

# The Outer Marker

Volume 17 Issue 7

Bonnie Gottschalk - Editor





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2020

## “Important Dates”

### **General Meeting**

July 10th

8:30 AM

Gateway EAA Chapter 1401

Merced Regional Airport

HANGAR 10

### **Board Meeting**

August 5th

7:00 PM

Mike Bodine

2519 Sea Breeze Ct.

Merced, CA



**Bonnie Gottschalk**  
**Editor**

# Happy 4<sup>th</sup> of July!

Hello Flight Enthusiasts!

Well, another month we have not been able to get up in the air. Really looking forward to the day John is back to 100% and he can take me back up in the plane. Don't realize how spoiled I am until we cannot fly for one reason or another.

After two years of not being able to have our Annual Young Eagles Event I am heartened to announce we have started the ball rolling again! Plans have been examined, rules of safety have been put in place and a date has been set! September 11<sup>th</sup> we will be having our Annual Young Eagles Event. If you have not taken advantage of this before with your children or grandchildren, you really need to bring them. It is an unforgettable experience!



<https://www.youtube.com/watch?v=QCt1kioX0kk&t=3s>

This month's meeting presentation will be a video on some highlights of EAA Air Venture Oshkosh over the years. Should be a fun experience.

Hope to see you there until then, may God bless you all with health, prosperity and clear blue skies!

Bonnie

# President's Proclamation



**Mike Bodine**

## **July 10,2021** **Gateway EAA Chapter 1401**

The July EAA general Meeting is scheduled for July 10th at 8:30 AM at the EAA hangar

The July meeting presentation will be EAA videos of EAA Air Venture pasts, since Air Venture has been canceled for the past 2 years!

Your Board has committed to having our Young Eagles Event September 11th. The event will be for kids 8-17. We will complete the details in August. We will comply with all the EAA National, State and Merced County requirements including Covid requirements. All sanitary precautions will be inhaled to in flying kids. We will need all of our EAA members to assist in this exciting adventure. Final details will be presented at our August general meeting.

Our August EAA general meeting will outline all the details for the Sept 11th Young Eagles Event.

See everyone Saturday July 10th, coffee and water will be available.

Mike Bodine

# 2021 Gateway EAA Tentative Meeting Schedule

<b>Board Meetings</b>	<b>General Meetings</b>	<b>Meeting Location</b>	<b>Meeting Agenda and Activity</b>
Jul 1	Jul 10	EAA Hangar 10	Aircraft Display and Social
Aug 5	Aug 14	EAA Hangar 10	Aircraft Display and Social
Sep 2	Sep 11	EAA Hangar 10	<b>Young Eagles Event</b>
Sep 30	Oct 9	EAA Hangar 10	Aircraft Display and Social
Nov 4	Nov 13	EAA Hangar 10	Aircraft Display and Social
Dec 2	Dec 11	EAA Hangar 10	<b>Chapter Christmas party</b>





