THE WIPAIRE WINDOW

A Special Newsletter Created for Everyone in the Aviation Industry!

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Featured Sections

Good Seaplane Training During a Northern U.S. Winter.

Brian Addis, Senior Flight Instructor - Lake & Air Pilot Shop

It's a typical winter situation for pilots in the Northern hemisphere. Your aircraft is tucked away in a snowed-in hangar and your instructor is in Florida, or some other winter retreat. How can you get beneficial recurrent training in your airplane during the cold winter months. There is a way; it's not the same as flying with your task master but it is helpful none-the-less, and it's free.

Here's the way it goes: Light up the interior of your airplane in your nice warm hangar. Turn off the radio, your cell phone and your 72" wide-screen TV. Hide your car so as to leave no evidence you are there. Avoidance of visitors is best when you're trying to focus on a learning experience. Take your place in the Captain's seat and open your POH to the emergency procedures chapter; section 3 in most airplanes. Then, slowly go through each emergency procedure while touching the appropriate knobs, levers, and switches. Think critically about why the procedure is written the way it is. Approaching the procedures this way will raise questions which will lead you to the systems chapter; section 7 in most airplanes. This will lead you to a better understanding of your airplane. Count the number of emergency procedures for your airplane. For example, most Caravans have 51 emergency procedures, Cessna 152s have 15. There are 4 engine failure procedures for Caravans and 3 for Cessna 152s. Bunch the similar procedures together and ask this question: "What is the same and what is different among these procedures and why?"

Think about this educational experience for a moment. Prior to this, your exposure to emergency procedures includes flying the airplane or simulator while the instructor is guiding, prompting, or cueing. That means there is a lot going on and, true, it is great training but this method does little to enable the pilot to have a conceptual understanding of the procedure. Psychologists tell us it is difficult to capture cognitive understanding while performing what they call "side tasks." We call it, "Flying the airplane while all this other stuff is going on."

At the end of this exercise you should have a better understanding of your emergency procedures and the airplane's systems. It may come in handy someday and the cost of this experience is just a little bit of time.

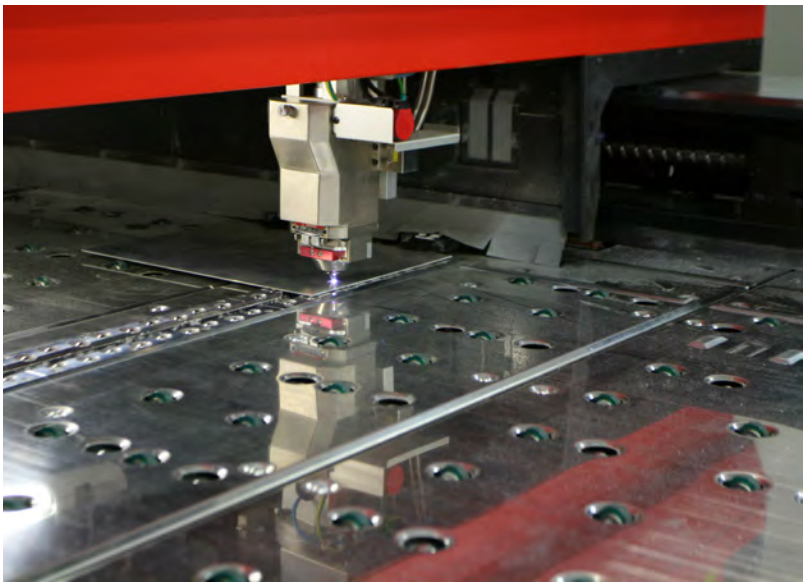
Always Moving Forward

Manufacturing Improvements Boost Efficiency at Wipaire

You may have heard that Wipaire has been busy—and it's true. However, we'd like to take this space to update you on the many improvements we've made in our manufacturing department to ensure we can provide you with the Wipaire products you've dreamed of. With growing demand around the world for Wipline floats, Wipaire's manufacturing department has invested in many improvements to increase capacity and production. These upgrades encompass facility expansion, new equipment, processes, and the addition of personnel.

