# Debrig 2011

## Ducan aviation Debrief

#### www.DuncanAviation.aero Spring 2011 Duncan Debrief, a quarterly customer magazine.

#### Project Management: Personal Planning Throughout Your Project

Project Managers at Duncan Aviation are one of a kind. They are focused solely on project management, not employee management.

#### Jeff Duvall: Home Again

Duncan Aviation customer Jeff Duvall describes the relationship he has with Duncan Aviation and his Project Manager, Tony Leitschuck.

## Meeting Leve's Aircraft Needs

Doug Stussi with Love's Travel Stops has worked with Duncan Aviation's Doug Roth through four aircraft acquisitions. He talks here about why he keeps coming back to Duncan Aviation.

### 15 Engine Service Since "The Beginning"

Duncan Aviation's Engine Services celebrates its 30th year of being a Honeywell Major Authorized Service Center. Although our OEM authorization became official in 1981, we've actually been here from the beginning.

## **11** How to Extend the Life of Your Aircraft Interior

An interior refurbishment can be effectively "phased" over several years of regularly scheduled maintenance events. By doing this, long-term costs are reduced, extra downtime is avoided and the interior is kept in pristine condition.

### 17 Worldwide Support

Duncan Aviation has experts worldwide, ready to provide customers with tip-to-tail aircraft support including parts, avionics, engine and airframe maintenance, completions, paint and avionics installations needs.





It is rare these days to have a business so confident in what it does that it warranties work for 24 months. Duncan Aviation's Components Solutions now provides the peace of mind that comes with a 24-month, nohassles warranty on many overhauled avionics and accessory units.

## Tech Report

In one spot, we provide the latest in Duncan Aviation news, industry trends and technical questions.

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company founder: Donald Duncan (1922-1981)



## from the chairman

#### Todd Duncan

Duncan Aviation customers tell us that our commitment to provide them with high-quality work is unmatched in the industry. Whether we are repairing a radar unit, performing a 2C inspection on a Falcon 900 or designing and completing new paint and a reconfigured interior for a Gulfstream IV, the quality of work and craftsmanship that our technical experts provide is unlike any other.

Our high quality goes deeper than the technical work we perform, though. It also refers to the personal service that comes along with any project delivered at Duncan Aviation. To provide the highest level of customer service, input from customers must be heard and result in action. Customer input has always been extremely important to me, as it was for both my father and grandfather. We take the time to listen to each customer through formal and informal means. Every two weeks, we host customer dinners for on-site customers in Lincoln and Battle Creek. Our senior team members, customer service project managers and technical experts are also given the chance to seek input from customers about their expectations, recommendations and experience. Personally, I enjoy the chance to get to know our customers whenever possible and always enjoy learning more about their business, as well as their more personal interests.

It is through personal relationships and open lines of communication where quality of customer service is strengthened. When our customers reflect on their experience with us, we hope they appreciate all aspects of quality provided by our teams; with each project, our customer's expectations become our goals and, whatever their needs, we strive to deliver the highest quality possible.



## project manager

#### Doyle Garrett

In the early '90s, Duncan Aviation introduced the Project Manager concept to the industry. The goal was to provide each customer with a main point of contact for all work being done to each aircraft. It is the Project Manager's job to know the progress of the project, whether it is on schedule and if there are required approvals or actions potentially holding up work.

Doyle Garrett, a Duncan Aviation team member for 32 years, was a member of the first team of Project Managers. Hand-picked by management for this role, Doyle and the others came from various areas within the company in order to supply a wide variety of expertise and background.

"The role of the Project Manager is to take ownership in the work Duncan Aviation does with every project we are assigned, large or small," Doyle says. "It is our job to support the teams performing the technical work and make sure what is being done matches or exceeds the customers' expectations." This has turned into a satisfying job for Doyle, and one that has some great intangible benefits.

"As a direct result of my work as a Project Manager, I have developed many long and lasting friendships with Duncan Aviation customers," he continues.

"Those friendships develop in part because we are working for the same goal—having the aircraft leave with a complete project that is of the highest possible quality and that is on time and on budget. But it is more than that. When we work together, we see a lot of each other. We talk a lot and learn about each others' lives outside of aviation, like hobbies and family relationships. I believe part of my job is to help customers find enjoyable things to do when they are not in the hangar watching their projects progress."

The concept has worked well and has been emulated by many other companies within the industry. The difference is found in the people . . . the quality and knowledge of the person in the position of Project Manager.

## Project

## Management:

Personal Planning Throughout Your Project

## Job: LW95

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Paint

A/C out of paint

Detail

A/C on jacks

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### Duncan Aviation has developed a process that makes a strong commitment to you as a customer.

That commitment is this: From the signed agreement to the final delivery day and beyond, one person will be there for you, one person who knows your airplane, one person who will answer your questions and one person who will work to coordinate dozens of technicians. This commitment helps to generate a completed project that is on time, on budget and that allows you to take flight from the runway knowing you couldn't have made a better choice. Who is that one person? Your Project Manager (PM).

The role of the PM dates back to the early 1990s. By design, each aircraft project completed within a Duncan Aviation maintenance facility is assigned a PM. The PM is the single point of contact for the customer and serves as the connection between the customer and the internal teams. They coordinate the project from beginning to end to ensure overall success. This duty involves providing customer service through communication, leadership and management. The events that consume the typical day for a PM may come as a surprise. Between phone calls, meetings, aircraft photos, billing, tracking parts and email, it is difficult to define a typical day. But with each project, there are five key stages to its success.

### Stage 1: Scheduling

Before the agreement is signed, the scheduling team gets involved to assist the sales staff with dates for input, delivery and personnel assignments. For returning customers, assignments are based on previous working relationships or specific aircraft familiarity. For first-time customers, a PM may be assigned based on aircraft make/model experience, as well as personality characteristics. Research is done to help establish the best pairing to aid team building and success.

During scheduling, a rough flow of the project is mapped and the service plan is created. The service plan is communicated to all team members and lists details of the individual work scopes completed by each team. "Research is done to help establish the best pairing to aid team building and success."

## Meet Monte Reeves, Project Manager

Monte Reeves began his career at Duncan Aviation in 1991 in the Avionics Installations department. He later became an Airframe Mechanic, Quality Inspector and Airframe Structures Team Leader. Prior to Duncan Aviation, Monte was employed at BF Goodrich Aerospace in Everett, Washington. Monte holds an A&P license. He enjoys the opportunity to meet and work with great customers and the industry's best technicians and staff. Monte and his wife, Nicole, have two sons, Jake and Trevor. He enjoys hunting, fishing, racing and coaching his sons' football and baseball teams. Monte is also an active member of the Seward County Pheasants Forever Club, where he has served as Banquet Chair. "Proper pre-planning activities can ensure that we meet the schedule and deliver a safe and compliant aircraft."

## Stage 2: Pre-Planning

After assignments have been made, the "Sales-to-PM Handoff" is initiated. In this meeting, the project concepts and work scope plans are handed off to the PM. An internal checklist is used to ensure all information is received. A call is made to the customer to introduce the PM as the primary contact and, from this point on, the PM will have full focus on the project and assist the customer with any needs.

During the pre-planning stage of every project, pre-planning meetings are held. These meetings take place in scheduled conference rooms with representatives from all teams. The goal is for everyone to be ready at aircraft arrival; the team makes sure that all questions are answered, major milestones are mapped and any pending issues are researched. The PM facilitates this meeting and coordinates open issues by assigning responsibility for resolution.

"Pre-planning on large projects before input is very critical to the Engineering and Certification group. We are all much more efficient if we develop a plan for the entire project, communicate the expectations to all groups involved and then work to the plan. Proper pre-planning activities can ensure that we meet the schedule and deliver a safe and compliant aircraft," says Lyle Schueth, Certification Coordinator.

