

# THE WIPAIRE WINDOW

A Special Newsletter Created for Everyone in the Aviation Industry!

Vol. 03 Num. 02 SUMMER 2010



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Wipline History

## WIPLINE 7000 FLOAT NOW APPROVED!

On Friday, June 11, 2010, we received Supplemental Type Certification (STC) for the Quest KODIAK on our Wipline amphibious 7000 float from the FAA showing that our design meets all applicable FAA regulations. The Quest KODIAK certification program has taken roughly three years to complete. This includes not only certification of the aircraft on the floats, but a complete design and development cycle for the 7000 float. It took 287 flights, totaling 162 hours of flying, to certify the KODIAK on floats. Certifying the Quest KODIAK proved to be significantly more work than many of the previous engineering programs due to the fact that the aircraft had never been floated before and was certified to the newest and most stringent version of FAR 23, the set of regulations that we are required to follow for this aircraft.

Wipline 7000 floats are the latest addition to Wipaire's Wipline family of products. The hulls are modeled after the successful Wipline 13000 Floats which have improved rough water handling qualities and also include the traditional Wipline flat top deck for easy loading and safety. A completely redesigned main gear system keeps maintenance simple and reliability high. These features and many others make this the most advanced and feature rich float produced yet.

The Wipline 7000 float has been in full production since December when it received TSOA and initial deliveries to customers are currently underway.

### Performance for the KODIAK

#### Wipline 7000 Floats

Maximum Cruise Speed (10,000 ft)	157 KTAS
Take off run (land)	1,474 ft
Take off over 50 ft. obstacle (land)	2,290 ft
Take off run (water)	1,658 ft
Take off over 50 ft. obstacle (water)	2,710 ft
Landing roll out (land)	1,314 ft
Landing over 50 ft. obstacle (land)	2,548 ft
Rate of climb	1,199 fpm
Service Ceiling	20,000 ft
Gross Weight	7,255 lbs
Landing Weight (land or water)*	7,255 lbs
Useful Load**	2,355 lbs

\* Note: Weight above 6490 lbs must meet zero-fuel requirement for flight operations.

\*\* Note: Loading must comply with zero-fuel requirement of 6490 lbs (see Quest POH section 9).

[Learn More About Wipline 7000 Floats](#)

# FEATURED WIPLINE FLOAT OPERATORS

## Wipaire Touches Down in the Maldives

Contributed by Maldivian Air Taxi



Thomas Pickard ©

*Situated in the heart of the Indian Ocean, the Maldives is a small island nation dominated by vast ocean vistas dotted with idyllic tropical islands. Covering an area of 90,000 square kilometers – about the size of Maine – the Maldives is comprised of 99 percent water and 1 percent land mass.*

Since the first resort opening in the mid-1970s, the Maldives has gone from a sleepy island nation to one of the most sought after tropical destinations today. In 2008 alone, 683,000 people visited this remote corner of the Indian Ocean to go diving, surfing and to experience some of what the best resorts in the world have to offer.

For a country largely dominated by water, getting to and from resort islands can represent a logistical challenge for visitors. Resorts close to Malé International Airport rely on speedboats for resort transfers. For resorts in the far-flung atolls though,

speed boat transfers are out of the question. Not only are the distances too great, the length of time is beyond what most people would comfortably tolerate – three-hour boat-transfer anyone?

Enter Maldivian Air Taxi (MAT). With a fleet of 22 de Havilland DHC-6 Twin Otter aircraft, piloted by a roster of 77 pilots, MAT services 44 of the 97 resorts in operation today. From humble beginnings in 1993, MAT has grown to become the largest seaplane operator in the world, with an annual carrying capacity of 400,000 people. While the Twin Otter is the success story of Maldives aviation, every pilot knows that a seaplane is only as good as the floats it lands on.

Given the importance of seaplane float design in daily aircraft operations, MAT recently partnered with Wipaire for the provision of 20 sets of Wipline 13000 floats as part of MAT's fleet restructuring-program. From an operational perspective, the Wipline 13000 float was a logical choice.



