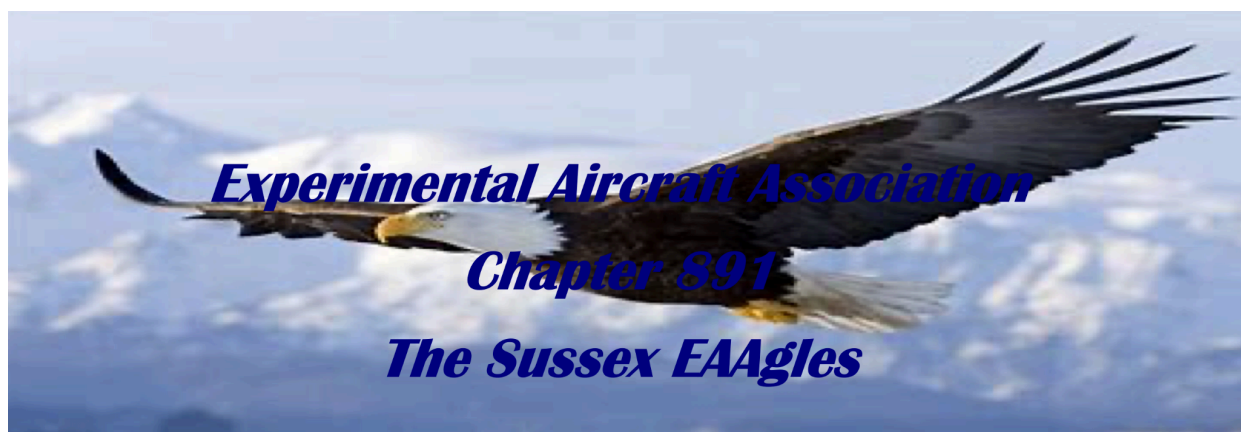




*“Your not having fun until you join 891”*

Meeting Monthly Digest

May 2023

SIX CHIX

BY RINA PICCOLO



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May 11th 2023 Meeting

“Just ask John.”

# May Monthly Meeting

May 11th 7:30pm

Have any questions on your medical, BFR, training, or maneuvers? You can submit your questions to us via email or ask at the meeting.



President John Massari called the meeting to order promptly at 7:30 PM to attending members: Bob Hewitt, Dick Smith, Dick Aaron, Matt Van Wolput, Bob Amsden, Mark Franek, Mark Daniels, and Paul Trotter and guest Mike Gottfried.

We met right behind the drive-through diner (now fixed up), I had a really good chicken sandwich, some ordered too, and all enjoyed the warm breeze of the upcoming summer. John presented a great

discussion on VOR usage, services, and the shift that the FAA is making with the system.

May's meeting ended at 9:15pm and lingered with some small talk. Hope to see more members at the next one on June 8th @ 7:30pm.

This month's guest of Matt was Mike Gottfried.



Mike is a teacher in Randolph and runs the aviation program in the High School. Check out an article here: [Randolph Aviation Program](#)

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“Who’s doing What”



Hear some exciting things that our members are doing to stay current, motivated, and fulfilling their passion for aviation.

Paul Trotter has worked a little on his RV8!!

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Visit the New Website!



[Eaachapter891eaagles.com](http://Eaachapter891eaagles.com)

Please relay any info you see that needs to be edited and email me your preferred picture for the members area.

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New Lower Chapter Dues!

**15 members of 25 Paid...**

Voted on 3/9/22 reduced to \$20/year.

Please bring your dues to the next meeting or mail them to:

EAA Chapter 891 % Matt Van Wolput, 19 Forest Ridge Terrace, Oak  
Ridge NJ 07438

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## Upcoming Events:

A vibrant poster for the Greenwood Lake Airshow. The background is a dark blue sky filled with colorful fireworks. Several aircraft are depicted in flight, including a biplane on the left and a propeller plane on the right. In the bottom right, three red biplanes are shown in a formation, each with 'AEROSHELL' written on its side. The text 'GREENWOOD LAKE' is at the top in yellow, flanked by two yellow stars. Below it, 'AIRSHOW' is written in large, bold, red letters with a white outline, with a white star in the center of the 'O'. The dates 'June 9, 10, & 11, 2023' are in white. To the right of the dates are icons for Facebook, Instagram, and YouTube. Below the dates, 'West Milford, NJ' is written in yellow. The phrase 'SPRING FEVER!' is in large, purple, outlined letters. Below that, 'GET 20% OFF ALL TICKET PURCHASES' is in white, and 'CODE: CC23' is in large, purple, outlined letters. To the right of the code, 'Expires 3/20' is written in red. At the bottom, a red banner contains the website 'www.GREENWOODLAKEAIRSHOW.com'. Below the banner, the text '15 Day SALE: 20% DISCOUNT OFF ALL TICKETS. ENTER CC23 AT CHECKOUT.' is displayed in black and red.

