

Letter from the Editor:

Hi folks,

Sun-N-Fun 2017 is in the books and it seemed to be a busy one this year. As usual, I spent my days moving between the Arion Aircraft booth and the Society of Aviation and Flight Educator's (SAFE) booth. I got a chance to walk around a bit one day and saw some nice airplanes.

I am asking all of you to access the link here (Runway Incursion Questionnaire) and take ten minutes to answer the questions. The FAA has found that Runway Incursions by General Aviation Pilots has begun to increase again. They are genuinely looking for reasons for the problem so they can find answers to correct it. If you have had a runway incursion charged to you, please send me a note and you can help out over a phone interview.

I have a couple of articles in this issue. One I meant to publish in the last issue from Bear Bryant and I apologize for forgetting to add it last time. It is a good one and I am sure everyone will learn from it. To get added to the Magazine list, please send me your e-mail address.

I will be in Marana, AZ to help with the US Flight Expo from May 3 – 6. Hope to see a few Lightning folks there.

Blue Skies, Dennis W. Wilt dwwilt@aol.com



Second Quarter 2017 Volume 10, Issue 2 April 2017



Inside This Issue:

Sun-N-Fun	2
News from the Factory	5
News from the Dealers	8
Jabiru Engine Service Letter	9
Current Lightning Dealers	14
News from Builders	15
For Sale	20
Upcoming Events	21
Lightning of the Quarter and Pilot Spotlight Questions	23
Final Thoughts	24



Sun-N-Fun

Sun-N-Fun, 2017

Article by Dennis W. Wilt



N320XS in the Booth

It seemed that Sun-N-Fun was a bit busier than last year. I believe it was and the Sun-N-Fun organizers said it there were more people and vendors, so it may very well have been. We had a lot of folks stop by to look at the XS and ask a lot of questions. There seemed to be several people that were serious, but you really can't count them until they sign the check.

Nick, Buz and Greg were there, and I sure missed Mark. I especially missed Crystal, but she is teaching full time now and could not make it out. Jabiru, North America was there with the 4th generation engine and their two Jabiru planes, the J170-D and the larger J230-D. The new engine looks interesting with the cast heads and although the crank case was not cast, that is coming. The access to the flywheel bolts and other maintenance items on the rear of the engine has been improved. I should have taken a picture, but did not think to take one. I have several pictures below that give a bit of the feeling of this year's show.



Nick Headed to Sun-N-Fun

On Final into KLAL

ι



Patty Wagstaff and Donna in the SAFE Booth



An Extra 330LX

How About a Rotec Powered Motorcycle?

You never know who you might run into or what you might see at an air show. Patty is a SAFE member and supports the organization. She stopped by the SAFE booth for a while and signed autographs for fans.

I heard the Rotec powered motorcycle before I saw it. They drive it on the streets and say it has a lot of "pull". I assume that they mean it has a lot of torque. It certainly looks very interesting.



An AirCam in Gator Colors

A Pretty Wittman Tailwind

I had to take a picture of the AirCam, I am a University of Florida graduate after all. The Wittman Tailwind looks fast just sitting there, it is such a timeless design. A couple more pictures below, hope to see you there next year.



An RV-9 with Winglets (VGs on the Winglets)



The Blue Angels and the Patrouille de France Demonstration Team

News from the Factory

The new demonstrator airplane is nearly finished. The pictures below show the plane in its pretty new livery and the new streamlined cowl getting fitted on the current demo airplane, N320XS. I can't wait for the reports on the new plane and the performance that should be amazing.



New Paint Scheme for the Demonstrator Lightning XS



New Cowl



Old Cowl

New Cowl on the Current Demo Plane

There is still some work to go getting the air intake, etc. But the cowl is much more aerodynamic looking compared to the cowl for the O-320 engine. Below are some pictures of a visit to the fiberglass supplier, AM Composites. Jason got to complete some wings for a new kit. It is possible more of this type of finishing will happen at the Shelbyville facility. Jason says, "He's got it."



The Wing Layup

More pictures of the wing layup and finish below. I think Jason really does have it and could easily complete all the wings and other parts as necessary.



Attaching the Spar

Spar and Ribs Installed



Closing up the Wing

I believe that Nick is always trying to improve the airplane and production time, one of the ways to do this is to take on some of the finish work from the fiberglass supplier. AM Composites does more than just Lightnings and sometimes their production schedules will slow a Lightning delivery. Kudos to Nick, Jason, and the Arion Aircraft team for looking out for their customers.