Facilities

We moved to a new manufacturing facility in late 2012, and expanded again in 2014, doubling the production space footprint. The new facilities feature upgraded electrical service along with a reinforced foundation for the location of our 500-ton press.



The new laser cutter increases Wipaire's in-house parts manufacturing capabilities.

Equipment

Major investments have been made to reduce lead time and increase efficiency. This includes the purchase and implementation of a laser for sheet metal fabrication. The laser will afford us new flexibility to manufacture parts in-house, making parts production more responsive to business demand with shorter lead times and total control over production.

A new servo-hydraulic press brake has also been installed and brought on line. The machine promises to bring significant efficiency gains by streamlining the setup process. Setup time is projected to be reduced by over 80%!

Along with new equipment, we have refurbished the 500-ton press that forms many parts. This investment will improve efficiency, part quality, and will ensure a long, productive life for the press.

A new servo-hydraulic press brake and refurbished 500-ton press will improve efficiency and part quality.

Tim Hendrickson, Director of Manufacturing, shows off a new part fresh off the laser cutter.

Processes

With the hiring of two key team members—our new director of manufacturing and our manufacturing engineer—we have undergone a thorough review of manufacturing processes and practices, resulting in recognition of several areas for improvement. These include a manufacturing cell centered around the new equipment, which is currently being implemented. The manufacturing cell is expected to return significant improvements in manufacturing cycle time, while eliminating wasteful travel time for parts in production.

Additionally, we are in the process of reviewing a more environmentally-friendly part treatment and conversion coating process. The new process will help enable the manufacturing cell and will eliminate the need for hazardous waste treatment, while maintaining paint adhesion and corrosion protection performance. This system will be fully implemented in 2015.

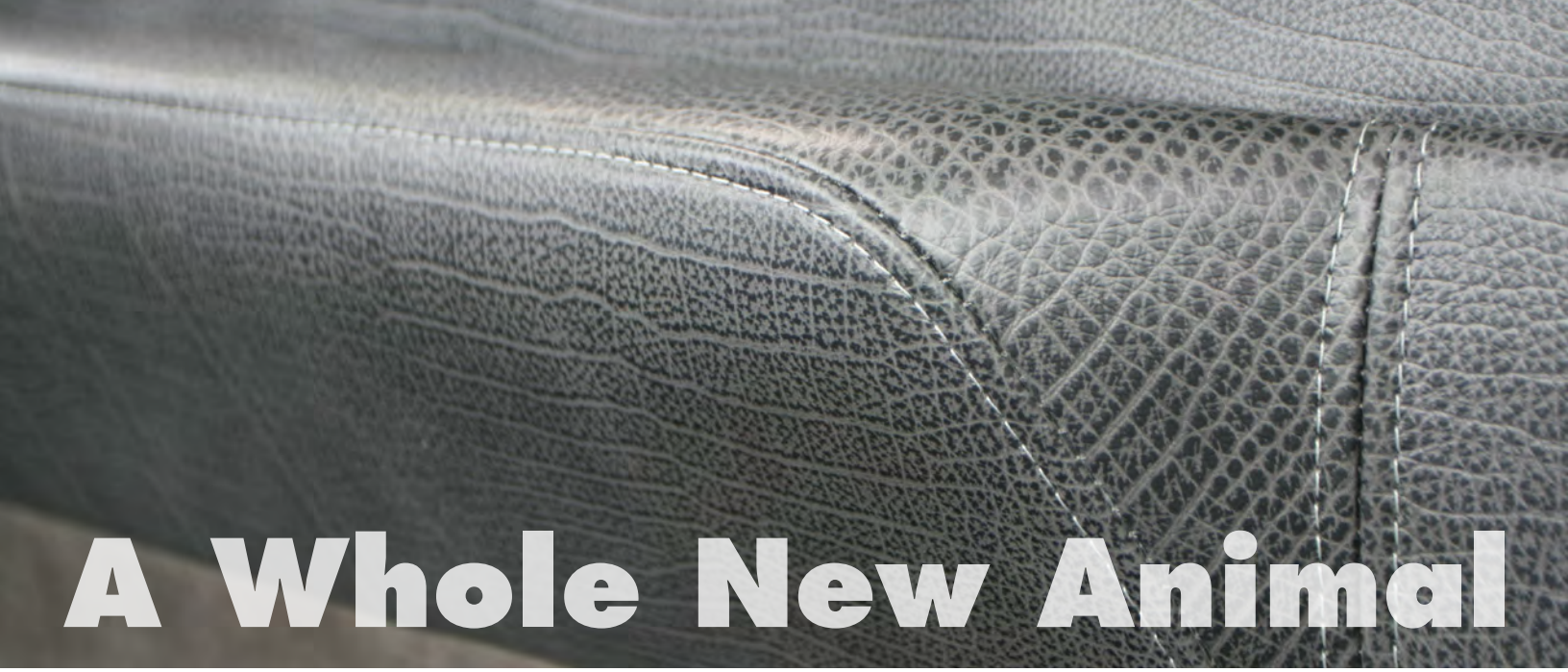
Finally, through scrutiny of existing practices, inventory placement has been changed to put the right parts in the right place at the right time. While hardware and piece parts might have been otherwise stored in a central location, they are now stocked where they are used.