• GREENWOOD LAKE •

# AIRSHOW

June 9, 10, & 11, 2023

West Milford, NJ

**SPRING FEVER!**

**GET 20% OFF ALL TICKET PURCHASES**

**CODE: CC23**

*Expires 3/20*

[www.GREENWOODLAKEAIRSHOW.com](http://www.GREENWOODLAKEAIRSHOW.com)

**15 Day SALE: 20% DISCOUNT OFF ALL TICKETS.**

**ENTER CC23 AT CHECKOUT.**

Plan on going? Let us know here:

 Greenwood Lk Air Show



## Coming Airworthiness Directive Expected to Ground All Airworthy B-17s

By: Mark Phelps-

Published: April 18, 2023

Last Saturday (April 15), the Yankee Air Museum announced it was grounding its World War II-vintage Boeing B-17G “Yankee Lady” in anticipation of an FAA Airworthiness Directive (AD), expected within a few weeks. Online sources, including a detailed article at [Aerovintage.com](https://www.aerovintage.com), anticipate the AD will likely ground all currently flying B-17s due to “wing spar issues” cited by the Yankee Air Museum.

The Michigan-based museum posted on its Facebook page: “Hello, The Yankee Air Museum decided to proactively cease flight operations of the B-17G Flying Fortress ‘Yankee Lady.’ Recent

inspections of other B-17s have discovered wing spar issues. As a result, we expect a mandatory Airworthiness Directive to be issued by the FAA in the next few weeks regarding the matter. Out of an abundance of caution, we are temporarily ceasing our B-17 flight operations and awaiting direction from the FAA regarding necessary inspections and repairs that will be required. It is expected that the B-17 will not fly during the 2023 flying season. Please note that this only affects the B-17.”

The announcement added that those who had scheduled “Air Adventure” rides on “Yankee Lady” would receive refunds and assured that its B-25, C-47, and Bell UH1 “Huey” helicopter will continue to fly with passengers. A 25-minute ride on the B-17 is priced at \$525 (\$425 for museum members) according to the museum’s website.

“Yankee Lady” is one of the few B-17s currently operating in the U.S. Others include the Commemorative Air Force’s “Sentimental Journey” and the Erickson Aircraft Collection’s “Olde Pub.” According to Wikipedia and other sources, there



are currently nine airworthy B-17s worldwide out of 12,731 manufactured by Boeing, Douglas and Lockheed between 1936 and the end of World War II in 1945.

The Experimental Aircraft Association's B-17 "Aluminum Overcast" has remained grounded since April 2021 over issues with its wing spars, and it is thought that the upcoming AD results at least in part from what has been uncovered in efforts to address those issues.

New B-17 Wing AD Forthcoming?

(Slightly revised edition on Sunday, April 16)

The Yankee Air Museum evidently put out an email today (Saturday, April 15) to, presumably, ticket holders for those wanting to ride on B-17G 44-85829, other wise known as Yankee Lady, that states the airplane has been grounded by the museum. The text of the email, as copied from this Facebook posting, states, in part:

"The Yankee Air Museum decided to proactively cease flight operations of the B-17G Flying

Fortress ‘Yankee Lady.’ Recent inspections of other B-17s have discovered wing spar issues. As a result we expect a mandatory Airworthiness Directive to be issued by the FAA in the next few weeks regarding the matter. Out of an abundance of caution, we are temporarily ceasing our B-17 flight operations and awaiting direction from the FAA regarding necessary inspections and repairs that will be required. It is expected that the B-17 will not fly during the 2023 flying season. Please note that this only affects the B-17. “

