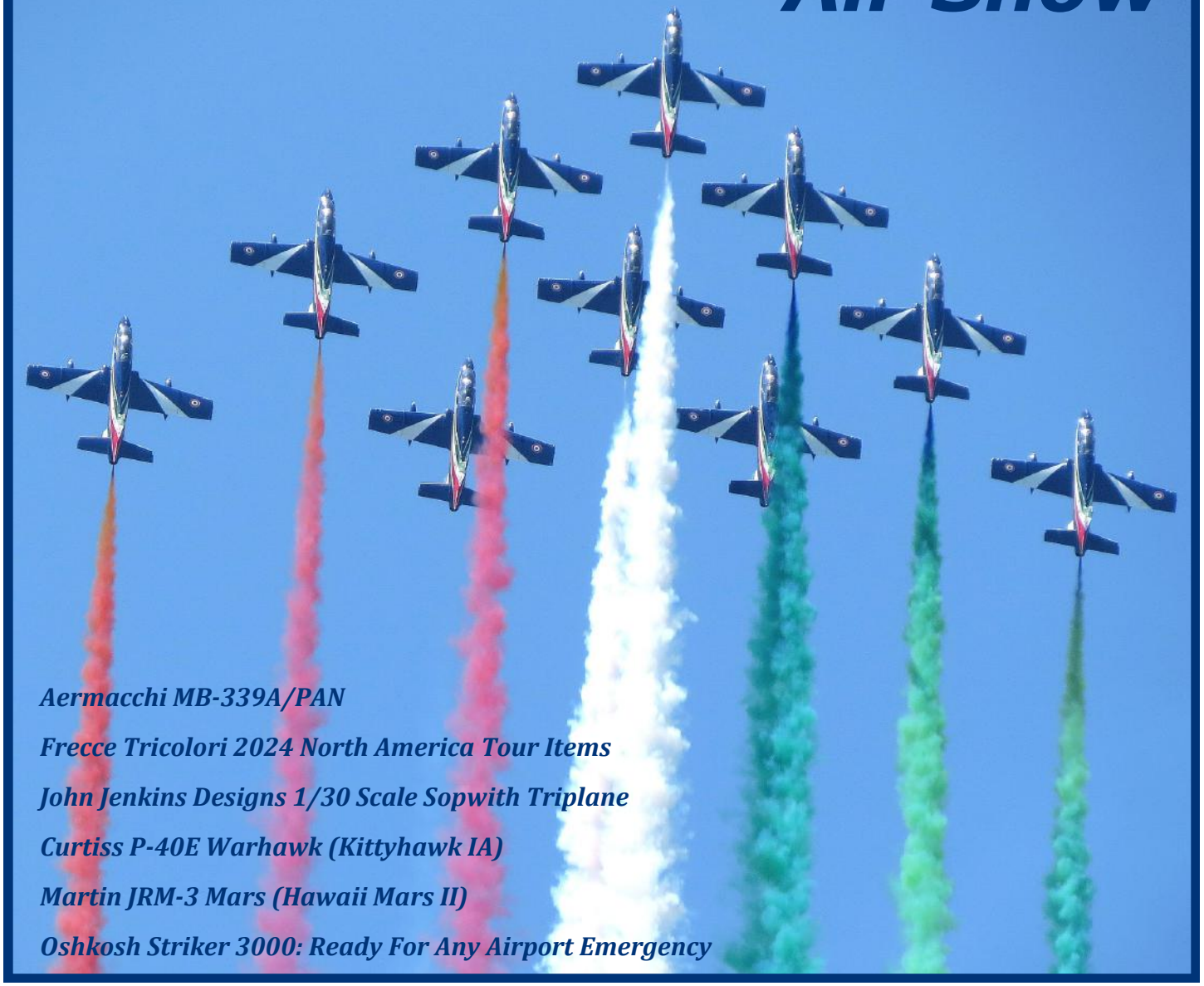
September 2024

Corey J Beitler's

# "Distelfink Airlines"

An Online Aviation Newsletter

## New York International Air Show



*Aermacchi MB-339A/PAN*

*Frecce Tricolori 2024 North America Tour Items*

*John Jenkins Designs 1/30 Scale Sopwith Triplane*

*Curtiss P-40E Warhawk (Kittyhawk IA)*

*Martin JRM-3 Mars (Hawaii Mars II)*

*Oshkosh Striker 3000: Ready For Any Airport Emergency*

*The Italian Air Force Aerobatic Team, popularly known as the Frecce Tricolori, trailing their signature red, white, and green smoke, climb to start their flight demonstration at the 2024 New York International Airshow. The Frecce Tricolori visited the United States and Canada for the first time in 32 years this summer, visiting airshows and performing flyovers of famous cities and landmarks.*

# *FROM THE EDITOR'S DESK*

## *New York International Airshow, Aermacchi MB-339, Tour Items, Hawaii Mars II*

*Greetings Everyone:*

*Welcome to the September edition of "Distelfink Airlines"! As the fall season begins here in Pennsylvania, aviation events will shift to smaller fly-ins and airshows in this region of the United States. There are still great aviation photojournalism opportunities at these events, and I fully expect to have plenty of content for newsletters for the remainder of this year and early 2025.*

*The featured content for this edition of "Distelfink Airlines" is a photo feature about the New York International Airshow that was held in mid-August at the Orange County Airport in Montgomery, New York. The fourth destination on the 2024 Air Dot Show Tour of airshows in the United States, this airshow featured headline performances by the U.S. Air Force "Thunderbirds" and the Italian Air Force Aerobatic Team, the "Frecce Tricolori". The Frecce Tricolori have been on a three-month tour of North America, visiting airshows in the United States and Canada. In addition, the team performed several flyovers of famous cities and landmarks in both countries. The 2024 North American Tour is the first time the Frecce Tricolori have visited North America in 32 years and it was my first time seeing the team perform their airshow flight display. The Frecce Tricolori put on an amazing airshow, and their pilots and personnel are some of the friendliest people I've ever met on the airshow circuit. I want to thank Chris Dirato, the PR Director for the Air Dot Show Tour, for the opportunity to cover the airshow as credentialed media. I'm looking forward to working with the Air Dot Show Tour at the New York International again at this event in 2025!*

*Also in this edition, a look at the Aermacchi MB-339A operated by the Italian Air Force as a trainer. The MB-339A featured is the MB-339A/PAN variant operated by the Frecce Tricolori. In service since the mid-1970s, the MB-339A will be replaced by the Frecce Tricolori with the new Leonardo (formerly Alenia Aermacchi) M-346 Master jet trainer within the next few years. I was afforded an up-close look at the MB-339A/PANs of the Frecce Tricolori at the Salisbury-Ocean City-Wicomico Regional Airport when the team arrived there in preparation for the OC Air Show in Ocean City, Maryland. I want to thank Gary Bitner from the Air Dot Show Tour and members of the Frecce Tricolori for the opportunity to photograph the jets up close and learn more about them.*

*The "Aviation Memorabilia" section of the newsletter for September features a selection of items that were available from the Frecce Tricolori to airshow spectators and VIP guests during the 2024 North American Tour. The Frecce Tricolori and the Italian Air Force were very generous in the memorabilia they handed out. As credentialed media, I was given a beautiful book about the Frecce Tricolori from one of the team's pilots that is an absolute keepsake for my airshow and aviation memorabilia collection.*

*Finally, "Aircraft of Special Interest" features the Martin JRM-3 Mars "Hawaii Mars II" flying boat. Originally built as a long-range transport for the U.S. Navy, the "Hawaii Mars II" eventually found its way to Canada to become a water bomber to fight wildfires in Western Canada. The "Hawaii Mars II" served for decades in this role before being officially retired last month. The "Hawaii Mars II" will eventually become a centerpiece of an exhibit about aerial firefighting in the British Columbia Aviation Museum. Thanks to my Photorecon editor, Ken Kula, for loaning me the photo of the "Hawaii Mars II" for this section of the newsletter.*

*Thank you again for supporting my aviation photojournalism efforts and "Distelfink Airlines" this year. Please feel free to share the newsletter with whoever you wish and invite them to join the newsletter's official social media pages listed below.*

*Regards,*
*-Corey*

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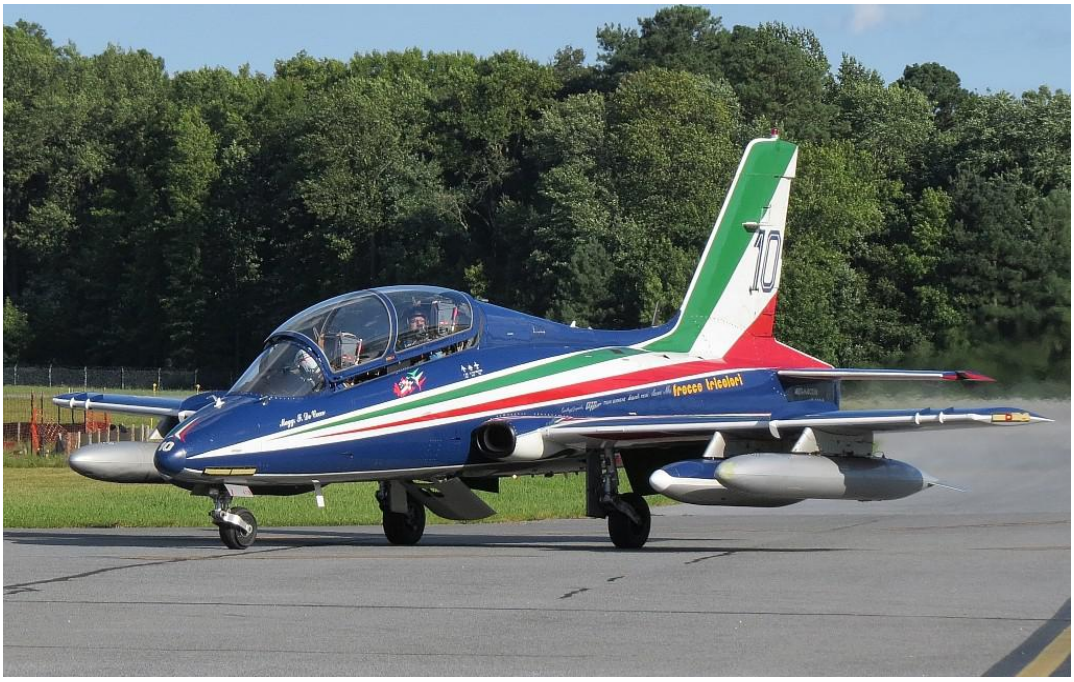
# *What's Inside:*



# Aermacchi MB-339A/PAN

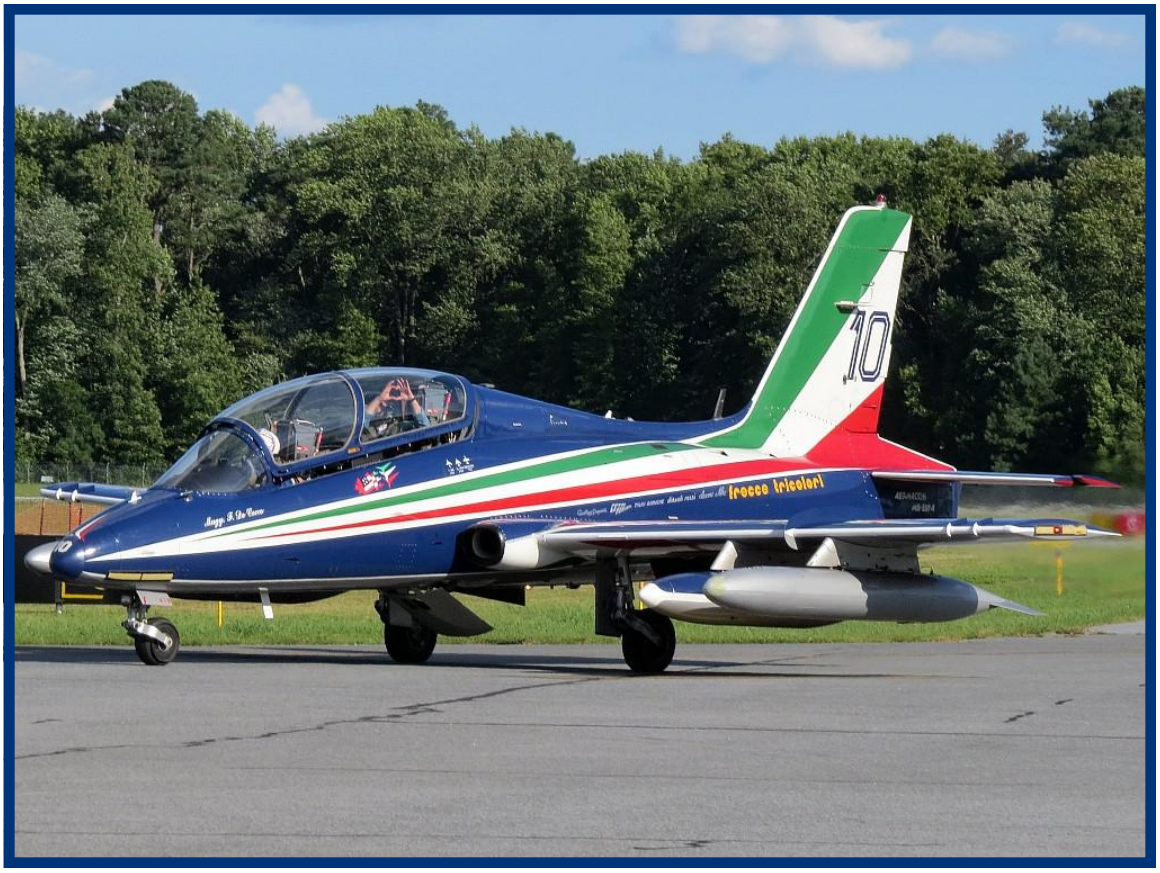



*An Italian Air Force Aermacchi MB-339A/PAN jet trainer assigned to the Italian Air Force's Aerobatic Team, the Frecce Tricolori. The Italian Air Force has operated the Aermacchi MB-339 as a trainer since the mid-1970s. Small numbers of the type have also been sold and exported for use as trainers or light attack aircraft in the air arms of other countries. The Italian Air Force will be replacing the Aermacchi MB-339A/PAN for the Frecce Tricolori with the new Leonardo (formerly Alenia Aermacchi) M-346 Master within the next few years.*

The Aermacchi MB-339 is a military jet trainer and light attack aircraft designed and manufactured by the Italian aviation company Aermacchi. The MB-339 was developed during the 1970s to meet an Italian Air Force requirement for a new jet training aircraft. Over half of the 230 MB-339s built were delivered to the Italian Air Force, with the rest being sold and exported in small numbers to other countries as trainers or light attack aircraft.

Development of the MB-339 began in 1972 when Aermacchi was awarded a contract by the Italian Air Force to study a replacement for the aging MB-326, which had been the standard jet trainer for the Italian Air Force since the 1960s. After evaluating seven new designs against an improved version of the MB-326, Aermacchi determined improving the MB-326 would meet the requirements of the Italian Air Force and be cheaper to produce. Designated the MB-339, the new aircraft shared many similarities to the MB-326 but with a new forward fuselage that raised the instructor's rear seat above the student pilot's front seat to improve visibility. The cockpit was pressurized, had a jettisonable canopy, and was equipped with two Martin Baker ejection seats. Other noteworthy features of the MB-339 included an enlarged tail for improved maneuverability, a single Rolls-Royce Viper turbojet engine for power, tricycle landing gear, and unswept wings with wingtip fuel tanks. Underwing pylons allowed the MB-339 to mount additional fuel tanks and weapons packs when operated in the light attack role. The first MB-339s entered service with the Italian Air Force in 1978. Since then, Aermacchi has offered improved variants of the MB-339 that feature modernized cockpits and more powerful engines. The MB-339 was also sold and exported in small numbers for use as advanced trainers and light attack aircraft. Some nations other than Italy that have operated the MB-339 in the advanced trainer or light attack role include Argentina, Peru, Malaysia, New Zealand, and Nigeria. The MB-339 has been praised in service for being highly maneuverable and easy to fly.

This MB-339 is an MB-339A/PAN variant operated and flown in airshows by the Italian Aerobatic Team, the Frecce Tricolori. The MB-339A/PAN is an MB-339A, but with a smoke generator added, the wingtip fuel tanks removed, and the colorful Frecce Tricolori paint scheme applied for airshow displays. There are 13 MB-339A/PANs assigned to the Frecce Tricolori, with the team using ten aircraft in airshow displays and keeping three as spares.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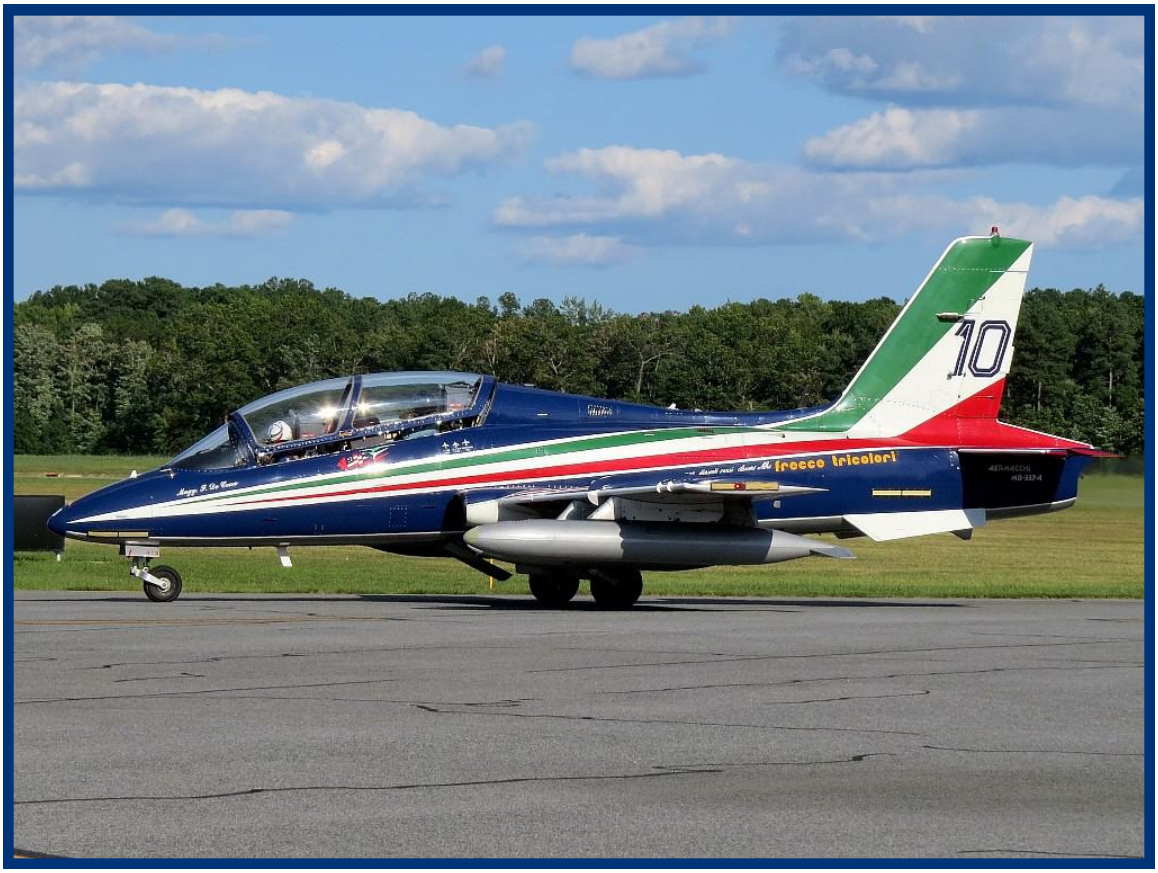
frecce tricolori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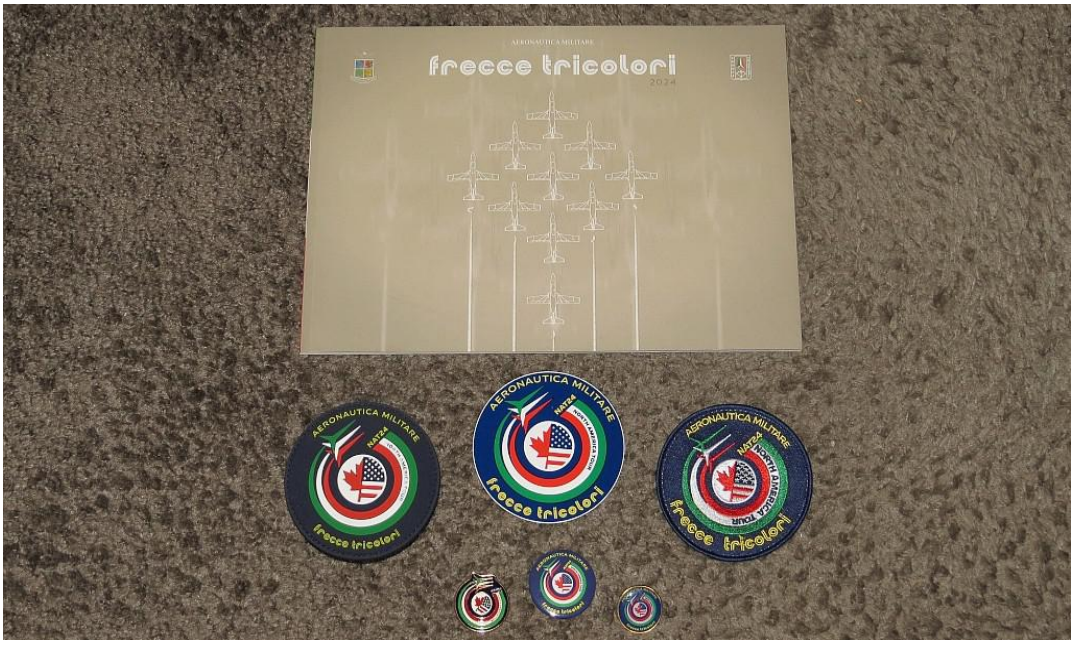
frecce tricolori