Personnel

We have added expertise and experience to the manufacturing team, in addition to adding more fabricators and assemblers. Tim Hendrickson joined Wipaire as Director of Manufacturing, bringing over 15 years of manufacturing experience. His skills include management, analysis, and planning, with a manufacturing engineering background. Ryne Nelson came to Wipaire in the newly created manufacturing engineer position. Ryne assists in developing and implementing processes and fabrication methods, as well as working with the product engineering team to establish manufacturability of new parts.

To meet the growing demand, we have been hiring and training new skilled fabricators and assemblers. Productive man-hours were increased by 45% in 2014 and will be increased by an additional 45% in 2015. These planned increases will result in additional hiring for our manufacturing team.

Click Here to View Our Current Job Postings



A Whole New Animal

This Custom Cessna 340 was Worth the Wait

Bruce, an owner-operator with a low-time 1980 Cessna 340, spent several months looking for someone to modernize and refresh the interior and exterior of his airplane. He had completed a major panel upgrade and was ready to make the rest of the aircraft similarly impressive. This makeover would encompass stripping the airplane and repainting it as well as completely refurbishing the interior.

Having seen some of Wipaire's Caravan interiors, Bruce elected to contact Wipaire as he was evaluating options for services providers. After several interactions, Bruce was understandably anxious about the significant work scope and elected to visit Wipaire in person last November. "At the time, I was looking at several different shops. Everyone else was trying to sell me a cheap job, and I wanted a quality job." To discuss the interior project, he met with Will Perez, our interiors manager.

"Will did a phenomenal job of diagnosing what I wanted," Bruce commented. "He and Jim (Halfen, interiors shop supervisor) were able to transform the sketchy ideas I provided into a spectacular project. Within about an hour, we had settled on the concept that was used in the airplane."

Bruce's first concern was durability and how the interior would show wear. With bases in Minnesota, Nebraska, and Colorado, he frequently flies with his dogs and cat, and didn't want a high-maintenance interior that would require constant upkeep. He knew he wanted darker colors that wouldn't show wear easily, but didn't have specific selections made. "Will showed me some darker colors of leather, and came up with the idea for the alligator-embossed leather for an accent. He and Jim also suggested a flecked carpet that doesn't show dirt. They were alerting me to things that I wouldn't have noticed on my own, which was fantastic."

Will added, "This project was just fun. It was outside the standard material selections, and we really enjoyed working with Bruce to develop something unique. He identified with creating something that no one else had, and that's always a lot of fun."

While the aircraft was a well-kept, low-time airplane, several design features were beginning to reveal the airplane's age. The seat upholstery style was outdated, so Will worked with Bruce to define what look and functionality was desired. "We made the seats close to two inches wider, while changing the headrest and seat back design. The result is a more streamlined and modern

appearance that also provides more room. Since Bruce routinely travels with his family in this airplane, comfort and function are key considerations," Will stated.