## Stage 3: Aircraft Arrival

Upon arrival, the PM will greet the customer at the cabin door, welcoming him or her to Duncan Aviation. Team representatives will be stationed at the flight desk or in a conference room to also greet the customer. Within the first few moments of arrival, the PM will escort the customer to a conference room where a debrief meeting is held with the customer and team leaders for the project. During the debrief, formal introductions are made, work scopes are reviewed and questions are addressed. For returning customers, this is a chance to catch up with old friends. Many customers request specific teams. It is not uncommon for airframe teams to develop lasting relationships with a customer or Director of Maintenance (DOM). They trust the expertise of the teams and find comfort in the familiarity that the technicians have with their airplane.

"It is good for the production teams to build familiarity with the minor differences that can exist on airplanes. In addition, getting to know the customers personally helps me to better serve them. When I know what their expectations are from past experience, it makes it a lot easier to meet their needs," says Rob Anderson, Airframe Team Leader.

### Stage 4: Management

As maintenance begins on the aircraft, the PM

is deep into the managing stage. It

## Meet Tony Leitschuck, Project Manager

Tony Leitschuck started at Duncan Aviation in 1989 as an Airframe Mechanic and was promoted to Lead Mechanic and Team Leader before transferring to his current position. Prior to coming to Duncan Aviation, Tony served in the Marine Corps as a Structural Mechanic working on helicopters and as a Line Manager for both the Hastings and Grand Island airports in Nebraska. Tony is a licensed A&P mechanic. Tony and his wife, Lisa, have one son, Zach, and one daughter, McKenna. Tony enjoys fishing, hunting and watching football. He is active in Junior Achievement and supports local softball and basketball programs as a coach. is now their goal to monitor the project flow, keep the customer informed of all activity and any unforeseen events that may arise.

Customer communication is vital. Each PM will work to establish expectations for communication whether the customer is are on-site during the event or at home. Duncan Aviation provides customer offices allowing customers to remain on-site during maintenance or modification. This gives customers the opportunity to conduct their daily business and visit the aircraft as they wish. Many

> Service Plan for N650DA Customer Information Customer Number: 130372 Company: Duncan Aviation - 650DA If Prebuy, Select: Director of Maintenance Contact: Telephone: 402-475-2611 Position: Cellular: FAX: Hotel: Additional Contacts: E-Mail:

Flight Manual Location: Job #: L4R9 Plan Created: 2/3/2011 Plan Revised: 2/16/2011 Quote Request #: BH09827141556

NGSODA

Schedule Information Delivery Date: 3/18/2011 Actual Delivery Date: 3/16/2015 Headliner

Make: Citation Model: 650 Serial: 0114

Aircraft Keys:

Unit:

## Meet Doyle Garrett, Project Manager

Doyle Garrett started at Duncan Aviation in 1978 as an Avionics Technician and advanced to Shop Supervisor before transferring to his current position as a Project Manager. Doyle holds a Federal Communications Commission (FCC) First Class License and Associate in Applied Science degree in Electronics Engineering. The most rewarding aspect of his position is meeting and working as a team with customers and forming lifetime friendships with many of them. Doyle and his wife, Pam, have two daughters, Allison and Kara. His youngest daughter, Kara, and her husband, Tim, both work at Duncan Aviation. Doyle's hobbies include golfing, biking, hunting and traveling. He enjoys spending time with his family at their lake cabin. Doyle is an active supporter of Habitat for Humanity and Pheasants Forever Club where he serves as a youth mentor. In 2010, Duncan Aviation partnered with Cessna for the Special Olympics Airlift and Doyle was a lead organizer.

customers are comfortable overseeing the project from the comfort of their own office. This is due in part to Duncan Aviation's online project management tool, myDuncan. The web-based myDuncan program is a free service developed and maintained by Duncan Aviation to improve the experience of the customer. It enhances communication, efficiency and accessibility. It allows customers to manage their projects, making all information available anytime, any day from anywhere in the world. It streamlines information into a user-friendly environment and gives the customer access to online squawk approvals, job status reports, project history, and messaging. myDuncan is available to any

"The myDuncan application is a handy tool."

## Meet Luke Swager, Project Manager

customer with open projects for aircraft services

and component repairs and overhauls.

Luke Swager started at Duncan Aviation as an Airframe Mechanic. He progressed to Crew Lead on his team, specializing in Falcon and Astra projects and transferred to his current Project Manager position in 2005. Prior to joining Duncan Aviation, Luke worked as Director of Maintenance for the University of Michigan Flying Club and as a Maintenance Technician for Western Michigan University. Luke has a Bachelor of Science degree from Western Michigan University and holds an A&P license. Luke and his wife, Amy, have seven children: Jordan, Spencer, Isaac, Lydia, Harriett, Simon and Sylvia. They also have two grandchildren. Luke enjoys spending time doing various family activities such as hunting, fishing and sports. He has coached softball and baseball teams for his children and is also a member of a barbershop quartet. Luke works with the youth at St. Martin of Tours Catholic Church in Vicksburg, Michigan. Luke and his family volunteer in various activities to support their church and community. They collect clothing and food to serve the needy and work with their local high school football program harvesting and donating fresh produce to the local food bank.

service center working off the same squawk list, and to have constant access to that list, whether we are in your shop, back at the hotel or all the way back at home base," says Bob Petty with IGT Flight Department. Also vital to any project is internal communication. The PM is a key component of this communication and works with the team leaders to coordinate activity. The PM visits the aircraft and back shops daily, always keeping up with status and looks to the future to help solve issues that

aircraft, critical questions can be explored and resolved.

"The myDuncan application is a handy tool. It keeps good track of built-up squawks,

and with a big project like a 96-month on a

Challenger, that can be a significant number

of squawks. It helps to have both customer and

may arise. Scheduled meetings known as "at-the-

are held at least weekly or more frequently as

team coordination and, with easy access to the

a job requires. The meetings are short, allow

nose" meetings or work-in-progress (WIP) meetings

Stage 5: Delivery & Follow-up

Delivery activities may end with the actual flight of the aircraft, but delivery events begin days prior to take-off. During the delivery stage, the PM is busy with invoices for non-final paperwork, calculating departure payment terms, coordinating test flights, ensuring completion of the maintenance entries and overseeing final touches to the aircraft. With everything that surrounds the delivery, it is the PM's goal to make the experience as memorable as possible.

myDuncan, which can be particularly han can't be in house to observe their project.

"The most memorable thing that we can do is to have the aircraft clean and the cabin door shut when the customer arrives for delivery.

This makes a huge impact on our customers and that is why this is my goal with every project that I run," says Shawn Busby, Project Manager. Project Manager, Luke Swager, also likes to take the customer around to the teams on that final delivery day. This lets them get the personal interaction that is so important to any completed project. It also lends well when

Photos can be "attached" to items approved for work in myDuncan, which can be particularly handy when a customer can't be in house to observe their project the customer requests information in the future. A customer may call in asking Luke to run an idea past a specific technician. A request like this can be really neat because we know then that the customer respects the work and it can be just as rewarding for the technician to realize that their input is appreciated.

> Project Managers at Duncan Aviation are one of a kind. They are unique to the industry in that they are focused solely on project management, not employee management. Your PM is assigned to you and your project. They are there for you to answer questions and to be your eyes and ears when you are unable to be on-site. They are a part of your team as well as ours. They have the technical experience and diverse knowledge to support your project, the teams involved, your aircraft and you.

To learn more about Duncan Aviation's project managers and their experiences, visit them at http://www.duncanaviation. aero/contact/project\_managers.php.

"The most memorable thing that we can do is have the aircraft clean and the cabin door shut when the customer arrives for delivery."

## Meet Shawn Busby, Project Manager

Shawn Busby started in 1994 working for Kal-Aero\* as an Airframe Mechanic. He was promoted through the Airframe department working as off-shift Supervisor and then as day-shift Team Leader. He specialized in the Dassault Falcon Jet line of aircraft. Shawn accepted the position of Assistant Manager for the Interior Department before taking on his current role as Project Manager. Prior to joining Duncan Aviation, Shawn served in the Army where he worked on helicopters. Shawn has an A&P license and a Bachelors of Science degree from Purdue University. Shawn married his wife, Jill, in 1989 and they have three sons and two dogs. When he is not spending time with his family, Shawn competes in triathlons, marathons and also enjoys racing bicycles. Shawn is the bike course coordinator for the Sherman Lake Triathlon. He is active in his church and supports several mission projects.

