

	<h1>PROPWASH</h1>	
<p>EAA Chapter 190</p>	<p><a href="http://eaa190.com/">http://eaa190.com/</a></p>	<p>June 2016</p>

PROPWASH is published for the dissemination of information for and about the members of Chapter 190 of the Experimental Aircraft Association (EAA). President Aaron Wypyszynski, Vice President Wes Conkle, Secretary Charles P. Cozelos, Treasurer Bryan Tauchen, Webmaster Jamie Dodson

**Photo of the Month:**



**May Chapter meeting with Tony's Pietenpol project.**

**Presidents Message:**

Aaron Wypyszynski – EAA # 579057

We had a great turnout this month at the Save Our Flying Heritage Fly-In at MDQ. Many Chapter members attend the event. A huge thanks goes out to Bob Spee and Todd Brooks for their help flying Young Eagles and Nate Forton for helping out with ground support. We were able to fly 42 kids in 5 hours despite only having 2 aircraft and threatening weather. Nearly half of the kids had never before been in an airplane!

This month we will be having a presentation on Alternative Engines by Mark Langford. Mark has an extraordinary amount of experience with both Corvair and VW engines for use in Aircraft. It will be a great opportunity to learn about engines, even if you never plan to use a converted engine in an aircraft.

Hope to see you at one of this month's activities!

Activity	Date	Time	Location
Fly-In Planning Meeting	Tuesday June 14	6:00	Moontown FBO
Chapter Meeting	Tuesday June 14	6:30	Moontown FBO
Moontown Pancake Breakfast	Sat. Mar 19 <sup>th</sup>	8:00-9:30	Moontown FBO

## Minutes of Last Meeting:

Charles P. Cozelos – EAA # 63381

### EAA Chapter 190 Meeting 17 May 2016

#### Members in attendance:

Andrea Atwood  
Charles P. Cozelos  
Tony Crawford  
Michael Dunning

Robert G. Friend  
Nate Forton  
Chris McCormick  
George Martin III

Ben Neighbors  
Bryan Tauchen  
Aaron Wypyszynski

#### Call to Order:

6:39 pm

#### Old Business.

Minutes from last month's meeting as posted in PROPWASH were posted.

The April Treasurers Report as posted in PROPWASH was approved.

Various bids/prices were discussed for the Hood Project in the kitchen. No decision yet as to which one we will accept.

#### New Business.

There will be an event at MDQ on June 4 and the chapter will be doing Young Eagles Rides there, anyone who can help, please be there.

Breakfast is this weekend; we always need more help parking aircraft.

#### Meeting Adjourned:

7:06 pm.

## Treasurers Report:

Bryan Tauchen - 651954

### Treasurers Report

Date		Dep	Check	Balance
5/1/2016	<b>Beginning Balance</b>			\$22,451.02
5/4/2016	1130 Propane		23.89	22,427.13
5/21/2016	Breakfast	108.00		22,535.13
5/31/2016	<b>Ending Balance</b>			\$22,535.13

## Young Eagles:

Aaron Wypyszynski – EAA # 579057

## Thoughts:

Jamie Dodson – EAA # 1025923

### *Lara Seligman - Defense News – 14 March 2016*

The F-35 joint program office will begin testing the first prototype of the new, lightweight Generation III helmet later this month, with the hope of resolving by November issues with the jet's escape system that have kept some pilots grounded.

The JPO and industry will begin testing Rockwell Collins' latest version of the F-35 helmet, built to be about 6 ounces lighter than the original Gen III helmet, in late March, said Maj. Gen. Jeffrey Harrigian, director of the F-35 integration office. This will be the first time the JPO has tested the full-up Gen III "Light," although the program office has tested a modified helmet that is about the same weight as the light version, he said.

The new light helmet is one of three solutions the Pentagon and industry hope will allow the military services to lift restrictions on lightweight pilots flying the F-35. Last year, Defense News first reported that pilots under 136 pounds were barred from flying the fifth-generation aircraft after testers discovered an increased risk of neck damage to lightweight pilots ejecting from the plane. The Air Force has also acknowledged an "elevated level of risk" for pilots between 136 and 165 pounds.