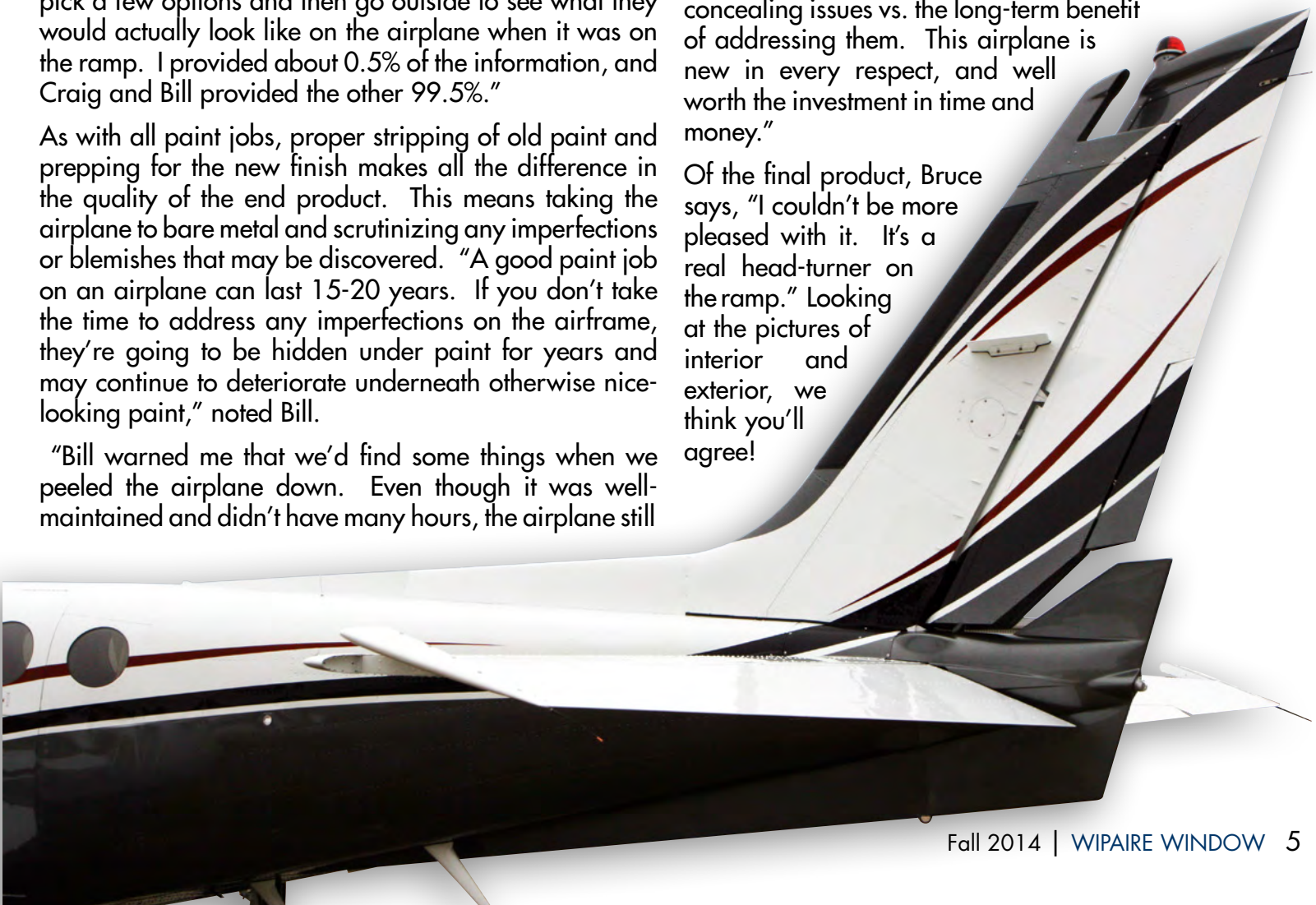
The seats feature a vintage-look leather that has rugged yet modern "lived in" look that doesn't show wear easily. The seat back incorporates the alligator-embossed leather, which is also used on the sidewalls to maintain continuity throughout the interior. The headliner was refreshed with a neutral color that offsets the darker material choices and creates a refined atmosphere with plenty of light.