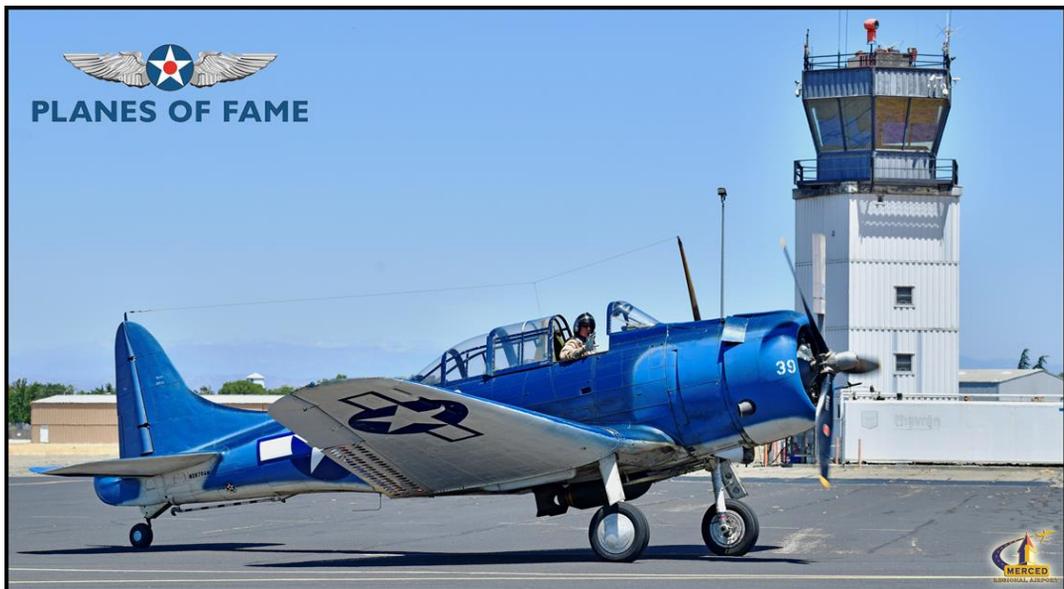
## MCE - Rare Vintage Warbird (SBD-5)

All,

This last Friday, a rare vintage warbird stopped for a quick visit at MCE.

N670AM is a 1943 Douglas SBD-5.

'Dauntless' from the Planes of Fame Air Museum



<https://planesoffame.org/aircraft/plane-SBD-5>

“The Museum’s SBD-5 is a World War II Combat Veteran that was manufactured in El Segundo, California and delivered on June 18, 1943. Following shipment to Espirito Santo in the combat zone, the aircraft was assigned to the Royal New Zealand Air Force. It flew over 30 combat missions with Squadron 25 off of the South Pacific island of Bougainville. In May 1944, it transferred to the U.S. Marine Corps. For the remainder of the war the aircraft served with six different Marine and U.S. Navy squadrons. After the war, it was sold to Warner Bros., where it appeared in several movies, including Midway. It was acquired by the Museum in 1959 and restored to flight in 1987.”



N670AM

1943 - Douglas SBD-5 Dauntless



PLANES OF FAME

Crew: 2

Maximum Speed: 255 mph

Power Plant: 1, 1,200-hp Wright R-1820-60 Cyclone 9-cylinder air-cooled radial engine

Range: 1,115 miles

Service Ceiling: 25,530 ft.

Armament: Two fixed forward firing .50-cal & two flexible .30-cal rear machine guns

2,250 lb of bombs

Produced 1940-1943

Number Built 5,936

Surviving airworthy aircraft 6

Under restoration or in storage 4

On display 18

The SBD ("Scout Bomber Douglas") was the United States Navy's main carrier-based scout/dive bomber from mid-1940 through mid-1944.

During its combat service, the SBD proved to be an excellent naval scout plane and dive bomber. It possessed long range, good handling characteristics, maneuverability, potent bomb load, great diving characteristics from the perforated dive brakes, good defensive armament, and ruggedness.

Enjoy!

Jon Kwiatkowski

Airport Operations

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I could have been an astronaut, but my parents told me the sky was the limit.