\*Duncan Aviation acquired Michigan-based Kal-Aero in 1998.



## JEFF DUVALL: Home Again

uring early visits, one of the first things that Jeff Duvall liked about Duncan Aviation was the overall feeling he had of being at home. Jeff is Chief Pilot at Integrated Management Services, LLC, which is located in Bowling Green, Kentucky. With each visit, Jeff feels more and more attached to the facility, teams and his Project Manager, Tony Leitschuck.

"I have made Duncan Aviation my primary maintenance provider." Jeff appreciates the atmosphere that Duncan Aviation has created for customers. "Everyone has treated me like I belong. I can walk around the facility and have never felt like I did not belong or should not be there," says Jeff. When his Learjet 45 is in-house, Jeff can usually be found camping out by the airplane, watching the teams work. "Some

in and and the

facilities that I have visited before leave me with the feeling that they do not like having the customers around the aircraft while it is being worked on," Jeff states. At Duncan Aviation, customers are welcome in the facility and have free access to their aircraft and the teams who work on them.

Project Manager Tony appreciates Jeff and his attitude about maintenance, describing him as a "top-notch customer." Tony says Jeff is a "safety-first kind of guy." He doesn't look through rose-colored glasses and expect not to find items on his aircraft when it comes in for inspections. He realizes that is why aircraft are inspected. The fact that Jeff spends time at the aircraft with the teams means he "not only gets to see the actual discrepancy, but he is very quick to approve or disapprove," says Tony. This sort of teamwork has meant a lot to Tony and the Duncan Aviation technicians.

When Jeff spends extended periods of time in Lincoln, he takes advantage of what Duncan Aviation has to offer a customer

away from home base. "I always look forward to returning to Lincoln, receiving top-notch maintenance,

visiting friends, a little rest and relaxation at the Embassy Suites hotel and a good customer dinner at Lazlo's," he says. Biweekly customer dinners give Jeff and other customers a chance to socialize with staff and each other. It is a simple way to thank customers for their business, but also allows networking and the opportunity to gauge the service experience offered.

The Duncan Aviation customer service experience stands out to Jeff. Over the years, Tony has provided Jeff with support, especially in using the myDuncan application. This online work order management tool has been created by Duncan Aviation with customers' needs in mind. "I can go over everything with the project team, take some time to make the proper decision and then approve or disapprove items on myDuncan," states Jeff. The system allows easy access to project information and provides interactive management tools to the customer from anywhere. Jeff appreciates the access that he can have to the project when he is not at the facility. "The myDuncan application is especially handy if I am away from the project and need to make decisions while traveling," he says.

After many trips to Lincoln for maintenance, Jeff has established relationships with many team members. "I request Tony and Steve McDunn's jet airframe team when I schedule maintenance." There have been one or two instances where Tony was not able to oversee his project and he was assigned another Project Manager. Jeff says that even then, Tony maintained communication with him to ensure that everything went well.

"It has been a real pleasure to get to know Tony and I consider him a great friend. He has provided the utmost in customer satisfaction,"

"It has been a real pleasure to get to know Tony and I consider him a great friend." Jeff continues. "Due to the overall service and attitude that I have received from Tony, Jerry House and the rest of

Steve McDunn's team, I have made Duncan Aviation my primary maintenance provider." Duncan Aviation Team Leader Steve McDunn lost a battle with cancer on December 5, 2010. The service he provided to Jeff and all his other customers makes Duncan Aviation proud. "I am going to miss Steve," Jeff says. Tony knows that Jeff is genuine when he says this. "Jeff appreciates the guys and gals on the floor and has respect for the work they do."

Tony has worked with Jeff for the past five years and cannot say enough good things about him. Each visit means a new chance to further develop their relationship, both personal and professional. Tony finishes by saying, "Jeff truly is a friend, and a model customer."



#### Memories of Steve McDunn

Duncan Aviation Airframe Team Leader Steven M. McDunn lost his long battle with cancer on December 5, 2010. Steve was an important part of Duncan Aviation and he will be missed by many Duncan Aviation team members and customers.

Steve valued his country and was an Army veteran, serving as a helicopter mechanic in the first Persian Gulf War. Steve was a hard worker. He was passionate about protecting and taking care of his team. His team members say they were honored to work alongside him.

Away from work, Steve was an avid golfer and enjoyed hockey. He loved his Harley Davidson motorcycle and traveling. He was thrilled that he had the opportunity to visit Mexico, Hawaii, Germany, Italy and Switzerland. (Pictured above: Steve and his wife Christine in front of the U.S.S. Missouri Memorial at Pearl Harbor, Hawaii in 2008.)

## Meeting



**Aircraft Needs** 

Duncan Aviation's Aircraft Acquisitions Helps Love's Travel Stops Succeed

Love's has more than 265 locations in 39 states. Their goal is to visit each location three times a year.



2004, Doug Stussi made his first call to Doug Roth, Aircraft Sales and Acquisition Representative for Duncan Aviation, to inquire about the purchase of an aircraft. Doug Stussi is Executive Vice President and Chief Financial Officer with Love's Travel Stops and Country Stores out of Oklahoma City. At that time, Love's, now the second largest travel stop chain in the United States, decided to officially enter into aviation. Their stores were expanding rapidly and their mission required a more efficient means of travel for the business. In that year, they purchased a Citation Ultra. It was the first of four aircraft purchased in partnership with Duncan Aviation and Doug Roth.

Love's Travel Stops is family-owned and operated, much like Duncan Aviation. They, too, take pride in their family history. Founder and Chairman Tom Love and three of his four children are heavily active in the business, making several trips a year to more than 265 locations throughout 39 states. Doug explains that for the Love family, it is imperative that their faces be in front of not only the general public and their customers, but their team members, as well.

"If you traveled to any Love's location, it would be unusual to find an employee who has not met a Love family member," he says. In addition, the Love's Senior Management Team also has made it their goal to visit each location three times a year. When these are your values and your goals, "you've got to have an aircraft," Doug states.

#### Family Values Mean A Lot

Family ownership means a lot to the Love's team. "When working for a family-owned company, they are much more long-term in their focus because they are building value in the business for their family," Doug says. He appreciates working for Love's because "they live their family values and their personal values in the way they run their business."

Doug says he can see that alive at Duncan Aviation as well. He has partnered with Doug Roth and Duncan Aviation through four aircraft acquisitions and the sale of one aircraft. "I was hooked the first time we did business with Doug Roth," he says. "The level of customer service, stickto-itiveness, get things done attitude and attention to detail is what stood out to me that first deal... and what has kept us coming back each time."

Both Dougs are very analytical and have a keen ability to work through options and ask the right questions. Doug Stussi describes himself as a "bean-counter type of accountant," so someone who exemplifies attention to detail and follow-through is very important to him. "Doug Roth does all of those things," he says, "so once hooked, we've stuck with him."



Tom Love, Chairman and founder with his son, Greg Love, Co-President.

Doug further explains by stating, "Doug Roth really sets you up to negotiate a fair price by working through to analyze the value of all the different aircraft that are in the market so that you can come up with a true comparison of the options out there."

#### Long-Term Partnerships Make A Difference

Doug Roth sees his knowledge and analytical nature as imperative to the long-term working relationship he has formed with Love's. "In-between aircraft transactions, we stay in touch," he says. "I supply them with updates on the market so they can consider their options for future aircraft as their needs change."

Near the end of 2010, their needs did change and Love's Travel Stops looked to expand their fleet once more. With locations in Washington state, New Jersey and Florida, the need to purchase a larger aircraft was really a "mission need" purchase. "We needed to go greater distance with more folks on board," Love's Doug says.