While Will's team was updating the seats with new foam and covers, Wipaire's paint team was working on a masterpiece of their own. "The airplane had a typical RAM paint scheme," Bruce noted. "I wanted to get away from the dated horizontal lines and color. I met with Bill Jones (paint shop supervisor) and he put me in contact with Craig Barnett of Scheme Designers. Craig asked me what I didn't like and had me send him some examples of airplanes that I did like during the development process." Scheme Designers zeroed in on a design that Bruce liked and then Bill helped translate the scheme into actual paint color selections. "Bill sat down with me and went through paint chips. We would pick a few options and then go outside to see what they would actually look like on the airplane when it was on the ramp. I provided about 0.5% of the information, and Craig and Bill provided the other 99.5%."

As with all paint jobs, proper stripping of old paint and prepping for the new finish makes all the difference in the quality of the end product. This means taking the airplane to bare metal and scrutinizing any imperfections or blemishes that may be discovered. "A good paint job on an airplane can last 15-20 years. If you don't take the time to address any imperfections on the airframe, they're going to be hidden under paint for years and may continue to deteriorate underneath otherwise nice-looking paint," noted Bill.

"Bill warned me that we'd find some things when we peeled the airplane down. Even though it was well-maintained and didn't have many hours, the airplane still had areas to be repaired," Bruce remembered. "When Bill and his team found something, the communications were absolutely second to none. The blemishes were circled in color and included the description and price to fix them. It was very detailed and professional." With Bruce's exacting eye for quality, repairs to the airframe were made by Wipaire's maintenance department, body work was performed by the paint team, and the avionics department addressed several antennae in need of repair. Bruce added, "I know the difference between concealing issues vs. the long-term benefit of addressing them. This airplane is new in every respect, and well worth the investment in time and money."

Of the final product, Bruce says, "I couldn't be more pleased with it. It's a real head-turner on the ramp." Looking at the pictures of interior and exterior, we think you'll agree!



A GLIMPSE INTO THE WORLD OF

Aerial Firefighting

With a busy fire season in the United States and abroad, the Wipline float-equipped Fire Boss firefighting aircraft had an opportunity to shine. The hazards faced by firefighting pilots on a daily basis are vastly different from a typical general aviation pilot's experiences. Andrew Robertson, the chief pilot for Conair Group Inc., lent some insight into the operations of the Canadian company's 14 Fire Boss aircraft.

The Fire Boss developed out of the Air Tractor AT-802. The land-based single-engine air tanker (SEAT) AT-802 began operations in 1993. The Fire Boss program kicked off in 2001 with the prototype aircraft making its first flight in February of 2002, and initial certification was achieved in 2003. Nearly seventy Fire Boss aircraft will be in operation around the world by the close of 2014. The aircraft is designed to be a versatile scooping water bomber capable of making quick turnaround tanking runs on smaller lakes than its fellow scooper aircraft. This allows the Fire Boss to work close to a fire with short breaks between drop runs for efficient coverage.

While the operations of firefighting pilots may seem daring, safety and procedure are paramount to successful firefighting companies such as Conair. A typical Fire Boss mission generally proceeds as follows:

First, a fire will be recognized. Conair contracts with the Canadian government to provide a unique firefighting solution, and responds to calls from the controlling agency. Airspace restrictions in Canada are automatic—Class F airspace is automatically in effect over a fire, and restricts access below 3,000' above ground level (AGL) and within 5 nautical miles of the outermost edge of the fire. This ensures that general traffic does not interfere with intense firefighting activity. Conair's pilots may elect to establish a temporary flight restriction but typically utilize the Class F airspace first.

Fires are equal parts art and science and require the trained eye of observers, both on the ground and in the air, to accurately and effectively direct tanker drops. Conair utilizes several "bird dog" aircraft to act as spotters and to direct the tankers. The Fire Bosses typically work with a Cessna C208B Grand Caravan, which is a good bird dog due to high visibility because the wing is mounted significantly aft of the cockpit.