# Frecce Tricolori 2024 North American Tour Items



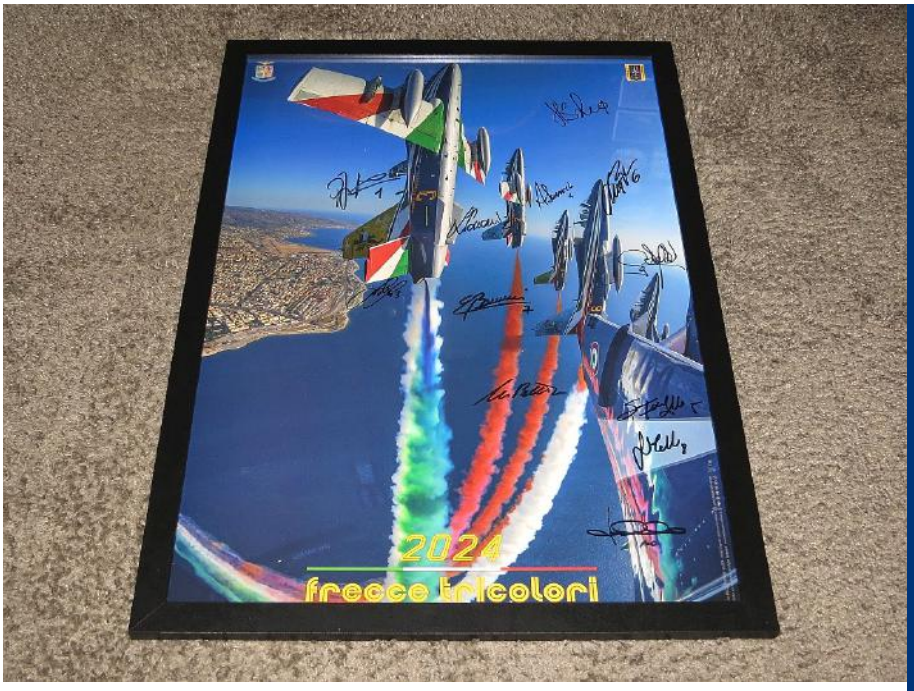

*During their 2024 North American Tour, the Italian Air Force Aerobatic Team, the Frecce Tricolori, had commemorative items to give away to airshow and VIP guests. One of the items included a colorful booklet about the 2024 team highlighting the maneuvers performed during the Frecce Tricolori flight display and the members of the team. Some other small items available included metal pins, two different patches, and a colorful sticker.*

Throughout the summer of 2024, the Italian Air Force's Frecce Tricolori (313th Acrobatic Training Group, National Aerobatic Team (PAN) Frecce Tricolori) embarked on a tour across North America. It was the team's first visit to North America in 32 years. During this three-month visit, the Frecce Tricolori visited seven airshows in the United States and Canada, connecting with airshow and aviation enthusiasts, as well as Italians who now call both countries home. The team also participated in a commemorative airshow to honor the 75th Anniversary of NATO and highlight the close alliance and military cooperation between Italy, the United States, and their NATO allies. In addition to airshow appearances, the Frecce Tricolori also performed flyovers of several major cities in both countries, including the national capitals of Washington D.C. and Ottawa.

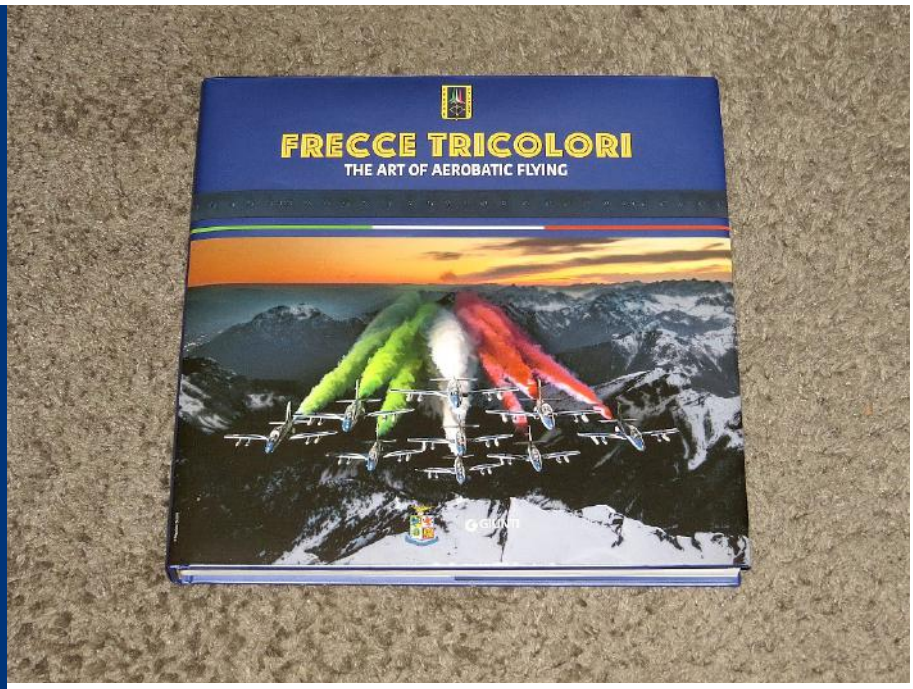
At airshow stops during their 2024 North American Tour, the Frecce Tricolori had commemorative memorabilia available to the general public and VIP guests. Some items available to the general public included a full-size poster of the team in action and a colorful booklet about the team. At airshows, the Frecce Tricolori pilots were available after their flight performances to sign these items for event attendees. The booklet featured biographical information about members of the team, illustrations detailing the maneuvers in the flight demonstration program, and information about the Aermacchi MB-339A/PAN jet trainer flown by the team.

For VIP guests and media members covering the 2024 North American Tour, some more exclusive items handed out by the Frecce Tricolori included patches and pins featuring the logo chosen for the 2024 North American Tour. The most exclusive item the Frecce Tricolori gave out was a copy of the book *Frecce Tricolori: The Art of Aerobatic Flying.* This 250-page hardcover book was printed by the Italian publishing house Giunti and was previously only available in Italy. For the 2024 North American Tour, a limited run of this book was published in English, as the book was originally printed in Italian. The book chronicles the team's history and is illustrated with outstanding color and black-and-white photography of the Frecce Tricolori in action.

These items are great memories for American and Canadian airshow fans who were able to get them of the history-making 2024 North American Tour conducted by the Frecce Tricolori. Hopefully, it will not be another 32 years before the Frecce Tricolori visit airshows in North America once again.

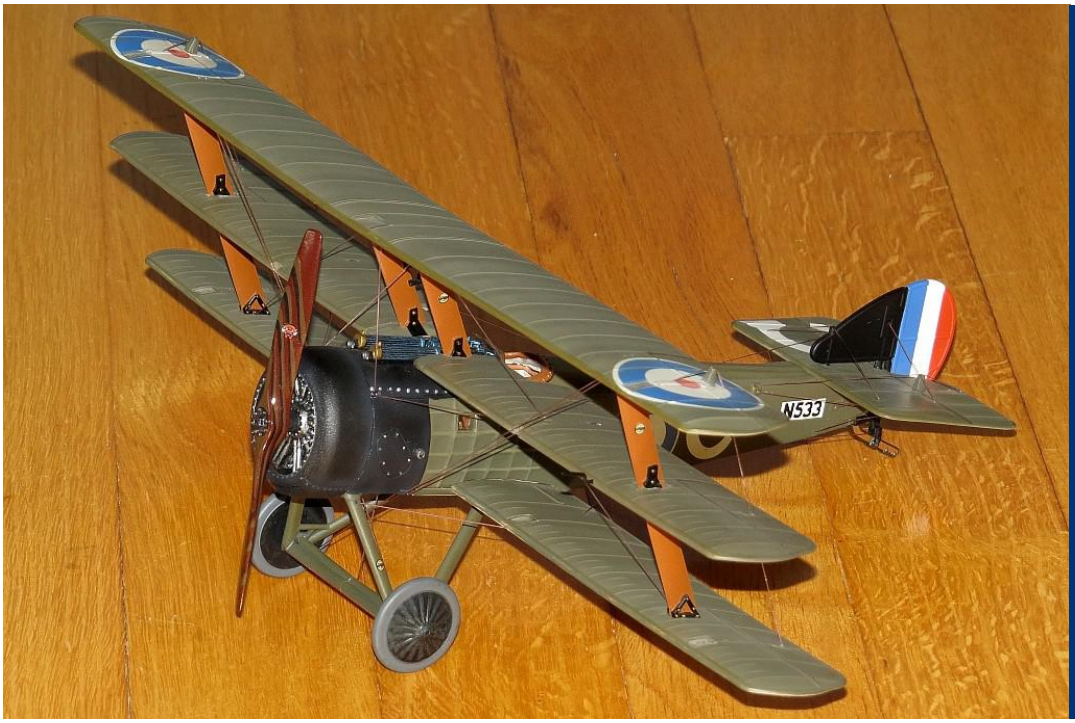



*The Frecce Tricolori gave out this large 18" by 26" poster at the airshows they performed at during their 2024 North American Tour. At some airshow sites, the team autographed these posters after their flying displays. This poster has the signatures of all ten demonstration pilots and the team commander.*




*For VIP guests, the Frecce Tricolori had a special gift. This book, Frecce Tricolori: The Art Of Aerobatic Flying, was published by the Italian publishing house Giunti. The 250-page, hardcover book chronicles the history of the Frecce Tricolori and is illustrated with beautiful color and black-and-white photography.*

# John Jenkins Designs 1/30 Scale Sopwith Triplane




*John Jenkins Designs created an impressive model of the Sopwith Triplane in 1/30 scale. An unusual aspect of this model is that it replicates one of only six Sopwith Triplanes built with twin Vickers .303-inch Vickers machine guns. The model replicates a Sopwith Triplane flown by Canadian ace Raymond Collishaw in July 1917. The Canadian ace claimed two victories with the aircraft while flying as part of the "B" Flight of the No. 10 Naval Squadron.*

The Sopwith Triplane is a British single-seat, single-engine British fighter aircraft designed and built by the Sopwith Aviation Company during World War I. Although the German Fokker Dr. I Triplane is much more famous due to its association with ace Manfred von Richthofen, "The Red Baron", the Sopwith Triplane has the distinction of being the first military aircraft with a triplane wing configuration to see operational service.

During World War I, the Sopwith Aviation Company became one of the most prominent British manufacturers of military aircraft. The Sopwith Pup, a single-seat, single-engine biplane fighter designed by the company possessed outstanding handling qualities but was a conventional design. Personnel in the Sopwith Aviation Company wanted to create a successor to the Pup that pioneered new concepts in aircraft design. These ideas for a pioneering fighter aircraft led to the development of the Sopwith Triplane.

The Sopwith Triplane shared many design attributes, such as its fuselage and rear empennage, with the earlier Sopwith Pup. The significant difference was the Triplane's three wings, which were a narrow-chord to improve pilot visibility. The three short-span wings featured ailerons on all three wings, which gave the Sopwith Triplane an excellent climb rate and outstanding maneuverability. The Sopwith Triplane also featured a variable incidence tailplane, which could be adjusted by the pilot so the aircraft could be flown hands-off.

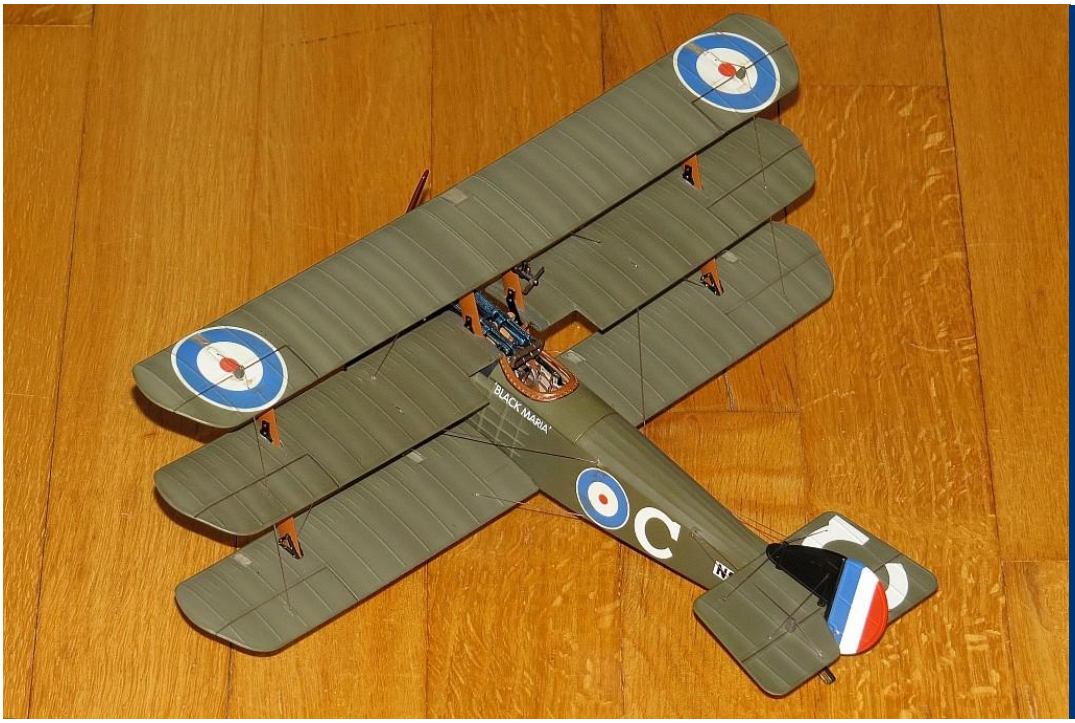
The new fighter was powered by a 110-horsepower Clerget 9Z nine-cylinder rotary engine. The majority of the production aircraft would be fitted with the 130-horsepower Clerget 9B nine-cylinder rotary engine for increased performance. Armament for the Sopwith Triplane consisted of a single .303-inch Vickers machine gun synchronized to fire through the propeller. The new Triplane was also fast, with a top speed of 117 miles per hour and an endurance of 2 hours and 45 minutes. The prototype of the Sopwith Triplane flew successfully in May 1916. This flight was followed by a second prototype flying successfully in August 1916. After successful test flights, production contracts were authorized by the Admiralty and the War Office for the fighter.

Production examples of the Sopwith Triplane were built by the Sopwith Aviation Company and two subcontractors, Clayton & Shuttleworth Ltd. and Oakley Ltd. Oakley Ltd. had no experience building aircraft, and their production contract was canceled after only three Sopwith Triplanes were delivered. The Royal Flying Corps also switched their order for Sopwith Triplanes to Spad S.VII fighters from France, canceling their production contract with Clayton & Shuttleworth Ltd. Eventually, 143 Sopwith Triplanes were produced by Sopwith and Clayton & Shuttleworth Ltd., all being procured by the Admiralty for the Royal Naval Air Service.

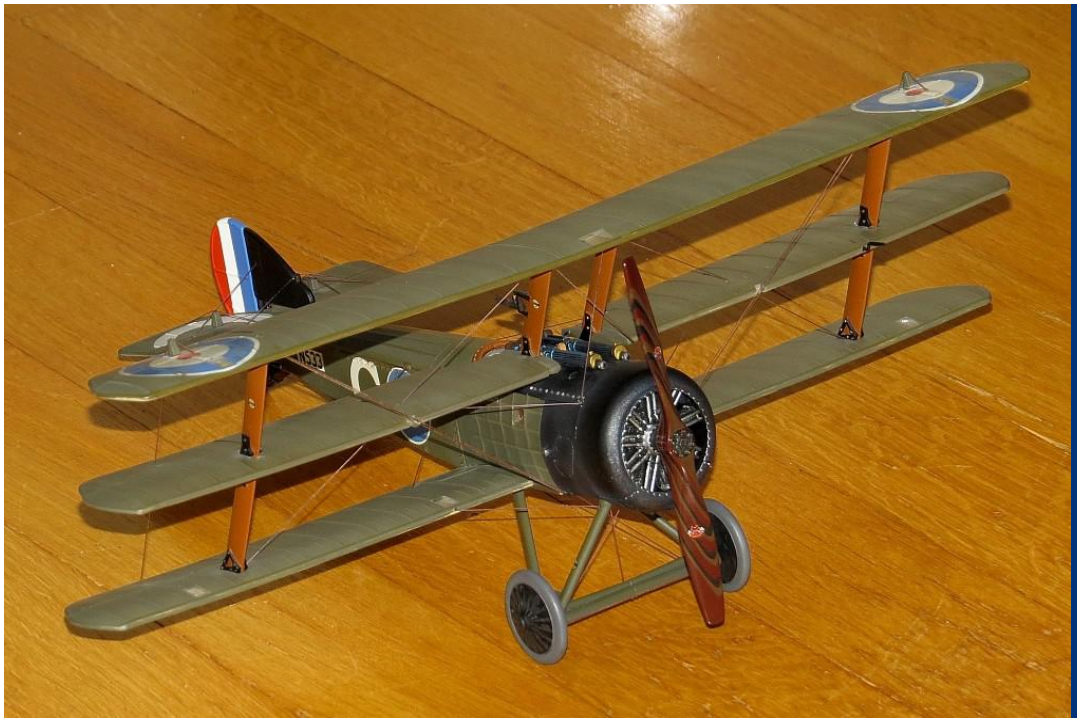
The first unit to become operational with the Sopwith Triplane was the No. 1 Naval Squadron in France during December 1916. This squadron first saw significant action when it relocated from Furnes to Chipilly in February 1917. The No. 8 Naval Squadron received its Triplanes in February 1917, and the No. 5 and the No. 10 Naval Squadrons equipped with the type in April and May 1917. Almost all aircraft built saw service with Royal Naval Air Service squadrons in France. One notable exception was a French squadron, which received 17 examples of the Sopwith Triplane from the Royal Naval Air Service and operated them from Dunkirk.

The Sopwith Triplane proved to be a formidable opponent during its combat debut. Its exceptional climb rate and maneuverability gave it an advantage over the German Albatros D.III fighter. The Germans were so impressed with the Sopwith Triplane that captured examples were studied and evaluated. The Sopwith Triplane's combat debut also sparked the development of other triplane fighter aircraft, with German aircraft manufacturers trying to copy Sopwith's design. Over 40 prototype triplane fighters were designed by German aircraft manufacturers. Only the Fokker Dr. I Triplane was successful in reaching mass production.

The Sopwith Triplane's combat career was brief compared to many other fighter aircraft in World War I. One of the reasons for this was that the Sopwith Triplane was difficult to repair. Repairs to the fuel and oil tank could not be carried out without removing the aircraft's wings and fuselage. Even minor repairs required the Sopwith Triplane to be sent to repair depots located far behind the front lines. Spare parts for the Sopwith Triplane were also hard to obtain. A kit to fit a smaller tailplane to the Triplane with improved elevator response was never fitted to most aircraft because of its lack of availability.




*The John Jenkins Designs 1/30 scale Sopwith Triplane model has incredible detail, which brings the model to life when displayed on a desk or bookshelf or in a diorama. The model captures notable features of the original aircraft, such as the Triplane's narrow-chord, short-span wings. Subtle weathering, including simulated exhaust stains, dirt, and worn fabric showing visible fuselage framework, gives the model the appearance of an aircraft used on regular operations and adds to the model's realism.*



*John Jenkins Designs did an outstanding job replicating many of the unique design features of the Sopwith Triplane in miniature form on the model. The model has clear control wire inspection panels on the fuselage and the leading edges of the wing, just like on the original aircraft. John Jenkins Designs also used photo-etched parts to realistically replicate the Clerget 9B rotary engine, the twin Vickers machine guns, and the cockpit controls and instruments.*

The other significant weakness of the Sopwith Triplane was its weak armament. Contemporary German Albatros fighters were armed with twin machine guns, while the Triplane carried only one gun. Clayton & Shuttleworth Ltd. built six aircraft with twin machine guns to increase the firepower of the Triplane. Some of these aircraft saw combat with the No. 10 Naval Squadron in July 1917, but opinions were mixed from pilots as the extra weight of the second gun negatively affected Triplane's speed and climb rate.

