technicians can recycle small-metal waste like nuts, bolts, screws, brackets and bearings. And in an effort to encourage the responsible disposal of used electronic devices (such as batteries, vacuum cleaners, DVD players, cell phones, digital cameras, radios, lamps and cordless phones) the Lincoln facility invited a local electronics recycling company to collect unwanted electronic/electric junk. On a frigid December day, team members stepped up and loaded hundreds of pounds of used electronics onto the truck!
- **Electronic “Printing.”** Duncan Aviation transitioned its payroll from paper checks and pay stubs to paperless, electronic data. All checks are now deposited directly for team members, and pay stubs are available online for viewing or printing when necessary. In addition, in lieu of faxing our *Duncan Intelligence* newsletter to companies around the world, we now e-mail it to subscribers once a month. These two major changes have cut down considerably on paper use required by our customers and used by our team members.

An Ongoing Process

More efforts are underway to ensure that the products and services we offer are environmentally safe and responsible. The Duncan Aviation Green Team will continue to find ways to help the company do what’s responsible for the environment and is best for our health and well-being. 

Arjen Groeneveld:

Helping Customers in Europe

At the age of 12, Arjen Groeneveld built his first model airplane. That began his love for aviation. By 14, he was flying aerobatics in Dutch competitions with his remote-controlled models. Over the years, he developed his interests professionally, attending technical school and working in maintenance, aerospace research and the commercial airline and aircraft leasing industries.

His career brought him to Duncan Aviation in the spring of 2008 as a customer. After his first experience with Duncan Aviation, he knew for sure that it would not be his last.

After just a few short years, Arjen is now a member of the Duncan Aviation team. Living and working in the Netherlands, he travels the region interfacing with aircraft operators, management organizations and other service providers with the goal of maintaining and building relationships. Arjen's ability to speak German, Dutch and English amplifies his abilities as Duncan Aviation's first European Regional Manager.

A Career that Benefits

After receiving his aeronautical degree from Anthony Fokker College, Arjen worked as a helicopter technician, spent seven years with the Dutch Aerospace laboratory, some time in aircraft leasing and five years deriving experience with consultancy. He attained a degree in Polytechnic Engineering and Business Administration and further developed his 20+ years of aviation skill.

During that first trip to Duncan Aviation, Arjen met Tony Gilbert, Duncan Aviation's Vice President of International Business. Arjen was at Duncan Aviation's Battle Creek facility for a C-check on a Falcon 2000EX. "We started talking about

possibilities to grow Duncan Aviation's support in Europe," explains Arjen.

In 2009, Tony moved to Paris, where he and Arjen met on a regular basis. They spent time visiting customers and potential customers throughout Europe together. In 2011, Arjen took over responsibility for Duncan Aviation's European business. Tony has since moved to Brazil, where he continues to expand Duncan Aviation's international reach and Arjen carries on European customer development and support.

"Tony taught me a lot about the Duncan Aviation way of working and who to contact for particular expertise," Arjen states. "Further, he gave me more insights about Duncan Aviation's history and unique selling points. Even though Tony is now in Brazil, I can always rely on him."

Easing Uncertainty

As a former customer of Duncan Aviation, Arjen says his first impressions of Duncan Aviation were good, "nice facility, great people with ownership for their work, a lot of knowledge, a surprising list of in-house capabilities and good cost-control." These are attributes that Arjen enjoys promoting to the market. "My motivations have always been safe aircraft operation and enabling lower cost per flying hour."

He now gets to support other operators to achieve those same goals. "Being in a position where I get to interact and support the customer is most rewarding" explains Arjen. "Growing the business, building relationships with maintenance suppliers and enhancing the European service network just add to the excitement."

"In Europe, we see a lot of aircraft management groups and charter companies. Many do not have in-house capabilities to meet European Aviation

Safety Agency (EASA) requirements and EU-OPS rulemaking. They are structured organizations with large fleets of aircraft. They are in need of contracted maintenance. These companies are important customers of Duncan Aviation," says Arjen.

According to Arjen, customer impressions of Duncan Aviation are positive. He often hears from customers that Duncan Aviation is a respected company. Any concerns usually revolve around whether it is worth the effort to ferry an aircraft to the United States or customers wonder how they will keep track of a large maintenance event over such great distance.

As a customer and now as an employee, when Arjen steps back and looks at what Duncan Aviation offers, he sees a senior management team who invites employees to be involved in process improvement. Arjen explains, "Many projects are managed in a bottom-up style. This makes the team members committed."

Key corporate IT systems are developed in-house instead of being purchased from a shelf. This approach delivers results like myDuncan, the web-based project management tool for customers, and the electronic work order system, which allows customized reporting and regulated documents to improve efficiency. It will be up to Arjen to educate operators of these specialty services.