Duncan Aviation's Doug supplied them with performance and operating economics on a couple of different models so they could determine the best model that would fit their needs. They looked into Falcons and Citations. Doug Roth says, "The best value for them met a balance between model year, total time, ownership history and price." They have always been

really happy with the Citation aircraft; in fact, their entire fleet is Citations. So taking a look at range and capacity, they finalized on a Citation Sovereign. "We can fill it up and go to the outskirts of our market areas in one stop," notes Doug Stussi.

#### Comprehensive Services Save Time

The efficiency of "one stop" ties directly to how Love's feels about Duncan Aviation's family of services. With each aircraft purchase, additional maintenance and completions have been provided.

Once the Love's family selects an aircraft and just before the pre-purchase inspection, Duncan Aviation's Doug meets with them. "They take a look at the aircraft and we determine what upgrades they might



Doug Roth, Aircraft Sales Representative

want to consider," he says. Their first Ultra needed new paint and a new interior. Their most recent acquisition showcases Duncan Aviation cabinetry and carpet.

Doug Stussi appreciates this kind of service. "Duncan Aviation's people have the skill and expertise to know the quality of the airplane," he says. "Then they provide you with an opportunity to modify it right on-site." The personalization provided by these sorts of upgrades makes it possible for them to take possession

Duncan Aviation's people do the right thing, are fair and strive to build long-term partnerships with customers.

of an aircraft that is not only theirs legally, but that feels like theirs emotionally. Love's Doug recommends the hassle-free aircraft acquisition service through Duncan Aviation to others. He says to any business thinking of purchasing their first aircraft:

"Work through the math, analyze the pros and cons of fractional ownership, and if the right decision is to buy an airplane, I recommend Duncan Aviation... They provide a great experience."

He also comments on similarities between Love's and Duncan Aviation. "Doug and I are both fortunate to work for family-owned businesses whose families are value-oriented and ethical. They do the right thing, are fair and strive to build long-term partnerships with customers."

loves

THE DOM'S GUIDE TO: PHASED INTERIOR MAINTENANCE

EXTEND THE LIFE

of an

Aircraft Interior

Mechanisms like doors, drawers, ch<u>airs and tables</u> require regular work correctly and prevent unnecessary damage.

You can tell a lot about the condition of an aircraft by looking at the cabin, or at least that's what people tend to think. A clean, well-cared-for interior inspires confidence in how well the rest of the aircraft has been maintained. Unfortunately, interior maintenance tends to be dismissed as a merely aesthetic or unnecessary expense. It's an assumption that isn't entirely true....

s commonly known that an interior that's five years old doesn't look or feel half as good as it did when it was new. What isn't commonly known is that regular maintenance can extend that "like-new" quality through to the end of the interior's functional lifespan. More importantly, regular maintenance can also help materials last longer, prevent damage, lower costs and increase aircraft availability.

## The Value of Aesthetics

The importance of an interior's appearance varies by how an aircraft is used, and if it will be leased or sold. Aircraft that are reserved for private or corporate use might postpone interior touchups until the next major refurbishment. By contrast, aircraft that are leased or chartered tend to target the interior appearance as a much higher priority for passenger comfort and appeal.

Latches, strikes and catches require adjustment every eight months to prevent damage to veneers and other surfaces.

> Cabin dividers and doors should be adjusted during major inspections.

> > Articulating, reclining seats should also be adjusted every eight months to prevent damage to hardware and softgoods.

Touching up finishes and replacing worn materials improves the passenger experience and helps an aircraft sell faster, for a better price.

Executive tables should be adjusted during major inspections.

"It's peace of mind," says Nate Darlington, an Interior Modifications Sales Representative at Duncan Aviation's Battle Creek, Michigan, facility. "A well-maintained interior looks clean and feels more comfortable, and passengers feel more confident with how the aircraft has been handled and cared for."

The same principle applies to selling an aircraft. A worn or abused interior leads prospective buyers to question how the rest of the airplane has been maintained, says Bob McCammon, an Aircraft Sales and Acquisitions Rep. at Duncan Aviation's Lincoln, Nebraska, facility. When preparing to list an aircraft for sale, maintaining highwear areas like armrests, entry door step treads and the galley help make a favorable impression with a buyer.

"First impressions make a big difference in the sale," says Bob. "A well-maintained interior will help an aircraft sell faster at a better price. The broker or selling agent won't have to make excuses for it."

Currently, interior work is trending away from complete refurbishments and moving toward partial interior work. "For

the most part, aircraft owners are just trying to fix what they need to fix to get their interiors looking nice again and not have them look worn," says Matthew Schepers, an Interior Modification Sales Representative in Lincoln.

## Preventive Maintenance

A well-maintained interior goes deeper than clean carpets and seats. Functional items need ongoing service to make sure they work properly.

For example, consider door and drawer adjustments. "It takes 30 minutes to adjust the latches so the door strikes

#### Standard vs Phased Interior Maintenance Cost Projections

AA



The top projection illustrates the typical burden of cost for the lifecycle of a Falcon 2000 interior. The bottom projection represents "phased" interior lifecycle costs. won't poke through the cabinet veneer," says Nate. "Otherwise it takes 20 hours to repair and refinish the damaged veneer."

Other functional interior items, like cabinets and seats, can break or damage surrounding materials if they aren't maintained, says Matthew. If they function correctly, they won't cause damage.

"Ongoing maintenance of big ticket items extends their lifespan," says Matthew. "It makes your interior investment last longer."

#### Scheduling Considerations

The ideal way to schedule ongoing maintenance is to coordinate it with maintenance events of similar downtimes. Unfortunately, interior items typically aren't anticipated far enough in advance for scheduling or budgeting considerations.

"Interiors are usually something people only worry about once every six years," says Matthew. "Most customers aren't comfortable talking about it." When interior issues frustrate the aircraft owner, it can make a

Director of Maintenance (DOM) equally uncomfortable. Scheduling becomes a last-minute addition to the workscope, which can extend downtime and increase costs beyond the budgeted expenses.

Aircraft availability can be affected if last-minute additions cause scheduling conflicts, or when there isn't enough lead time to order necessary materials.

As a general rule, larger aircraft should have interior projects planned at least six to eight weeks in advance, says Matthew. Smaller aircraft can be done with less lead time, about four to six weeks.

"This allows all the materials to come in so when the plane arrives everything's ready," says Matthew. "We're not figuring things out along the way."

#### "Phased" Interior Maintenance

An interior refurbishment can be effectively "phased" over several years of regularly scheduled maintenance events. Nate describes it as running interior events in conjunction with annual airframe events, which off-sets the cost of a complete refurbishment by amortizing it over the aircraft life and maintenance cycle. By doing so, long-term costs

Sample Phas		Interior Items				
Aircraft Age	Inspection	Adjust cabinets/seats.				
16 months	A, 2A	Touch-up finishes.				
24 months	Α, 3Α	Replace step treads. Clean/dye/touch-up/adjust seats. Adjust cabinets. Touch-up finishes.Clean/dye/touch-up/adjust seats. Adjust cabinets. Touch-up finishes.				
32 months	A, 2A, 4A, B					

## Sample Phased Interior Maintenance Schedule for Falcon 2000 Aircraft

are reduced, extra downtime is avoided and the interior is kept in pristine condition.

Matthew estimates that 10 to 12 weeks of downtime can be saved for a larger aircraft over the course of three or four years. Smaller aircraft would save about five to six weeks of downtime over the same period of time.

Most of these savings are realized by pairing inspections that require removal and reinstallation of interior items with maintenance for those same items. For example, inspections that require the removal of seats and floorboards are a prime opportunity to replace carpet and recover seats without extending the service schedule.

DOMs usually know when their next maintenance event is coming due. However, estimating downtimes and determining what interior services can, or should, be scheduled with which events can get complicated quickly.

"It's easy to get overwhelmed, but pre-planning is important to keep in mind," says Nate. "We're able to help DOMs think it through and develop a maintenance plan."

Such interior maintenance plans help operators perform annual evaluations by making note of functionality and appearance, planning interior services and budgeting more effectively. If the plan is followed, it also helps soften the blow on the balance sheets by spreading the burden of cost over several years, says Nate.