Thomas Pickard ©

From a flying perspective the Wipline 13000, with its deep keel, is ideally suited for the often-rough ocean conditions that pilots encounter throughout the Maldives. The deeper keel provides pilots with more 'cutting' ability, which assists with the aircraft's stability during take-off and landing. Above water, the Wipline 13000 provides crew and passengers with a wide, flat top, making the float a user-friendly surface for embarking and disembarking passengers.

To date, MAT has retrofitted 10 aircraft with the new floats and implemented a mandatory training program to ensure pilots are familiar with the handling characteristics of the Wipline 13000 floats.



Thomas Pickard ©

# The **LION** has learned how to swim

*The Amphibious Caravan unites guts with versatility to conquer the Amazon.*

Contributed by Tam-Taxi Aereo Marilia S.A.



Greenpeace/Erika Harrison ©

*To get to all corners of the Amazon, a large region full of constantly-flooded rivers, quickly and gracefully, you need an airplane. In a boat, depending on the route, it can take days to reach your final destination. But how can you land a plane when there are no runways?*



Greenpeace/Erika Harrison ©

Wipline floats, the rivers are no longer a problem. Hard to reach places are no longer impossible with this aircraft that is so highly recommended by aircraft pilots and owners.

With an amphibious aircraft, your problems are solved. An excellent option is the versatile Caravan, a success in Brazil, with a total fleet of 126 aircraft (the largest market after the U.S.).

If the robust Caravan is already a national preference in its normal configuration, imagine the amphibious version with the Wipline 8000. With retractable landing gear on

Fernando Bezerra is a pilot for Greenpeace and he uses the amphibious Caravan to carry personnel from the well-known international NGO around the Amazon Rivers. He uses the float for half the year because it is very useful in his work. "The benefit of the float [plane] is that it provides easier access to those places where a boat might take 30 days to reach, depending on the route taken. If it rains, its worse," Fernando says. Greenpeace uses the float for six months of the year and for the rest of the time they use the fixed landing gear; "There are jobs in Mato Grosso where there is no need for the floats," he explains.

For Attila Yurtsever, from the Rico Táxi Aéreo Company, the amphibious Caravan eliminates the limitations of an airport and even offers increased mobility. "There is no need for a runway, you land using the floats, and our operational range increases," he emphasizes. Rico Táxi Aéreo uses the amphibious Caravan for fishing tourism, rescuing people in cities with no runways, and for the transport of valuables, health professionals, and personnel to help vessels in trouble on the region's rivers.

Marcos Pacheco from Manaus Táxi Aéreo, says he will not remove the float for anything. The aircraft lands at Manaus International Airport and on the Amazon rivers. His main customers are tourists who come to Brazil for fishing, humanitarian aid, local governments and IBAMA (the Brazilian environmental agency). "The biggest benefit that the amphibian offers is its mobility in those places where there are no runways," says Pacheco.



Greenpeace/Erika Harrison ©

## A word about flying wires...



*Jason Erickson  
Director of Maintenance*

Wipline floats all use a component to keep your floats square called a flying wire or box wire. The wires can be round, streamline or a combination of both. The most common question I get is how tight they should be. The short answer is: just right. Now most mechanics will not accept that answer, so I will try and explain.

I have only seen two flying wire tension tools ever. The first was a reproduction of a tool manufactured for the Stearman, the other was for the Christian Eagle. What I noticed about each of these tools was the wire that was being measured was of a consistent size and shape. Float wires do a similar job but have some noticeable differences. Some wires have a round section where they intersect the opposing wire. Small floats have thinner round wires ranging from 3/16" to 5/16". If they are round wires with wrenching flats, over tightening them will round off the flats making them nearly impossible to rotate. Using a very

smooth and polished adjustable wrench (to prevent nicks and scratches) on streamline wires could over tighten them but usually common sense will prevent this. In most applications these wires are indeed "boxed" to an equal distance from clevis pin to clevis pin. This keeps your floats level in relation to the aircraft. Proper rigging starts with two important facts; that the wires are of equal length and evenly positioned on the threads, and which clevis is the RH threaded end. By starting with equal distance wires, you can turn each one the same amount to line them up, and knowing which side is the RH threaded end will tell you if you are going the right direction. Once you have them equally drawn up and snug, measure from each clevis to make sure you are square. Again, there are a few instances where you can't use the square measurements but the majority of the installations are of this nature. Once you have the wires snug and square, you can draw them up a half turn at a time to a comfortable setting. Too loose and they will slap and move with pressure on the floats, too tight and you are at risk of damaging the wires or putting unnecessary stress on them.