Fire Bosses are dispatched with 4 hours of fuel and approximately 600 gallons of fire retardant. Upon takeoff, Fire Boss pilots establish contact with their bird dog crew and check in when they are 5 minutes away from the fire. At this time, the bird dog crew will inform the Fire Boss pilot of the orientation of the fire, the objective of the drop run, and the anticipated target. A dummy or "show me" run will be completed first to give the Fire Boss pilot a look at where he needs to be in order to drop effectively. Pilots will work down in altitude in 500-foot increments to investigate the nuances of flying the drop run.

The first run will dispense fire retardant, which is a clay-based substance designed to coat whatever it is dropped on. Andrew notes that Fire Bosses attack two sides of the "fire triangle", which is comprised of oxygen, heat, and fuel. The initial fire retardant drop will be made on the perimeter of the fire to prevent further spread by removing the fuel source.

After the retardant drop, scooping operations will commence. Conair's Fire Bosses are equipped with tanks that carry foam which can be mixed with the scooped water to further enhance the effectiveness of the water drop. Fire Boss pilots will inject foam into the water as directed by the controlling officer. The water runs will be aimed towards the inside of the fire with the goal of removing heat from the fire.

Pilots interested in a predictable schedule need not apply for firefighting operations. Conair hires pilots on a 123-day contract that runs from approximately mid-May through mid-September. Days off are given in the field, so pilots may be able to get home but may also be at a tanker base full-time for the duration of their contract. Conair schedules pilots in cycles. On the first day, a pilot is allowed to fly up to 10 hours with a maximum of 8 hours per day thereafter.

To measure fire danger, Canada uses a color system to describe the risk. Green means that a pilot is free from duty for 24 hours, while blue means that the pilot must be airborne within 1 hour and 6 minutes. A caution level of yellow requires that a pilot be airborne within 30 minutes and red, the most serious level, requires aircraft to be airborne within 5 minutes. This means that a tanker pilot could spend most of his time counting ceiling tiles at a remote tanker base, or he could be waiting in full gear near the aircraft.

Conair's unique operating environment results in a similarly unique fleet of aircraft. The company operates 11 types of aircraft, including Fire Bosses, land-based AT-802Fs, RJ85, Convair 580s, a Lockheed Electra, Canadair CL215Ts, a Turbo Commander, Cessna 208B Grand Caravan, Piper PA-60 Aerostar, and Cessna 525 Citations. Pilots are cross-trained in a variety of these aircraft in order to respond to rapidly changing needs, giving Conair the flexibility required to dispatch the best firefighting solution on short notice.

Conair is a Canadian specialty aircraft operations provider which delivers a comprehensive range of aerial fire control products and services. Conair has been serving Canadian and international customers for over 40 years with a range of fixed wing aircraft. See www.conair.ca to learn more.

Aero Spray and the Fire Boss

Working to Fight Fires Across the United States

Aero Spray of Appleton, Minnesota, is currently the only United States-based operator of the Fire Boss. The company first gained experience with land-based aerial firefighting operations beginning in 1997. In 2007, the company brought the first Fire Boss on line as a trial operation in the state of Minnesota. Since the adoption of the first Fire Boss, Aero Spray has added three additional Fire Bosses and is planning to add one more for 2015 for a total fleet of five. The company also operates a wheeled Air Tractor AT-802 for aerial firefighting, and engages in aerial application operations in Minnesota with a separate Air Tractor fleet.

Aero Spray's Fire Bosses typically start the season in Minnesota with a 34-day exclusive-use contract. This means that the airplanes are dedicated solely to remaining ready to fight fires for the specified area. Fire risk determines the level of readiness, as in Canada. Generally, the Fire Bosses will follow fire activity around the country.

Until recently, the fire season in the United States was fairly well-defined. It would start in Florida and move in a counter-clockwise fashion to North Carolina, Minnesota, Alaska, the Pacific Northwest, down to California before starting again in Florida. The most recent fire seasons may change the way US officials view the fire season, though, as activity has been more consistent in drought-stricken areas like California. For 2014, Aero Spray Fire Bosses went to work in Minnesota, Washington, Idaho, Montana, and Oregon. They were also on standby to respond to fire activity in many other locations throughout the country. Aero Spray anticipates that some of its Fire Bosses may be called into action in California this year under a "Call-When-Needed" agreement with the state's fire agency, Cal Fire.