## Creating a Maintenance Plan

Interior maintenance plans target all aspects of an interior from softgoods to veneer, from the cockpit to the aft

baggage compartment as the interior ages. However, not all operators want every aspect of the interior in mint condition, and that's just as it should be. An interior should reflect the needs, goals and objectives that are unique to each operator. An effective

maintenance plan is

based on a thorough understanding of the customer and their aircraft. To create one, an Interior Modifications Rep. works with a DOM to review how their aircraft is used without cost or obligation. The lifespan of interior items is estimated, required maintenance events are identified and interior items are paired with inspections that require similar downtimes.

"We sit down and really get to know the operator, the aircraft and the needs of the principal," says Matthew. "The relationship with the operator is what's important to us. Every aircraft has its own life and maintenance cycles, and the goal is to come up with a plan that the operator can take with them, and will cover the full scope of both cycles."

The cost of

an interior

refurbishment can

be amortized over

several years by

"phasing" interior

maintenance.

For example, Falcon 2000

aircraft have a life and maintenance cycle of about eight years. A phased interior maintenance schedule for this aircraft identifies five inspection types, the estimated downtime and the interior items that are recommended for each. "If you follow the plan, you'll know what

items need to be worked three to four months in advance and have time to prepare for it," says Matthew.

For more information, or to request a phased interior maintenance schedule, please contact Matthew Schepers in Lincoln at 402.479.4189 or Nate Darlington in Battle Creek at 269.969.8443.

		Interior Items				
Aircraft Age 40 months	Inspection A	Recover entry door shrouds, replace hinge covers. Recover cabin lower sidewalls. Recover seat base shrouds. Clean cabin carpet. Clean/dye/touch-up/adjust seats. Adjust cabinets. Touch-up finishes.				
48 months	A, 2A, 3A	Replace cabin window panels, shades. Replace entry cabinet. Recover crew closet, aft baggage. Touch-up flightdeck dividers (see complete sample at www.DuncanAviation.aero/debrief)				

## ENGINE SERVICE SINCE THE "BEGINNING"

year, Duncan Aviation Engine Services celebrates its 30th year of being a Honeywell Major Authorized Service Center. Although our OEM authorization became official in 1981, Duncan Aviation has actually been there since the beginning.

This

YEARS RUTHORIZED TEE731 MPI ENGINE EXPERIENCE

#### THE BEGINNING

In 1973, Leo Sawatzki stepped off the Navy ship U.S.S. Constellation and signed on with Duncan Aviation in Lincoln, Nebraska, as a jet engine mechanic. He was prepared to service GE CJ610 and Pratt & Whitney PT6 engines. However, it wasn't long after he arrived that Airesearch introduced a new engine, the TFE731. This engine showed lots of promise and Duncan Aviation's team members, with only a four-section wooden box filled with plugs, caps and hardware, were eager to discover and learn all they could.

Early on, as with many firstgeneration technologies, this new engine had some growing pains. Leo and six other Duncan Aviation turbine engine mechanics were called upon many times to provide Aircraft on Ground (AOG) services. Just by the sheer volume of handson, field-repair work, they discovered first-hand how the engines operated and what was needed to fix them.

Seeing an unmet need, Duncan Aviation invested in the necessary tooling and equipment to dispatch a team to any location whenever the calls came in. And the calls did come. On a weekly basis, mechanics were sent as far away as Iceland, Argentina or Canada... or to the hangar just down the road. Their quick responses made them the go-to-guys for TFE731 on-the-road engine services.

This Duncan Aviation team was the original AOG engine road crew before such crews became popular. This practice of being ready to travel at a moment's notice is the genesis of Duncan Aviation's Engine Rapid Response Teams (RRT). Today, seven RRTs are strategically located across the United States, able to reach an operator's location in as little as 24 hours.

#### THE AUTHORIZATIONS

Duncan Aviation had become a reliable resource for TFE731 operators flying all over the world, proving that even a small shop from the middle of America had a worldwide impact. In 1981, Duncan Aviation hit two milestones and received major level authorization to work on the Airesearch TPE331 and TFE731 engines. These authorizations allowed all who previously relied upon Duncan Aviation to come to their rescue during times of need to entrust their engines to Duncan Aviation for high-level, expert Major Periodic Inspection (MPI) service. Word quickly spread and the number of MPIs that Duncan Aviation performed every year increased at an exponential rate.

In those early years, the Duncan Aviation team disassembled the engines and sent them out for repair, relying on the abilities and time schedule of others. The culture at Duncan Aviation has always been to deliver only the best, on time and at budget. Unfortunately, not every company has the same level of customer commitment. "We knew we could provide these same services better, faster and cheaper," says Leo. With that, the decision was made to invest in the research, tooling and training to bring those capabilities in-house.

## ENGINE SERVICES

Today, Airesearch is now Honeywell and Duncan Aviation Engine Services has grown to include 55 licensed factorytrained turbine engine technicians working two shifts to provide line maintenance, MPIs, AOG services and technical expertise, all dedicated to the support of the TFE731. The "four-room" wooden box is now a modern 20,000-square-foot facility with 12 separate engine bays. It is a one-stop shop that performs all MPI and maintenance events in-house.

Obtaining the maximum performance out of your engines is an art mastered by the Duncan Aviation turbine engine professionals. Generations of experience combined with investment in all Original Equipment Manufacturer (OEM)-authorized repair methods bring the most reliable and proven techniques to ensure performance and reliability of your engines.

Leo, now the Engine Acquisitions and Sales Manager, has seen firsthand the changes the TFE731 has gone through over the last 38 years. One thing has remained constant— Duncan Aviation has remained Duncan Aviation. The company has never changed its name, its ownership or its commitment to delivering only the best.

Duncan Aviation is the only U.S.-run, family-owned company with this length of historical and technical experience on the TFE731. We are still Duncan Aviation. We have been there since the beginning. And we'll be here for generations to come.

#### IN-HOUSE DUNCAN AVIATION CAPABILITIES:

- Non-Destructive Testing, including fluorescent penetrant, magnetic particle, ultrasonic and eddy current inspections.
- Blading and digital balancing for all turbine components and fan assemblies.
- A4/A5 nozzle flow bench.
- Fuel manifold flow bench.
- Fan blade shot peening.
- Thermal Spray.
- Separate bearing, turbine inspection rooms.

- Welding.
- Machining.
- High-pressure turbine flow, leak testing.
- Oil pressure stimulation fixture.

## **DUNCAN AVIATION**

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## INTERNATIONAL BUSINESS

#### Tony Gilbert

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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**

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R	Ε	Ρ	R	Ε	S	Ε	Ν	Т	Α	Т	I	VI	E

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#### Lee Bowes

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#### Rick Randall

Skip Laney Phone 402.479.1525 Cellular 402.440.8396

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COMPLETE SERVICE F LNK BTL MAINTENANCE SERVICE PVU Provo, Utah	A C I L I T I E S 800.228.4277 800.525.2376 F A C I L I T Y 877.771.2788	
A VIONICS INSTALL & LINEA P ADenver, ColoradoB F ISeattle, WashingtonB D RBridgeport, ConnecticutD A LDallas, TexasF T YAtlanta, GeorgiaF X EFt. Lauderdale, FloridaHOUHouston, TexasL A SLas Vegas, NevadaMDWChicago, IllinoisMHRSacramento, CaliforniaKKCScottsdale, ArizonaS T PSt. Paul, MinnesotaT E BTeterboro, New JerseyV N YVan Nuys, California		COMPONENT SOLUTIONS Technical Support, Avionics, Instruments, Accessories, Propellers & Parts Support 800.228.1836 or 800.562.6377
WORK AWAYFROM STATIONADSAddison, TexasAUSAustin, TexasBJCBroomfield, ColoradoBURBurbank, CaliforniaFTWFt. Worth, TexasHPNWhite Plains, New YorkHWDHayward, CaliforniaIAHHouston, TexasMMUMorristown, New Jersey	FACILITIES   214.352.3468   512.530.7050   303.410.7053   818.955.8413   817.740.9266   914.686.8294   916.231.0943   281.821.2689   973.326.1110	RAPID RESPONSE AOG SERVICES Expert In-Field Technicians, Fast 24/7 Dispatch, Airframe, Engine, and APU Support & Services 877.522.0111

Chesterfield, Missouri

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636,536,7090



## It is rare these days to have a business so confident in what they do that they warranty their work for 24 months... and not just their work, but the work of others.