Over time, Arjen plans to relieve any uncertainties. Letting operators know of Duncan Aviation's tip-to-tail service, skilled technicians, experience with EASA regulations, craftsmanship and innovative systems such as myDuncan will be his main goals. "It would be nice to bring every potential customer to a Duncan Aviation facility" says Arjen. "Once on-site, they would see all that we have to offer. That is all it would take."


Today's Newest Initiatives

Since his start, Arjen has been a part of a number of initiatives. Arjen has been and will continue to be instrumental in providing support to customers located in Europe and part of this support is through Duncan Aviation's first European Customer Advisory Board.

Arjen says the initial meeting, held during the European Business Aviation Convention & Exhibition (EBACE) 2011, came together nicely. "It was good to see customers in discussion with each other," he says. The second meeting is planned for fall and will deliver an active brainstorming session. These meetings will serve Duncan Aviation well and will lead to even better customer support in the future.

In addition to the European Customer Advisory Board, Arjen has spent time developing relationships with fleet managers and maintenance suppliers. Working with others, Duncan Aviation will provide support to operators and continue to support those operators long after they leave a Duncan Aviation facility.

Duncan Aviation is accomplishing its aircraft service mission worldwide because of its dedicated team members who work with competence, dedication and passion. With Arjen now a part of that mission, the future of Duncan Aviation's European presence is enhanced. He supports a need in the international market that can only lead to bigger and better opportunities.

Tony Gilbert is proud of the mission saying "I believe Duncan Aviation is solidifying its presence around the world, changing its image from a company that does business abroad to a global presence that operators know and trust." 



European Regional Manager

Direct: 31.2.0820.2328

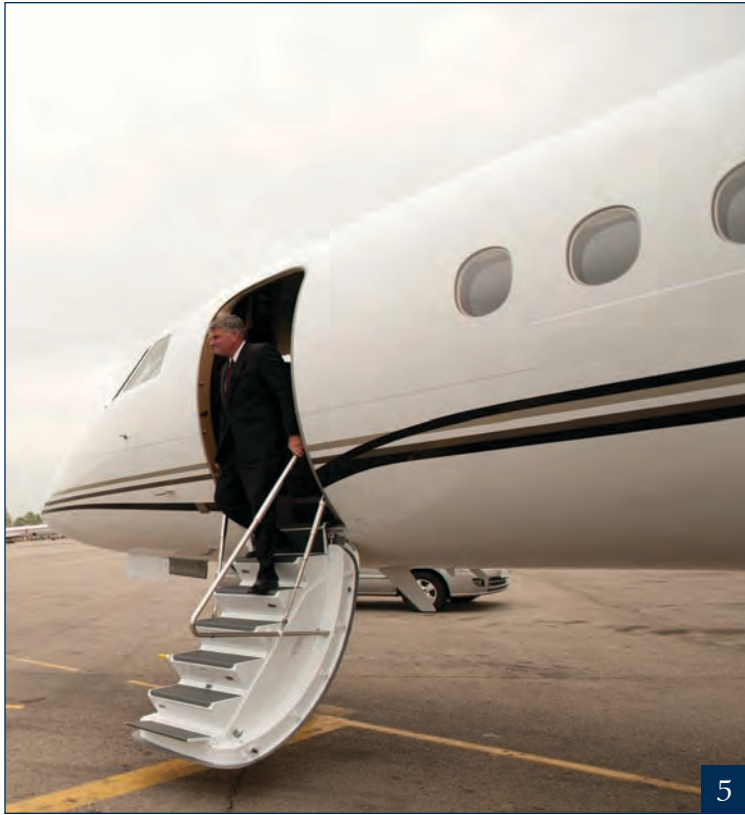
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Samaritan's Purse®

INTERNATIONAL RELIEF



Franklin Graham Pilots Disaster Relief Worldwide: Duncan Aviation's Teams Lend Expertise.

Through more than thirty years of earthquakes, hurricanes, wars and famine, Franklin Graham has led Samaritan's Purse, helping meet the needs of people and sharing a Christian mission.

"We are a non-denominational relief and development organization" states Franklin, "with a goal to help people who have fallen in the ditch along life's road."

The Bible story of the Good Samaritan helping an injured traveler gives Samaritan's Purse a clear mission to help those in need. Their emergency relief programs throughout



Photos Courtesy of Samaritan's Purse

1 Franklin Graham viewed areas devastated by the earthquake and tsunami in Japan.

2 Franklin Graham meets Luke Velnea, a "tap tap" (taxi driver) in Grand Goave. Velnea was injured in the quake, and he and three immediate family members all lost their homes. They each received

shelter materials and other relief supplies from Samaritan's Purse.