In June 1917, the first Sopwith F.1 Camels reached the No. 10 Naval Squadron. The advantages of the sturdier, better-armed, and faster fighter were immediately realized. By August 1917, only the No. 1 Naval Squadron had Sopwith Triplanes operational in combat. This squadron operated the Triplane until December 1917, when it was finally withdrawn from frontline combat. Surviving examples of the Sopwith Triplane remained in use as training and experimental aircraft until the end of the war. Today, two authentic examples of the Sopwith Triplane survive in museums, one in Great Britain and one in Russia, and several flying reproductions have been built for use in airshows and museum displays.

This 1/30 scale model of a Sopwith Triplane is manufactured by John Jenkins Designs, a toy soldier company known for their excellent replicas of military aircraft, vehicles, figures, and diorama accessories. This model is part of the "Knight of the Skies" product line of World War I aircraft, figures, and diorama accessories.

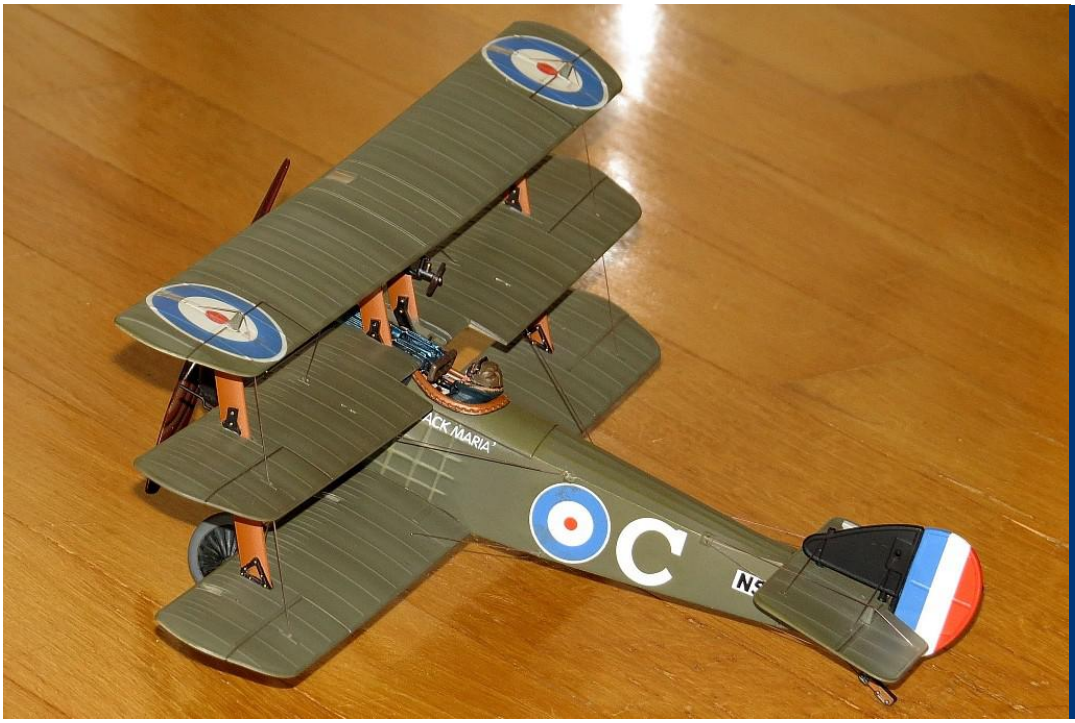
This model represents a Sopwith Triplane flown by Canadian ace Raymond Collishaw as part of the No. 10 Naval Squadron when the squadron was stationed at Droglandt, France, in July 1917. Collishaw commanded the "B" Flight of the No. 10 Naval Squadron, a flight consisting entirely of Canadian pilots. Their aircraft were distinguishable by their black-painted fins and cowlings. "B" Flight claimed 87 German aircraft in three months while equipped with the Sopwith Triplane. Collishaw claimed 34 of his aerial victories flying the type, making him the highest-scoring Sopwith Triplane ace. The aircraft depicted by the model, N533 "Black Maria", was one of six Triplanes built with twin Vickers machine guns. N533 was delivered to the No. 10 Naval Squadron on July 21, 1917. On July 27, 1917, Collishaw, flying N533, scored two victories. The John Jenkins Designs Sopwith Triplane model is constructed of mixed media materials, with resin, plastic, and metal used throughout the model.

The John Jenkins Designs Sopwith Triplane is an excellent model of one of the more obscure fighter aircraft of World War I. The cockpit and engine are wonderfully rendered, with the engine turning with the propeller just as the rotary engine did on the real aircraft. The model is also accurately painted according to historical references and photos of N533 and has the correct black cowl, tail, and "Black Maria" markings. Using resin and plastic throughout most of the model allowed John Jenkins Designs to mold the landing gear, wings, and fuselage in accurate thicknesses with an exceptional amount of surface detail.

John Jenkins Designs also did an exceptional job with the control and bracing wires on this model. The Sopwith Triplane had extensive wire bracing, with additional bracing added to late-production models of the aircraft to address some structural weaknesses discovered during high-speed dives. Tinted wire is used for the bracing and control wires, giving an excellent scale look and accurate appearance. Another detail captured on this model is the clear panels that were located on the fuselage and leading edge of the wings. These panels were used on most Sopwith aircraft and allowed mechanics to inspect the control wires inside of the wing.

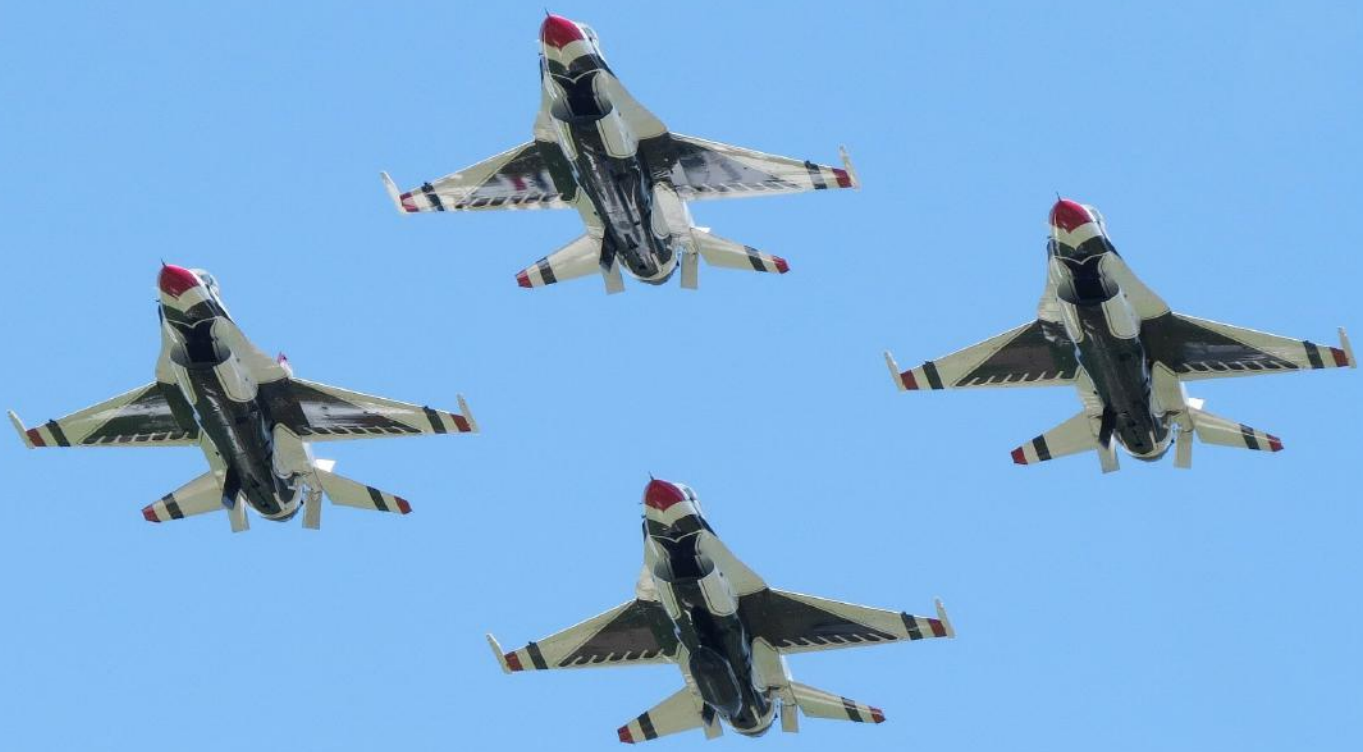
Two aspects of the model that could be improved. First, although the accurate bracing and control wires are extraordinary, wires that run from the wing to the fuselage just behind the cockpit should have been left off. These wires, due to their location on the model, are extremely fragile. On the model reviewed, one of these wires had become detached during shipping. Thankfully, it was repairable. The other weakness of this model is the cockpit. The narrow cockpit and its shape limit which of the John Jenkins Designs half-bust pilot figures that are sold separately can be placed in the cockpit. Many of the half-bust pilot figures that fit the model are long out of production and hard to find.

The John Jenkins Designs Sopwith Triplane is an unusual and great addition to the excellent "Knights of the Skies" series of World War I aircraft models offered by the company in 1/30 scale. The model is well-detailed with accurate markings, and the company did a masterful job replicating the fighter's shape and unusual features, such as the clear inspection panels on the leading edges of the wings. The paint quality and weathering on this model are flawless. The John Jenkins Designs Sopwith Triplane and its incredible detail are an excellent addition to any World War I model airplane collection.



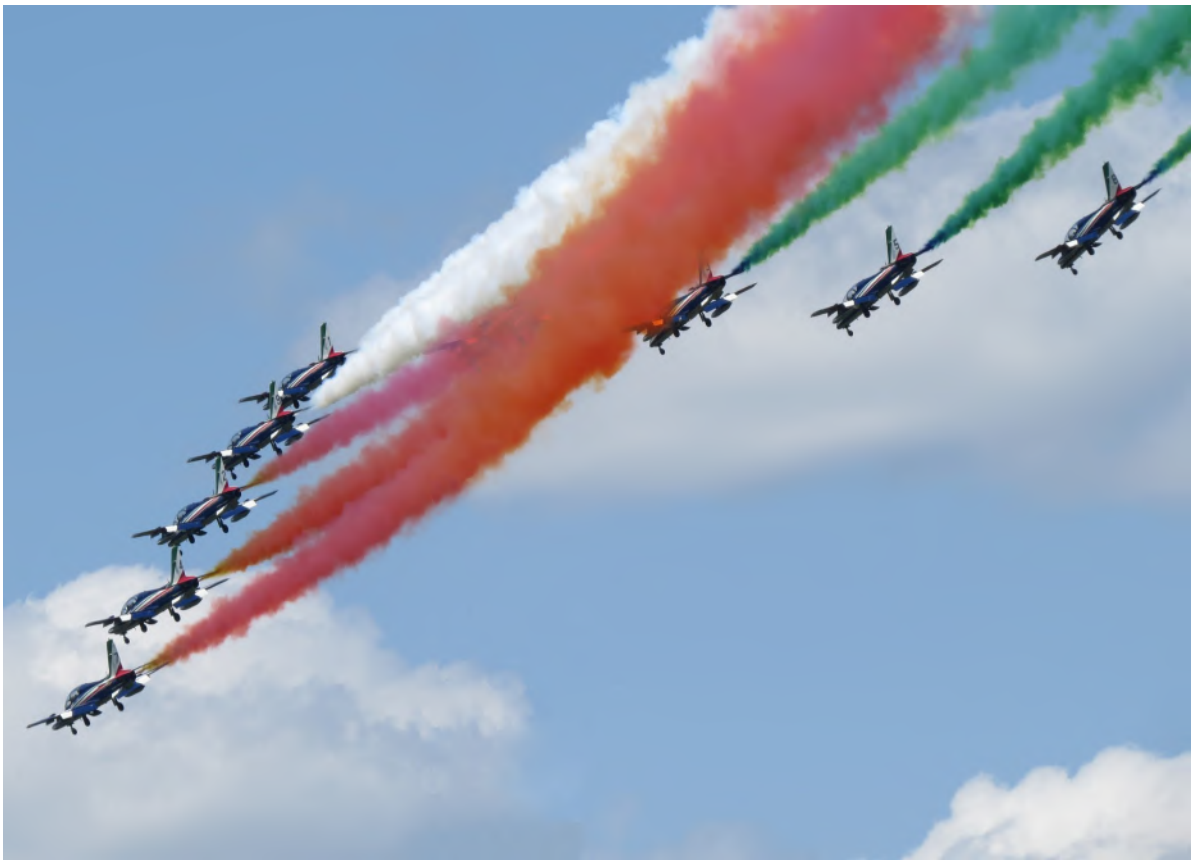
*With its exquisite detail, the John Jenkins Designs Sopwith Triplane is an excellent model of the World War I fighter aircraft, but there are some areas that could have been improved. The cockpit's size and shape only allow a small number of the John Jenkins Designs half-bust pilot figures designed for use with the World War I aircraft models to fit in the cockpit. The wires attached to the fuselage behind the cockpit are also extremely fragile and prone to breakage in shipping or from mishandling the model.*

# New York International Air Show



***The annual airshow was once again held at the Orange County Airport and headlined by flight demonstrations from the U.S. Air Force Thunderbirds and the Italian Air Force's Frecce Tricolori.***

*The diamond formation of the U.S. Air Force Thunderbirds Flight Demonstration Squadron flies over the airshow crowd gathered for the 2024 New York International Airshow at the Orange County Airport in Montgomery, New York. The airshow was the fourth destination on the 2024 Air Dot Show Tour and was held on August 10 & 11.*



*With trails of color smoke representing the Italian flag, the Italian Air Force's Aerobatic Team, the "Frecce Tricolori", fly over the Orange County Airport during a flight demonstration at the 2024 New York International Air Show. The Frecce Tricolori spent three months this summer on a goodwill tour of North America, performing airshow demonstrations and flyovers of famous landmarks in the United States and Canada.*

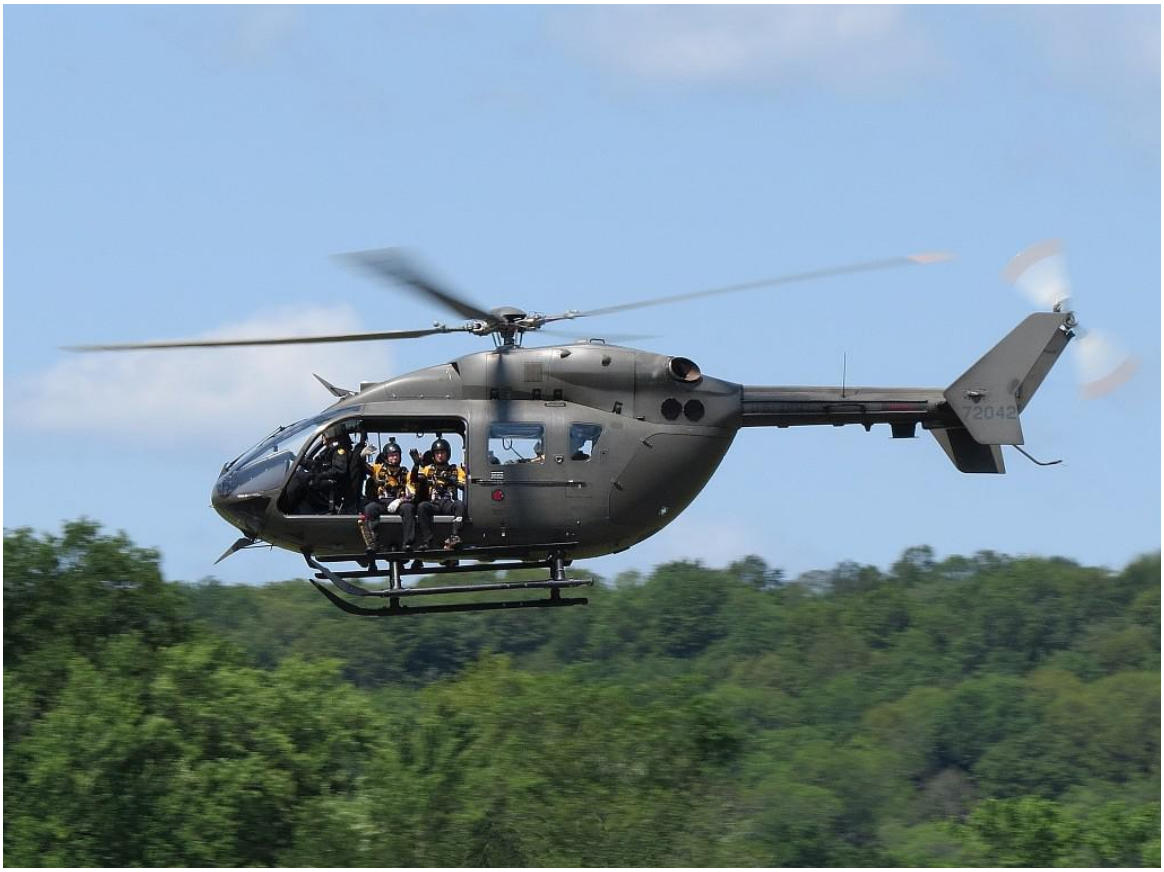
The Orange County Airport in Montgomery, New York, hosted the annual New York International Airshow on August 10 & 11, 2024. The airshow was the fourth destination on the 2024 Air Dot Show Tour, which is hosting airshows in six travel destinations this year. The New York International Airshow once again featured a variety of civilian and military aircraft demonstrations. A small selection of aircraft were also located throughout the airshow grounds on static display for the public to view up close.

The featured performer at the New York International Airshows this year was the Frecce Tricolori. The Frecce Tricolori are the official aerobatic demonstration team of the Italian Air Force. This year, the team decided to visit airshows in the United States and Canada as part of a goodwill tour of North America. In addition to flying in airshows, the team performed several flyovers of major cities and landmarks in both countries. The Frecce Tricolori's North American Tour was a unique opportunity for aviation enthusiasts and the general public in the United States and Canada to see the team without traveling overseas.

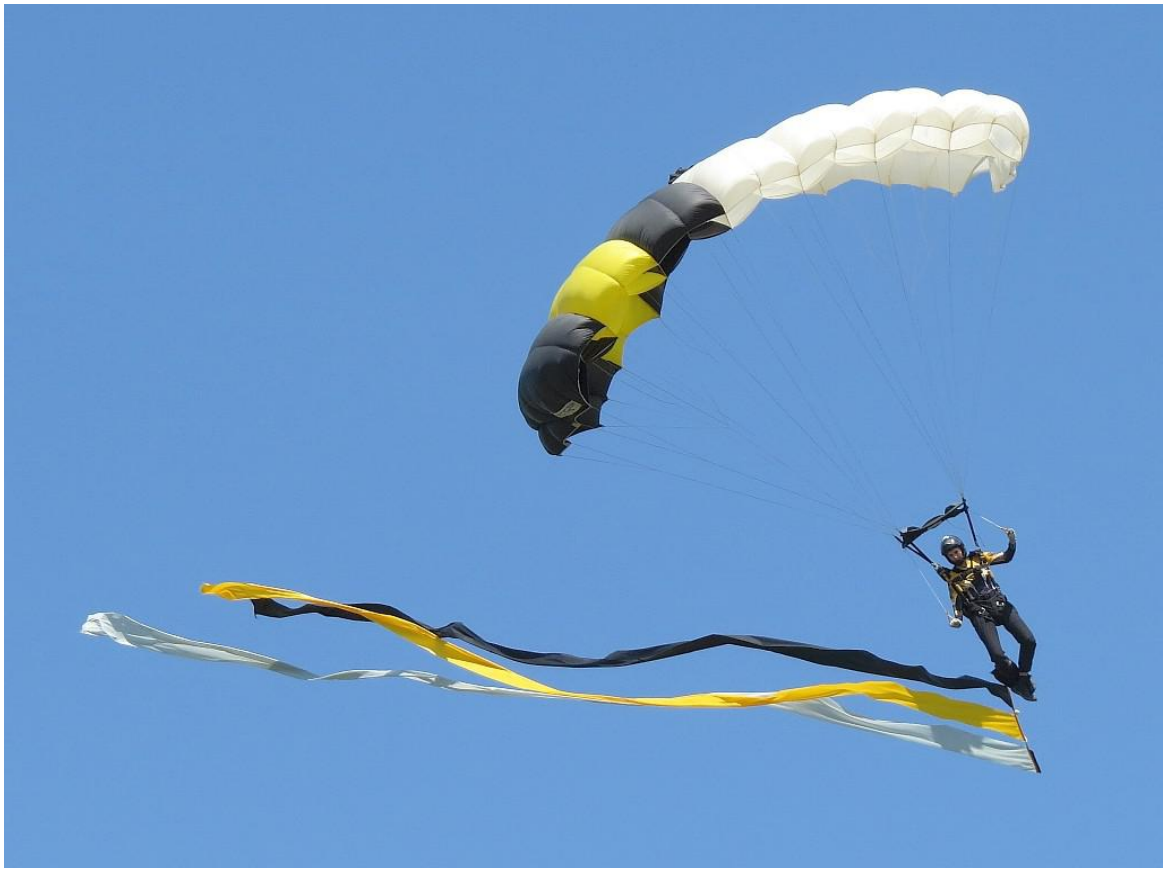
The New York International Airshow also featured an appearance by the U.S. Air Force Thunderbirds. The U.S. Air Force's flight demonstration team has visited the New York International Airshow several times in the past. This year's New York International Airshow also featured performances by civilian aerobatic pilot Michael Goulian, the U.S. Military Academy West Point "Black Knights" Parachute Team, and a flyover by a Boeing C-17 Globemaster III from the 105th Airlift Wing of the New York Air National Guard based nearby at Stewart International Airport. Also in attendance at the event were Thom Richard with the American Airpower Museum's Curtiss P-40 Warhawk "Jacky C", and Scott Yoak with his restored North American P-51D Mustang, "Quicksilver".