All three fixes — the lightweight helmet and two modifications to the F-35 ejection seat — will be finalized and ready for incorporation into the production line by November, said JPO Chief Lt. Gen. Christopher Bogdan during a March 10 event in Washington. This reflects an acceleration of the schedule since January, when the JPO estimated the services would be able to implement the three parts of the complete solution in October 2017.

"That schedule showed me that the helmet wouldn't be ready until late 2017. That was not good enough, so I sent the team back," Bogdan said at the Credit Suisse/McAleese FY2017 Defense Programs Conference. "The good news is the team did a lot of hard work [and] we will have our first Gen III light helmets now aligned with the seat in November 2016 so we can remove the restriction for the pilots under 136 pounds."

### **The Fix**

The prototype helmet the JPO will test weighs about 4.63 pounds and will help ease some strain on smaller pilots' necks during ejection, Harrigian said during a March 9 interview. Testers have found that the heavier helmet adds risk of neck damage during the first phase of an ejection, after the windscreen canopy is breached. The seat and pilot are launched upward via a rail system at a jarring rate, causing back and neck injuries if the pilot is not in the correct position with his or her head directly centered on the spine. The heavy helmet pushes a pilot's head down, increasing the risk of injury particularly for lighter pilots.

But the helmet is only part of the problem. Once the pilot and seat reach the top of the rails, a rocket under the seat is ignited to lift the pilot-and-seat package free of the plane. At this point, the seat can begin pitching back and forth, a motion much like that of a rocking chair.

This pitching motion is worse with a lightweight pilot, putting him or her in a potentially dangerous position when the main recovery parachute deploys – the pilot could be completely upside down at this moment. The rapid deployment of the parachute snaps the pilot back into an upright position, potentially injuring the head and neck.

To fix the ejection seat itself, the team will install a switch on the seat for lightweight pilots that will delay deployment of the main parachute. The proposed switch will keep the smaller "drogue" chute attached longer to further reduce the speed of the seat before the main parachute deploys, hopefully easing the pilot's motion back into an upright position. In addition, the program office will mount a "head support panel," or HSP, a fabric panel sewn between the parachute risers that will protect the pilot's head from moving backwards during the parachute opening. This will prevent the potential hyperextension of the neck and protect the head.

Since November, the JPO, Lockheed Martin and seat-maker Martin Baker have conducted seven tests — three out of an airborne jet and four so-called "sled tests" on the ground — with the latest version of the seat, which included the switch and HSP, according to Harrigian. Although most tests have been done with mannequins in the lightest and heaviest weight classes – under 136 pounds and above 245 pounds – the latest test on March 3 was done with a 150-pound mannequin, which represents "the heart of the envelope," Harrigian said.

The program office has about another 11 tests planned, which are expected to incorporate the lightweight helmet solution, Harrigian said. The tests will use a mix of low, middle and high-weight mannequins, he said.

All of the test results have been "fairly positive," so far, although the team is still working through analysis of the latest March 3 test, Harrigian said.

"We're waiting for a little more feedback, but everything thus far has been positive," Harrigian said. "As you can imagine we're going to continue to track this closely and stay very well connected with the JPO and industry to make sure we're monitoring how this goes as we continue through the test."

### **Weapons Tester Weighs In**

A spokesman for the Pentagon's top weapons tester, known for his criticism of development programs across the armed services, said the JPO's test schedule for the escape system fixes is "aggressive," but "achievable." However, the spokesman cautioned that the schedule for flight clearance and implementation of the three solutions assumes that no discoveries are made during testing that would require additional modifications.

"If discoveries are made during the testing, the timeline to achieve full qualification of the seat and helmet for ejection will take longer because additional regression testing and analyses would be likely be required," Maj. Adrian Rankine-Galloway, a spokesman for the director of operational test and evaluation, said in a March 7 email.