Once you have them "tensioned", tighten the check nuts and double check your cotter pins. Make your required log entries and you are ready to go. Happy floating!!!

## 406 MHz ELT News



*Rick Wahlman  
Avionics Manager*

Most everyone is aware that the International Cospas-Sarsat System terminated satellite processing of distress signals from 121.5/243 MHz emergency locator transmitters (ELT) on February 1, 2009. Distress signals on 121.5/243 MHz are now only detected by ground based receivers and other aircraft. Aviators will need to switch to an ELT operating at 406 MHz if they want to be detected by satellites.

At the time of this writing, the FAA has not mandated the use of 406

MHz ELTs for U.S. registered aircraft or other aircraft flying in U.S. airspace. Mexico will require them by April 2, 2010. The Bahamas has not implemented the requirement and will review the order again in February 2011. Canada has extended their requirement for 406 MHz ELTs in the southern part of the country until at least March 11, 2011. A 406 MHz ELT (or an alternate means of emergency location) is required when operating north of 55 degrees latitude in western Canada and north of 50 degrees

latitude in eastern Canada.

Those not ready to install a 406 MHz ELT may wish to consider a Personal Locator Beacon (PLB). These are handheld devices that transmit distress signals on the 406 MHz frequency. They do not meet FAA ELT requirements, but when carried in conjunction with a standard, onboard 121.5/243 MHz ELT, can offer a little more peace of mind. Remember that PLBs will not automatically activate.

Here's something to keep in mind; with an activated 121.5/243 MHz ELT, the typical search area may be a 15-20 kilometers radius. In a remote area, it is even possible for the signal to be undetected. A 406 MHz ELT tightens that radius to 1 - 2 kilometers. When coupled to the aircraft navigation system (GPS, etc.) the position accuracy improves to approximately 100 meters.

On June 15th, The Federal Communications Commission announced it will prohibit further certification, manufacture, importation, sale or use of 121.5 MHz emergency locator transmitters. The date of compliance has not yet been set by the FCC. The FCC has clarified that the rule is targeting legacy TSO C91a type ELTs, which operate primarily on 121.5 MHz. Current TSO C126 ELTs (406MHz) are not affected by this ruling, although most of them also transmit on 121.5 MHz.



## Single Point Refueling System G-2 Now Certified

The new and improved Single Point Refueling System for the Cessna Caravan is now certified. The G-2 edition of the Single Point Fueling System is compatible with the Cessna 208 or 208B Caravan equipped with either G1000 or resistive fuel quantity systems. The system can be installed on the aircraft in either landplane or seaplane configuration. An upgrade option is also available for aircraft previously equipped with an older Aviadesign system.

The Wipaire Single Point Fueling System G-2 enables the aircraft to be filled from the ground, eliminating the risk of



leading edge damage from over the wing fueling. Ladders are no longer required, enabling the Cessna Caravan to be fueled more safely and expeditiously. Wipaire's new electronic monitoring ensures that the aircraft is reliably topped-off and an all new digital display with touch screen controls ensures an easy interface for the user. Also new to the G-2 edition is the flexibility to display fuel quantities in gallons, liters, kilograms or pounds. With over 100 STCs, Wipaire, Inc. is not just for aircraft floats - for additional information on the Single Point Fueling System G-2 or other STCs, contact Mark Mathisen at 651.286.7007.

## Trade Show Schedule

### Dates

Jul 26 - Aug 1  
 Aug 21-22  
 Sep 9-12

### Show

EAA AirVenture 2010  
 Orillia Fly-In  
 International Seaplane Fly-In

### Location

Oshkosh, WI  
 Orillia, Ontario  
 Greenville, ME

[Click Here to view our full tradeshow schedule online](#)



### Win the EAA Husky A-1C with Airglide C2200 Skis

Wipaire is once again proud to support the EAA Share the Spirit Sweepstakes by providing a set of Airglide C2200 Hydraulic Wheel Skis. The EAA Sweepstakes directly supports EAA programs, which allow members to share the spirit of aviation among fellow enthusiasts and the next generation of aviators.