The New York International Airshow was well-attended by the public, and the weather was excellent for flying on both days of the event. The following photographs showcase some of the airshow highlights of the 2024 New York International Airshow.

*The 2024 New York International Airshow began with opening ceremonies and a parachute jump by the West Point "Black Knights" Parachute Team. The West Point Parachute Team is comprised of cadets enrolled in the U.S. Military Academy. The cadets can use being on the team as their sports commitment, and by graduation, can accumulate between 700 and 1,000 jumps with the team. In this photo, the team is getting a lift to jump altitude aboard a U.S. Army UH-72 Lakota helicopter.*

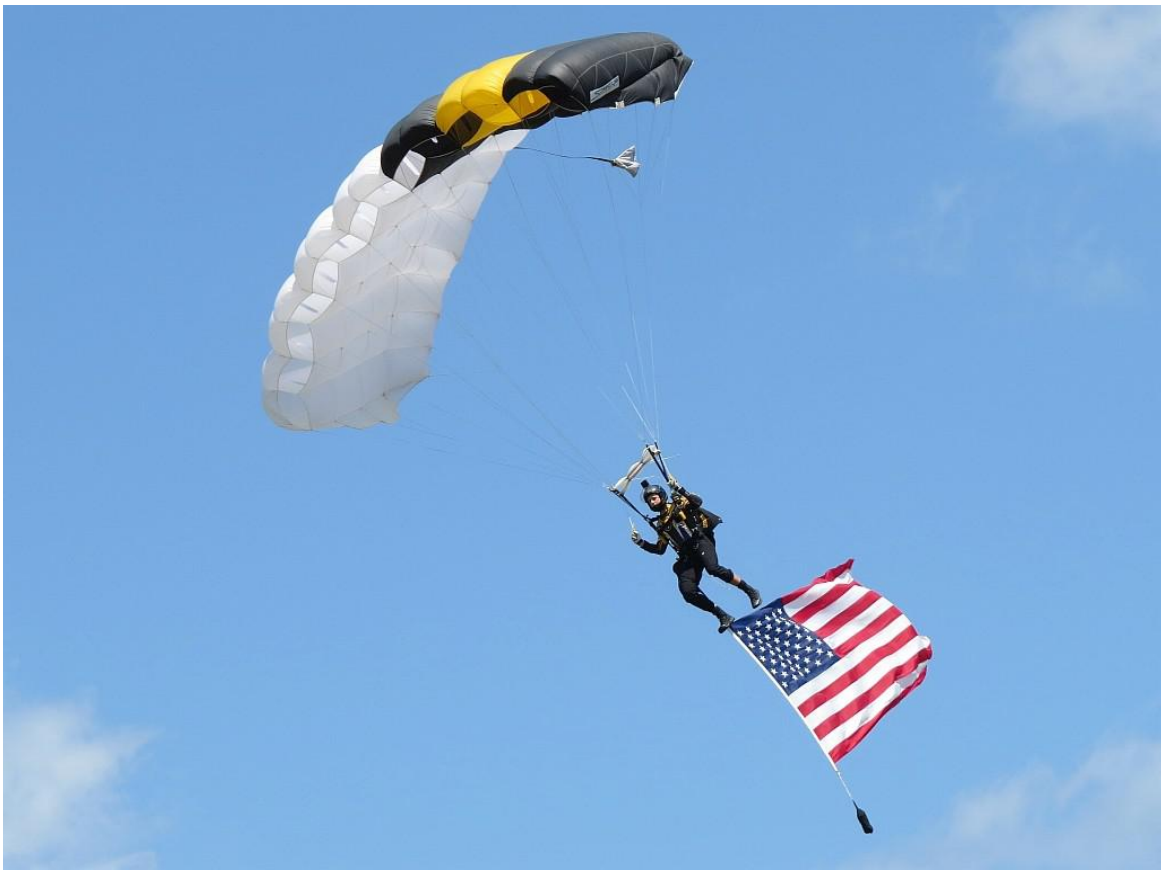


*A member of the West Point "Black Knights" Parachute Team descends to airshow center during their demonstration on Saturday at the New York International Airshow. The modern parachutes used by the team are steerable, allowing the jumpers to land in tight spaces, such as baseball stadiums, to perform their demonstrations. These parachutes can also attain forward speeds of up to 20 miles per hour. This jumper has a smoke canister used as a visual aid attached to their leg.*

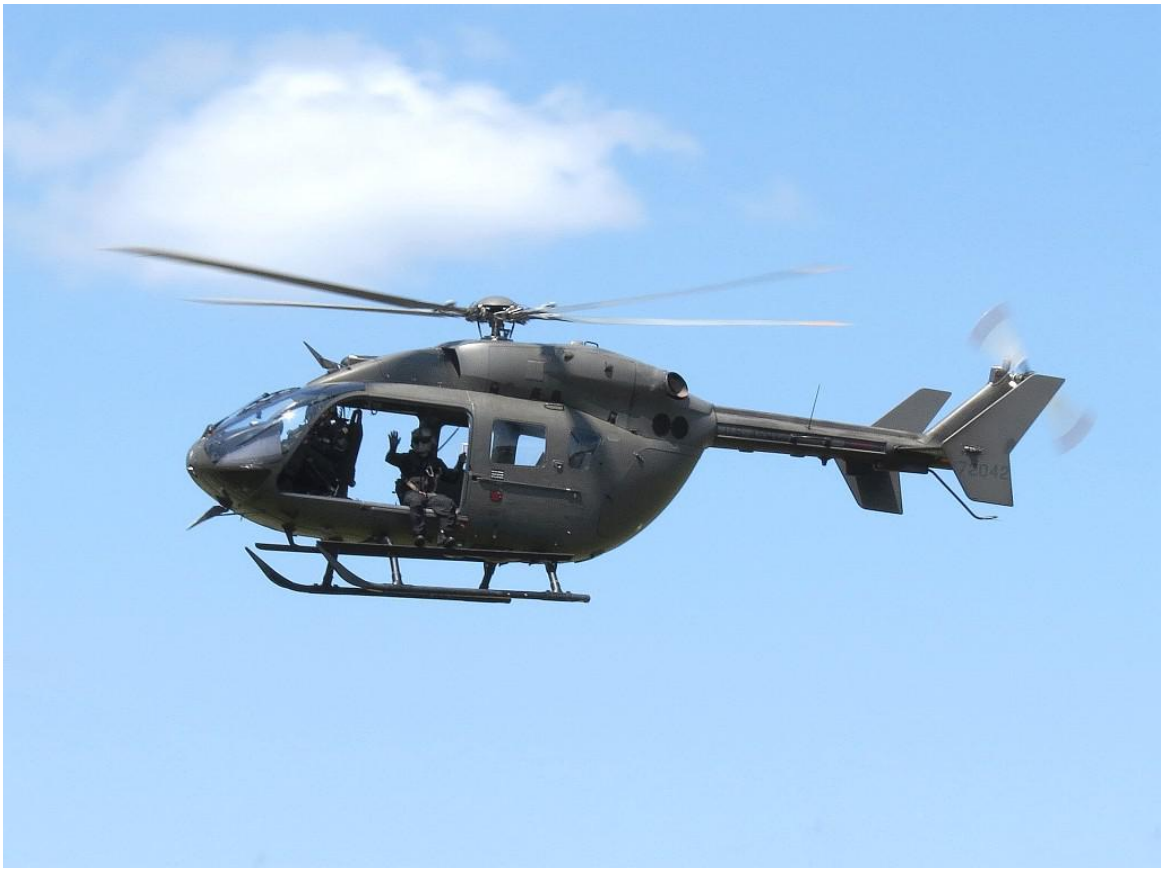


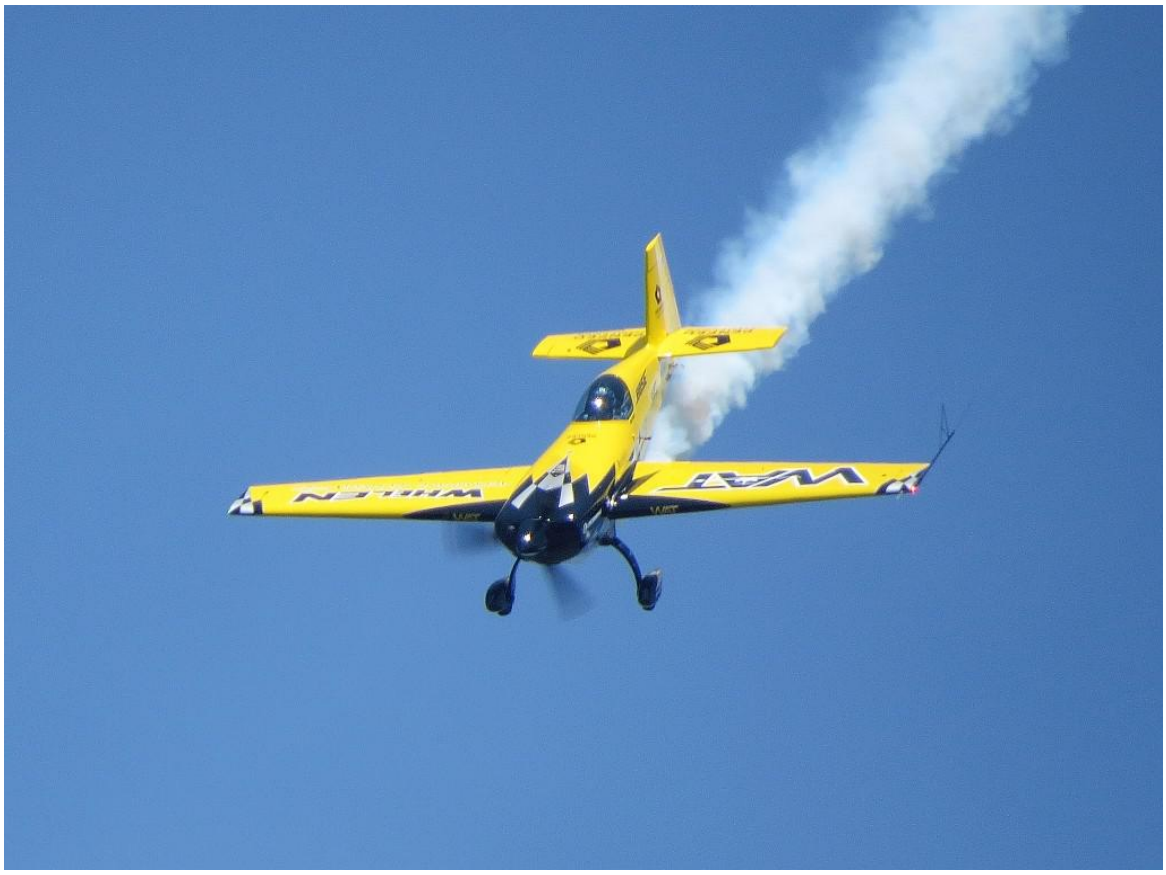
*Descending with colored streamers that proudly showcase the black, gold, and white colors of the United States Military Academy, a jumper eyes the show center target at the New York International Airshow. In addition to performing at airshows, the West Point "Black Knights" Parachute Team also participates in parachute competitions against other teams and performs jumps into football and baseball games to promote the U.S. Military Academy and U.S. Army recruitment efforts.*

*A jumper from the West Point "Black Knights" Parachute team prepares to land with the American flag as the national anthem is played to open the airshow. The steering lines attached to the parachute not only allow the jumper to turn right or left but also can be used to slow the descent speed of the parachute by tugging on both sets of steering lines simultaneously. Each of the jumpers carries a reserve parachute should the primary parachute become damaged or fail to open.*



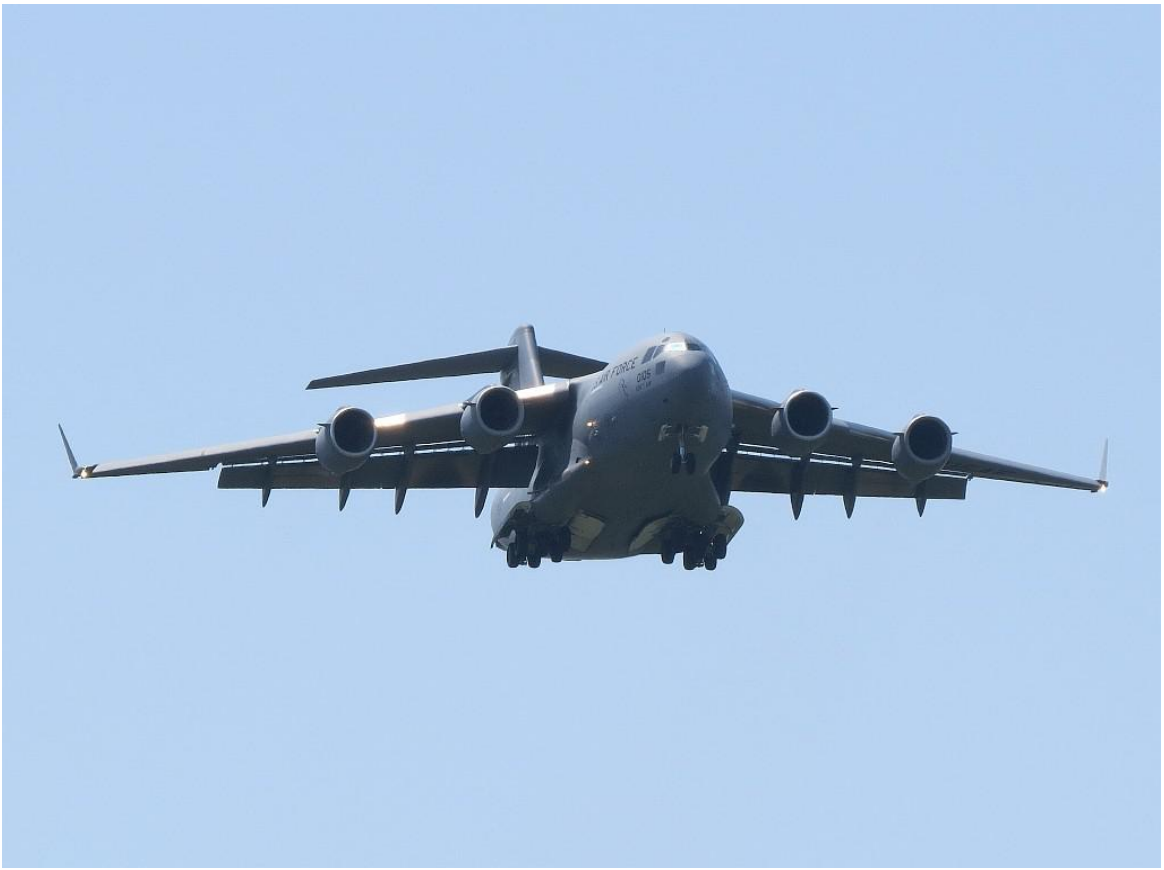
*The Airbus Helicopters/American Eurocopter UH-72A Lakota that carried the parachute team to altitude for their jump performs a flyby for the airshow crowd. This UH-72A belongs to the 2nd Aviation Detachment and supports operations at the U.S. Military Academy. Based at the Stewart International Airport, the "Wings of West Point" primary aircraft are two UH-72A Lakota helicopters. The UH-72A Lakota is a twin-engine light utility helicopter that entered service with the U.S. Army in 2007.*





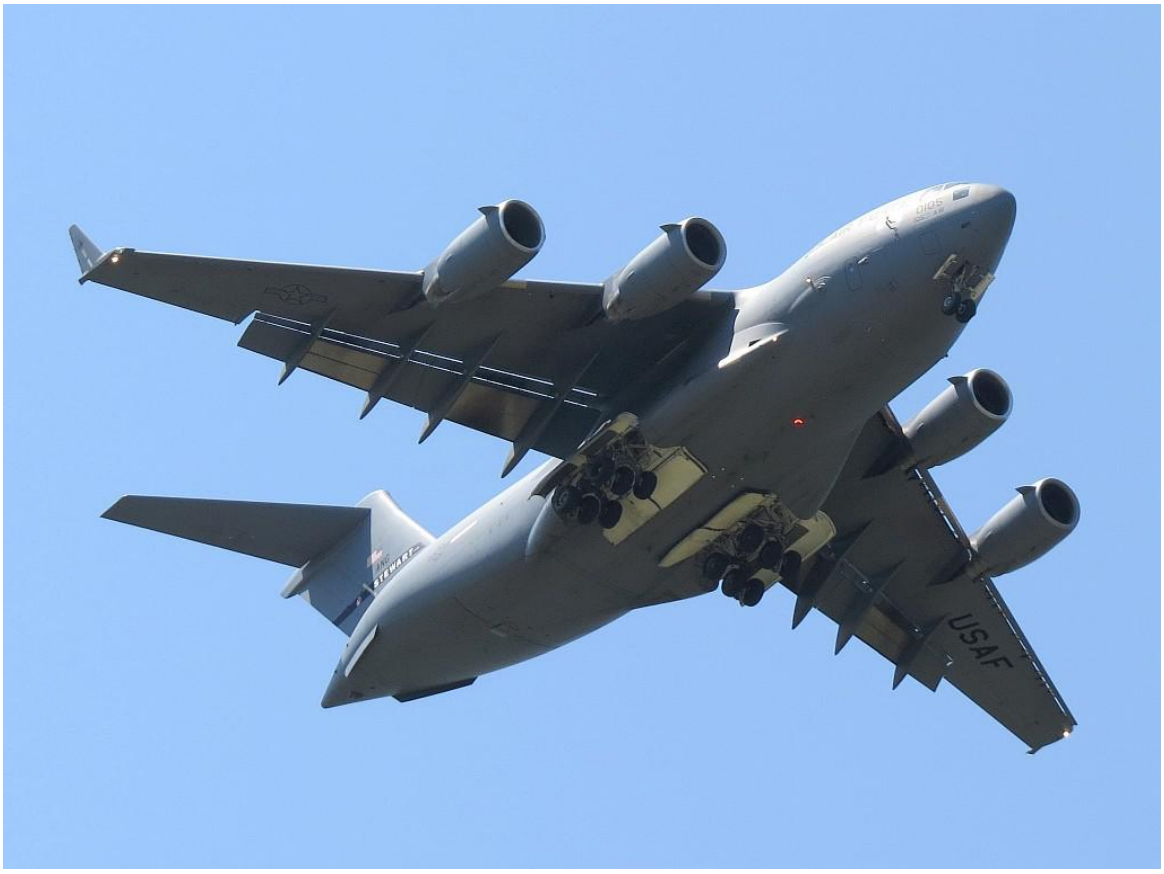
*Michael Goulian performs at the 2024 New York International Airshow on Saturday. This performance was a teaser demonstration prior to Goulian performing his full aerobatic demonstration later in the afternoon. Goulian has been a regular performer at the New York International Airshow. Currently, Goulian flies an Extra 330SC. The Extra 330SC is a purpose-built, single-seat, aerobatic aircraft designed specifically for competition in unlimited category aerobatics competitions.*