The upcoming tests will reveal if any other changes are required to the ejection seat, Rankine-Galloway said. In addition, the tests should show whether the new lightweight helmet

is strong enough to withstand the wind blast from high-speed ejections, as well as any impact from pieces of the canopy that have been shattered by the initial blast, he said.

“Until this testing is completed and DOT&E has analyzed the data, we cannot assess whether the fixes work and are ready to field,” he said.

Tests late last year with 103-pound mannequins at various speeds demonstrated the two seat fixes worked as planned, Rankine-Galloway said. In at least one recent test, the HSP successfully prevented a “neck exceedence” during deployment of the main parachute, and the lightweight switch delayed parachute opening, he noted.

However, there is still work to be done to completely eliminate the risk. During Oct. 15's low-speed "proof-of-concept" test at 160 knots, the HSP did not prevent strain on the lightweight pilot's neck in the early stages of an ejection due to the rocket firing and initial wind blast, according to Rankine-Galloway. During the Nov. 19 test at 450 knots – or high speed – neck strain was still seen during the initial catapult and windblast phases, and during parachute opening.

These tests were done using a surrogate helmet that is not quite as light as the proposed lightweight Gen III helmet, Rankine-Galloway noted. Until the program has completed full testing of the new seat changes and the new helmet, DOT&E will not have adequate data to make a judgment, he cautioned.

DOT&E does not have the final say in when the Pentagon can lift the restriction on lightweight pilots.

Fixing the escape system is not part of the Air Force's criteria to declare its F-35A variants operational this summer, but "it remains a fundamental concern that the Chief and the Secretary have because this is all about the safety of our airmen and that is the bottom line," Harrigian said.

## Projects Update:

Jim Harchanko	RV	<a href="http://www.flickr.com/photos/rvflyer03/sets/">www.flickr.com/photos/rvflyer03/sets/</a>
Bob Wilson	Dragonfly	<a href="http://hiwaay.net/~bzwilson/dragonfly/index.html">http://hiwaay.net/~bzwilson/dragonfly/index.html</a>

## Calendar of Events:

Jun 14	1800hrs	Chapter Meeting	<a href="http://eaa190.weebly.com/">http://eaa190.weebly.com/</a>
Jun 18	0730hrs	Fly-In Breakfast at Moontown	<a href="http://eaa190.weebly.com/">http://eaa190.weebly.com/</a>
Jul 12	1800hrs	Chapter Meeting	<a href="http://eaa190.weebly.com/">http://eaa190.weebly.com/</a>
Jul 16	0730hrs	Fly-In Breakfast at Moontown	<a href="http://eaa190.weebly.com/">http://eaa190.weebly.com/</a>
Jul 25 – Jul 31		<b>Oshkosh</b>	<a href="http://www.airventure.org/">http://www.airventure.org/</a>