# Chapter Events

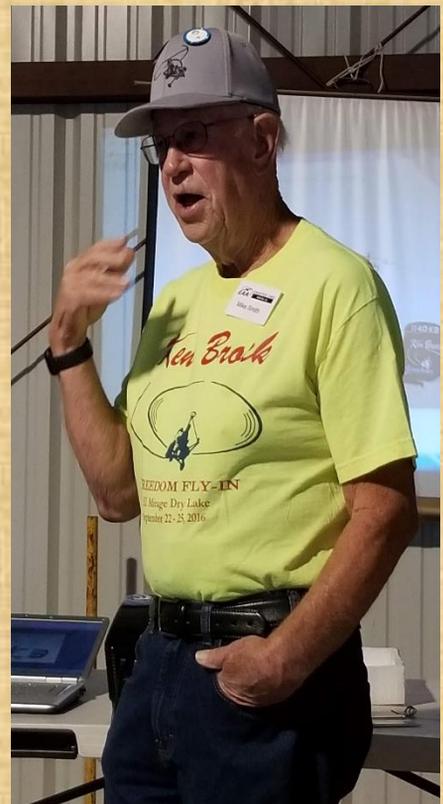
Click blue hyperlinks to see webpages

Donation made to [Castle Air Museum](#)  
Joe Pruzzo accepting from Mike Bodine

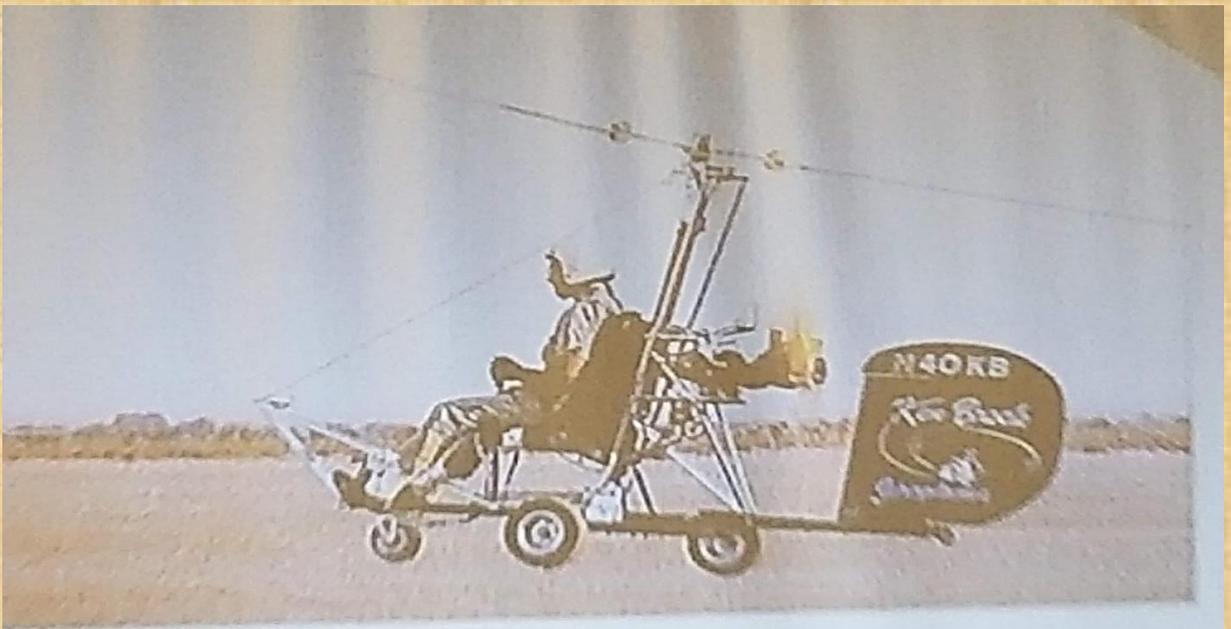


# Gyroplanes

With Mike Smith







## Definition

A gyroplane is an aircraft that achieves lift by means of a free spinning rotor.

## Description

Unlike a helicopter which has a powered rotor, the rotor of a gyroplane spins in flight due to the air loading on the rotor blades ([aerofoils](#)) ([/index.php/Aerofoil](#)) as the aircraft moves forward. The free spinning rotor of a gyroplane does not require an anti-torque device, such as a tail rotor, as there is no torque load as would be associated with a powered rotor. The most common gyroplane configurations are comprised of an airframe with landing gear, a single rotor which, in general, has either two or three blades, a propulsion engine and [propeller](#) ([/index.php/Propeller](#)) in either pusher or tractor (puller) configuration, and an aircraft style tail assembly with a vertical fin and [rudder](#) ([/index.php/Rudder](#)), and a horizontal stabiliser and [elevator](#) ([/index.php/Elevator](#)). The rudder and elevator [flight controls](#) ([/index.php/Flight\\_Controls](#)) work essentially the same as those of a conventional aircraft. A wing may be included in the design to enhance performance.