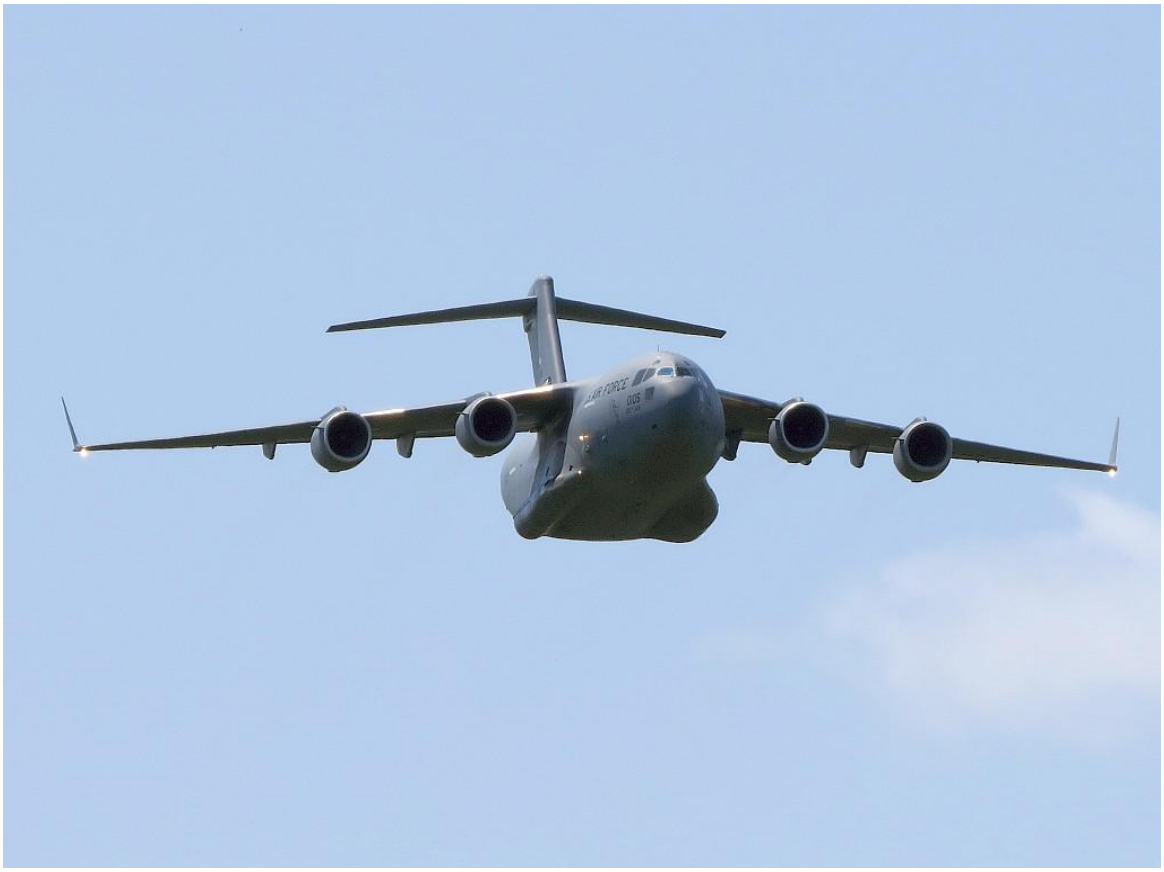


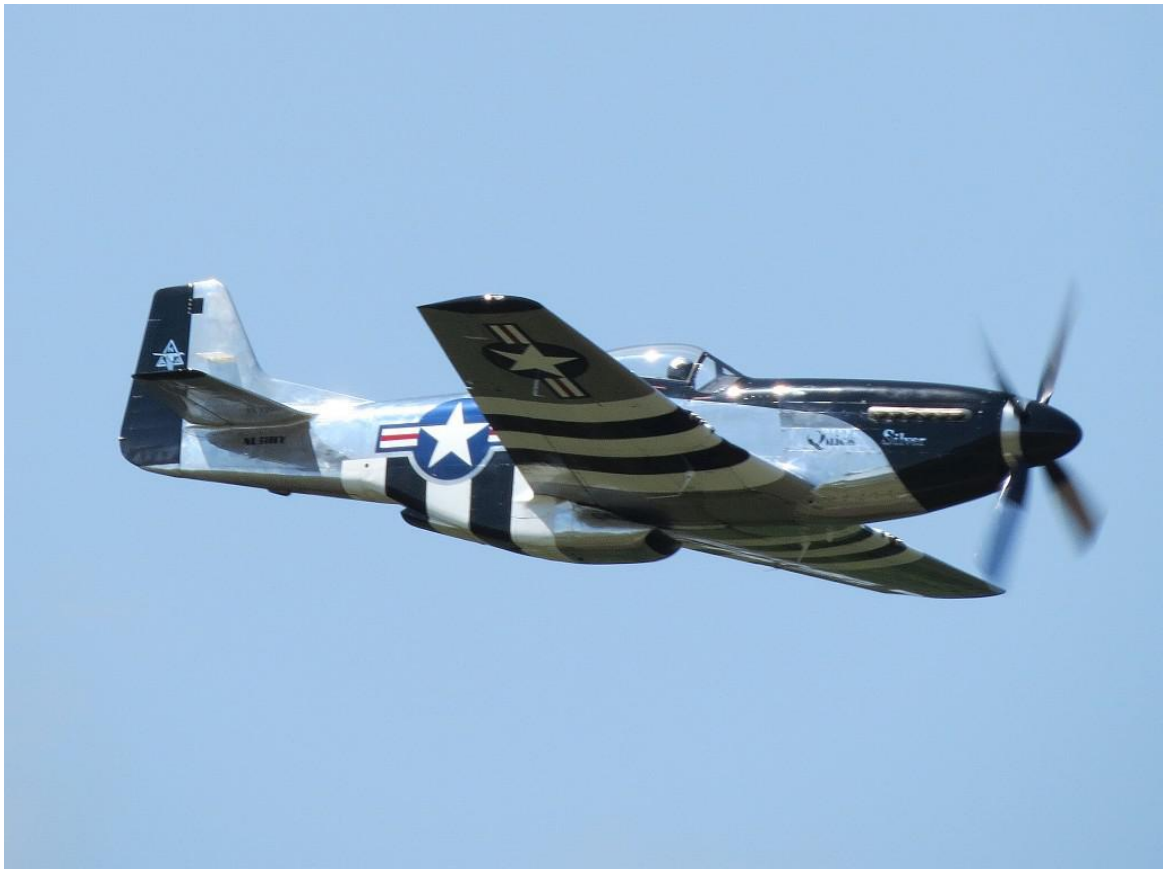
*The McDonnell Douglas/Boeing C-17 Globemaster III is a military transport aircraft that was developed for the U.S. Air Force in the 1980s and early 1990s. Initially designed and manufactured by McDonnell Douglas, the C-17 program was taken over by Boeing after the two companies merged in 1997. The C-17 entered service in 1995 and has been used to support tactical and strategic airlift missions worldwide. This C-17 belongs to the 105th Airlift Wing of the New York Air National Guard.*

*A C-17 Globemaster III from the 105th Airlift Wing of the New York Air National Guard flies over the New York International Airshow with its landing gear and flaps extended on Saturday afternoon. The 105th Airlift Wing operates eight C-17s, and they are frequently called upon to support U.S. Air Force operations worldwide. The C-17 is 174 feet long and has a wingspan of about 170 feet. The C-17 can cruise at 520 miles per hour and carry 170,000 pounds of cargo over 2,500 miles without refueling.*

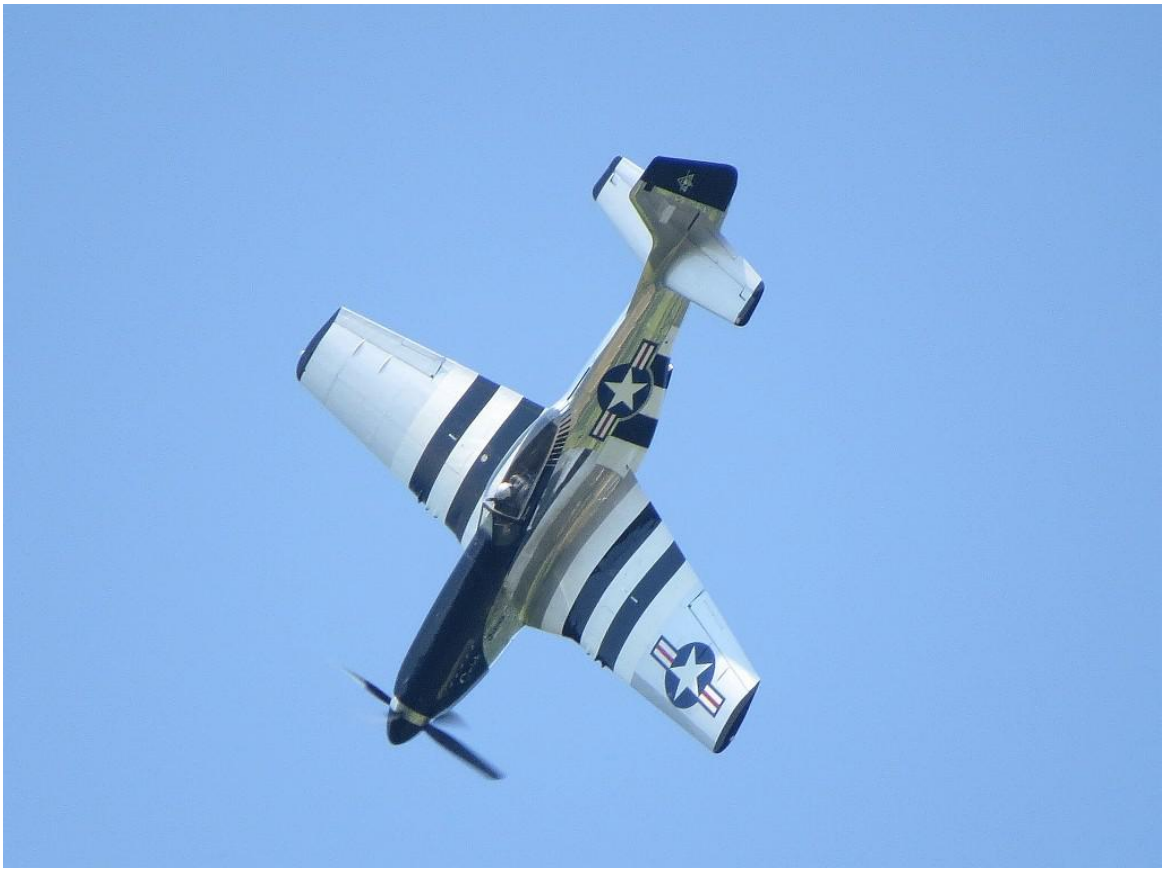



*The C-17 Globemaster III played an important logistical role in Operation Enduring Freedom in Afghanistan and Operation Iraqi Freedom in Iraq. The type has also airlifted and airdropped humanitarian aid after several natural disasters. Loading and unloading cargo and vehicles is simplified using the ramp in the rear of the aircraft. In addition to the U.S. Air Force, the air arms of Australia, Qatar, India, Canada, Kuwait, the United Arab Emirates, and the United Kingdom also operate the C-17.*



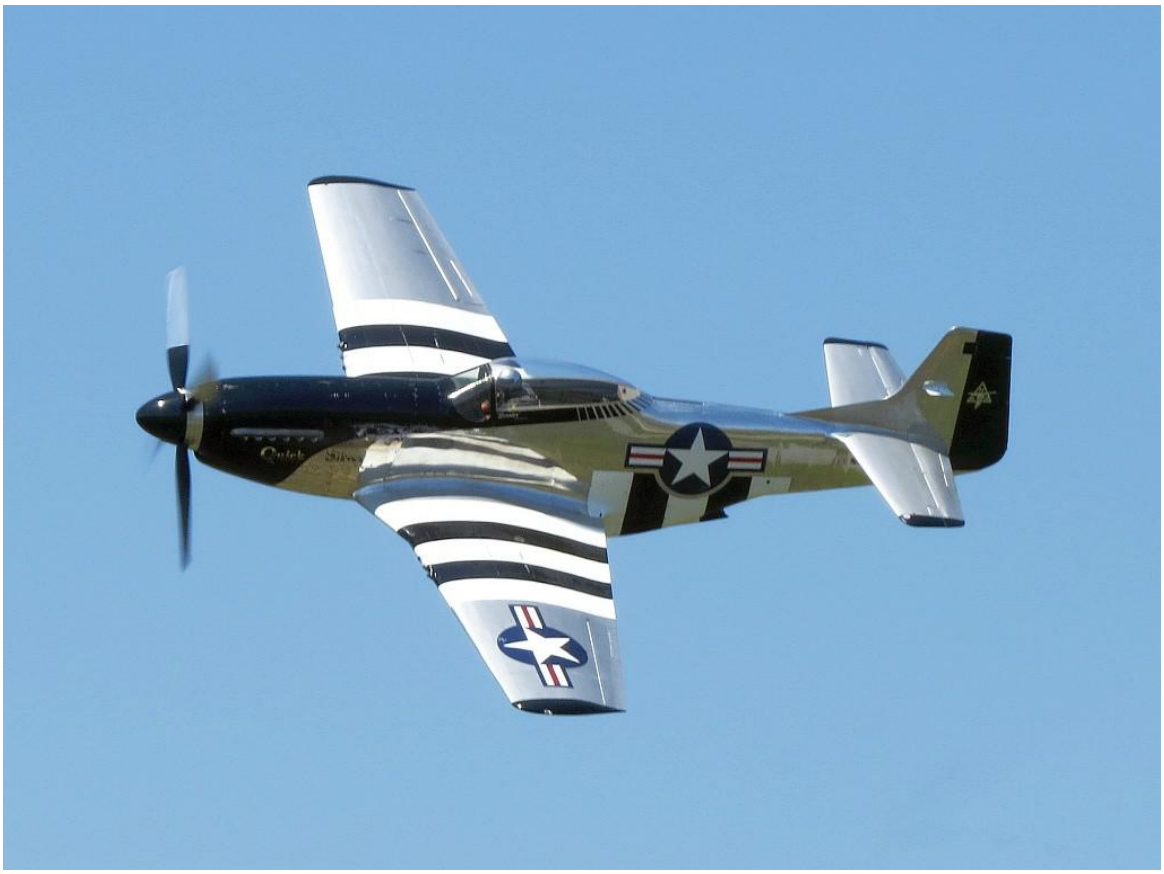


*For aviation enthusiasts who are fans of World War II aircraft, the 2024 New York International Airshow featured a flight demonstration from Scott Yoak with his beautifully restored North American P-51D Mustang "Quicksilver". For those who study World War II aircraft, the P-51 Mustang needs no introduction. The P-51 was one of the finest Allied fighter aircraft of the war and excelled in use as a long-range bomber escort in both the European and Pacific theaters of operation during the war.*

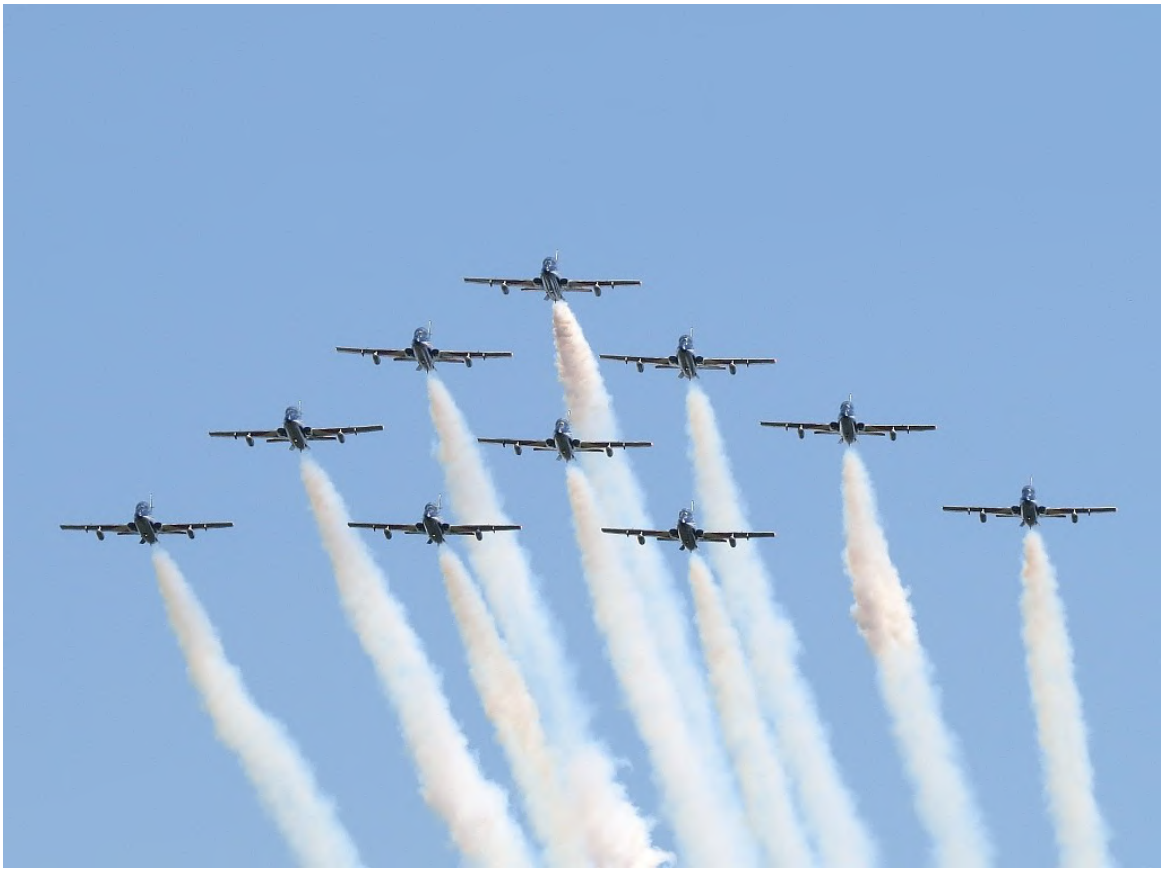


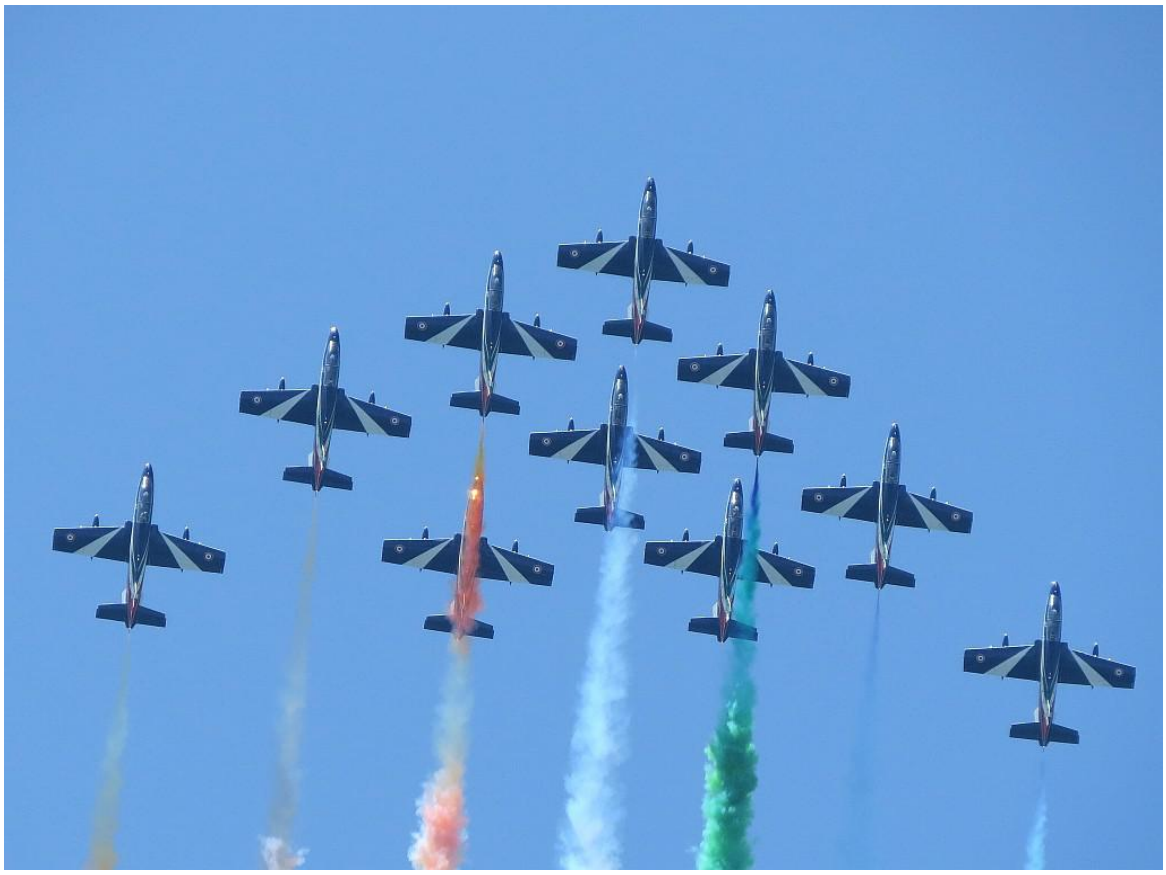
*Scott Yoak performs a role in his restored P-51 Mustang "Quicksilver" during his airshow demonstration, showcasing the maneuvering capabilities of the fighter. With its Packard-built Rolls-Royce Merlin V12 engine capable of producing almost 1,500 horsepower, the P-51 had a top speed of 440 miles per hour. The P-51 was also well-armed, with six .50-caliber machine guns in its wings and the ability to carry bombs, rockets, or additional fuel tanks for increased range on underwing pylons.*

*Scott Yoak banks for a photo pass at the New York International Airshow on Saturday afternoon. Over 15,000 P-51s were built during World War II, and they were used by the air arms of several nations during and after World War II. The P-51 saw combat for a second time with the U.S. military during the Korean War in the early 1950s, where it was used as a ground-attack aircraft. Today, less than 200 P-51s remain in airworthy condition, and the type is still beloved when visiting fly-ins and airshows.*