Aug 16	1800hrs	Chapter Meeting	<a href="http://eaa190.weebly.com/">http://eaa190.weebly.com/</a>
Aug 20	0730hrs	Fly-In Breakfast at Moontown	<a href="http://eaa190.weebly.com/">http://eaa190.weebly.com/</a>
Sep 13	1800hrs	Chapter Meeting	<a href="http://eaa190.weebly.com/">http://eaa190.weebly.com/</a>
Sep 17	<b>Moontown Airport (3M5) Annual Grass Field Fly In Sponsored By EAA Chapter 190</b>		<a href="http://eaa190.weebly.com/">http://eaa190.weebly.com/</a>
Oct 11	1800hrs	Chapter Meeting	<a href="http://eaa190.weebly.com/">http://eaa190.weebly.com/</a>
Oct 15	0730hrs	Fly-In Breakfast at Moontown	<a href="http://eaa190.weebly.com/">http://eaa190.weebly.com/</a>
Nov 15	1800hrs	Chapter Meeting	<a href="http://eaa190.weebly.com/">http://eaa190.weebly.com/</a>
Nov 19	0730hrs	Fly-In Breakfast at Moontown	<a href="http://eaa190.weebly.com/">http://eaa190.weebly.com/</a>
Dec 13	1800hrs	Chapter Meeting	<a href="http://eaa190.weebly.com/">http://eaa190.weebly.com/</a>
Dec 27	0730hrs	Fly-In Breakfast at Moontown	<a href="http://eaa190.weebly.com/">http://eaa190.weebly.com/</a>
----- 2017 -----			
Jan 17	1800hrs	Chapter Meeting	<a href="http://eaa190.weebly.com/">http://eaa190.weebly.com/</a>
Jan 21	0730hrs	Fly-In Breakfast at Moontown	<a href="http://eaa190.weebly.com/">http://eaa190.weebly.com/</a>
Apr 4 – Apr 9	<b>Sun-N-Fun</b>		<a href="http://www.sun-n-fun.org">http://www.sun-n-fun.org</a>
Jul 24 – Jul 30	<b>Oshkosh</b>		<a href="http://www.airventure.org/">http://www.airventure.org/</a>
----- 2018 -----			
Apr 10 – Apr 15	<b>Sun-N-Fun</b>		<a href="http://www.sun-n-fun.org">http://www.sun-n-fun.org</a>
Jul 23 – Jul 29	<b>Oshkosh</b>		<a href="http://www.airventure.org/">http://www.airventure.org/</a>
----- 2019 -----			
Apr 2 – Apr 7	<b>Sun-N-Fun</b>		<a href="http://www.sun-n-fun.org">http://www.sun-n-fun.org</a>
Jul 22 – Jul 28	<b>Oshkosh</b>		<a href="http://www.airventure.org/">http://www.airventure.org/</a>
----- 2020 -----			
Mar 31 – Apr 5	<b>Sun-N-Fun</b>		<a href="http://www.sun-n-fun.org">http://www.sun-n-fun.org</a>

Jul 20 – Jul 26	<b>Oshkosh</b>		<a href="http://www.airventure.org/">http://www.airventure.org/</a>
	-----	2021	-----
Apr 12 – Apr 18	<b>Sun-N-Fun</b>		<a href="http://www.sun-n-fun.org">http://www.sun-n-fun.org</a>
	-----	2022	-----
Apr 5 – Apr 10	<b>Sun-N-Fun</b>		<a href="http://www.sun-n-fun.org">http://www.sun-n-fun.org</a>
	-----	2023	-----
Mar 28 – Apr 2	<b>Sun-N-Fun</b>		<a href="http://www.sun-n-fun.org">http://www.sun-n-fun.org</a>
	-----	2024	-----
Apr 9 – Apr 14	<b>Sun-N-Fun</b>		<a href="http://www.sun-n-fun.org">http://www.sun-n-fun.org</a>
	-----	2025	-----
Apr 1 – Apr 6	<b>Sun-N-Fun</b>		<a href="http://www.sun-n-fun.org">http://www.sun-n-fun.org</a>

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## Ports of Call:

Lawrenceville, GA	LZW	EAA 690	1 <sup>st</sup> Saturday
Rome, GA	RMG	EAA 709	1 <sup>st</sup> Saturday
Winchester, TN	BGF	EAA 699	1 <sup>st</sup> Saturday
Gallatin, TN	M33	EAA 1343	2 <sup>nd</sup> Saturday
Guntersville, AL	8A1	EAA 683	2 <sup>nd</sup> Saturday
Murfreesboro, TN	MBT	EAA 419	2 <sup>nd</sup> Saturday
Huntsville, AL	3M5	EAA 190	3 <sup>rd</sup> Saturday
Shelbyville, TN	SYI	EAA 1326	4 <sup>th</sup> Saturday
Fort Payne, AL	4A9	EAA 890	5 <sup>th</sup> Saturday

Hazel Green potluck 5:30pm 3rd Saturday each month.