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Ben Wiplinger and N9881X

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WipCaire Services

Celebrating 50 years of Wipline Floats

In 1960, Bernard "Ben" Wiplinger 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 have been the driving principles for three generations of Wiplingers and 50 years of Wipline Float design and manufacturing. Today, Wipaire, Inc. is excited about what the future holds and proud to celebrate this historic milestone for Wipline Floats.

Building a Foundation: 1940s and 1950s

Ben Wiplinger had a strong interest in aviation long before he began working on Wipline Floats. As a child, he built his own glider in the backyard of his parent's home. Out of concern for his safety, his parents dismantled the aircraft before he could take it on its maiden voyage. His passion for aviation grew stronger as he went on to study aerospace engineering at the University of Minnesota before moving to California to work for Douglas Aircraft for a period of time. He then returned to Minnesota to work for Northwest Air Activities and Peterson-Curtiss Flying Service at St. Paul Airport. At the age of 25, Ben was one of only six certified aircraft mechanics working in the Minneapolis/St. Paul area. Ben was drafted into the Army Air Forces of the United States before Pearl Harbor and spent time working in Albuquerque, New Mexico, where he developed a pre-oiling system to help the performance of the bombers. He was awarded several decorations by the military for this engineering contribution.

After WWII, Ben returned once again to his roots in Minnesota and began converting surplus military aircraft into corporate aircraft at South St. Paul Airport. In fact, he sold 3M their first corporate aircraft in 1947. By the close of the 1940s, Ben was operating Wiplinger Aircraft Service, an FBO offering fuel service, aircraft sales, maintenance, restoration and upholstery.

During the 1950s, Ben grew and expanded his scope of services. He purchased his first seaplane in 1951 and began flying north on fishing expeditions, thus beginning his passion for seaplane flying. He even developed an improved hydraulic system for his Edo floats. In 1959, Ben sold his FBO business to focus on the next chapter of Wiplinger Aircraft.

continued on page 2

Celebrating 50 years of Wipline Floats, *continued...*



Wipline Inc. Founded 1960

After incorporating Wipline in 1960, Ben set up shop in a World War II barracks building on the eastern boundaries of the South St. Paul Airport. After many conceptual drawings on the walls and posts of the barracks and much tinkering with aluminum parts, he began constructing his first set of floats. Having seen much room for improvement on other existing floats of the day, Ben set out to incorporate many new features. He worked with experts at 3M to develop a metal bonding technique that would allow him to use fewer rivets and therefore achieve a smoother and lighter float. It took him three years and \$8000 to get the patent

on this process, but Ben knew it was the way to go. He also incorporated flat top decks on the floats, allowing the pilot and passengers to maneuver into and out of the airplane with much less risk of taking an impromptu swim.

In 1961 Ben purchased a Cessna 185, N9881X, to flight test his new floats on. By 1962 he had sold his first set of floats to Ontario Central Airlines. In the coming year, Ben would receive FAA certification for the Cessna 185 on Wipline 3700 Floats. This certification was soon expanded to include many models of the Cessna 206 as well. During the first decade of Wipline Float production, approximately 30 sets were installed on various aircraft. Look for more of the Wipline story to come in future publications of the Wipaire Window in 2010.

Wipline Floats: Hydraulic Pump Locations



Dan Gutz
Eastern Float Sales

Wipaire, Inc. has built many different float models over the past 50 years. Many improvements have been made along the way as technology and engineering designs have changed. Some of the changes were implemented due to aircraft design changes, and some were implemented as product improvements. Some of the changes that have been made have to do with the hydraulic pumps and systems used, and also the location of the hydraulic pump.

Some of the first amphibious floats designed used engine driven pumps. Many did not have backup emergency hand pumps to cycle the landing gear if something went wrong. Currently, all Wipline models use hydraulic pumps that are located in the fuselage or on the firewall and all are backed up with a secondary emergency hand pump system.

There was a time when Wipaire installed the hydraulic pumps inside the floats. After several seasons we realized that this

was not a good idea. The float compartments are a very humid environment, and having electronic components inside the float shortened the life of the pumps. The wiring and the pumps corroded very quickly. Also, you ran the risk of damaging the pump and the wiring while placing cargo inside the baggage compartment. Putting the pump inside the aircraft increases the life cycle of the pump, also keeps the pump in a safe non-humid location that cannot be damaged by cargo.

Many changes have been made with the design of Wipline floats over the past 50 years. All of these changes have been made to better the quality, performance, and also the longevity of our products. Wipaire, Inc. strives to manufacture and design the highest quality, best performing,

and longest lasting floats in the world, and will continue to do so. Keep an eye on our website, you never know what the next new product or improvement may be.