How About a Dip Stick for your Fuel Tanks?

I asked Nick for this information so I could make myself a semi-calibrated Dip Stick for my tanks. One thing you have to remember, this is for the 15-gallon tanks, not the new 20-gallon system. In a future issue, I will include the measurements for the 20-gallon tanks.

Left Tank		Right Tank		
3gal	3/8"	3gal	1/4"	
6gal	1 1/4"	6gal	1 1/2"	
9gal	2 3/8"	9gal	2 7/8"	
12gal	3 5/8"	12gal	4 1/4"	

All from the bottom of the stick being 0

News from The Dealers

From Lightning Aircraft West:

Greg has been working hard getting ready for the US Flight Expo in Marana, AZ. If you want to learn more, go to the web site, here: **US Flight Expo** In conjunction with the US Flight Expo, there will be the first Lightning Fly In at the Hobbs Build Center. Everyone in the West should come visit. So, because of all of this work, visiting the Aircraft West blog site has found very little to report since the last issue. Tony's jet has had the engine mounted and a lot of small parts ready for the paint booth.



Tony's Engine Install



The Small Parts

News from Jabiru North America

(Editor's Note: I was talking with Pete Krotje about the new generation engine and he mentioned that he was considering sending out a letter to all Jabiru Engine owners to seriously consider complying with Jabiru Service Letter JSL 008-1 the next time you have your valve covers off. Evidently, Pete has seen Valve Spring Washer Wear even on engines not operating in dusty environments. You can find the Service Letter here (<u>JSL 008-1 Valve Spring Washer Wear</u>). I also have the entire Service Letter included below.)

Jabiru Service Letter:			JABIRU	AIRCRAFT PTY	/ LTD
Valve Spring Washer Adverse Wear		P.O. Box 5186 Bundaberg West Queensland, Australia.	Phone:+61 7 4155 1778 Fax:+61 7 4155 2669 Email: info@jabiru.net.au		
JSL 008-1	Release Date: 21st Dec 2012	Effective Date: 21st Dec 2012	Affected Models: All	S/No. Range: All	Page 1 of 5

SERVICE LETTER: JSL 008-1

Issue: 1

Subject: Valve Spring Washer Adverse Wear

Release Date: 21st Dec 2012

Effective Date: 21st Dec 2012

Affected Models: All Jabiru Engines

Affected S/No: All S/No.

Table of Contents

Issue	Reason for Issue	Issue Status
1	Original Issue	CURRENT

1	ıa	ible of Contents	
1	TA	ABLE OF CONTENTS	1
2	GE	ENERAL	2
3	RE	ECOMMENDATIONS:	4
	3.1 3.2 3.3	PERSONNEL & DATA OPERATION IN DUSTY CONDITIONS:	4
	3.4	DURING NORMAL MAINTENANCE:	
4	CC	OMPLIANCE - IMPLEMENTATION SCHEDULE:	5

Jabiru Service Letter:			JABIRU	AIRCRAFT PT	Y LTD
Valve Spring Washer Adverse Wear		P.O. Box 5186 Bundaberg West Queensland, Australia.	1000	one:+61 7 4155 1778 Fax:+61 7 4155 2669 iil: info@jabiru.net.au	
JSL 008-1	Release Date: 21st Dec 2012	Effective Date: 21st Dec 2012	Affected Models: All	S/No. Range: All	Page 2 of 5

2 General

- Jabiru Engines use a conventional arrangement of washers and collets to retain the valve spring assemblies (Figure 1).
- By design the valves are free to rotate within the valve collets. The valve actuation mechanism
 applies a small rotational force to the valve, rotating it to maintain valve sealing.
- Two incidents, one year apart, have been reported to Jabiru Aircraft: in each a valve jammed in the
 collet, causing the top spring washer to rotate with the valve and wear against the valve spring,
 eventually causing a failure of the washer and engine stoppage.
- In both cases the engines were operated in dusty conditions and dirt contamination was found within the carburettor and intake plenum.
- It is likely that dirt contamination caused the valve to jam in its collets.
- Jabiru Aircraft are releasing this document to alert owners and maintainers to the potential issue.
 The next revision of Jabiru engine service documentation will also incorporate the inspections detailed herein.
- Jabiru Aircraft and Engines are designed to operate from "typical" airfields. If they are operated in dusty conditions additional maintenance is recommended as noted in Section 3.2.
- This Service Letter is equivalent to a Manufacturer's Special Airworthiness Information Bulletin (SAIB) for engines operating in Light Sport Aircraft categories.
- This letter has not been mandated (as an AD or similar) by any National Airworthiness Authority at the time of writing.