The drawing will be held on August 1, 2010, during EAA AirVenture Oshkosh. Please visit EAA's website for how to enter:

<http://www.airventure.org/sweepstakes>





Cessna Service Center at Fleming Field. In 1979, Wipline, Inc. and Wipaïre, Inc. came together when Wip purchased Wipline, Inc. from his dad.



## Celebrating 50 years of Wipline Floats, Part 2

Wipline, Inc. was founded in 1960 by Bernard "Ben" Wiplinger. He set out 'to build the toughest float anybody ever stuck under an airplane.' This was a tall order, set by an individual with a passion for success and engineering innovation. This vision and passion has been the driving principles for three generations of Wiplingers and 50 years of Wipline float design and manufacturing. Today Wipaïre, Inc. is excited about what the future holds and proud to celebrate this historic milestone for Wipline floats.

### 1970s: A Decade of Expansion

Bob 'Wip' Wiplinger joined Wipline, Inc. in January 1970 after having received his aeronautical engineering degree from the University of Minnesota. By early 1970, Wipline, Inc. had outgrown its current facility at Fleming Field. In February of 1971, Ben moved Wipline, Inc. to a new 23,000 square feet facility on the bluff overlooking the Mississippi River. The new site had great river access and the Wipline Seaplane Base (09Y) was established. Production increased in the new facility and by December 14, 1974, the 100th set of Wipline amphibious floats came off the production line. During the 1970s, Ben and Wip took on an extensive engineering project to float the N.22B Nomad, a twin engine utility aircraft built by the Australian Government Aircraft Factories (GAF). Though the Nomad aircraft had a short production run and only resulted in a few sales, the design for the Nomad float opened the door to other larger scale projects and became the forerunner for the popular Wipline 8000 float.

In 1974 Wip expanded the range of services by founding Wipaïre, Inc. to perform maintenance as a certified

### 1980s: A Decade of Engineering Innovations

Continuing in a tradition of engineering excellence, Wipaïre introduced Wipline 6000 floats for the de Havilland Beaver in 1982. In addition, over ten performance and safety modifications were made available, allowing Wipaïre to transform the Beaver into a true seaplane workhorse. In 1985, the first Wipline 8000 floats for the Cessna Caravan were launched. The combination of Wipaïre's rugged amphibious float and Cessna's sport utility aircraft has proven through the decades to be a successful combination with many applications.

Wipaïre expanded their service offerings in 1989 with the addition of avionics and exterior refinishing departments. The avionics department, under the leadership of Rick Wahlman, began providing repair and installation service to float customers. The refinishing department allowed floatplane owners to give new life to their airplane. The addition of these services enabled customers to truly leave Wipaïre with their dream floatplanes. By the mid-1980s, Wipaïre, Inc. had grown to 35 employees and had sold an incredible 700 sets of floats.



# WIN WIPLINE 2100 FLOATS

To commemorate 50 years of float innovation and manufacturing, Wipaire is giving away a set of Wipline 2100 seaplane floats. Visit us at Oshkosh AirVenture 2010 for your next chance to enter.

The drawing for the Wipline 2100 floats will be held at the AOPA Summit in Long Beach, California on November 13th. Full contest rules will be supplied upon request.

[Click Here to read more about Wipline 2100 floats](#)



**Aircraft Display #227-228**  
**WipCaire by Wipaire #4002**  
**Seaplane Base**



**WIPAIRE CELEBRATES**  
**50 YEARS**  
**OF INNOVATION**

# Seaplane Safety Tips

## Keeping Safe - GPS Locators

by Guest Contributor Grant Wallace, Lake & Air - Training and Pilot Shop

Last winter I decided I would take a day trip up to Crookston, MN. For those of you who don't know Crookston, Minnesota is way up in the northern part of this great state and to say the least it is cold. Some love the cold and some hate it....I am a member of the latter group. Funny thing about the cold....it actually hurts. You see I was woefully unprepared for this day. Some of the simplest tasks are near impossible with warm gloves on.