# Autorotation

A fundamental difference between helicopters and gyroplanes is that in powered flight, a gyroplane rotor system operates in autorotation. In other words, the rotor spins freely as a result of air flowing up through the blades, rather than using engine power to turn the blades and draw air down from above. Forces are created during autorotation that keep the rotor blades turning, as well as creating lift to keep the aircraft aloft. Aerodynamically, the rotor system of a gyroplane in normal flight operates like a helicopter rotor during an engine-out forward [autorotative \(/index.php/Autorotation\)](/index.php/Autorotation) descent.

## Prerotator

Prior to takeoff, the gyroplane rotor must first achieve a rotor speed sufficient to create the necessary lift. On very basic gyroplanes, this is accomplished by initially spinning the blades by hand. The aircraft is then taxied with the rotor disc tilted aft, allowing the airflow through the system to accelerate it to the required speed for flight. More advanced gyroplanes use a prerotator, which is driven mechanically, electrically or hydraulically to provide the means to spin the rotor. Note that these types of prerotators can only be used on the ground as the torque that they create must be overcome by the friction between the gyroplane's undercarriage and the surface. In a very few cases, jets mounted on the tips of the rotor blades have been used to prerotate the rotor. Many prerotators are capable of only achieving a portion of the rotor speed necessary for flight; the remainder is gained by taxiing or during the takeoff roll. However, some prerotator systems are robust enough to achieve rotor speed in excess of that required for flight with enough inertia to sustain the rotor speed through a "jump" or vertical takeoff and acceleration profile.

# Gyroplane Operating, Handling and Flight Characteristics

It is well beyond the scope of the SKYbrary mandate to provide operating methodology, evaluate the flight characteristics or to suggest handling techniques for specific aircraft types. The FAA Rotorcraft manual listed under Further Reading below contains a wealth of information on these subjects.

## Related Articles

- [Autorotation \(/index.php/Autorotation\)](/index.php/Autorotation)

## Further Reading

### FAA

- [Rotorcraft Flying Handbook - Gyroplane Use Only \(https://www.skybrary.aero/bookshelf/books/4085.pdf\)](https://www.skybrary.aero/bookshelf/books/4085.pdf)

Retrieved from "<https://www.skybrary.aero/index.php?title=Gyroplane&oldid=128935> (<https://www.skybrary.aero/index.php?title=Gyroplane&oldid=128935>)"

Category (/index.php/Special:Categories): **General (/index.php/Category:General)**



**Welcome Everyone to  
The Ken Brock Freedom Fly-In 2021  
Hosted by Chapter One**

**KBFFI 2021 Schedule of Events**

***Radio Frequency 123.025 MHz***

**Friday - 24 September 2021**

**7:00AM - 8:00AM – Coffee and Sweet Rolls**

**8:00AM - 9:00AM - Pilot Sign-In**

**9:00AM - Pilot Safety Briefing**

**12:00PM - 1:00pm – Grilled Beef dogs and Soda/Water for Lunch - \$3.00**

**Rest of the Day – Enjoy flying, visiting and making New Friends!**

**5:00PM –Friday Night dinner (\$15 Donation), with Thick Burger, Potato Salad, Salad & Dressing, Baked Beans, Soda/Water & Dessert (plates, napkins and silverware provided by Chapter One).**