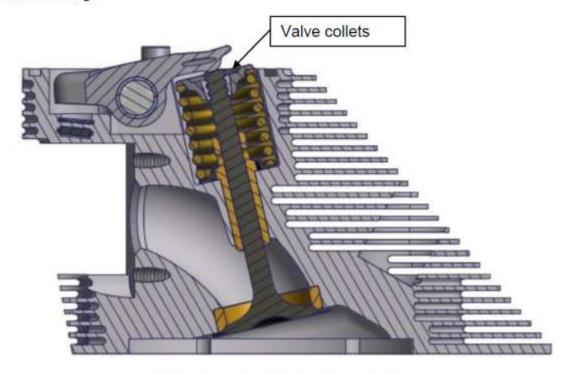


Figure 1 - Valve & Spring Cross Section

Jabiru Service Letter:		JABIRU AIRCRAFT PTY LTD		Y LTD	
	Valve Spring Washer Adverse Wear		P.O. Box 5186 Bundaberg West Queensland, Australia.	Phone:+61 7 4155 1778 Fax:+61 7 4155 2669 Email: info@jabiru.net.au	
JSL 008-1	Release Date: 21st Dec 2012	Effective Date: 21st Dec 2012	Affected Models: All	S/No. Range: All	Page 3 of 5



Figure 2 - Valve Spring Washers



Figure 3 - Carburettor Contamination & Slide Wear

		JABIRU	AIRCRAFT PTY	LTD	
		P.O. Box 5186 Bundaberg West Queensland, Australia.	F	one:+61 7 4155 1778 Fax:+61 7 4155 2669 il: info@jabiru.net.au	
JSL 008-1	Release Date: 21st Dec 2012	Effective Date: 21st Dec 2012		S/No. Range: All	Page 4 of 5

3 Recommendations:

3.1 Personnel & Data

- Where inspections or other actions are recommended below they must be carried out by personnel authorised appropriately to the aircraft type and category; for example, by appropriately type approved Aircraft Maintenance Engineers or RA-Aus Level 2 maintainers.
- Where inspections or other actions are recommended below they must be carried out in accordance with the maintenance documentation for the aircraft and engine (Engine Maintenance Manuals, Overhaul Manual, Aircraft Technical Manual etc).
- Where inspections or other actions are carried out they are to be recorded in the maintenance logbook for the aircraft and/or engine.

3.2 Operation in Dusty Conditions:

- The aircraft operating manuals, aircraft technical manuals and the engine maintenance manuals
 provide guidance for operating in dusty conditions. Maintainers must be pro-active and carry out
 appropriate preventative maintenance in these conditions. The following is recommended:
 - Air filters must be cleaned and replaced more frequently.
 - Maintainers must regularly check carburettor bowls, intake piping, oil breathers etc to monitor any potential dust contamination.
 - Operators must take steps to minimise dust around the aircraft when carrying out engine runups, ignition tests etc.
 - Certain older type air filter / hot air mixer boxes produced by Jabiru Aircraft did not filter the
 intake air when carburettor heat is selected to ON. This was a certification requirement to
 ensure that the engine would run if the filter is completely blocked by ice. Operators of aircraft
 equipped with this system must ensure the carburettor heat tests are carried out in conditions
 as dust free as possible.

3.3 Whenever Cylinder Head / Valve Assemblies are Disassembled:

- Thoroughly inspect all valve washers and replace any which show signs of wear.
- Trial fit all valves to their collets and assess the fit before assembly; the valve should be free to
 rotate within the collet. While some friction is normal, binding or jamming is not acceptable. If
 friction is judged excessive the overhauler should try the valve in other collets and, if necessary,
 source replacement parts.