A FLY-IN HAMBURGER RUN GONE AWRY



Rachel Norman,
Guest Contributor

Several weeks ago the local news outlets were buzzing about two skiplanes that landed on Lake Calhoun in Minneapolis for a quick lunch. They had checked the Federal Aviation Regulations (FARs) and what they thought were sufficient local ordinances. Unfortunately, they did not do enough, as the Minneapolis police, along with the local FAA Flight Standards District Office (FSDO), tried to determine whether it was actually legal to land and take off from Lake Calhoun.

It's a good reminder, especially for seaplane pilots, but also ski-plane pilots and folks that don't always use an approved runway for landing, that the FARs aren't the only thing to be concerned with. Most seaplane pilots know that there are a lot of other controlling agencies that oversee waterways and parks. Some states are more restrictive than others. Living in Minnesota and near Wisconsin, we're blessed with a pretty fair use of these resources, in my opinion, but there are some

states where this isn't the case. So, how do you know? For seaplane pilots, the Seaplane Pilot's Association publishes a water landing directory. This is a good starting point, as they try to compile information from as many sources as possible, also using input from seaplane advocates in each region. We recommend that if a pilot is going somewhere, they try to talk to a local seaplane pilot, or someone who knows the ins and outs of the area.

In the case of the skiplanes on Lake Calhoun, as well as other skiplane flyers and people who use other than "approved" runways, it gets a little tougher. Try to find out who the controlling agency is for the area or water body you want to use. Are there ordinances in place that would prevent or pose an issue for what you want to do? When in doubt, start calling. Unfortunately, there's no master list of what you can and can't do – but that doesn't mean you can't get in trouble for it...



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Wipaire Receives TSO Approval for Wipline Model 7000 Float for the Quest Kodiak



Wipaire is making steady progress on certification of their Wipline 7000 Float designed for the Quest Kodiak. The innovative float structure received FAA approval in early

December via a Technical Standard Order authorization, or TSO. With the FAA's approval of the structure and design confirmed, Wipaire engineers are turning their full attention to the completion of flight testing, and expect full approval of the installation in the 1st quarter of 2010. Aircraft are currently on the ramp awaiting the Supplemental Type Certificate approval and installation of Wipline 7000 floats.

The Quest Kodiak, designed to access short, unimproved back country strips, coupled with Wipaire's new Wipline 7000 Floats, will whisk passengers to the most remote lakes and rivers in safety and comfort. The hulls of the Wipline 7000 floats 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 to date.

[Learn More About Wipline 7000 Floats](#)

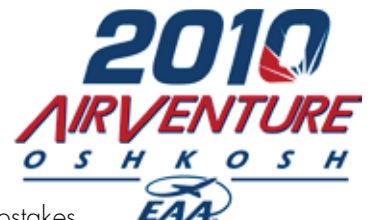


Win the EAA Husky A-1C with Airglide C2200 Skis

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>.



MAGNETOS 101



Jason Erickson
Director of Maintenance

Magnetos, installed on all but a handful of certificated aircraft engines, are the spark behind the fire of your aircraft engine.

Just like anything mechanical, they do require periodic inspections to make sure

they are in proper working order.

The two most common magneto

manufacturers are Unison, or SLICK, and TCM, or BENDIX, as we know them. The same situation would apply to any of the older magnetos you find from time to time as well. Each of them has required inspections at various time intervals depending on what application and what engine they are installed on. Check out the chart following on each manufacturers inspection intervals. If you are experience hard starting in cold weather

or harder starting during a “HOT” start situation, especially in fuel injected engines, it may be time for a magneto inspection. Point settings can drift, condensers and coils can break down. All of these produce a lower than desired amount of energy to the spark plugs and there you have it; a burned up starter, dead battery or both. The worst situation is just instant failure. Fortunately you have a dual magneto installation. A proper magneto check at run up can spot degraded performance of not only magnetos, but the harnesses and plugs as well. A dead magneto will also be found at this time. Waiting until a magneto fails is just not a good practice. The manufacturers put inspection requirements out there for a reason, your safety. At your next annual inspection, make sure your maintenance provider checks the time of your last inspection.

TCM Magnetos

500 Hour Inspection-Snap ring impulse couplings

100 Hour Inspection-Riveted impulse couplings

Unison Magnetos

500 Hour Inspection

(Non Pressurized)

250 Hour Inspection

(Pressurized)

INGREDIENTS TO A SUCCESSFUL PRE-PURCHASE INSPECTION

by Brittne Brink, Aircraft Sales

With so many options on the market, purchasing your next aircraft is a big decision. Once you have finally narrowed down your search, here are a few ingredients that will help in completing a successful pre-purchase inspection.