**7:00PM – Movie Night and/or Presentation (Weather Permitting)**

**Saturday - 25 September 2021**

**7:00AM - 8:00AM – Coffee and Sweet Rolls**

**8:00AM - 9:00AM - Pilot Sign-In**

**9:00AM - Pilot Safety Briefing**

**12:00PM - 1:00pm – Grilled Beef dogs and Soda/Water for Lunch - \$3.00**

**Rest of the Day – Enjoy flying, visiting and making New Friends!**

**5:00PM – BYOB (Bring Your Own Beef), with Potato Salad, Salad & Dressing, Baked Beans, Soda/Water & Dessert**

**After Sunset – Awards Ceremony and Raffle!!!**

**Sunday - 26 September 2021**

**7:00AM – 8:00AM – Coffee and Danish**

**9:00AM – Pilot Safety Briefing**

**All Chapter One members would like to thank you for attending the 2021 Ken Brock Freedom Fly-In. Have a safe trip home and we all look forward to seeing you again next year!**



# EAA Chapter 1401



# Young Eagles Annual Event

## September 11, 2021

### 8 AM to 11 AM



Launched in 1992, the Young Eagles program has dedicated more than 25 years to giving youth ages 8–17 their first free ride in an airplane.

It's the only program of its kind, with the sole mission to introduce and inspire kids in the world of aviation.

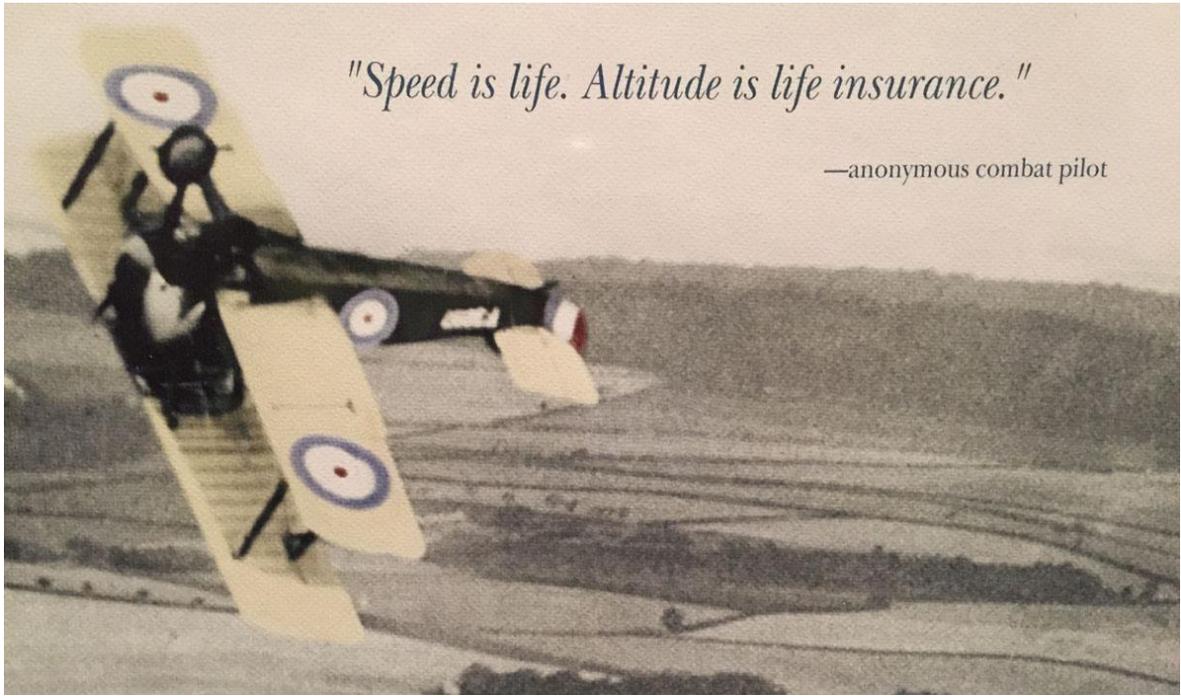
Today, more than 2 million young people have enjoyed a free introductory flight through the Young Eagles program. These flights are made possible through the generosity of EAA member volunteers.