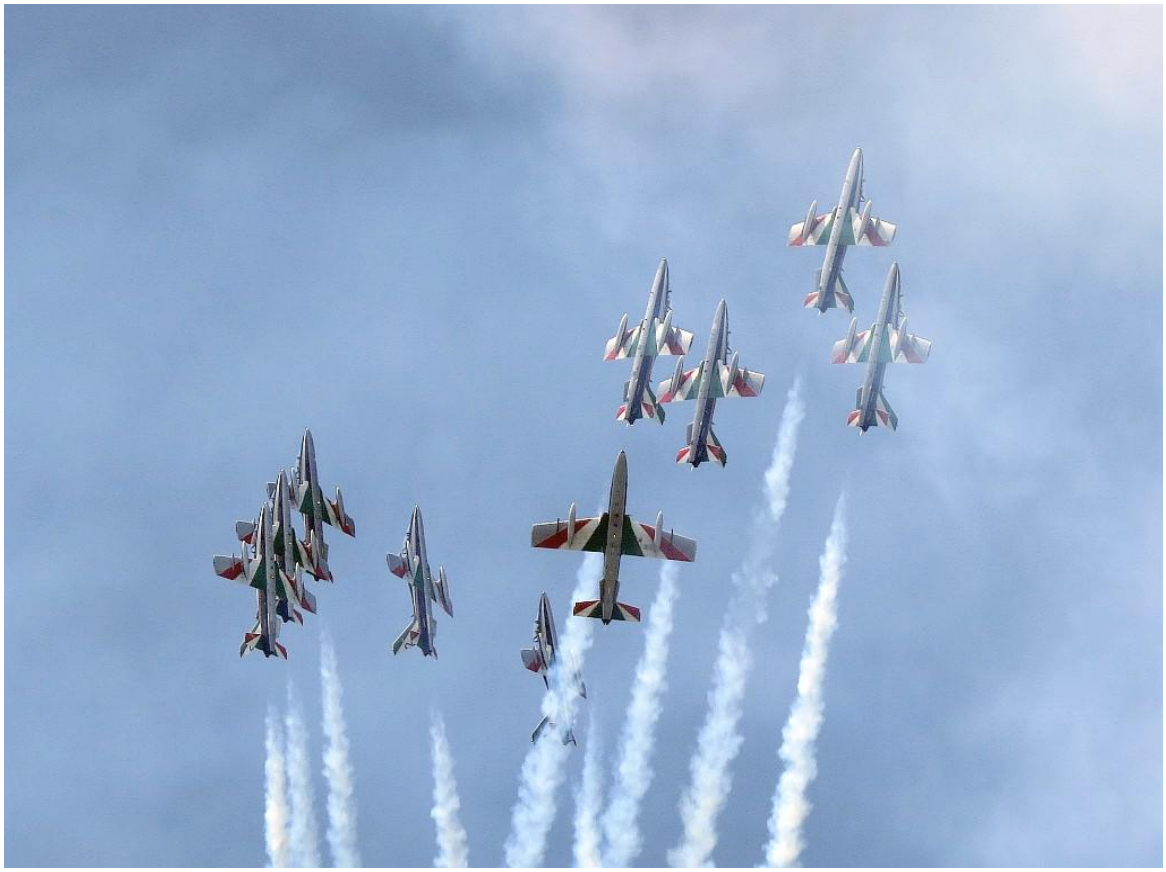


*Although the U.S. Air Force Thunderbirds were the official headliner of the 2024 New York International Airshow, the highlight of the airshow for many of the spectators was the flight demonstration by the Italian Air Force's Frecce Tricolori. The Frecce Tricolori are the official aerobatic demonstration team of the Italian Air Force and were formed in 1961. With their smoke on, the Frecce Tricolori enter from behind the airshow crowd to begin their performance at the 2024 New York International Airshow.*



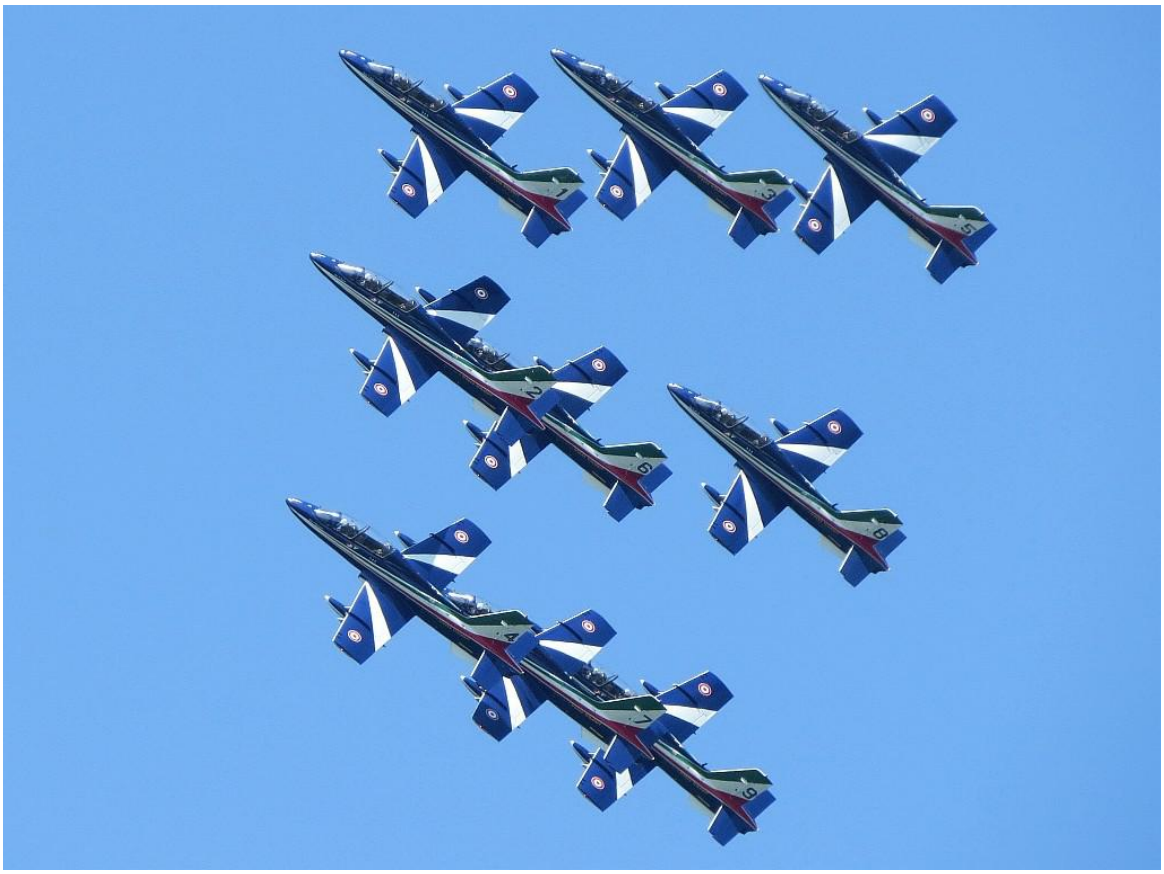


*The Frecce Tricolori climb trailing colored smoke during their performance at the New York International Airshow. The colored smoke is created by using non-polluting pigments, with the red, white, and green colors representing the flag of Italy. The colors of the smoke also represent the snow of the Italian Alps, the Italian fertile plain, and the blood spilled during the nation's wars for independence. The smoke is generated by dispersion, the oil, and pigment mixing with the airplane's exhaust.*

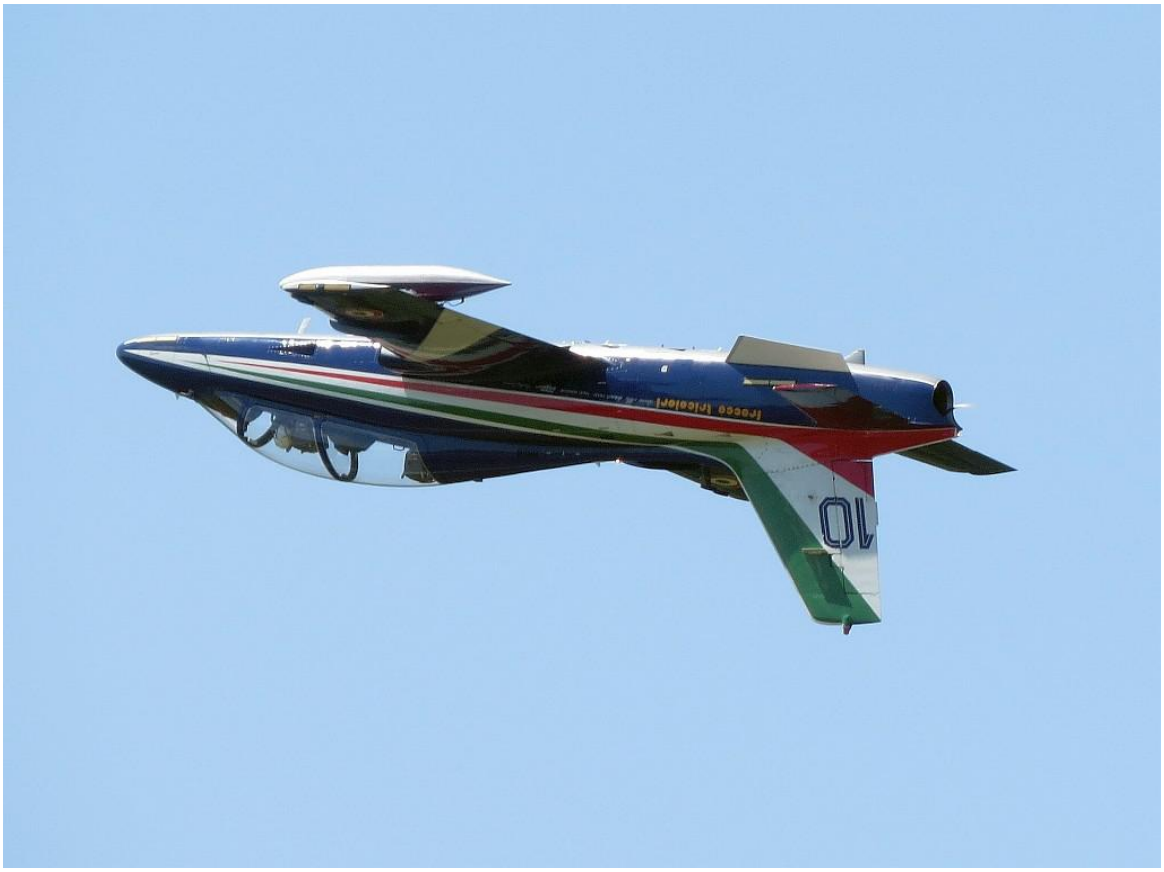


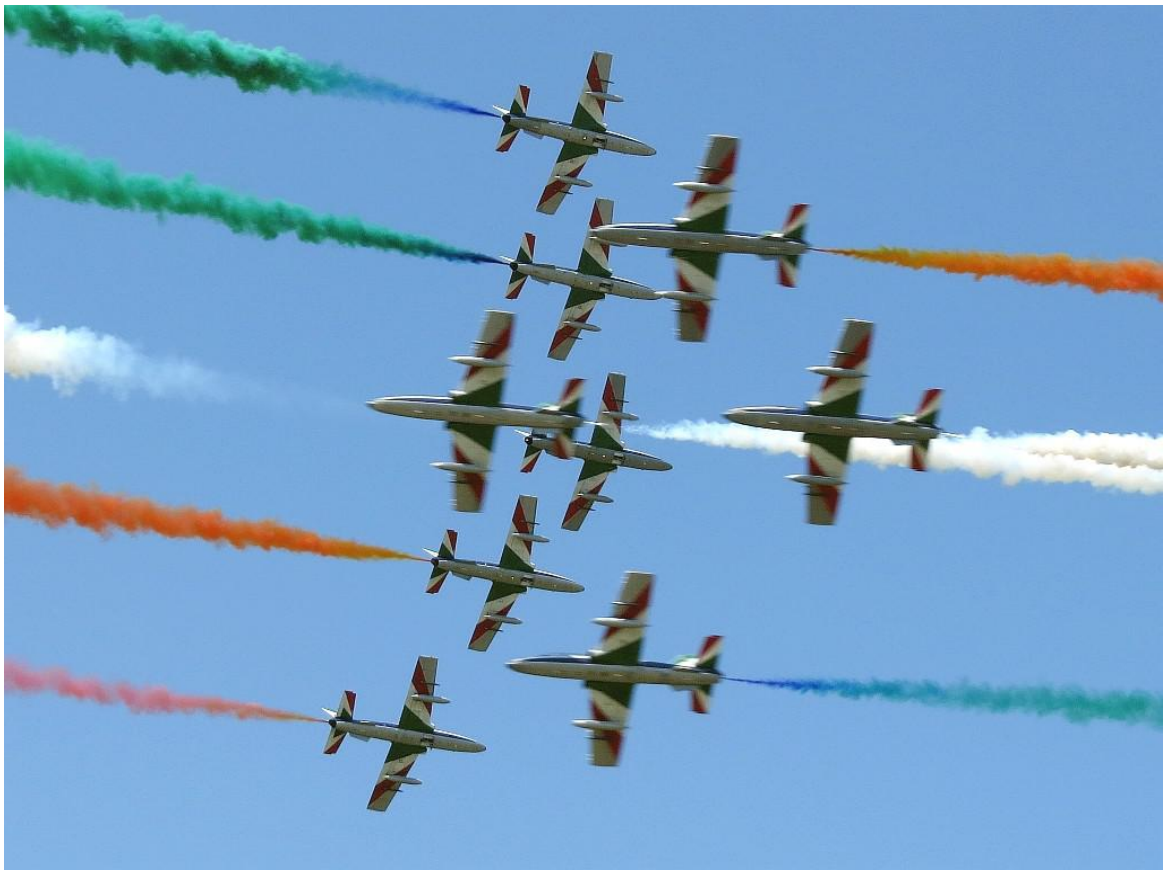
*The Frecce Tricolori perform one of their signature break maneuvers. In this maneuver, the nine-plane formation element of the team splits into two smaller groups while the solo pilot, Pony 10, breaks off from the entire group. The Frecce Tricolori display contains two elements, a nine-plane formation group and a single solo pilot. The solo pilot showcases individual aerobatic maneuvers as well as the performance capabilities of the Aermacchi MB-339A/PAN jet trainer flown by the team.*

*The Frecce Tricolori performs a formation roll high above the 2024 New York International Airshow. This is a difficult maneuver as it requires the nine formation pilots to roll in unity during the maneuver. Spots on the Frecce Tricolori are open to any pilot in the Italian Air Force, but the selection process is very competitive. Pilots must be able to work as a team and have at least 1,000 hours of flight time in a combat jet aircraft. Usually, one or two new pilots are selected for the team each year.*



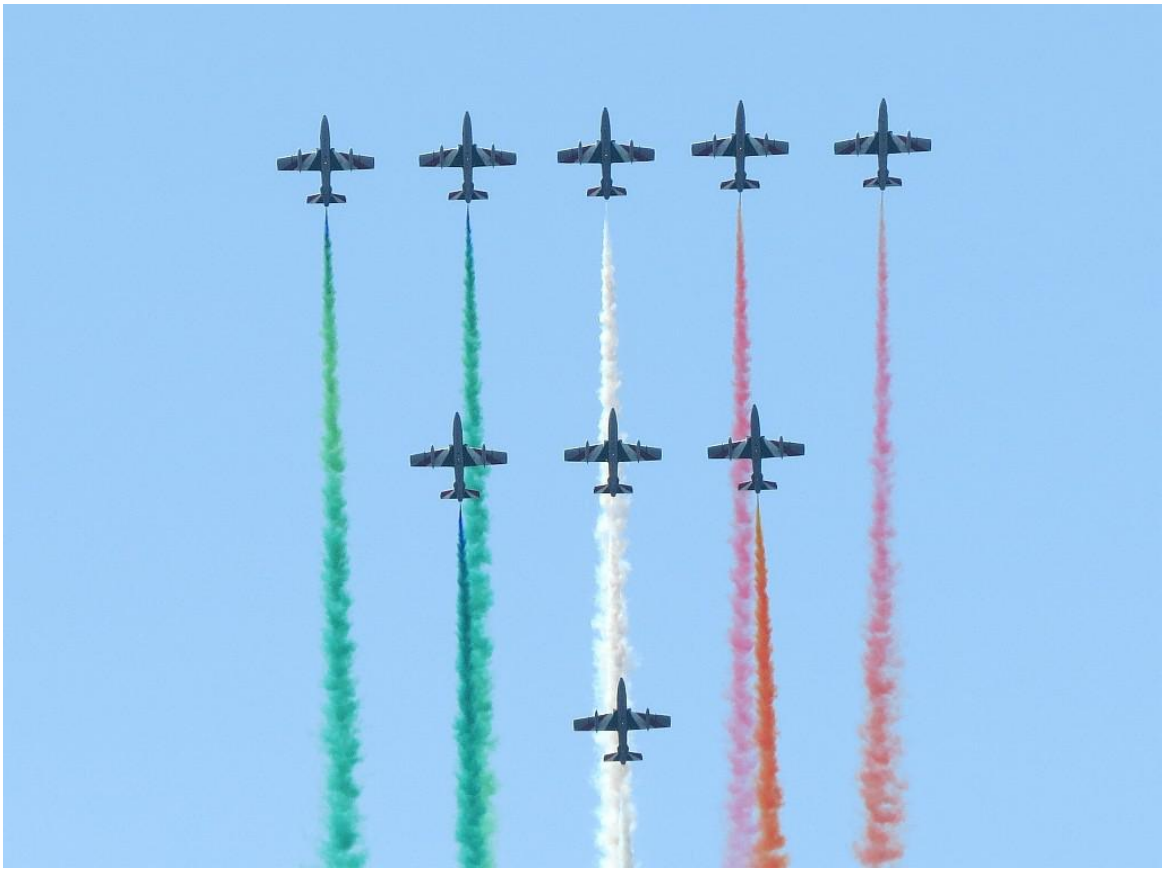
*Similar to other aerobatic jet teams, the Frecce Tricolori incorporates a solo element into its display program. During the display, the solo pilot showcases the capabilities of the Aermacchi MB-339A/PAN jet trainer with several maneuvers, such as a barrel roll down the flight line, a minimum radius turn, a Negative G-turn and climb, and a tailslide. These maneuvers highlight the positive attributes of the MB-339, with the type having a powerful engine, excellent maneuverability, and being easy to fly.*



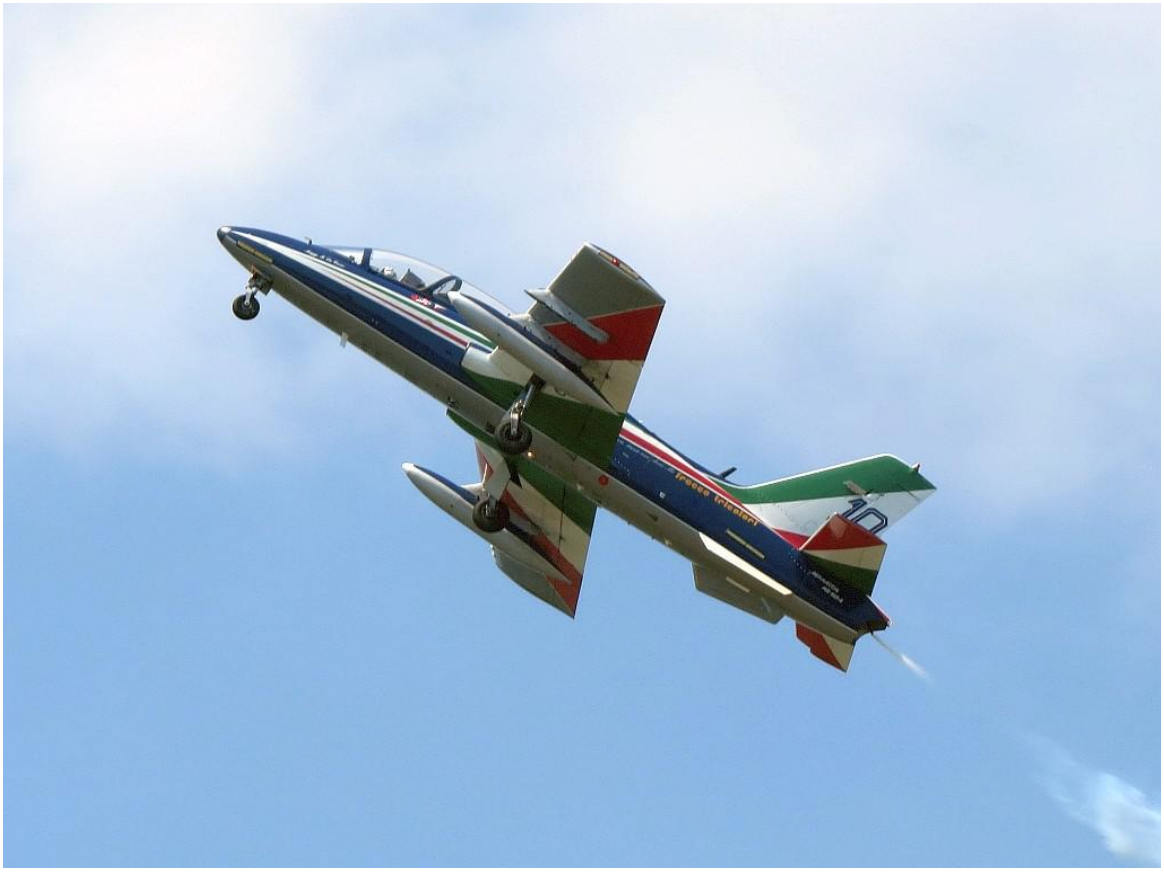
*The Frecce Tricolori performs one of their signature crossing maneuvers on Saturday during the 2024 New York International Airshow. Unlike other demonstration teams whose crossing maneuvers usually involve only two aircraft, the Frecce Tricolori crossing maneuvers involve all nine aircraft from the formation element of the team, with five coming from one direction and four from the other. The team's colored smoke adds to the appeal of the flight demonstration with the audience.*