1. Log Book Research – The airframe, engine and propeller log books will offer you a vast amount of information. Things you should be looking for are: damage history and the repair logs, a continuous log book trail, dates of major repairs, alterations, annual inspection dates, total time on airframe, and time since major overhauls on propeller and engine. Be sure all major repair and alteration (337s) documents and supplemental type certificate paperwork are present in the logs. Take note of where the aircraft was maintained as this will give you a good idea of the conditions the aircraft has been operated under.

2. Title Search – Order the title search on the aircraft. This is available through any aviation title company. Be sure to review the title search and check if there are any open liens or encumbrances on the aircraft and review the remarks listed. When you call to order a title search, you may want

to order the CD of electronic files that is available. This CD will give you all major repair and alteration (337s) documents that have previously been filed with the FAA and a transit history of previous owners.

3. Mechanical Inspection – This inspection should consist of airframe condition, engine overall condition and compressions, avionics review, and systematically that aircraft is functioning properly. Ask the seller for a test flight. Make sure the aircraft performs as it should per the POH, avionics are operational, monitor engine gauges and others, and don't be afraid to ask questions. An overall cosmetic look of the interior and exterior should also be included.

4. Inspection Facility – If you don't have your Airframe & Powerplant License it is good idea to hire a maintenance facility to perform your physical inspection. This facility will be trained to find small problems that could turn into large problems later down the road. The more you know about the aircraft now, the less likely you will be to have unexpected expenses arise on your aircraft in the future.

LOCAL AVIONICS SHOP VS. FACTORY REPAIR



Rick Wahlman
Avionics Manager

That #1 NAV, which has been intermittently flagging for the last 3 months, has finally quit altogether. Now the question is; do you send it to the factory or to an experienced avionics service shop for repair?

Though your unit may have been built at the factory, your avionics service shop will often present you with a much better option when it comes to the repairs. For example, most avionics service shops can offer you many no-charge loaners while your unit is being serviced, as opposed to factory rentals, which can often exceed half the cost of a repair. Another service shop advantage is the faster turnaround times, usually within one or two days. Factory repairs are

typically eight to ten days unless you are willing to pay an expedite fee. One of biggest advantages of dealing with a good service shop is access to the technician who is working your equipment. This is a great benefit when you have information to pass along concerning how the unit has been failing, to discuss repair options or to answer questions on what kind of work was performed on your equipment. Add to this the lower repair costs and warranties that are typically equal to or exceed that of the factory, and the selection of a quality avionics repair shop makes more than just good economical sense.

If you are being faced with an avionics box repair, we would invite you to consult with our avionics component repair department. You can talk with the tech at 651-209-7173.



WipCaire Profile: Curt Lundeen, Avionics



The WipCaire Avionics Department is excited to welcome Curt Lundeen to our staff of skilled technicians. Curt brings over 30 years of avionics bench repair and installation experience. He has always enjoyed tinkering with electronics. Combined with a strong interest in aviation, he says that it made good sense for him to go into avionics repair. Curt received his initial training in communications and avionics repair while in the United States Air Force. He also received his pilot's license in

the early 1980s. After his term of service, he returned to Minnesota and was employed by Burlington Airmotive, which would eventually become a component of General Dynamics. He worked in varying capacities throughout his tenure with them, starting as a technician, working his way up to running a satellite shop for two years, and finally to being the lead technician for the largest shop in the Midwest. Curt left General Dynamics when they closed their shop due to the economic times in April 2009.

With Curt's expertise, the WipCaire Avionics Department has expanded the list of avionics equipment they can repair to be almost 1200. Curt is happy to provide technical assistance in troubleshooting -an avionics problem in your aircraft. He can be reached at 651.209.7173.

"Instrument flying is when your mind gets a grip on the fact that there is vision beyond sight."

-US Navy Approach Magazine, circa WWII



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Spring Show Schedule

| Dates | Show | Location |
|--------------|--|---------------------|
| Feb 20-21 | Northwest Aviation Conference & Trade Show | Puyallup, WA |
| Mar 1-4 | Alaska Air Carriers Association 2010 Convention & Trade Show | Anchorage, AK |
| Mar 29-30 | Minnesota Aviation Maintenance Technician Conference | Brooklyn Center, MN |
| Apr 13-18 | Sun 'n Fun | Lakeland, FL |



WIPAIRE CELEBRATES
50 YEARS
 OF INNOVATION