3 Samaritan's Purse sent a 747 cargo plane loaded with 93 tons of relief supplies to Japan for earthquake and tsunami survivors. Duncan Aviation reached out by donating a pallet of blankets.

4 Samaritan's Purse built sturdy temporary shelters for hundreds of quake-stricken families in Haiti.

5 Franklin Graham arriving in China on the new Falcon 900EX.

6 "It was heartbreaking to see the devastation in Ishinomaki, where thousands lost loved ones, homes

and livelihoods in a matter of minutes," says Franklin Graham.

7 Samaritan's Purse continues to provide relief and comfort to people in hard-hit coastal communities in Japan.

8 Delivering supplies to North Korea after massive flooding.

the world provide prompt and efficient assistance to victims of devastation and a chance to rebuild their lives.

Many supporters make it possible for Samaritan's Purse to provide for those in need. However, Franklin explains, general aviation is one of the biggest reasons they are able to make it all work.

Franklin, the Pilot

As a young man in 1971, Franklin attained his pilot's license, not knowing at that time just how important aviation would

"I was immediately impressed by its size, courtesy and how efficiently things operated."

FG

become in his life's work. He has been flying for 40 years now, 30 of which he has been a Duncan Aviation customer.

"On my first trip to Duncan Aviation, I was flying cross country in a Cessna 180 when I landed in Lincoln for fuel," says Franklin. "I was immediately impressed by its size, courtesy and how efficiently things operated."

For many years, Franklin would stop at Duncan Aviation for fuel when he was out traveling, always remaining impressed by what a facility in Lincoln, Nebraska, could offer.

Then there came a need to purchase an aircraft for the Boone, North Carolina, office of Samaritan's Purse. Franklin found a Falcon 50, but wanted another set of eyes to help him assess the aircraft. He thought of Duncan Aviation first.

Franklin had always been awed with the many things that Duncan Aviation offered to an operator and assumed that the Aircraft Sales and Acquisition team would surely offer the same courteous support. He says he was not disappointed.

Purchasing a Relief Aircraft

"Purchasing an aircraft is complicated" explains Franklin, "but having someone who knows what they are doing makes it so much easier." Franklin worked with Bob McCammon, Duncan Aviation Aircraft Sales Representative, through an assessment of the purchase and in 2004, Franklin purchased that Falcon 50. "Bob was very professional and extremely helpful," states Franklin.

"The aircraft needed a little work," Franklin says, so the project was completed at Duncan Aviation. Initial work scopes included interior modifications and installation of Pro Line 21 avionics.

"We found that every year or so we would make an upgrade to the plane," says Franklin. "Because we have always been happy with the work that Duncan Aviation provided, we continued to come back."

In late 2010, Franklin saw opportunities in the market. He decided to sell the Falcon 50 and look for something that could offer him more efficiency. He returned to Duncan Aviation, this time working with Bob and Rene Cardona, also an Aircraft Sales Rep. Franklin purchased a Falcon 900EX which offers him more range and operational flexibility.

"Bob and Rene are two well-qualified, knowledgeable gentlemen," says Franklin. "They conduct themselves very professionally and are never pushy."

Franklin explains that in his experience, lots of times salespeople are over-eager, "but that is not what you have at Duncan Aviation," says Franklin. "Whether you are buying or selling, they are very helpful, honest and up-front."

Throughout both the sale of the 50 and the acquisition of the 900EX, "Bob and Rene did a great job and I thoroughly enjoyed working with them. They are great men," states Franklin.

Bob says he, too, enjoyed working with Franklin. "He did the research and saw the opportunity the market presented."

"Whether you are buying or selling, Duncan Aviation is very helpful, honest and up-front."

FG

"Franklin has been flying for a long time," Bob continues. "I found him to be a really sharp guy, down to earth and eager to speak with the team and tech reps assisting with the pre-buy."

"Franklin has such a professional approach to everything," says Rene. "He was involved in all facets of the acquisition process and displayed knowledge of general aviation that was apparent to us all."

Franklin says the Falcon 900EX has quickly become a huge part of the ministry. Just a couple of months ago, during one of Franklin's trips to North Korea, he had Greta Van Susteren of

Fox News aboard the Falcon. This was her third trip to North Korea with Franklin.

And last winter, Franklin had the ABC Nightline crew on the Falcon during one of his trips to Haiti. "I find the aircraft not only gets me on location quickly," explains Franklin, "but allows me to take people along...people of influence, who can help make a difference in the area of the world where I am working."

Franklin and Duncan Aviation

"Everyone I have ever worked with from Duncan Aviation has been professional. At Duncan Aviation they have high

"Duncan Aviation will take care of you wherever you are in the world."

FG

quality people, with high standards and excellent work ethic," says Franklin.

With Franklin's demanding schedule, most maintenance events with Duncan Aviation are led by Samaritan's Director of Maintenance, Jeff Sanders.