3.4 During Normal Maintenance:

- Visually inspect the top spring washer. A washer which is being worn may show burrs on the outer edge and the reduced thickness may be evident.
- The thickness of the top valve spring washer may be measured (Figure 4) using vernier calipers.
 Older washers should measure 1.5mm (0.060"), newer parts 2.0mm (0.08". 2mm thickness was
 introduced from S/No. 332486, 22A3514 and 22B263 and spare parts from June 2011). Any
 measurement below 1.3mm must be investigated and worn parts replaced; failure typically occurs at
 around 1.0mm.

Note: A depth vernier may be used for measuring a top spring washer in situ.

Jabiru Service Letter:			JABIRU	AIRCRAFT PTY	LTD
Valve Spring Washer Adverse Wear		P.O. Box 5186 Bundaberg West Queensland, Australia.		one:+61 7 4155 1778 Fax:+61 7 4155 2669 il: info@jabiru.net.au	
JSL 008-1	Release Date: 21st Dec 2012	Effective Date: 21st Dec 2012	Affected Models: All	S/No. Range; All	Page 5 of 5

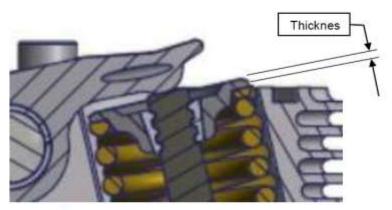


Figure 4 - Washer Thickness Measurement

4 Compliance – Implementation Schedule:

 Inspections per Section 3.4 are recommended during 50-hourly or Annual inspections whichever is the sooner.

Recommendations:

 Operators of affected engines within Light Sport Aircraft categories should comply with the recommendations of Jabiru Service Letter JSL 008-1.

Compliance:

The compliance details given in JSL 008-1 must be met.

Background:

 This SAIB has been prepared to make applicable the recommendations of JSL 008-1 for engines operating within Light Sport Aircraft Categories.

Current Lightning Dealers or Representatives

Arion Lightning, LLC, contact Nick Otterback, Shelbyville, TN, 931-680-1781, www.flylightning.net

Southwest: Geronimo Experimental Aircraft, Greg Hobbs, 18750 West Avra Valley Rd, Marana, AZ 85635, 520-405-6868 www.lightningaircraftwest.net

Mid Atlantic: Green Landings Flight Center, Ryan Gross, 309 Takeoff Dr., Hedgesville WV 25427, 304-754-6010, www.greenlandings.com

Upper Midwest: H & S Aviation, Tom Hoffman, 3015 Shady Ln, Neenah, WI 54956-9509, (920)-585-9704

Midwest: Heart of America Aviation LLC, Jack Gonzenbach, 12906 W 122nd St, Overland Park KS, 66213, (913) 890-3052, jgonzenbach@flyhoaa.com

Russia and CIS, AVIA-NIANIA Ltd, Moscow, Russia, Phone: + 7495518-62-75, Mobile Phone: + 7925518-62-75, avianiania@mail.ru *or* avianiania@aol.com

Editor's Announcement:

I would really like to hear from other dealers as there are sales and or aircraft for sale. The Matronics Lightning List has been very quiet and although I am on the list for getting the e-mails for any posts, I only get them once in a while. I think their software is having problems, but they have not found the issue yet. In any case, my e-mail is on the first page of the magazine and you can contact me any time with information.



A New Kit Headed Home with a Builder

News from Builders and Flyers:

ADS-B IN/OUT for my Lightning

Article by Bear Bryant

I'm sitting at the end of the runway in my state-of-the-art Lightning waiting for the tower to clear me for take-off. It's a beautiful, clear, cool day in Florida. Perfect weather for a nice flight. As I sit there, several other aircraft are cleared for take-off; some are even cleared to taxi around me. What the heck is going on I wonder as I continue to sit there and wait. With my patience waning, I give the tower another call to let them know I'm continuing to wait as instructed and am curious why other aircraft have been allowed to precede me in taking off. After a few seconds, the controller says to me, "as of midnight last night, the Federal Aviation Administration (FAA) required all aircraft to be in compliance with the 2020 Automatic Dependent Surveillance-Broadcast (ADS-B) Out equipment. It appears either you have not met the mandate or your ADS-B Out equipment is not working."

So much for my state-of-the-art Lightning. I really should have gotten it installed. I knew it was coming, but I thought the date would be extended and I really thought the prices would get a lot lower. Now I have to taxi back to the hangar and let the "jet" become a hangar queen until I meet the mandate.