As one of only three current U.S. operators airworthy B-17s (the others being Ye Olde Pub and Sentimental Journey), the Yankee Air Museum is pretty sure that flyable B-17s will soon be grounded pending another mandatory FAA-required wing inspection. It is a short presumption that this new wrinkle, pun intended, is the result of what has been found on the EAA’s B-17G, 44-85740 (Aluminum Overcast), wing attach structure that caused it to be grounded in April 2021. Whereas the 2001 FAA Airworthiness Directive required inspections of the joint (holes

and bolts) between the wing attach tubes and the wing spars themselves, the EAA B-17s issue apparently was related to wing attach structure in the fuselage. I have not been able to find out any detailed information beyond what was posted early by those who should (might) know. From that information, the problem was on the aft wing attach point, fuselage side, at the middle solitary bolt (item “D” in the drawing below). This diagram shows the wing attach structure:

Released information from the EAA indicates that the problem was identified on a fuselage-side shear terminal, one of three attach points for each of the two wing spars on each B-17 wing. Since then, the EAA decided to replace all the fuselage wing-attach fittings for both wings. It is probable that what was discovered on the EAA B-17 is the source of the anticipated FAA AD being issued.

There is much (at this point, unfounded) speculation that this new AD will require spar replacements. If the source of the AD is what the EAA is dealing with, it has nothing to do with the wing spars

However, it is possible that the FAA will require a wider inspection and repair of the whole structure...the wing spars, the attach fittings, and the fuselage carry through structure. Without the text of the possible AD available, one can only speculate as to what this possible AD will entail.

The primary structure of the B-17 inner wing panel consists of two truss-type wing spars, forward and rear. Each truss-type spar is built up from two spar chords, upper and lower, that are assembled with tubular members forming "N" type trusses. The upper and lower spars, both front and rear, are themselves attached to the fuselage center section with steel terminal fittings that are bolted into the inner end of the spar chords. The terminal fittings attach to matching wing attach fittings on the fuselage center section that sandwich the wing fittings. The two parts are secured with special tapered pins. Thus, there are four main attach points that hold each wing to the fuselage, along with two other specialized secondary attach points located between the



upper and lower spars. The secondary attach points are where the sheer terminal is located.

The spar chords were originally manufactured as an extrusion and many smart people have since tried to figure out how exactly this was done back in the 1940s. The challenging feature of the spar chords is that the inside the hollow square chord tube tapers down from the wing root to the length of the section.

The process to extrude these parts with the exact dimensions as required to match the Boeing design is very specialized and thus expensive. One supplier has been identified but it has proven cost prohibitive to obtain the extrusions for new spar chords. The availability of original wing inner sections is just about zero, so the choice is left to use existing spar chords, manufacture new ones, or re-engineer a refined design for the spar chord. However, trying to re-engineer a new wing spar chord using modern components would require a massive effort and re-certification with the FAA and is not practical.

The other problem with the B-17 inner wing is the steel terminal fittings where each of the four spar chords connect to the fuselage center section. Each of the four attachment fittings are slid into the respective spar chords and precisely held in position with eight close-tolerance bolts. It was determined back in 2001 that the spar chords and the steel attachment fittings were subject to cracking around the holes drilled to hold the bolts. This generated the Airworthiness Directive issued by the FAA in 2001 that requires close inspection of these components to find and repair any cracking found. The AD offers several methods of compliance for the inspection, but if cracking is found then repairs are obviously required. The procedure used to repair the cracked components has to be coordinated with and approved by the FAA.

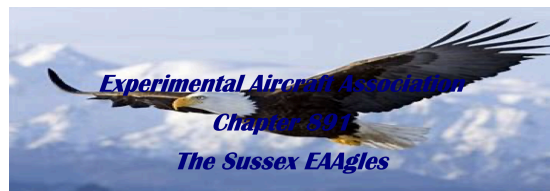
And now a possible new problem in the B-17 wing attach assembly. If the FAA issues an Emergency AD, it will most likely ground the two remaining flying U.S. B-17s until the AD is accomplished. A new AD would probably affect the UK based

Sally-B. Also, it would affect the several other B-17s currently in maintenance or restoration back to airworthy condition. If the FAA targets wide on the wing spars and fuselage structure, it might end up being a showstopper for operators.

It should be noted that these 78-year-old airframes were never intended to last more than a few months or years at the most. But, if there are issues with the basic structural integrity of the wings, they bear close scrutiny to ensure that these airworthy B-17s remain safe to fly.

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EAAgles 891  
Sussex Airport, N  
(KFWN)

Comments or Suggestions: Please respond via email.