"The Duncan Aviation teams have developed a great relationship with Jeff," says Bob. "Working through the sale of the Falcon 50, the acquisition of the 900EX and other maintenance events over the years, Jeff literally becomes a part of their team while he is on-site."

"I have found that Duncan Aviation's help is not just available in Lincoln or Battle Creek. They will take care of you wherever you are in the world," says Franklin. He goes on to explain that there were a few times while traveling, when they had issues with their aircraft and Duncan Aviation was there to support them.

"We were en-route to China and North Korea last year and had stopped in Kalispell, Montana, with an issue. We called Duncan Aviation, who quickly asked that we bring the aircraft in. We landed in Lincoln at 9 p.m. and by midnight it was fixed. We were able to take off early in the morning and continue the trip without further delay."

"On another occasion, we were overseas and needed a part. Duncan Aviation was able to get it shipped into Nairobi, Kenya, within just a couple of days. We were able to put the part in and continue with the trip, once again without major delay."

Relief in Japan

Franklin says that when you are a customer with Duncan Aviation, it is a partnership. He saw this first-hand during this past year when the earthquake and tsunami devastated Japan. During this time, Samaritan's Purse was working with Duncan Aviation through the sales and acquisition process.

"Duncan Aviation offered to sponsor some pallets we had going over to Japan," explains Franklin. "Duncan Aviation took the lead and when we told others that Duncan Aviation was a part of it, they wanted to be a part of it, too."


The support was outstanding. Working with the United States Air Force, Duncan Aviation and many other supporters, Samaritan's Purse sent pallets containing blankets, heavy-duty plastic, hygiene kits, soap, buckets, and jerry cans. They were delivered promptly and transported to a Sendai rescue center within just a few days.

Samaritan's Purse was the first non-government organization to respond. "To be able to come in within hours, to show compassion, show love, and for me, as a Christian, to share with the people of Japan the hope that I have in Jesus Christ was truly amazing," says Franklin.

"It was a great incentive for us to have a partner like Duncan Aviation who gave their name and shared some of their resources to help the people of Japan," he continues.

Franklin has devoted his life to meeting the needs of people like those in Japan and around the entire world. Under his leadership, Samaritan's Purse has met the needs of poor, sick and suffering people in more than 100 countries.

Whether it is here in the United States, assisting after a hurricane like Katrina or the recent tornadoes in Joplin, Missouri, and Tuscaloosa, Alabama, or in far away countries such as Haiti, North Korea and Japan, Samaritan's Purse responds with open arms.

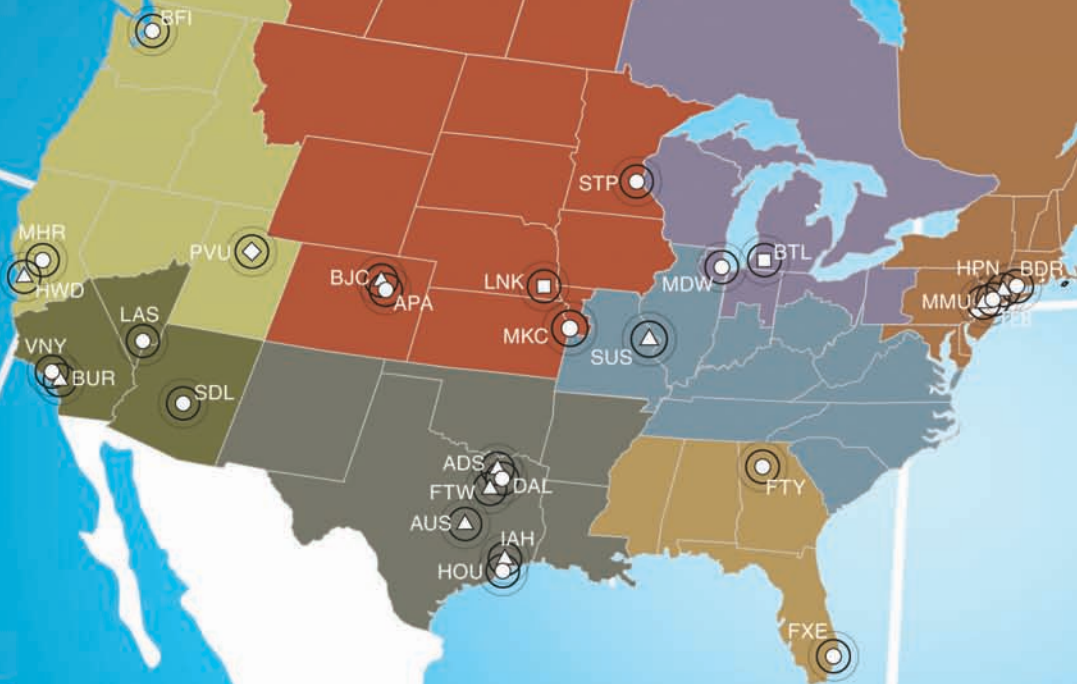
"When there is a crisis in the world, it is important for us to get there quickly," says Franklin. "Aviation is a huge part of allowing us to respond effectively and in a short period of time, worldwide." 