..." Back to the Future" it's October 2016 and I'm a few years out from the mandate. The pricing for the new ADS-B equipment has gotten lower and now, the FAA has started a rebate program for new ADS-B equipment to motivate



aircraft owners to equip their aircraft now with the new ADS-B requirements. With this in mind, I decided to look at all the different models and pricing structures. I wanted one which would be an easy install, have both In and Out capabilities, "talk" to my GRT Avionics, Inc. primary flight displays, and have WiFi. My choice was the L3 Lynx NGT-9000. It filled all my requirements, fit exactly into the space where my Garmin GTX327 was located, and the price was recently drastically reduced.

The install took place at American Aviation, the Fixed Base Operator (FBO) on Brooksville-Tampa Bay Regional Airport. They were the closest ones to me who sells L3 products and their avionics shop is top notch. The installer, believe it or not, was the Vice President of our local Experimental Aviation Association (EAA) chapter and had already installed several of the NGT-9000 units. This however, would be his first Lightning and GRT install. He has built several experimental aircraft and his current build has the GRT avionics in it. So, having him install the Lynx into the Lightning and marry it to the GRTs would be a natural fit.

The install went very well. The Lynx fit exactly into the hole where the Garmin transponder had been and we used the same transponder antenna. We added the new

Global Positioning System (GPS) antenna to the inside of the engine area mounting it between the top engine mounts. The Lynx requires a 5-amp circuit breaker. The Garmin GTX 327 only need a 3 amp. So, we had to swap out a 5-amp breaker for the 3 amp. That was easily done as I had one 5-amp circuit breaker on my panel tied to a cigarette lighter plug, which wasn't being used. The GRT requires a high speed comm port to "talk" with the Lynx. This would normally be comm port 4, but I already had XM weather on this port. My avionics technician said that the GRT also has a high-speed port for comm port 1, which is where the com/nav was connected. The Garmin SL 30 does not require a high-speed port, so we took that out of comm port one and put it into another non high speed port. The Lynx then was now using comm port 1 which is a high-speed port. The system immediately linked up and I was receiving data into the GRT without any problems.

With the install complete, it was now check-out time. Because Brooksville airport has an ADS-B antenna very close to the FBO avionics shop, we were able to see traffic on the GRT screens without having to even be in the air. As a note, the Lynx is set up not to display any traffic while the aircraft is sitting on the ground. Strange, but that's how the software is set up. That might change in a future software release. So, even though I don't see any traffic on the Lynx screen while on the ground, the system allows the data to be displayed on the GRT screens. Today, a small front was coming through the area and I captured the Wx both on the GRT screens and the Lynx. Below are a couple of pics of the data.

The real test would be a flight check. Now, bear in mind I had been issued an ADS-B rebate reservation number and part of the process was to fly the aircraft with the newly installed ADS-B equipment for at least 30 minutes in designated airspace. (Defined as: Towered airport, within class B airspace, or within a mode C ring). Since Brooksville airport is a towered airport and sits within the Tampa Mode C ring, it was a perfect place to try out the new equipment and at the same time fly my required 30 minutes. We took off, flew approximately 10 miles south, did some maneuvering flight around 2500' for about 20 minutes, went back to Brooksville airport and did several touch-and-goes to get my 30 minutes of flight (yes, touch and goes at a towered airport also qualifies for the 30 minutes of ADS-B flight) for the \$500 rebate.





The flight went well. As stated before, while sitting on the ground the Lynx will not display any traffic and each side of the display screens will show you this as an "on-ground" statement, and a small yellow radar symbol on the traffic side indicates no traffic available. The screens are touch screens and are also pageable. You can get data on a particular aircraft, airport, METARS, etc. If you slide the traffic display over to the transponder side, you will continue to see the transponder code you currently have selected. The traffic side of the display shows traffic positon, speed and bearing relative to your own aircraft. You can zoom in or out to suit the situation. Here are a few more pics of traffic and traffic alerts I got on my GRT while flying earlier today around Brooksville airport (BKV) Florida.









So far, I'm very happy with the install and the product. The Lightning is not meant to be a hangar queen and with my new Lynx installation it certainly appears it won't be. I'm sitting at the end of RW 21 Brooksville and am cleared for take-off!

Bear Bryant



Bear's Jet at Sebring a Few Years Ago

More News from Builders and Flyers:

More from Bear:

Folks,

Just a note to let you know that I have a Jabiru engine on my Lightning built in 2008 and recently found a loose stator bolt.