Aero Spray's Fire Bosses have also served in Alaska and North Carolina. It's the company's hope that US fire agencies will move forward with adopting the Fire Boss concept as many other countries have. "Interest has been increasing in using the Fire Boss as a supplemental resource to traditional aircraft like helicopters and large tankers," notes Jamie Sargent, a representative for Aero Spray. "It's an exciting new frontier for the Fire Boss."

Jamie notes that most of the practices in the United States are very similar to those in Canada, with relatively minor differences. For instance, the US term for Conair's "bird dog" would be "air attack" in the United States. Airspace restrictions are controlled by fire agencies, who coordinate with air traffic control to keep traffic clear of the fire area.

One notable difference between the United States and her northern neighbor is the contract terms. Canada features more stable, long-term fire contracts (120 days or over), while the United States has historically preferred shorter contracts of 30-100 days. Jamie notes that the volatility of shorter contracts can make it more difficult for domestic operators to invest in new technology and a stable, skilled workforce. With the changing fire environment, leading states like California are shifting to have resources in place on a 365-day basis. Operators like Aero Spray hope that this practice spreads throughout the country.

For more information, visit aero-spray.com and www.firebossllc.com.

Got Performance?

Wipaire has the cure for the common Skylane!

Wipaire, Inc. is pleased to announce that approval has been received for performance- and utility-enhancing modifications for the Cessna 182 Skylane. These modifications currently include the Boss 182, a Lycoming IO-580 engine conversion, and a gross weight increase to 3,500 lbs (1,587 kg) when on Wipline 3000 floats.

"Our goal for this project was to provide owners and pilots a more useful, better-performing airplane, and these modifications do just that," stated Chuck Wiplinger, President and COO. "We like to say that these improvements are 'the cure for the common Skylane.'"

The Boss 182, featuring a Lycoming IO-580 engine, produces 315 hp from the factory, making it the most powerful factory-new engine conversion available for 182 owners. Owners may elect to port and polish their engine for even more spirited performance. Dyno testing confirms that this can increase total output to 340 hp. The conversion is approved for the 182S and 182T models. The new carbon fiber composite Hartzell Trailblazer series propeller is standard equipment. A natural composite MT propeller is also available immediately, with other propeller options pending certification.

Landplane certification efforts for the Boss 182 IO-580 engine conversion are expected to be completed in 2014 along with a gross weight increase to 3,158 lbs (1,432 kg) in the landplane configuration. Additional approvals will include wing extensions and Flint tip tanks in the future. "Many of our customers switch between wheels and floats seasonally, or just want a landplane for different missions," commented Dale Fehrenbach, Wipaire's Director of Sales and Marketing. "Making these modifications available to landplane owners is a natural step."

Wipaire's gross weight increase to 3,500 lbs (with a 3,510 lb ramp weight) is available for the following Wipline 3000-equipped Cessna 182 models:

- 182S and 182T, when equipped with the Wipaire IO-580 conversion
- 182P, 182Q, and 182R, when equipped with the AirPlains IO-550 conversion

The Boss 182 IO-580 engine conversion combined with the gross weight increase to 3,500 lb results in a 23% reduction in water run and 35% increase in rate of climb, even with an additional 250 pounds of gross weight. It's truly an impressive combination!

First-Ever Helicopter Approval for Single Point Fueling

We are pleased to announce that approval has been received for the installation of single point fuel in the Airbus Puma 330 series helicopter. Previously approved on fixed-wing aircraft such as the Cessna Caravan series and the Quest KODIAK, the Puma 330 is the first rotary wing application of the Wipaire single-point fuel system, and the first Part 29 certification Wipaire has received.

A large transport category helicopter, the Puma 330 is operated around the globe in both passenger and cargo applications. Wipaire's single point fueling system increases the convenience of fueling the Puma, and opens up more use options, such as naval ship-borne operations. The electronic monitoring system ensures that the aircraft is reliably topped off and provides information to crew members throughout the process.

The system was developed, prototyped, and tested at Wipaire's Leesburg, Florida, service center.

A Puma SA-330 Dropping Cargo on a US Navy Ship

Share Your Flying Adventures!