Beginning in 2011, Duncan Aviation's Components Solutions will provide all customers the peace of mind of a 24-month warranty that covers 100% of many Duncan Aviation overhauled avionics and accessory units.

So when you bring in a pneumatic valve for overhaul because the motor failed, it won't cost you anything in 18 months if the flapper also fails to work.

We know what you're thinking. In this tough economy, how can Duncan Aviation possibly offer a warranty on work we didn't perform? It's simple. Through our experience, we've been able to identify high-failure parts in many units and will take the extra time during overhaul to make sure those parts are able to last for 24 months or more, even if they are not replaced during the overhaul. Other shops only overhaul and fix the current fault without regard to the entire system. We have always taken care of the whole component when it is in our shop. We will send that component home. . .and include the confidence that we've got you covered should you need us again.

### **Promises Kept**

A warranty is only as good as the company providing it, and it obviously isn't worth much if the company won't be around to honor it. According to Karl Detweiler, Business Development and Marketing Manager for Duncan Aviation Components Solutions, "2009 was the beginning of turbulent times for business aviation. It was common to hear about at least one component shop closing its doors every week." At Duncan Aviation, we say what we'll do and do what we say. We'll be around in two years (and beyond!) to fulfill our promises to you.

Most warranties range from six months to one year, and few (if any) provide comprehensive coverage. Among independent component shops, Duncan Aviation is a leader in the industry, offering

Our 24-month warranty covers the entire unit, whether we serviced the part or not. a 24-month warranty for many overhauled avionics and accessory units (and the number of units covered is growing every day). As a nonunion shop, we are more flexible to respond to your needs by providing superior workmanship

with quicker turntimes at great prices.

There is a small list of units that are not covered by the 24-month, tip-to-tail coverage. But even if your unit falls into this category, we will still provide warranty coverage for 12 months, just as we have in the past.

The choice is simple. When selecting the best component shop to service your aircraft avionics and accessories, choose the one that stands behind its work and will be here in the future to fulfill its promise to you.

## 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.

## "RAPID RESPONSE TEAM" CONCEPT CELEBRATES LOTH ANNIVERSARY

Duncan Aviation is proud to recognize its technical engine "road warriors" as the company's Rapid Response Team (RRT) concept—the industry's first model for supporting customers with dedicated, traveling engine service teams located at major hub cities—celebrated its 10th anniversary in late 2010.

Starting near the end of 2000 with the opening of an office location for Duncan Aviation engine technicians in the Dallas area, the first RRT was born. These teams consist of up to four engine technicians specializing in engine troubleshooting, regional support and AOG assistance. Team capabilities





include routine inspections and vibration surveys, engine changes, on-the-wing repairs, engine removals and replacements (R&Rs), periodic inspections and line maintenance support for all Honeywell models, Pratt

& Whitney, JT15D, 300 and 500 series, General Electric CF34 and Williamson FJ44. In addition to AOG engine support, RRT technicians are available for APU assistance.

The teams are strategically located so technicians can be quickly dispatched to a customer location or the

location where a customer is AOG. Besides Dallas, locations have grown to include New York, Chicago, Denver, Ft. Lauderdale, Atlanta, Scottsdale and the latest addition in Seattle. In many locations, RRTs are located near a Duncan Avionics satellite facility. The Duncan Avionics satellite network began 25 years ago with a

v. (Rapid Response Team): the industry's first model for supporting customers with dedicated, traveling engine service teams located at major hub cities. similar quest, that of making expert avionics services more convenient for customers.

RRTs work with the full support of Duncan Aviation's engine service centers in Lincoln, Nebraska, and Battle Creek, Michigan, which can provide additional tooling and technicians as needed.

To schedule the Rapid Response Teams, call toll-free 877.522.0111 or 402.475.2611.

DUNCAN AVIATION OPENS SEATTLE-BASED ENGINE "RAPID RESPONSE TEAM" Duncan Aviation recently opened a Rapid Response Team (RRT) base location in Seattle. This is the company's eighth launch facility for engine RRT services.

The team, which has the capability to support several engine and APU models, is located at Boeing Field but performs all engine maintenance and repair work at customers' locations, be it in their hangar or where they happen to be AOG.

Tom Nelson, an aviation professional since 1985, is the shop Team Leader. To reach Tom directly, call the shop at 206.375.4454. To schedule AOG service through our Rapid Response Team network, call 877.522.0111.

## DUNCAN AVIATION'S "GREEN" BUSINESS EFFORTS

A couple of years ago, Duncan Aviation formed a "Green Team" dedicated to improving business practices and educating team members with the goal of reducing the company's impact on the environment. The results have been astounding, says Jeannine Falter, Duncan Aviation's Vice President of Business Development and Facilitator of the Duncan Aviation Green Team.

"The benefits of making 'green' decisions are good for us and for those who will follow us," she 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 Green Team is made up of

Duncan Aviation team members located at both its Nebraska and Michigan facilities. Jeannine says the goal of the team is to establish green policies to include curbing the company's comsumption of resources, using what we have more efficiently and recycling everything we possibly can.

n. (green team): duncan aviation's team dedicated to improving business practices and educating team members with the goal of reducing the company's impact on the environment.

Some of the things the Duncan Aviation Green Team has accomplished include the following:

- A reduction in the amount of hazardous chemicals Duncan Aviation purchases and stores with a commitment to use chemicals that have a low environmental impact wherever possible.
  - The development of a new paint process that eliminates the use of hexavalent chromium (or chrome, a known carcinogen) that has the potential to leach into the ground water.
  - The replacement of incandescent and fluorescent bulbs with more energy-efficient alternatives.
  - The replacement of T-12 lamps with magnetic ballasts with T-8 lamps

with electronic ballasts.

- The recycling of 350 tires last year, more than 5,000 pounds of metal, 40 tons of paper and cardboard and 4,000 pounds of aluminum cans.
- The creation of an eco-friendly interior refurbishment

## EARTH-FRIENDLY INTERIOR OPTIONS

Duncan Aviation's aircraft interior design team has selected a line of ecofriendly products for aircraft interiors. Inspired by new eco-friendly fabric collections from industry vendors, the collection features materials that are just as luxurious and beautiful as conventional materials used in aircraft completions.

"I want our clients to know that they never have to sacrifice quality or aesthetics to go green," says Lori Browning, Interior Designer for Duncan Aviation. "Many textile companies are creating new fabric lines to meet the 'green' demands of the commercial industry, and this collection features the most sustainable products

## available in the aircraft interiors market today."

This collection was developed as a response to a growing list of clients who believe in corporate responsibility and want to lead by example. The collection includes a range of natural, rapidly renewable and Leadership in Energy and Environmental Design (LEED) certified materials such as cotton, wool, bamboo and a fully compostible fabric.



collection for business aircraft. The collection includes a range of natural, rapidly renewable and Leadership in Energy and Environmental Design (LEED) certified materials.

"These things were all accomplished by having small groups of people throughout the company question current practices," Jeannine says. "The Green Team is far from finished. There are many areas where we can have an impact and areas where we can realize cost savings that we can pass along to our customers. We view this as an ongoing process that will make a difference for future generations."

For more information about Duncan Aviation's new chrome free paint process, see "The Truth About Chrome Free Paint Systems," a field guide written by several Duncan Aviation and industry paint experts. A copy can be downloaded at www.DuncanAviation.aero/fieldguides.

A full list of the materials that make up the green collection, along with photos and descriptions, can be found at *www.DuncanAviation.aero/green*. For more information how to incorporate these materials in your next interior project, please contact a member of the Duncan Aviation Interior Team in Lincoln, Nebraska, at 402.475.2611 or in Battle Creek, Michigan, at 269.969.8400.