A few weeks ago, I pulled the prop through prior to my first flight and about every 5 or 10 degrees, I heard a small clicking noise. I initially tracked it down to somewhere in the Stator assembly and/or the rear plate alternator mount. When I put my finger at the rear plate right next to the wire that comes out center of the rear plate, I could actually feel the clicking when the prop was pulled. I removed the rear plate mount and inspected the fly wheel bolts, stator assembly coils, magnets, alternator assembly and, initially, couldn't find anything which would cause the clicking sound. When the rear plate was removed and the prop pulled there was no clicking sound, so at least, I knew I was in the right area. I also doubled checked that the sound was not being caused by any of the coils hitting any of the magnets. Not finding anything obvious, I re-assembled the rear plate assembly and started the engine to see if the issue was exaggerated or not.

So, with the engine running there was an extremely loud high pitched noise at idle and up to about 1200 RPM. I immediately shut the engine down, sent an email off the Jabiru and received some advice from Pete and Katie on where to start looking for the culprit. Pete suspected one of the flywheel bolts may have backed out. Now, that is an annual condition inspection check which I did in December and there was no issue at that time and I had just checked them again when I had the rear plate assembly off. But, hey I could have missed something.

So, with a little more determination to find the issue, I again removed the rear plate assembly which holds the stator (coils) and inspected the flywheel bolts-nothing solid and torqued to specs. Then I inspected the stator bolts (different from the flywheel bolts). There it was. One of the four bolts had back out about 1 and a half threads (turns) and a second one back out about a half thread. The other two bolts were ok. So, I removed all four of the stator bolts, replaced them with new bolts and Loctite 620. Then I reassembled the stator/back plate assembly. Issue gone. Note: I did check the stator bolts earlier when I had the rear plate assembly off, but I only checked two bolts...of course, the ones which were ok.... lesson learned there.

I thought I'd share this with the Lightning guys who have a Jabiru in case you begin to hear a clicking noise as you pull the prop through prior to flight or you start to hear a loud high-pitched whine noise as the engine is running. My experience might help you go to the issue quicker.

For me, I think I'm going to make this a "special attention" part of my condition inspection checklist.

Thanks to Katie and Pete at Jabiru NA for helping me with this.

Hope all is well with everyone!

Bear

And the following from Geoff Eather in Australia:

Dennis,

A few ideas for the next Newsletter.

I often wonder what happened to The Airmaster Constant Speed propeller? It appeared on the Facebook page in October 2014 but I can't find any follow up. There was talk of publishing some performance data. I did email Nick a while back but did not receive a reply.

And, what about the Lightning with the electric engine. Again no follow up, but I'm sure a lot of readers would be interested to know what has happened.

There was also the anti-turbulence idea that someone was using a Lightning to investigate.

Cheers,

Geoff Eather (Kit 127) Newcastle, Australia

Well Geoff, I will try to answer your questions in order. Nick has been pretty busy running a business, building airplanes, helping Dana with the kids and there are 3 of them now, and now he is helping Dana open a new business. Crazy if you ask me, but here goes:

From Nick just this morning: Several inquiries have been made into the Airmaster Constant Speed Propeller (CSP) installation on the Jabiru Powered Lighting. To date we have sold 8 props to customers in the US. All reporting similar performance increases, and other aerodynamic side benefits.

The system which we use is the AP420. This is a 2 blade electric system that uses the Sensenich carbon blades. It is completely Plug and Play or bolt on with exception to ship power and ground hook ups. Only minor fabrication is required for a 2.25" hole in the panel and a small toggle switch. The prop does require simple tuning of the fine pitch stop after installation. It requires the pilot to make a full power unloaded run on takeoff roll to set max RPM, recommended to 3250rpm. This may take a few runs to get exact, but adjustment is simple with a small CAM nut and stop. All other prop settings are pre-programmed in the control head.

System weight is 20lbs, which amount to 8-10lbs delta depending on what prop was originally installed on the aircraft. Performance increase is the big question. The prop in auto mode has several settings: Takeoff, climb, cruise, and manual operation with the toggle. We compared the Airmaster prop to a standard WC62fk58 Fixed Pitch Propeller (FFP) wood prop which gives 3200rpm flat out and about 2650rpm on takeoff.