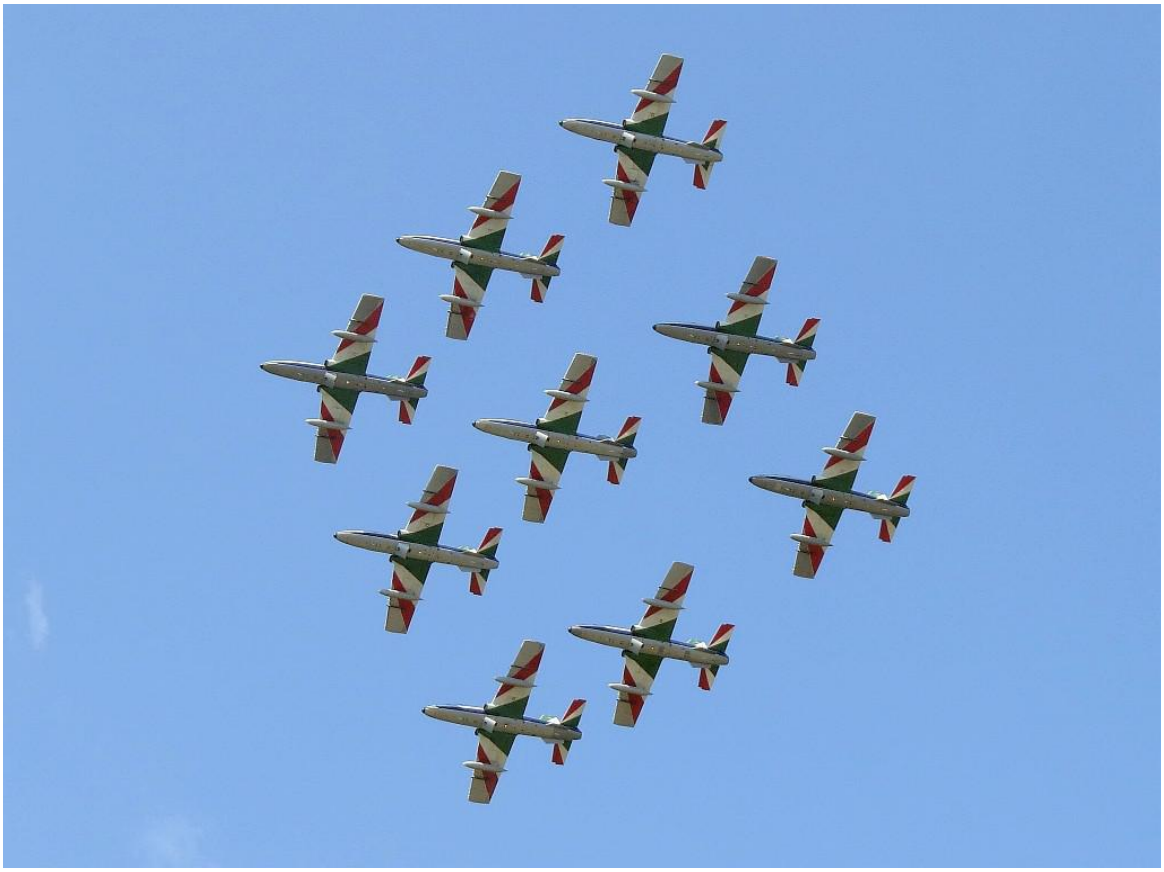


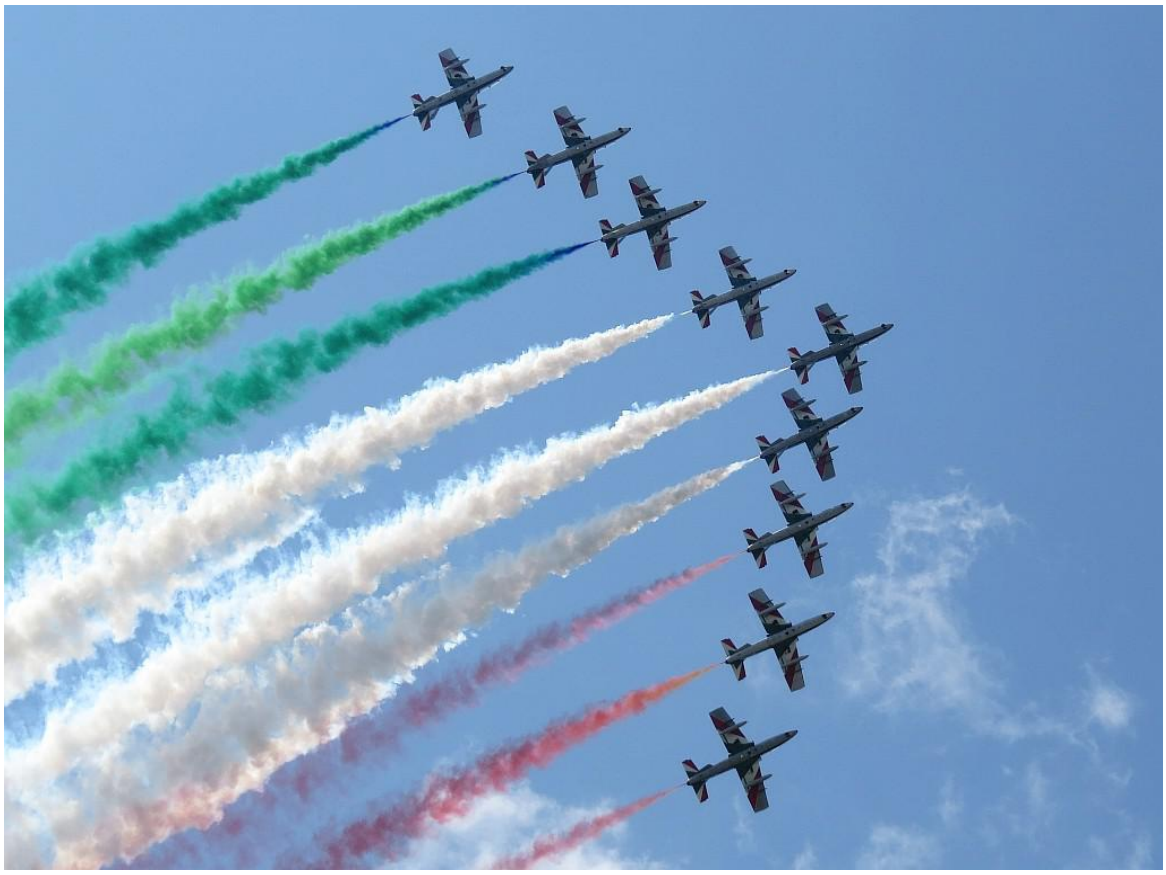
*The nine-ship formation of the Frecce Tricolori climbs skyward, trailing their signature colored smoke during their flight demonstration at the 2024 New York International Airshow. In this maneuver, several aircraft are in a line abreast formation in two distinct groups. The line abreast formation is challenging to fly during an aerobatic demonstration, as pilots must align their aircraft across from each other with the lead aircraft rather than slightly behind, which is typical in most aircraft formations.*

*The solo pilot of the Frecce Tricolori prepares to perform a loop with the gear down on his Aermacchi MB-339A/PAN jet trainer. The MB-339 trainer typically has fuel tanks installed on its wingtips. The Frecce Tricolori removed these wingtips from their MB-339s for safety purposes. The wingtip fuel tanks would compromise the aerobatic capabilities of the MB-339 in an airshow performance. The tanks also inhibit the pilot's view regarding the other aircraft when flying in close formation.*

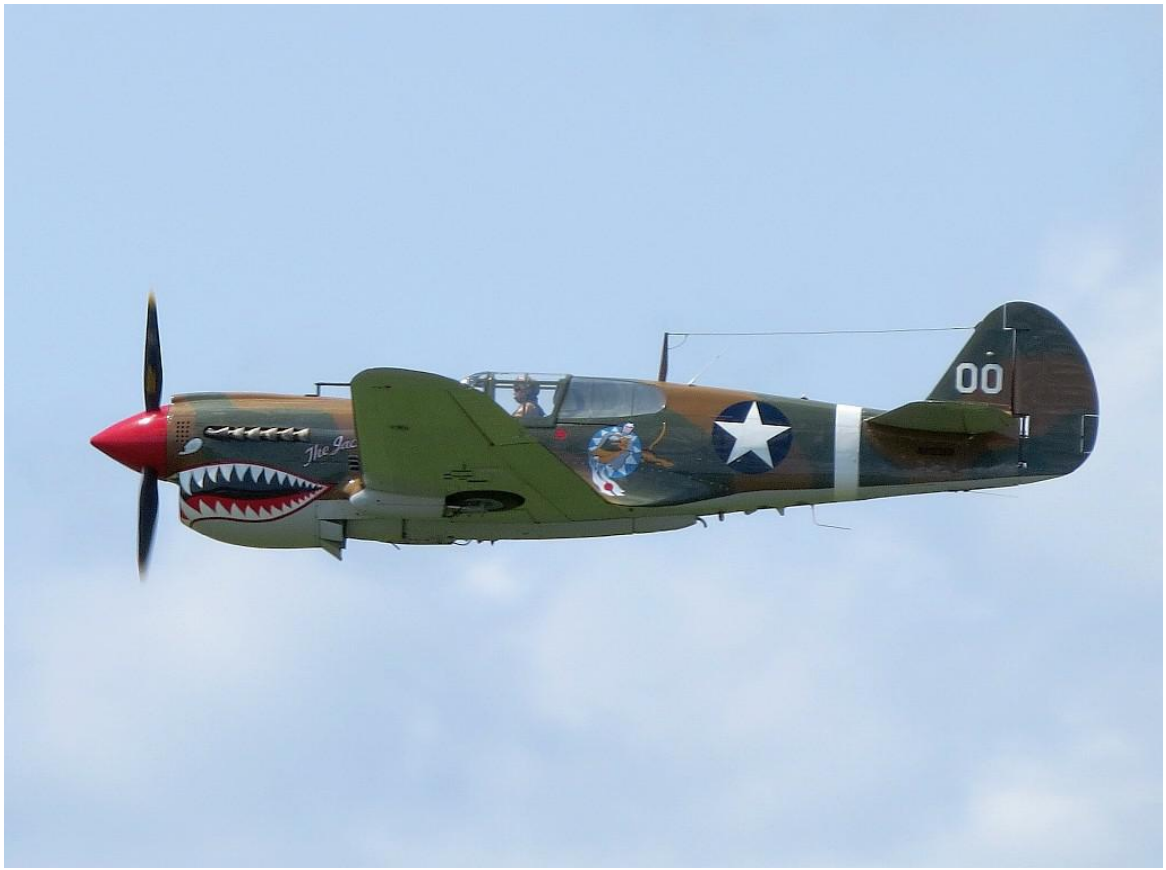


*The Freece Tricolori performs a nine-ship diamond formation pass showing the underside color scheme of the MB-339A/PANs flown by the team. This angle of the team's aircraft also shows the underwing tanks used to hold the dye and oil used to make the colorful smoke trails used in the flight demonstration. The underside of each wing has two additional pylons. These pylons can be used to attach additional fuel tanks for long-distance flights so the team can attend airshows far from Italy.*



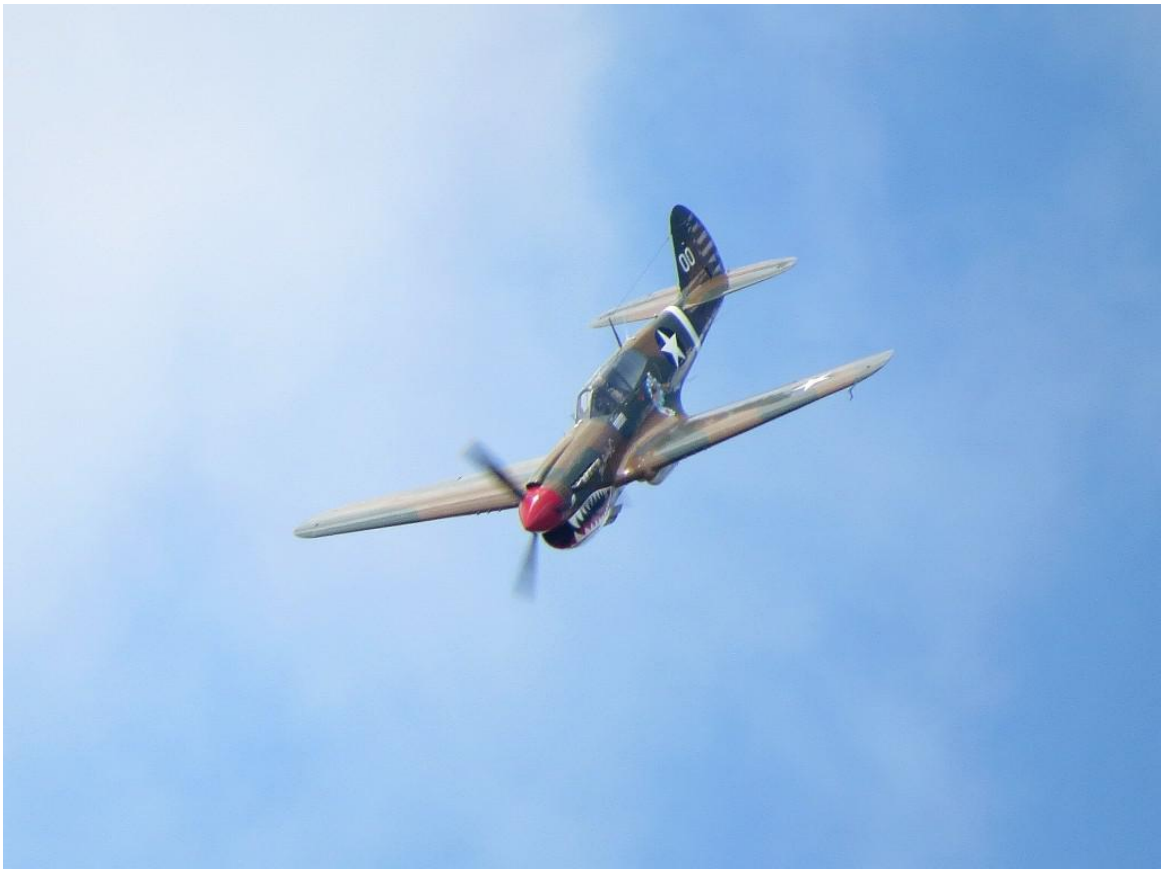


*The final sequence of the Frecce Tricolori display program is a large Italian flag in the sky drawn by the nine smoke trails of the formation element of the team. The flag is a final salute from the team to the airshow audience. The flag is up to three miles long in the sky before the team turns the smoke system off their MB-339s. For the New York International Airshow, the Frecce Tricolori staged out of nearby Stewart International Airport and flew to the Orange County Airport for the performance.*

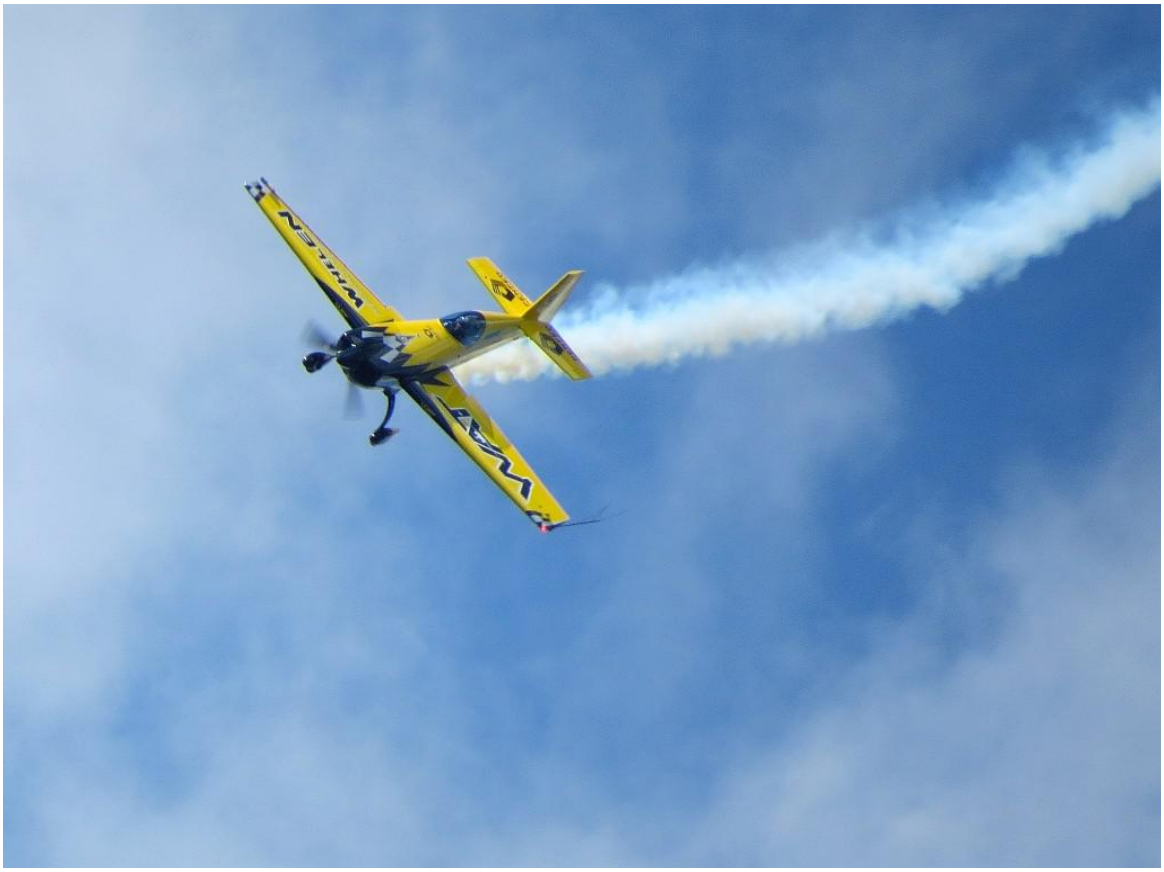


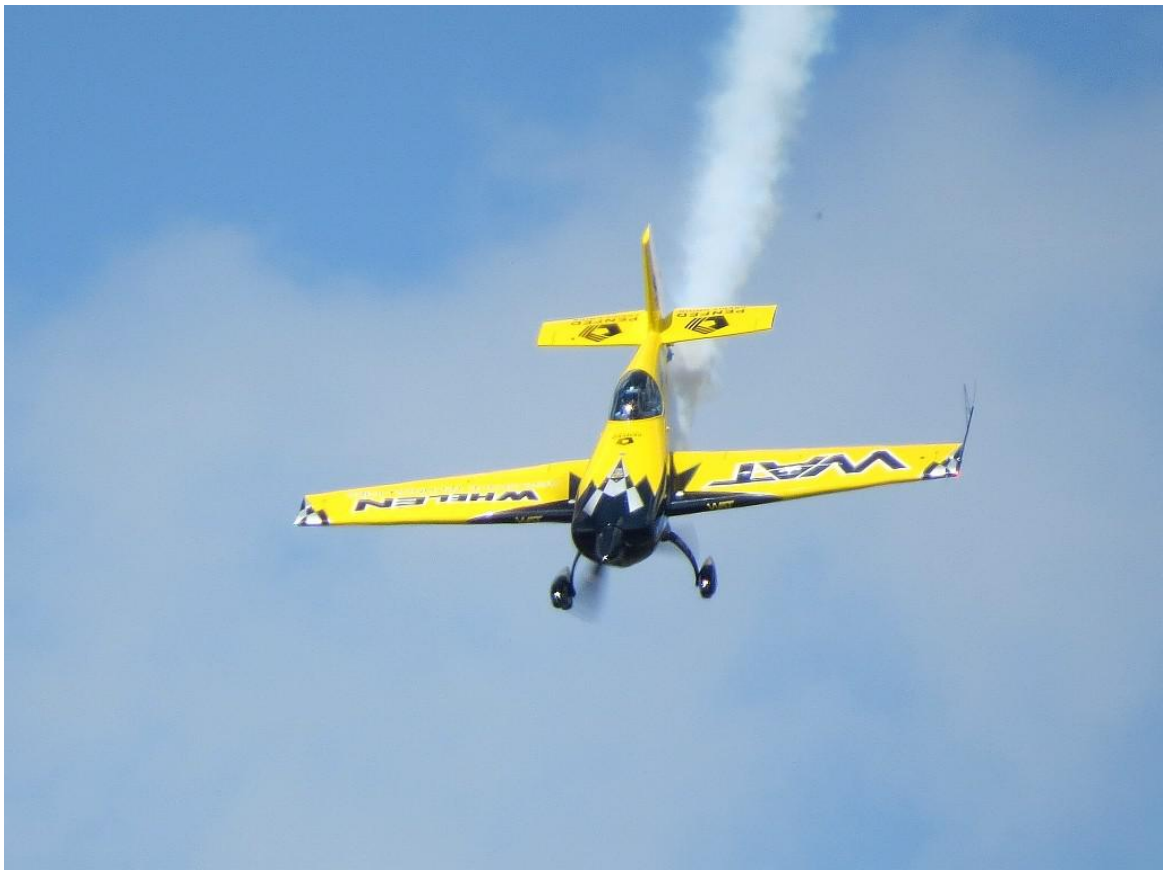
*Another restored World War II fighter in attendance at the 2024 New York International Airshow was the American Airpower Museum's Curtiss P-40M Warhawk "Jacky C". Based at the Republic Airport on Long Island, the American Airpower Museum has an extensive collection of aircraft and aviation artifacts in their museum facility. Other aircraft in the museum collection, such as this P-40M, are airworthy and visit airshows. Thom Richard was at the controls of the P-40M for this airshow.*