Photo courtesy of Matt Brown and Jeff Gordon

What did you do this weekend? Matt had a dilemma--how to get his favorite pizza while out on the boat? His friend Jeff came to the rescue, delivering the pizza with this beautiful Wipline 2100-equipped Aviat Husky. Now that's service!

If you would like to share one of your adventures, please send photos and a description of the experience to agesch@wipaire.com.

We look forward to seeing where you have taken Wipaire products!

Are You Newly Seaplane Rated?

Let us be the first to welcome you to the seaplane flying community! As you have already discovered, the seaplane pilot's lifestyle is one of adventure and freedom. In celebration of this accomplishment, Wipaire extends to you the opportunity to receive a custom-engraved "Freedom to Explore" medallion*.

Visit www.wipaire.com/medallion for details and to claim your medallion!

*Valid for ratings issued after May 23rd, 2012. While supplies last.

Eighteen Years Later...

Wipaire recently had a Cessna 172 come through the shop that reminded some of our crew of one that they had worked on in 1996. Thank you to Brian "B.A." Anderson and Gene LaPointe for helping us recreate some shop snapshots!

1996

Brian "B.A." Anderson

Gene LaPointe

2014

Brian "B.A." Anderson

Gene LaPointe

Aircraft for Sale

Questions? Call Diane at 651-209-7190

1998 Cessna Caravan, 2,568.4 Hrs TT, 30 Hrs SHOT, Garmin 530W/430W, Air Conditioning, Wing & Tail De-Ice, Executive Leather Interior, Commuter 10 Pax Seating Option Available. $1,740,000 on Wipline 8750 Amphibs - Optional Landplane Gear only $1,440,000 - Trades Considered

2008 Cessna Caravan, 450 Hrs TT, Wipline 8000 Amphibious Floats, Garmin G1000 Avionics Suite, Jeppesen Chart View, 8360 GW, Air Conditioning. This Aircraft is in "like new" condition inside and out! $1,900,000

2009 Quest KODIAK, 285 Hrs TT, Garmin G1000 Integrated, Avionics System, Garmin Synthetic Vision, TKS System, Very Low Hours, Midwest based and operated. Like New. Available Immediately. $1,240,000

2004 Cessna Turbo 206H, 830 Hrs TT, Wipline 3450 Amphibious, Co-Pilot Door, Garmin G1000 Avionics Package, Annual 04/2014, 3792 GW. This is a fresh trade in! Save 300K over new pricing. $449,000

1975 Cessna U206F, 825 Hrs TT, 345 Hrs SFRM, Hartzell 3 Blade 135 Hrs SNEW, 6 new Millennium Cylinders, nearly new paint/interior, all glass replaced, custom-modern Avionics Site w/WAAS approved IFR GPS. A must see! $239,900

1978 Cessna TU206G, 3267 Hrs TT SNEW, 1001 SMOH, Garmin GTN 750, Aspen Pro 1000 MFD, STEC 55 Auto Pilot, Traffic Transponder, Wipline 4000 Amphibs, Co-Pilot Door, RSTOL, Flint Tips, Fresh Annual 08/2014. Call for Pricing

2015 Wipaire "Boss" 182 Amphibious Conversions Now available for full customization! New Lycoming 580 engines:315 to 340 HP. Most powerful engine conversion for any late model 182. Increased GW available from 3250 to 3500 lbs MTOW. New paint/interior. AVAILABLE FOR DEMONSTRATIONS, call for an appointment today.

How can Wipaire help you with your aircraft sale or purchase?

- Experienced and Market Savvy Sales Staff
- World-Wide Network of Contacts Developed Over 60 Years
- Professional Photography and Aircraft Listing
- Customized Marketing Strategy
- Pre-Buy Inspections
- Full-Service Interior, Avionics, Maintenance, and Refinishing Facilities
- No-Hassle Document Preparation and Filing
- Importing & Exporting Service
- Convenient Aircraft Ferry Service
- Pilot Training and Checkrides

View Full Specs and All Aircraft Listings at www.wipaire.com

Click Here to Sign Up for Our Aircraft Sales E-Mail List