Take off distance on average was shortened by about 15%. Our test ship was around 700' take off loaded on concrete with the FPP. Just under 600' with the CSP.

Climb increase was substantial at near 20% increase. Test ship was around 1050FPM at 85knts with the FPP. The CSP yielded 1350FPM.

Cruise increase was good around 8%. Test ship at 2950RPM would run 130knts TAS with the FPP. With the CSP we ran around 140knts TAS at the pre-programmed 2650rpm and 22" of Manifold Pressure (MP).

The increase in cruise is not as much as other areas. This is because with the WC62fk58 we are near optimal for cruise but lacking in takeoff and climb.

A few things to consider with the installation and a standard jabiru Engine. The CSP in cruise is designed to run around 2650rpm, more pitch and higher MP. So you must install a manifold pressure sensor in the aircraft. The stock jab uses the Bing constant velocity carb. As you increase prop load you increase MP and the carb will run rich, not rough but rich. The use of a HACman unit is a must with the CSP as well. Most benefit with the CSP in cruise will come from better economy and in the jabs case you must be able to lean.

One other very neat side benefit is aerodynamic braking. Typically, with a high pitch FPP use get nearly no braking effect at idle. However, with the CSP set to takeoff as you enter the pattern the you can feel the aircraft slow down considerably. Long wing Lightings with sport tips will not float if you are slightly fast. The aircraft just doesn't do it anymore. Granted that is if you are within 10knts of approach speed. If you are running 80knts on final it will still float, sorry. But this is very handy with short runways or windy days.

In my opinion the Airmaster Constant speed prop is a great addition to the aircraft if it is in your budget. Performance is nearly the same as a FPP on the Lycoming O320 install. The total cost with "new" parts is less and empty weight lower. The jabiru engine at \$18K and Airmaster at \$8K delivered puts your cost at around \$26K total. With the typical new O320 install you will be around \$30K firewall forward.

If anyone is looking for customer reports on the prop I can certainly provide contact information of those who fly the Airmaster already. Most of all those pilots are more than willing to talk about their Lightning and flying in general.

Latest On the Sun Flyer:

I talked with Jennifer Matasy, VP of Marketing for Aero Electric Aircraft Corporation while I was at Sun-N-Fun. The Sun Flyer is still in ground testing and they hope to be flying soon. Below are some expected specifications from their brochure. This is not the prototype specs, but the final aircraft.

Seating 2

Construction Composite
Cabin Width 46 in.
Wing Span 36 ft.
Wing Area 120 sq. ft.
Aspect Ratio

Aspect Ratio 12 Glide Ratio 20 to 1 Decibels @ 500 ft. 30 dB **Gross Weight** 1700 lbs. Propulsion 100 kW **Batteries** Li-ion Stall (Full Flaps) 45 knots **Normal Speeds** 55 - 120 knots 160 knots Vne Endurance 3 hours

The Anti-Turbulence Project:

Buzz was trying to work with a small research company that provides contract work for NASA Langley Research Center. Unfortunately, the project was not funded.

For Sale:

For Sale Experimental – Light Sport Compliant Asking \$87,000





Contact Lightning West for details and more information. They also have a Jabiru aircraft for sale.



The Coveted Tail Dragger Lightning (Not For Sale)

Upcoming Events

AOPA Fly-In April 28 – 29. 2017



your freedom to fly

Camarillo Airport (KCMA)

Camarillo, CA

US Flight Expo May 3 – 6, 2017



Marana Airport US Flight Expo

Marana Regional Airport - KAVQ

This airshow is the invention of Greg Hobbs and Geronimo Experimental Aircraft LLC. If you can, you should attend and if you have the time to volunteer, you should contact Greg at usflightexpo@gmail.com. I am going to be there for the entire show. Knowing Greg and Crystal, the show will be a good one and I am sure it will grow over time. Greg is trying to create something for the Western US that is similar to what Sun-N-Fun is to the Southeastern US.

AirVenture – Oshkosh, WI July 24 - 30, 2017



EAA AirVenture 2017 Airport Identifier – KOSH



Jason Using the "Get a Bigger Hammer" Option

Lightning of the Quarter and Pilot Spotlight Guidelines and Question

The following questions are to be used for your submittals of the Lightning of the Quarter and Pilot Spotlight articles. Every single Lightning out there deserves to be in the Lightning of the Quarter. Every single pilot has a story to tell. I hope you take some time and used these questions and guidelines to tell your story for the rest of us. Although similar, the stories for a Lightning of the Quarter and the Pilot Spotlight are just a bit different.