"Aviation is a huge part of allowing us to respond effectively and in a short period of time, worldwide."

FG

Quotes provided by Franklin Graham

DUNCAN AVIATION



INTERNATIONAL BUSINESS

Tony Gilbert

Tony is presently located in Latin America and may be reached through Duncan Aviation's headquarters (402.475.2611).
USA Cellular 269.277.2895



WORLDWIDE SUPPORT

EUROPEAN REPRESENTATIVE

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HPN	White Plains, New York	914.686.8294
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Duncan 411

NEWS & TECH UPDATES

n. (duncan aviation): the most comprehensive, family-owned aircraft support organization with a history of trying new ideas and an ability to innovate and transition itself into emerging trends.

The “Duncan 411” addition to the *Duncan Debrief* is meant to keep you up-to-date on the continually changing aviation industry. In it, you will find Duncan Aviation news and technical updates that may affect you or your aircraft.

BREAKING NEWS DUNCAN AVIATION ADDS PMA ODA AUTHORITY

The FAA Wichita ACO has approved Duncan Aviation’s ODA authority and added Parts Manufacturing Approval (PMA) to the company’s capabilities. In addition to the Supplemental Type Certificate (STC) and Major Repairs and Alterations (MRA) authorities, Duncan Aviation can now manufacture, inspect and approve aircraft parts under its ODA designation. Now all of Duncan Aviation’s delegated authority is managed under the ODA, providing increased flexibility and more efficient turntimes. Jim Ferguson has been named Duncan Aviation’s ODA PMA Administrator. 



Chad Doehring

3200 HOUR INSPECTION ON CHALLENGER 300 COMPLETED

Duncan Aviation recently completed a 400/800/1600/3200 hour airframe inspection on a Challenger 300, one of only a handful completed industry-wide.

The inspection was completed for International Jet, and it was their first experience with Duncan Aviation on the Challenger 300. Randal Arnone, Director of Maintenance with International Jet, has this to say: "I was very impressed with the knowledge, enthusiasm and sense of pride that the entire crew exhibited." He says they will return for future service.

Airframe Team Leader Ryan Huss has led his Challenger team since 2007. In regards to their recent accomplishment on the Challenger 300, he says, "The pre-planning involved with the team members and their

n. (challenger 300 - 3200 hour inspection): encompasses approximately 270 hours of aircraft inspection. Duncan Aviation has invested in the required tooling and completed their first inspection.




Team Huss (Left to Right): Troy Nail, Brian Buss, Chris Ulrich, Harley Kinell, Austin Sailors, Justin Sutter, David Marte, Andy Leffler and Ryan Huss. Not pictured, Tim Renner.

excitement to gain more in-depth knowledge into the aircraft and its systems led to the project's success. Lead Mechanic Tim Renner had the project milestones laid out and the team

took full ownership and made sure everything exceeded Duncan Aviation's standards and the customer's expectations."

Duncan Aviation's teams of experienced airframe mechanics provide service for almost every airframe maintenance event and have Challenger Airframe Factory Authorizations in Battle Creek, Michigan, and Provo, Utah. For more information,

contact Airframe Technical Representatives Scott Shefke at 402.479.1618 or Cary Loubert at 269.969.8452 or visit www.DuncanAviation.aero/airframe/challenger.php. 

CHAD DOEHRING NOW MANAGER OF AIRFRAME SERVICES - LINCOLN, NEB.

Chad Doehring has been named manager of Duncan Aviation's Lincoln, Nebraska, Airframe Services team.

Chad has been with Duncan Aviation since 1994. He began as an airframe mechanic, specializing in Falcon and Hawker airframes. He was soon promoted to Shift Supervisor and then Assistant Manager. In 2004, he became Customer Service Manager in Lincoln and was in that role for the past seven years. He now returns to airframe maintenance and will serve as Manager. Prior to joining Duncan Aviation, Doehring worked for Northrop Grumman

on the B2 bomber as a structure, hydraulic and flight test mechanic.

"I am excited to return to airframe services" says Chad. "My seven years in customer service has taught me a lot about Duncan Aviation, our customers and their expectations. I will continue to support the customers of Duncan Aviation, leading the airframe service teams in Lincoln."

Feel free to contact Chad at 402.479.4139. 