## 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.



## FIRST EVER HONEYWELL NZ-2000 FMS WAAS/LPV CERTIFICATION IN A FALCON 900B

. 6824

Duncan Aviation's Organization Designation Authorization (ODA) recently issued the first ever Supplemental Type Certificate (STC) for certification of Wide Area Augmentation

System – Localizer Performance with Vertical Guidance (WAAS/LPV) in the Dassault Falcon 900B aircraft.

This solution consists of a software upgrade to the Honeywell NZ-2000 Flight Management System (FMS) and the installation of GPS WAAS/ LPV receivers.

"We are very pleased to work collaboratively with Honeywell to

bring another milestone software upgrade to the market," says Steve Elofson, Avionics Installation Sales Manager for Duncan Aviation. "In September 2010, we completed this upgrade in a Challenger 601-3A and we know there are hundreds more operators with Honeywell NZ-2000 systems across multiple jet models who will upgrade in the coming years to take advantage of WAAS/LPV benefits."

Chad Cundiff, Vice President of Crew Interface with Honeywell Aerospace, has this to say: "This functionality will enable pilots to operate with lower approach minima, allowing for more flights to land in lower visibility and low overcast conditions. There are more than 2,300 WAAS/LPV approaches in the U.S. with new approaches being added on a regular basis."

The upgrade provides ILS-like guidance down to near CAT I ILS minimums (as low as 200 feet with 1/2 mile visibility). With a multitude of additional features such as Circle to Land

n. (ODA): Organization Designation Authorization delegation allows Duncan Aviation to issue STCs for aircraft alterations on behalf of the Federal Aviation Administration.

Approaches, Multiple Approaches, TACAN approaches, Vectors to Final, Baro Vnav, Auto Hold to Altitude, Enroute Holds, Cross Loading, Magnetic Variation, GPS time, and more.

> For more information about Honeywell's FMS 6.1 and 7.1 software upgrade, please visit www.flywhatsnext.com.

Duncan Aviation can perform the upgrade in 10 business days. In addition to the FMS upgrade, operators should consider adding Honeywell's SmartRunway<sup>™</sup> and SmartLanding<sup>™</sup> features to their

existing Enhanced Ground Proximity Warning System. These software upgrades provide the latest in situational awareness, and Duncan Aviation received an Approved Model List (AML) STC for its installation in September 2010.

Besides the Falcon 900B and the Challenger 601-3A, Duncan Aviation holds STCs for WAAS/LPV upgrades on the Learjet 31A, Learjet 45 and Challenger 600/601 aircraft.

To find out more about WAAS/LPV upgrades for your aircraft, please contact any member of the Duncan Aviation Avionics Sales Team at either of Duncan Aviation's full-service locations: Battle Creek, Michigan, 800.525.2376; or Lincoln, Nebraska, 800.228.4277.

To learn more about WAAS and LPV certification, visit www.DuncanAviation.aero/waas. For answers to common questions about WAAS/LPV, download the "WAAS Answers From Industry Experts" field guide.

## departing FFU VORTAC

## **Aircraft Listings**

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

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	1120300	N22AFJ	5
1992 Ealc	on 50. SN	228	



1982 Learjet 35A, SN 485

## WEB TOOL DEMONSTRATES VALUES OF WAAS/LPV TECHNOLOGY

During NBAA last fall, Duncan Aviation unveiled a new tool for aircraft operators to calculate an estimated return on investment for WAAS/LPV installations, based on the specifications and flight activity of an aircraft. Operators can find the tool, entitled the "WAAS/LPV ROI Calculator," online at www.DuncanAviation.aero/waas.

"We've always known that an investment in WAAS with LPV will pay for itself in a short period of time," says Chad Ostertag, Avionics Install Rep. at Duncan Aviation. "This tool confirms that and takes it one step further by creating a customized report for each user. Pilots can use this tool to confirm and explain what they already know, that WAAS with LPV saves them time and money."

Duncan Aviation currently holds STCs for WAAS/LPV upgrades on the Falcon 900B, Challenger 601-3A, Learjet 31A, Learjet 45 and Challenger 600/601 aircraft.

To find out more about WAAS/ LPV upgrades, contact any member of the Duncan Aviation Avionics Sales Team at either of Duncan Aviation's full-service locations: Battle Creek, Michigan, 800.525.2376; Lincoln, Nebraska, 800.228.4277. n. (WAAS/LPV ROI Calculator): duncan aviation's new tool for aircraft operators to calculate an estimated return of investment of WAAS/LPV installations.



1998 Challenger 604, SN 5395



#### 1996 Astra SPX, SN 85



1985 Falcon 50, SN 153

### **REGIONAL MANAGER CHANGES**

Duncan Aviation is pleased to announce some changes in its Regional Manager line-up. With the retirement of long-time Regional Manager Dennis Brewer and the upcoming retirement of Regional Manager Dave Loudenback, many customers will see new faces representing Duncan Aviation in the field.



Bill Otte is the company's new Regional Manager for the east central territory in the United States. Bill has a 30-year aviation background. Before coming to Duncan Aviation in September, he worked with Classic Jet Center in Willoughby, Ohio, as

their Maintenance Director. Prior to that, he spent nearly 18

years as the Chief of Maintenance with National City Corp. in Cleveland. Bill also spent seven years as an aviation maintenance technician, earning his A&P license in 1983 from Columbus State Community College.

A former Duncan Aviation customer and a former member of Duncan Aviation's Customer Advisory Board from 2004-2006, Bill has this to say about his impression of Duncan Aviation: "I am pleased to be representing Duncan Aviation. The n. (regional managers): duncan aviation has employees strategically located to provide technical support and advice while building relationships.

company has the mindset of always seeking feedback, both good and bad, from customers. That keeps Duncan Aviation on a constantly evolving path of improvement. You can get aircraft serviced at a lot of places, but Duncan Aviation truly does offer an Experience, Unlike Any Other."

Bill is based in Columbus, Ohio, and can be reached at 440.413.8259.



Dan Arrick is now Duncan Aviation's Great Lakes Regional Manager. Dan started his aviation career in 1985 by working the Line Department for Kal-Aero (which was acquired by Duncan Aviation in 1998) while attending Western Michigan

> University. He moved to the Engine Shop in 1988 and then Engine Service Sales in 1996. In-between, he worked on his pilot's and A&P licenses.

> Dan left Duncan Aviation briefly in 2006 for an Operations Manager position in Orlando with Pratt & Whitney, but soon returned to Michigan's Duncan



## ARJEN GROENEVELD NAMED EUROPE REGIONAL MANAGER

Duncan Aviation is pleased to welcome Arjen Groeneveld as our Regional Manager for Europe. Arjen lives in The Netherlands and will travel the region to interface with aircraft operators, management organizations and other service providers with the goal of maintaining and building relationships within the region.

"Over the last several years, Duncan Aviation has developed great relationships and business partnerships throughout Europe," says Tony Gilbert, Duncan Aviation's Vice President of International Business. "As our first Regional Manager based outside the continental United States, Arjen will be instrumental in providing the best possible support to our customers located in Europe." Aviation-Battle Creek in 2008 as Engine Shop Manager.

Dan is based in Battle Creek and can be reached at 269.969.8460.



Rick Randall, an established Regional Manager for Duncan Aviation, moved south to a new territory, the South Central United States.

Rick started with Duncan Aviation in 1999 as a Regional Sales Manager in the Great Lakes region. Prior to Duncan Aviation, Rick was a U.S. Coast Guard helicopter mechanic and flight school helicopter mechanic. A licensed A&P mechanic. Rick also worked as a turbine engine mechanic, inspector and foreman, in aircraft and engine parts sales and in aircraft maintenance sales.

Rick is based in Trinidad, Texas, and can be reached at 817.472.6113.