**Parents/ Guardians must attend and sign permission paperwork.**

# Lift Your Spirits

Click on blue titles to get to webpage

## The Biggest Collection of Insightful Quotes about Flying!



"Some of our freighter companies are asking us for [single pilot airliners]. We are quite confident, technologically, that the toolkit is filled. With respect to commercial airplanes, there is no doubt in our minds that we can solve the problem of autonomous flight." — John Tracy, Chief Technology Officer, Boeing.

"I have seen the curvature of the earth. I have seen sights most people will never see. Flying at more than 70,000 feet is really beautiful and peaceful. I enjoy the quiet, hearing myself breathing, and the hum of the engine. I never take it for granted." — Lt. Col. Merryl Tengesda

"Same with anyone who's been flying for years and loves it still... we're part of a world we deeply love. Just as musicians feel about scores and melodies, dancers about the steps and flow of music, so we're one with the principle of flight, the magic of being aloft in the wind!" — Richard Bach

It's congenital really. We're an aspiring species that doesn't have wings. What else would we dream of?" — Mark Vanhoenacker

“Once you have tasted flight, you will forever walk the earth with your eyes turned skyward, for there you have been, and there you will always long to return.” — Leonardo da Vinci

“More than anything else the sensation is one of perfect peace mingled with an excitement that strains every nerve to the utmost, if you can conceive of such a combination.” —Wilbur Wright

“The engine is the heart of an airplane, but the pilot is its soul.” —Walter Raleigh

“There is an art to flying. The knack lies in learning how to throw yourself at the ground and miss.” — Douglas Adams, *The Hitchhikers Guide to the Galaxy*.

“Aren’t we all dreamers? It’s only because man dreamt of flying that we are travelling in planes. Behind all inventions, we see the dreams of people.” — Ajith Kumar

“Mostly, my flying has been solo, but the preparation for it wasn’t. Without my husband’s help and encouragement, I could not have attempted what I have. Ours has been a contented and reasonable partnership, he with his solo jobs and I with mine. But always with work and play together, conducted under a satisfactory system of dual control.” — Amelia Earhart

“A pilot who says he has never been frightened in an airplane is, I’m afraid, lying.” — Louise Thaden

“Flying is a great equalizer. The plane doesn’t know or care about your gender as a pilot, nor do the ground troops who need your support. You just have to perform. That’s all anyone cares about when you’re up there – that you can do your job, and that you do it exceptionally well.” — Lt. Col. Christine Mau, 33rd Fighter Wing Operations Group Deputy Commander.

“Feathers shall raise men even as they do birds towards heaven: That is by letters written with their quills.” — Leonardo da Vinci

# A BIT OF HISTORY

[Click blue hyperlinks to see webpages](#)

# Missions Impossible

## The Skunk Works® Story



On paper, the specifications read like works of pure fantasy: a spy plane capable of taking crystal-clear photographs from 70,000 feet. A Mach-3 aircraft that could fly continuously for hours on end and literally outrun missiles. An attack aircraft that rendered itself invisible to enemy radar.

But Lockheed's chief engineer, Clarence "Kelly" Johnson, simply fielded all requests and relayed to his handpicked band of Skunk Works employees what needed to be done.

And then they would deliver. Impossible missions always were, and continue to be, their particular area of expertise.

## **An Aircraft for Every Mission**

Conceived in 1943, the Skunk Works division—a name inspired by a mysterious locale from the comic strip Li’L Abner—was formed by Johnson to build America’s first jet fighter. German jets had appeared over Europe. Uncle Sam needed a counterpunch, and Johnson got a call. As with virtually all Skunk Works projects that followed, the mission was secretive and the deadline was remarkably tight. Johnson promised the Pentagon they’d have their first prototype in 150 days. His engineers turned one out in 143 days, creating the P-80 Shooting Star, a sleek, lightning-fast fighter that went on to win history’s first jet-versus-jet dogfight over Korea in 1950.