TOUCH SCREEN TECHNOLOGY INSTALLED IN A PILATUS PC-12



Garmin GTN-750 and GTN-650 touch-screen fully integrated GPS/NAV/COMM systems that were installed in a Pilatus PC-12/45 aircraft by Duncan Aviation-Denver.

Duncan Aviation's avionics shop in Denver, Colorado, recently completed the first industry installation of the new Garmin GTN-750 and GTN-650 touch-screen fully integrated GPS/NAV/COMM systems in a Pilatus PC-12/45 aircraft.

Bob Hazy, Duncan Avionics Satellite Shop Manager, anticipates the demand for this system upgrade will begin to rise for this airframe. "There are more than 800 PC-12 Legacy aircraft in operation," Bob says. "Most have the Garmin GNS-

CUSTOMER SERVICE SUPPORT CHANGES FOR DUNCAN AVIATION-LINCOLN



Tony Leitschuck

Monte Reeves

Duncan Aviation recently promoted Monte Reeves and Tony Leitschuck to leadership positions in customer service support at the company's Lincoln, Nebraska, facility.

As Manager of Customer Service, Monte will lead the customer service and line service team members and develop customer service goals and strategies. Monte began his career with Duncan Aviation in 1991 in the Avionics Installations department. He later became an Airframe Mechanic, Inspector and Airframe

Structures Team Leader. He spent nine years as a Project Manager in Lincoln and was promoted to Assistant Manager before his most recent promotion to Manager.


Tony will support Monte as Assistant Manager. Tony started with Duncan Aviation as an Airframe Mechanic in 1989. He was promoted to Lead Mechanic and Team Leader by 1996 and became a Project Manager in 2000. He has served as team coordinator in that role. Before starting with Duncan



530 and GNS-430 systems installed. As touch-screen technology becomes more popular, the interest will grow.”

Bob goes on to explain how the installation will mean more convenience for the pilot. “With the FAA’s approval, we moved the engine instruments to the right of the center panel and installed the touch screen units to the left.”

Because the Pilatus can be flown with just one pilot, having the touch-screens closer to them is very important.

For more information on this system, contact Wayne Sand, Denver Satellite Install Team Leader at 303.210.6249 or any of Duncan Aviation’s Avionics Satellites locations. 

Aviation, Leitschuck served in the Marine Corps as a Structural Mechanic and as a Line Manager for two local airports.

“In these new roles, Monte and Tony will continue to positively impact the ‘customer experience’ at Duncan Aviation,” says Jeff Lake, Duncan Aviation-Lincoln Chief Operating Officer. “They have both shown great commitment to our customers and teams over the years and I am confident that with them leading, our great reputation for customer responsiveness and support will continue to lead the industry.”

You can reach Monte at 402.479.1508 and Tony at 402.479.1671. 



DUNCAN AVIATION AIRCRAFT SALES & ACQUISITIONS

Purchasing or selling an aircraft in today’s market can be a daunting task. As the leading independent maintenance, completions and avionics facility in the world, Duncan Aviation also has an Aircraft Sales and Acquisitions team with the experience to provide customers with peace of mind.

Duncan Aviation has been in aircraft sales and support for more than 55 years. Altogether, the Aircraft Sales and Acquisitions team has completed more than 3,000 transactions.

Aircraft knowledge, acquisition experience and worldwide resources allow the team to locate and evaluate aircraft and provide potential purchasers with the complete and unbiased information they need to make informed decisions. For those selling an aircraft, Duncan Aviation’s consignment service helps them market to the most qualified buyers.

Whether you are buying or selling your first aircraft or upgrading or adding to a fleet, working with the Aircraft Sales and Acquisition experts team at Duncan Aviation will provide you with the most negotiating strength.



WATER SAFETY SOLUTIONS

Water safety is often overlooked in the world of aviation. So Duncan Aviation has teamed up with International Water-Guard Industries Inc. as part of our ongoing commitment to make our customers' health, safety, and cabin environment a top priority.

To specifically address water safety, International Water-Guard's IWG-A4 UV water treatment unit can be installed in business aircraft. Already in operation on the Dassault F900 and F2000 family, the IWG-A4 is a potable water treatment unit that provides crew and passengers with clean, safe water for the life of the aircraft.

"Although savvy passengers may say they never drink aircraft water, we all inevitably come in contact with the aircraft water supply in either the galley or lav. And not all passengers are sophisticated travelers – the young, old, and not well traveled may unwittingly use the aircraft water supply for all their needs," says David Fox, CEO and president of IWG.

"We are very pleased to work with IWG," says Mike Minchow, Duncan Aviation-Lincoln's Modification Sales Manager. "It's important that customers enjoy their aircraft, but basic necessities must not be overlooked. This includes the protection of passengers and crew from water-borne disease."