For a complete list of Duncan Aviation's Regional Managers, please visit *www.DuncanAviation.aero/contact.* 

Arjen is an enthusiastic aviation professional with 22 years of experience and a thorough understanding of aircraft maintenance, derived from positions in aerospace research, commercial airline and the aircraft leasing industries. He and his wife, Grace, have three children. He loves sailing, bicycle riding, hiking in the mountains and watching the sports activities of his children from the sideline.

To reach Arjen, call him in The Netherlands at +01.31.6.4672.7679 or email him at Arjen.Groeneveld@ DuncanAviation.com.

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## FIRST CABIN CONTROL IPAD INTEGRATION DELIVERED FOR FALCON 900

Duncan Aviation recently integrated an iPad application for wireless control of the cabin systems in a Falcon 900. This installation utilizes an iPad app, an Aircell CTR Wi-Fi source and an interface unit to communicate instructions to the Honeywell MH cabin management system. This fully customized iPad cabin control interface does not impact any existing functionality or tie up system resources.

This is the first of many iPad control systems that Duncan Aviation plans to deliver over the next several months. Duncan Aviation's Avionics Tech Rep. Adrian Chene worked with the client to deliver this first system and is currently exploring the possibility of integrating iPad control with other cabin systems in other aircraft models.

"We have always sought to be innovators wherever possible and this innovation is an expression of that passion," Adrian says. "I know that many of our customers will enjoy the elegant and familiar interface that this application provides."

For more information on this system, please contact any member of the Duncan Aviation Avionics Sales Team at either of Duncan Aviation's full-service locations: Battle Creek, Michigan, 800.525.2376; Lincoln, Nebraska, 800.228.4277.





DAVID SHIPPERBOTTOM NOW MANAGER OF GOVERNMENT PROGRAMS

Duncan Aviation is pleased to announce the appointment of David "Dave" Shipperbottom to the position of Manager of Government Programs, where he is responsible for effective execution of the company's Government Programs and will provide leadership for the Government Programs team. This team is currently managing a diverse mix of projects that includes Special Mission Equipment installations in Learjet 60s, Falcon 20s, and Citations, Casa 235 avionics upgrades, C-12 structural maintenance programs, and various aircraft

## MORE AIRCELL WI-FI STCS

Duncan Aviation is pleased to announce that it recently completed additional Supplemental Type Certifications (STCs) for the installation of Aircell's Cabin Telecommunication Router, which provides Wi-Fi access in the cabin for Gogo Biz<sup>™</sup> Inflight Internet service. The new STCs apply to Hawker 800XP / 850XP, 900XP, Falcon 2000, and Falcon 2000EX EASy aircraft.

Aircell's Gogo Biz Inflight Internet service provides high-speed inflight connectivity in the cabin, allowing passengers to use their laptops, BlackBerrys, iPhones and other Wi-Fi devices at connection speeds of 1-3 Mbps, providing an experience similar to that of groundbased Wi-Fi connections.

The installed system consists of an aircraft certified High-Speed Data (HSD) unit, wireless Router and two belly-mounted antennas. The STCs were certified under Duncan Aviation's Supplemental n. (Aircell's Gogo Biz Inflight Internet): provides high-spreed inflight connectivity in the cabin, allowing passengers to use their laptops, BlackBerrys, iPhones and other Wi-Fi devices at connection speeds of 1-3 Mbps. Type Certificate (STC) and Major Repair and Alterations (MRA) Organization Designation Authorization (ODA).

"We expect many more operators will be upgrading to Gogo Biz with Wi-Fi to make the most productive use of their time in the

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air," says Steve Elofson, Manager of Avionics Installations Sales for Duncan Aviation. "Duncan Aviation is geared up to support customers with FAA-Certified Wi-Fi solutions for a good selection of business aircraft models. These new STCs join previous Duncan Aviation certifications for the Falcon 900EX EASy, the Cessna 680, the Challenger 300 and the Citation 750."

maintenance and modifications contracts with U.S. and other government and military organizations.

Dave began his aviation career in the Navy where he worked for four years aboard the U.S.S. Nimitz. After his service, he attended Spartan School of Aeronautics in Tulsa, Oklahoma, where he earned his A&P license and an associate's degree in Aviation Applied Sciences. In 1999, he began his career with Duncan Aviation as a Learjet Airframe Mechanic, advancing to Lead Mechanic and then team leader by 2003. In 2007, Shipperbottom became a Project Manager, where he most recently served as Team Coordinator.

"We are excited to have Dave in this important leadership role," says John Slieter, Vice President of Sales and Marketing. "Throughout his years with Duncan Aviation, Dave has showcased his leadership abilities and communication skills with customers as well as Duncan Aviation team members. I am confident Dave will have an immediate impact in his new role and will continue to provide excellent support for customers interested in our government and special programs services."

For more information about Duncan Aviation's Government & Special Programs services, visit www.DuncanAviation.aero/government.

## 2010'S TOP 5 DOWNLOADS FROM DUNCANAVIATION.AERO

n. (www.DuncanAviation.

Aviation's publications,

downloads and multimedia

resources for customers.

location with all of Duncan

aero/resources): one

2010 was a busy year. We fielded countless avionics and paint questions, launched a blog, introduced a series of field guides and beefed up our YouTube channel with some new videos. Here's a rundown of our most popular resources on DuncanAviation.aero last year.

#### 1. Upgrading to WAAS: Answers

#### **From Industry Experts**

The WAAS/LPV field guide was our most popular download last year. It addresses common questions from operators, differences between approval processes, discrepancies in upgrade costs and considerations for planning an upgrade.

## **Aircraft Value**

The runner-up was an aircraft paint field guide, which targets common misperceptions about exterior refurbishments. It addresses the necessity of regular paint maintenance, aircraft market value considerations and criteria for selecting an aircraft paint service provider.

#### 3. Straight Talk About WAAS

This WAAS eBook continued to attract attention last year with its discussion about the importance of WAAS, why it impacts business aviation operators and how it works.

#### 4. Company Video: "Our Work Speaks for Itself"

A four minute video about Duncan Aviation debuted on our YouTube channel last year, highlighting our history,

> service philosophy, customer observations, capabilities and facility locations.

#### 5. Understanding WAAS/LPV Video Series

Avionics Installation Sales Rep and long-time AEA Advisory Board Member Gary Harpster hosted this five-part WAAS video series based on the presentations he gave across the

country last year. The series offers more technical information on legacy interface problems, LPV approaches, GPS signals and operational benefits.

More downloads are planned for release this year, so stay tuned! Additional resources that didn't make our top five list can be found at www.DuncanAviation.aero/resources.

## JOB STATUS TRACKING LAUNCHED FOR MYDUNCAN.AERO

Job status reports are now available to customers who manage aircraft projects through myDuncan.aero, Duncan Aviation's exclusive project management system.

The status reports provide a high-level project overview with charts, hours for items in different phases of work, and cost estimates. Although the reports do not reflect real-time changes, they can help customers monitor overall progress and access detailed financial estimates and cost projections.

"Customers have needed a more convenient way to monitor progress and expenses for their projects," says Chad Doehring, Customer Service Manager at Duncan Aviation-Lincoln. "Our goal with these reports is to make this information more accessible to project stakeholders."

Access to the new Job Status reports is available for all current projects managed with myDuncan.aero, and

may be requested by contacting the Project Manager for that job.

A video demo of myDuncan is available at *www.myDuncan.aero*.

myDuncan.aero is a web-based project management system that can be accessed any time from anywhere in the world. It was designed to make information more accessible and streamline communication throughout all phases of a project. It includes paperless approvals, item histories and custom viewing rights for aircraft prebuy evaluations, among other features. For more information, please visit www.myDuncan.aero.

2. Paint, Maintenance & Turbine

Completions experts at Duncan Aviation focus on finding the best and most productive interior and paint solutions for aircraft operators and passengers.

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DREAM

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Cover: Duncan Aviation's Customer Service Department and Project Manager concept was developed in 1991. This year marks the 20th anniversary for the four original members (left to right); Doyle Garrett (32 years of service), Steve Ballard (31 years of service), Nancy Moll (32 years of service) and Howard Nitzel (28 years of service).