Just four years later, amidst growing fears over a potential Soviet missile attack on the United States, Skunk Works engineers—who often worked ten hours a day, six days a week—created the U-2, the world’s first dedicated spy plane. It cruised at 70,000 feet, snapping aerial photographs of Soviet installations. This vital reconnaissance, unobtainable by other means, averted a war in Europe and a nuclear crisis in Cuba.

But high altitude was not enough. By 1960, Soviet radar and surface-to-air missile technology had caught up with the U-2. President Eisenhower needed something quicker, stronger, and more elusive. Using sheets of titanium coated with heat-dissipating black paint, engineers created the SR-71 Blackbird. On July 3, 1963, the plane reached a sustained speed of Mach 3 at an astounding 78,000 feet and remains the world’s fastest and highest-flying manned aircraft. Though lightning-fast, the Blackbird was not invisible. By 1973, Pentagon officials were calling for the creation of an attack aircraft that could fly undetected past enemy radar. Building on obscure research that showed radar beams could be diverted by angled triangular panels, the Skunk Works team designed the F-117 Nighthawk.



Unusual looking and aerodynamically challenged, the Nighthawk wasn't pretty, but it did what no aircraft had done before. Slipping past Iraqi radar on the morning of January 17, 1991, Lockheed's Nighthawk bombed thirty-seven critical targets across Baghdad, a surgical strike that led, in just forty-three days, to the successful conclusion of Operation Desert Storm.

## **The History Makers**

Over the years, the Skunk Works division in Palmdale, California, was given a more official moniker, Lockheed's Advanced Development Programs, but its mission remained unchanged: build the world's most experimental aircraft and breakthrough technologies in abject secrecy at a pace impossible to rival.

The essential spirit of the division was captured perfectly on July 15, 1955, in an entry from Kelly Johnson's logbook, after a frantic race to ready the U-2 for its inaugural test flight: "Airplane essentially completed. Terrifically long hours. Everybody almost dead."

A total of six Collier trophies, the most prestigious award in the aeronautics industry, have been collected by the Skunk Works division since 1943, but it's quite possible the division's most impressive legacy has yet to be written.

As a Skunk Works' program manager aptly stated, "The problem with Skunk Works' programs is that they typically get credit for changing history long after they actually change history."

## **Sources and Further Reading**

Boyne, Walter. *Beyond the Horizons: The Lockheed Story*. New York: St. Martin's Griffin, 1999.

Garrison, Peter. "Head Skunk." *Air & Space*, March 2010.

<http://www.airspacemag.com/history-of-flight/Head-Skunk.html>

Lockheed Martin. "Collier

Trophies." <http://www.lockheedmartin.com/us/aeronautics/skunkworks/CollierTrophies.html>, accessed August 1, 2012.

# Plane & Pilot



[EAA AirVenture Oshkosh 2021: It's Happening!](#)



[Transformers-Style Flying Car Makes 35-Minute Flight](#)

# Photos & Videos

Click blue hyperlinks to see video's



The United States Air Force partners with the National Institute for Aviation Research, Wichita State University to extend the longevity of the B-1 Bomber. [AFLCMC, Wichita State University creating digital copy of B-1](#)



[The QF-16 Aerial Target](#)



[Crosswinds](#)



[Sukhoi Su-35](#)



[BEECHCRAFT KING AIR 300  
SURPASSES 50,000 FLIGHT HOURS](#)

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## EAA Events



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AIR MUSEUM  
Castle Air Museum



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**Gateway  
Air Center**   
<http://gatewayaircenter.com/>

**Taildragger Cafe**  
Frequent Flyer Card

FOR EVERY FOOD PURCHASE OF \$5.00 OR MORE (EXCLUDING DRINKS) YOU RECEIVE ONE PUNCH. AFTER 12 PUNCHES YOUR 13TH MEAL IS FREE! UP TO A \$ 7.95 VALUE



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"Mmmmmmmmm....its  
so good"

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Sherriewood13@yahoo.com



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