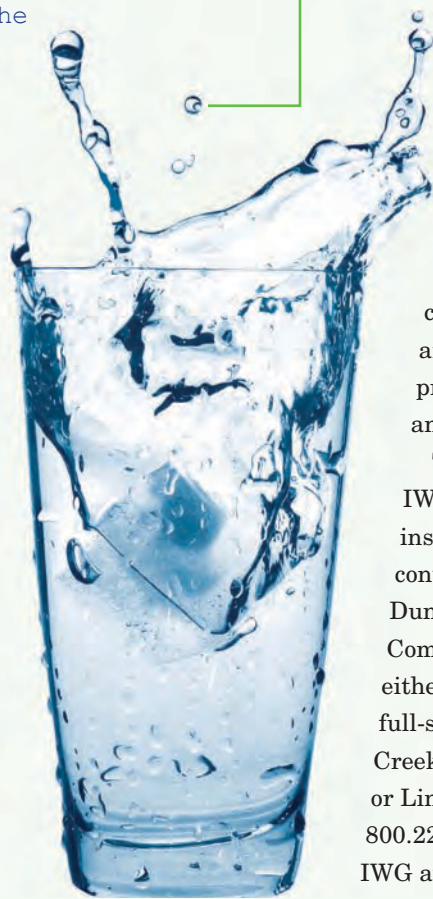
IWG's Fox says the way potential contaminants can get suddenly and dramatically out of control was recently

n. (IWG water treatment unit): a potable water treatment unit that provides crew and passengers with clean, safe water for the life of the aircraft.

highlighted by the E. coli outbreak in Europe this past spring. The outbreak was linked to raw vegetables and resulted in almost 2,200 people sick and at least 30 dead. "The E. coli family of pathogens, along with many other micro-organisms, are also water-borne.

This tragic example highlights how serious the impacts of such contamination can be and how important it is to protect the water onboard an aircraft," he says.

To find out more about IWG water treatment units, installations and prices, contact any member of Duncan Aviation's Interior Completions Sales Team at either of Duncan Aviation's full-service locations: Battle Creek, Michigan, 800.525.2376; or Lincoln, Nebraska, 800.228.4277. You may also visit IWG at www.water.aero. 



Aircraft Listings

Our inventory is always changing. Visit www.DuncanAviation.aero for more information on our current aircraft listings.



1996 Astra SPX, SN 85



1982 Learjet 35A, SN 485

AUTHORIZED SERVICE CENTER FOR 70+ ADDITIONAL HONEYWELL AEROSPACE COMPONENTS

Duncan Aviation has signed an agreement with Honeywell Aerospace that appoints Duncan Aviation as the sole “authorized service center” in the United States to provide repair and overhaul of a select list of more than 70 aircraft components.



These components include various instruments, indicators and sensors on a wide variety of aircraft, including airline and “special mission” government aircraft. Some of the more popular components on the list include the following: 4016341-XXX BA-141; 4021541-XXX GH-14; 7000622-901 VG-14A; 7002860-XXX SI-225; and JG-1208XXXX load selectors.

“Duncan Aviation is looking forward to introducing new customers to the value and service for which both Duncan and Honeywell are so well known,” says Steve Gade, Vice President of Duncan Aviation’s Parts and Components Solutions. “Duncan Aviation has the tooling,

n. (authorized service center): Duncan Aviation maintains strong working relationships with manufacturers to provide the most complete services possible to our customers. Visit www.duncanaviation.aero/authorizations to see a complete list of authorizations.

equipment and factory training in place that will allow us to provide excellent support to Honeywell’s customers who operate aircraft utilizing these components. Our customer service solutions like our pool of loaners and exchanges will be a big benefit to those operators, as will our industry-leading turntimes and technical expertise.”

Donna Chase, Honeywell’s Vice President of Business Aviation Aftermarket, had this to say about the agreement: “Honeywell’s collaboration

with Duncan Aviation provides business aviation customers operating legacy aircraft the peace of mind that only our combined experience and commitment to serve can deliver.”