After departure and climb out from Crookston on my flight home I started to warm up again and it dawned on me that no matter how well I could fly the airplane that no amount of skill would save my life if I was not prepared to walk to safety. From that point forward I decided that, number one, I would not fly trips like this in the winter without all the gear I would need to stay warm and stay overnight. And, number two, I would not do it without a personal

tracking or rescue device. Fast forward six months to today and in preparation for next winter I have been reviewing two different devices. One is the Spot II Messenger and the other is the ACR Aqualink View. These devices are two completely different tools. In short the Spot II Messenger is primarily a tracking device with a rescue feature that requires a subscription to work. The ACR Aqualink is a primarily a rescue device that requires no subscription (One can be added for additional features). The chart below outlines the major differences between the two units.

This obviously is not an exhaustive explanation of the differences but they are the things that I am considering as I select a tracking and rescue device. Take the time to consider your options and weigh the benefits of carrying one with you when you fly.

[Click Here](#)  
to view these and other  
safety items on  
[lakeandair.com](http://lakeandair.com)



Feature	Spot Messenger	Aqualink
Subscription Required	YES	NO
Transmits GPS Position	YES	YES
View GPS Position	NO	YES
Tracking Via Website	YES	NO
Send Custom Message	YES	YES (Subscription)
LED Strobe	NO	YES
406Mhz	NO	YES
121.5 Mhz Homing	NO	YES
Power Output	UNKNOWN	6 Watts
Replaceable Batteries	YES	By Authorized Service Center



# More than you ever wanted to know about flotation devices in seaplanes. . . .

by Guest Contributor Rachel Norman, Lake & Air - Training and Pilot Shop

We often get asked what the requirements are for flotation devices in seaplanes for crewmembers and passengers. There really isn't a good straightforward answer as it can vary by state, but as a general rule commercial and for-hire operators must have an FAA approved flotation device for each crewmember and passenger. If you're a private operator, your options expand dramatically, as your flotation device typically does not need to be FAA approved.



Some things to consider when purchasing personal flotation devices (PFDs) include the buoyancy, fit, comfort level, ease of operation, and serviceability. It should be rated for the intended wearer's weight and fit them reasonably well. My favorite styles include either the inflatable life vest (shown on Jackie), or the inflatable waist pack (worn by Randy). Both can be worn with relative ease in the aircraft, although some people may prefer one or the other based on their seatbelt and shoulder harness fit.

A foam life vest or foam seat cushion is a hindrance if trying to swim out of a submerged cabin, and for that reason, we only recommend inflatable devices. Because you don't want to inflate the device until you are clear of the aircraft, manually inflatable devices are the only type that should be used in aircraft. Some automatically activated models can be deactivated so they only operate through manual activation (instead of on contact with water), but if you're buying a PFD for use solely in your aircraft, keep the few extra dollars in your pocket and get the manual design. There are no Coast Guard approved manual inflation PFDs for infants or children, so if you carry them onboard, you will need

to get FAA approved ones similar to those the airlines use for children.

The waist pack flotation device when inflated fits around your neck, and the waist strap remains attached. The vest just needs to be activated and it is ready to go. Both styles should support the wearer face-up in the water without assistance if worn correctly. They have an oral inflation tube so you can increase the buoyancy if necessary by blowing air into the bladder, and may have a whistle or water activated light as well depending on which manufacturer and model you go with.

Inflatable PFDs require periodic service, which can usually be accomplished by the owner. This typically includes replacing the cartridge after any discharge of the inflation cylinder as well as regular inspections and test inflations to ensure it will operate correctly when needed. The owner's manual for your device should provide more information about required inspections and service.



Lake & Air carries the Mustang line of PFDs, which I really like and use daily. In addition, there are several styles of FAA approved flotation devices, including those for children and infants. There are lots of other options out there as well from other manufacturers, and regardless of which one you carry in your plane, make sure you and your passengers understand how to use them. Nobody plans on a water upset or ditching, which is why it's so important to have a plan in place, conduct a thorough briefing, and use the right gear on board.