Before publishing any story, I will likely make some edits for spelling, punctuation, and clarity. So, with these guidelines, I hope I get a lot of input for future issues of Hangar Talk.

Lightning of the Quarter Questions:

If you are interested in submitting your jet for the Lightning of the Quarter, just use the questions below and submit some nice pictures of your plane. A picture of the panel is also interesting, at least it is to me. Take a look at the prior Lightning of the Quarter articles and use them as guidelines when you put your story together. Your story will be great - they all are.

Questions for Lightning of the Quarter.

- Do you have an online build log? If so, and would like to share it, provide the URL.
- 2. Where did you get your interest in aviation and what are your earliest memories of wanting to fly?
- 3. Does your spouse share your interest and does he/she fly as well?
- 4. What made you choose the Arion Lightning for your aircraft?
- 5. Did you build it or buy it?
- 6. Is it an S-LSA, E-LSA, or E-AB? If it is an experimental, does it meet Light Sport requirements?
- 7. If you built your plane did you build it at the factory, a dealer, or at home?
- 8. How was the build process?
- 9. What type of flying do you do with your jet?
- 10. Have you flown it to a major fly-in? Which ones?
- 11. Finally, include some (3 or 4) nice pictures of you and your plane and some captions for each picture.

Pilot Spotlight Questions:

If you would like to be highlighted in the magazine, we do that in a Pilot Spotlight article. Each of us have unique stories about our aviation interests, careers, and/or hobbies. Each story deserves telling and they are all interesting to me.

- 1. Where are you from? Hometown? Current residence?
- 2. How did you get started in aviation? When did you begin being interested in flying? Why did you want to become a pilot?
- 3. What were the circumstances for your first airplane ride? Explain in detail.
- 4. What was the first plane you flew / soloed?
- 5. What is your favorite aircraft to fly?
- 6. Did you have to pay for your flight lessons yourself? If so, how did you do that?
- 7. Tell about your education. If you have a college degree, where did you go to college? What did you study? Do you have any advanced degrees?
- 8. Did you work in the aviation industry? If so, what was your occupation? If not, what was your occupation?
- 9. Did you fly commercially? Explain who you flew for, what aircraft you flew, how long did you fly commercially?
- 10. Were you in the military? Which service, when, how long? Did you fly in the military?
- 11. When did you meet your spouse? Was she/he supportive of your flying?
- 12. Have you owned an airplane before the Lightning? How many? What models? How long have you owned them? Which ones did you like best and why? Worst?
- 13. Have you ever built an airplane? What model(s)? Why did you choose that / those model(s)?
- 14. What are your favorite aviation events?
- 15. Have you attended AirVenture or Sun-N-Fun? How many times?
- What are your other hobbies? Tell about them in some detail.

Final Thoughts



You Never Know What You Might Find at Sun-N-Fun

I am still looking for Pilot Spotlight and Lightning of the Quarter candidates. Please consider taking a little time to answer one or both of the questionnaires and sending me the data with some good pictures.

I always have fun at any Air Show. But, Sun-N-Fun is special to me because I have such good memories from there. Donna and I have been going since before my children were born. Somewhere, I have a picture of her standing in front of a Barracuda (aircraft) when she was 8 months pregnant with our son. This was in 1981, so it was a while ago. Interestingly enough, there were more home built aircraft in the home built parking back then than there was this year. It's a bit sad, don't you think?

We used to camp out next to the airplane at Sun-N-Fun. Either the Grumman Cheetah, or the Cessna Cardinal. One year I sent our kids out to get pictures of the balloon launch while we got up and made breakfast. My son came back with two rolls of film taken of just balloons. Most of them were very good. If I looked long enough, I could find those pictures and scan them, but you will just have to imagine. Below, are pictures of the Cheetah (yes, the registration is N9999U) and the Cardinal. Not at Sun-N-Fun, but just a flavor of the airplanes I have the most flight time in to date. Although the Lightning is rapidly taking over both of them.

Blue Skies, Dennis W. Wilt dwwilt@aol.com



The Plane I Learned to Fly In

The Cardinal Climbing out from OSH