INTELLI-CONFERENCE SYMPOSIUM PLANNED FOR DALLAS AND MAINTENANCE SEMINAR PLANNED FOR ATLANTA

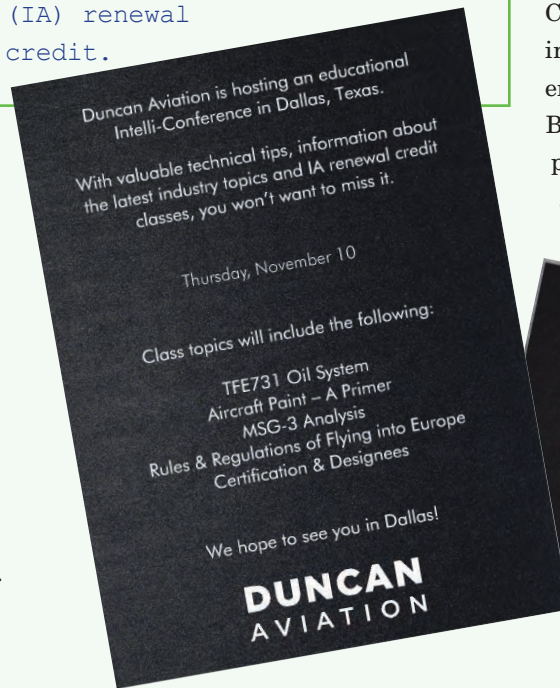
Dallas Intelli-Conference

Duncan Aviation will host an Intelli-Conference symposium on November 10 in Dallas, Texas.

The one-day symposium will provide face-to-face forum discussion with industry experts on hot industry topics as well as classes with Inspector Authorization (IA) renewal credit. Attendees will be able to choose their sessions, which will last all day with a luncheon in the middle. There is no charge for the event and accompanying meals, although attendees are responsible for their own lodging, if needed.

Many of the classes are approved for IA renewal credit. Registration for the symposium is open now at www.DuncanAviation.aero/events. For more information about the event, contact Pam Orr, Duncan Aviation's Event Coordinator at 402.479.1513 or Rick Randall, Regional Manager, at 817.472.6113.

n. (intelli-conference): educational business aviation events providing face-to-face forum discussion with industry experts on hot industry topics as well as classes with Inspector Authorization (IA) renewal credit.



Atlanta Maintenance Seminar

In addition, aviation experts from Duncan Aviation will be teaching some of the seminars at the Georgia Business Aviation Association (GBAA) Maintenance Seminar to be held Nov. 15 at the Georgia Department of Transportation Hangar in Atlanta. Class subjects to be covered there include regulations, human factors, engine, avionics and airframe. Breakfast and lunch will be provided. For more information about this event, contact the GBAA at gbaa@att.net.



(Left to Right): KC Chan, Dassault Falconjet Field Service Rep., Doug Patocka, James Donahue, Scott Howell and Jason Thuman

DUNCAN AVIATION TECHNICIANS TRAVEL TO CHINA TO HELP 7X OPERATOR

For several years, Duncan Aviation has supported Falcon 7X operators

in-house and on the road with various inspections and support work. Recently, Duncan Aviation technicians traveled to Shanghai, China, to support a Falcon 7X operator.


“Duncan Aviation-Lincoln is one of very few facilities in the world that has approval for Falcon aircraft from the Civil Aviation Administration of China (CAAC),” says Ron Grose, Duncan Aviation Falcon Technical Rep. “This

TOM LIESER NAMED AVIONICS SATELLITE MANAGER-ST. PAUL


Tom Lieser has been named manager of Duncan Aviation's avionics satellite facility in St. Paul, Minnesota.

"Tom's passion for aviation, our customers and his own growth and development has influenced the satellite network since he began with Duncan Aviation," says Matt Nelson, Manager of Satellite Operations. "I am confident he will continue to positively impact our service and support as he has in every Duncan Aviation satellite of which he has been a part."

Tom joined Duncan Aviation in 2003 as an avionics technician in St. Paul. He transferred to Duncan Aviation's Chicago avionics satellite shop in 2010 as crew lead and now returns to St. Paul as manager. Tom is a graduate of St. Cloud University with a bachelor's degree in Aviation Operations and an associate's degree in Aviation Electronics.

Feel free to contact Tom at 651.755.3546. 

entire effort is a great testament to the relationships that Duncan Aviation has with manufacturers all over the world and the trust they and operators have in our systems and our people."

For more information, contact any one of Duncan Aviation's Falcon Technical Reps, which include Mark Goertzen at 402.179.1511, Ron Grose at 402.479.1640, both in Lincoln, and Kevin Bornhorst in Battle Creek at 269.969.8482. 



DUNCAN AVIATION

BUSINESS AIRCRAFT SERVICE & SUPPORT

- Aircraft Acquisition & Consignment
- Airframe Maintenance
- Avionics Installation
- Engine & APU
- Government & Special Programs
- Paint & Interior
- Parts, Avionics, Instruments & Accessories
- Emergency Assistance (AOG)



Duncan Aviation is an independent business aircraft support organization providing complete service and technical support. The Duncan Aviation name is well-known and respected by manufacturers, service providers and operators around the world. We have a strong reputation for providing one-stop premier aircraft services—delivered on time—for a wide variety of business aircraft.



Cover: Jeff Lake, COO; Todd Duncan, Chairman; Aaron Hilkemann, President; Doug Bohac, Paint Manager and Larry Sterling, Facilities Manager, discussing the progress of Duncan Aviation's new paint hangar.