*Introduced in 1938, the P-40 Warhawk was one of the few capable fighters available to the Allies at the start of World War II. Although less maneuverable and slower than some Axis fighters, the P-40 made up for those shortcomings by being well-armed and well-suited to combat operations in various climates. Variants of the P-40 were used in all theaters of operations. The P-40 was continuously improved until production ceased in 1944 after over 13,000 examples had been built.*

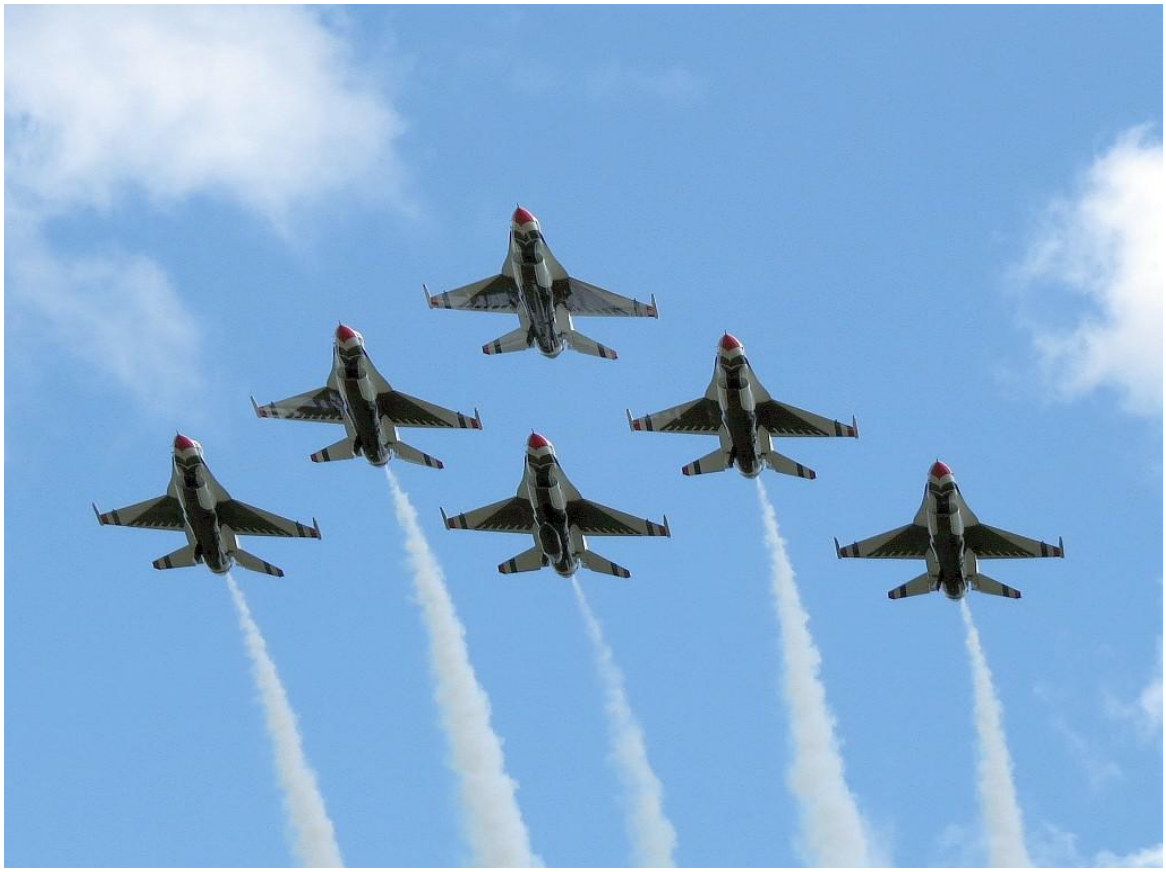


*Michael Goulian returned to the skies above the Orange County Airport for his full demonstration at the 2024 New York International Airshow on Saturday afternoon. Goulian's Extra 330SC is one of the finest aerobatic aircraft in the world. The wing of the Extra 330SC is designed to give the aircraft increased maneuverability and a higher roll rate. The airframe is combined with a high-performance Lycoming Thunderbolt IO-580 engine and Hartzell propeller for unprecedented aerobatic capabilities.*



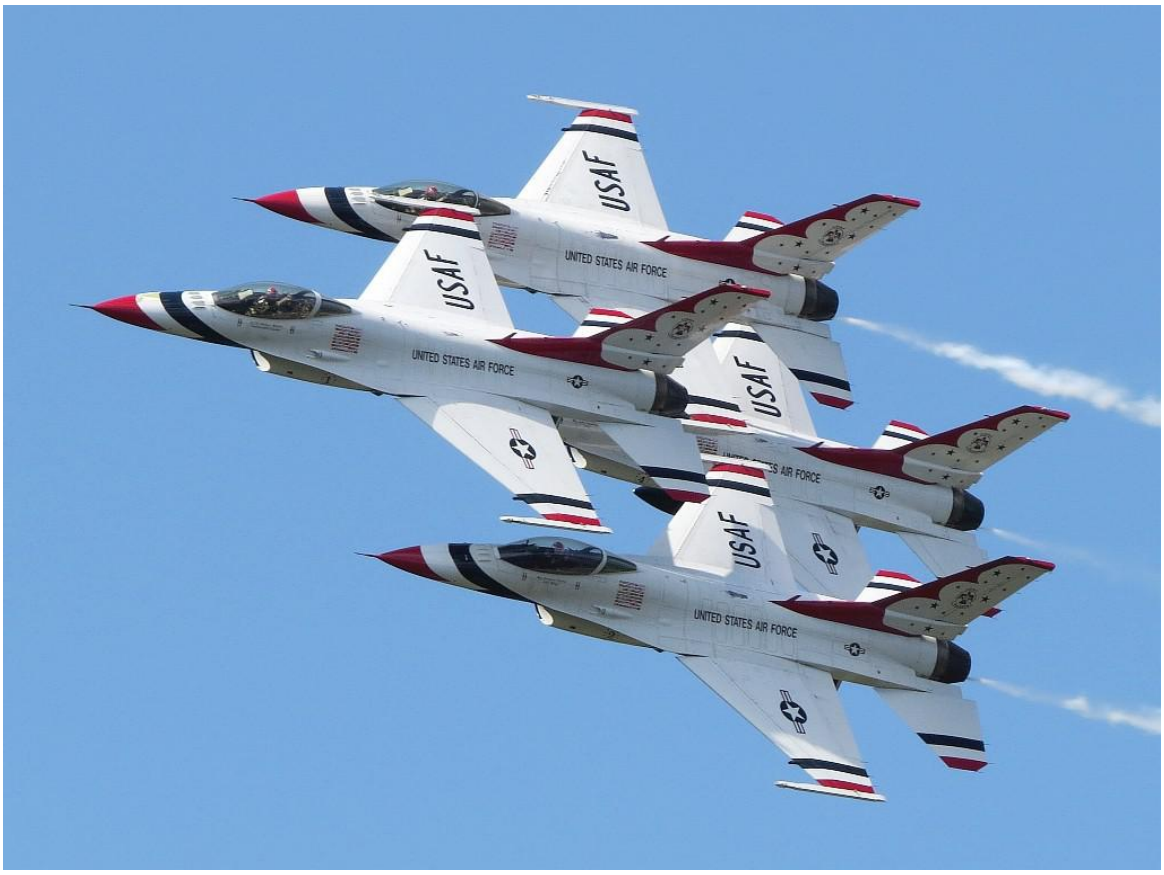


*Michael Goulian rockets toward airshow center in his Extra 330SC aerobatic aircraft. Goulian has had a 30-year career as a professional aerobatic pilot. At age 27, Goulian became one of the youngest pilots ever to win the United States Unlimited Aerobatic Championship. Goulian has also been a three-time member of the U.S. National Unlimited Aerobatic Team. Throughout his airshow career, Goulian has also won numerous awards for showmanship and excellence as an airshow performer.*

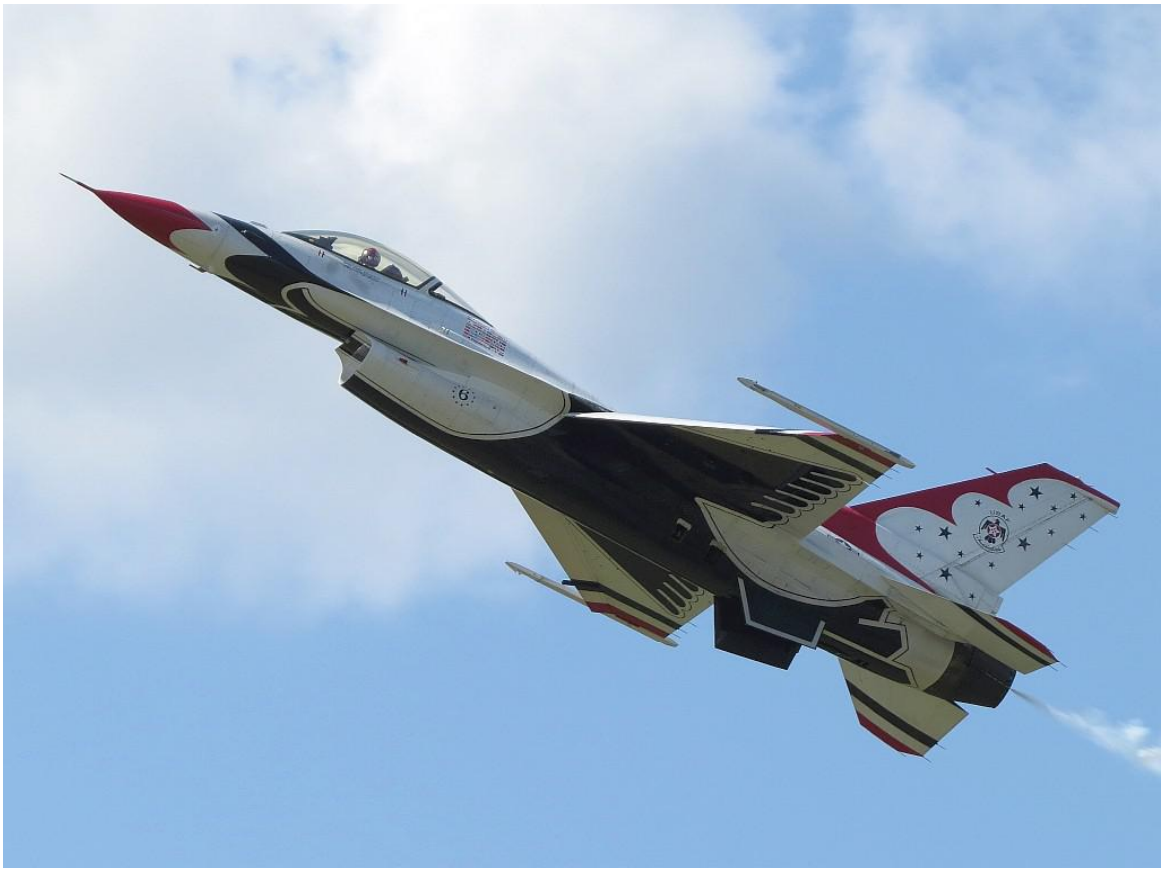


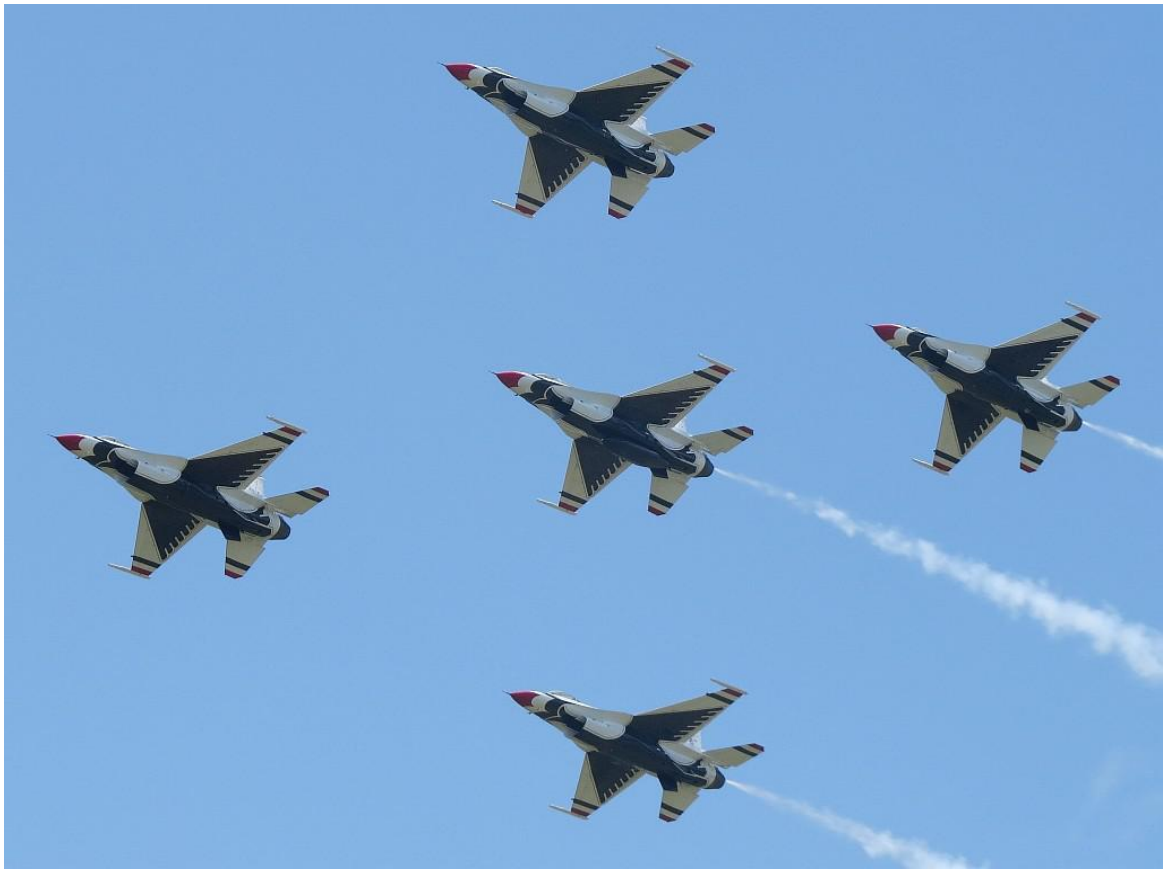
*The headline act of the 2024 New York International Airshow was a flight demonstration by the U.S. Air Force "Thunderbirds" Flight Demonstration Squadron. The U.S. Air Force Thunderbirds have performed at the New York International Airshow several times in the past and are always a favorite of the spectators. Since the Orange County Airport is a smaller facility, the Thunderbirds flew to the airshow site from the larger Stewart International Airport, located in nearby Newburgh.*

*The U.S. Air Force Thunderbirds perform the "Diamond Pass In Review" on Saturday at the 2024 New York International Airshow. This maneuver is always a great photo opportunity. The 2024 team is led by Thunderbird #1, Commander, Lt. Col. Nathan Malafa. Flying in the Left Wing position is Thunderbird #2, Maj. Zachary Taylor. Thunderbird #3, Maj. Tyler Clark, flies in the Right Wing position. The diamond formation is brought up in the rear by the Slot pilot, Thunderbird #4, Maj. Jake Impellizzeri.*

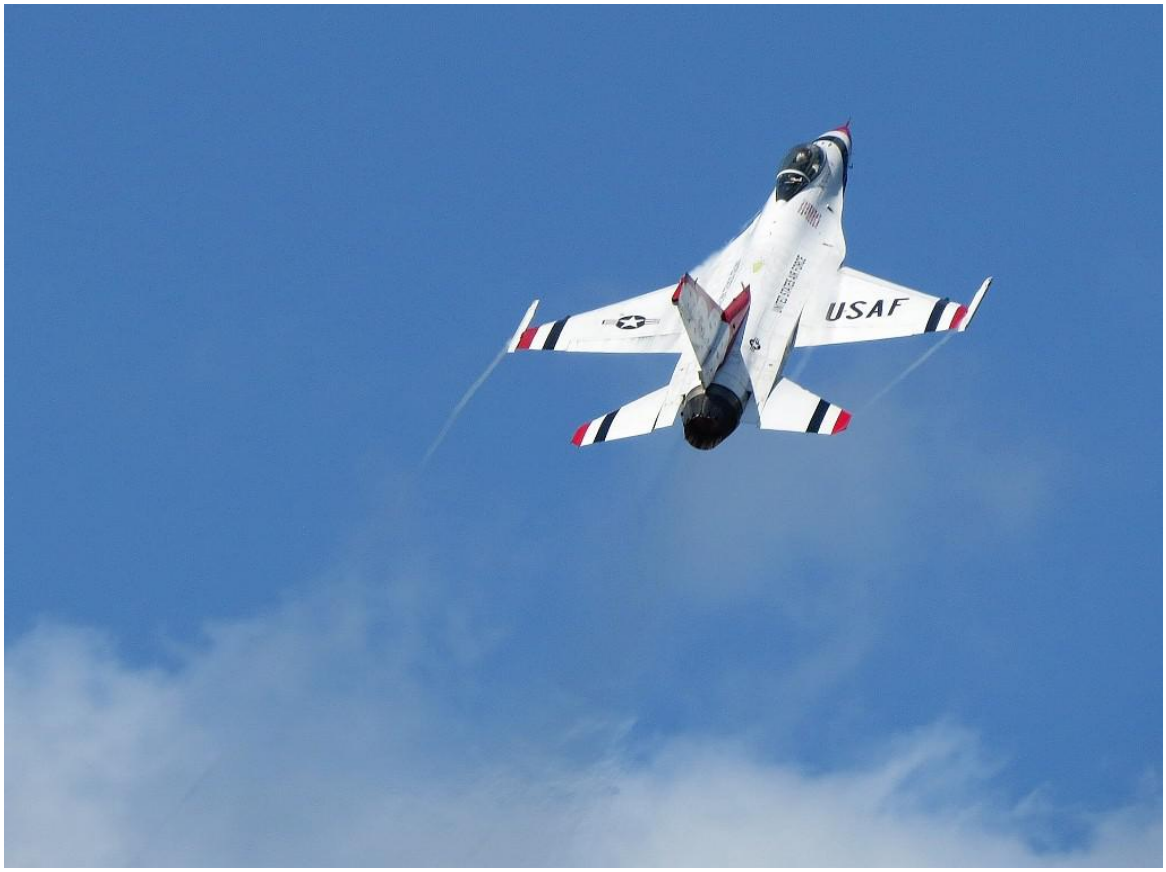



*Thunderbird #6, Opposing Solo, Maj. Jeffrey Downie, performs the "Slow Speed Pass" with his F-16C Fighting Falcon. Although capable of speeds of up to Mach 2, or 1,353 miles per hour, the F-16 has excellent slow-speed handling capability. This maneuvering capability is thanks to an advanced fly-by-wire flight control system, which constantly adjusts the flight control surfaces to keep the F-16 stable in flight. This flight control system relies entirely on electrical systems to relay flight commands.*



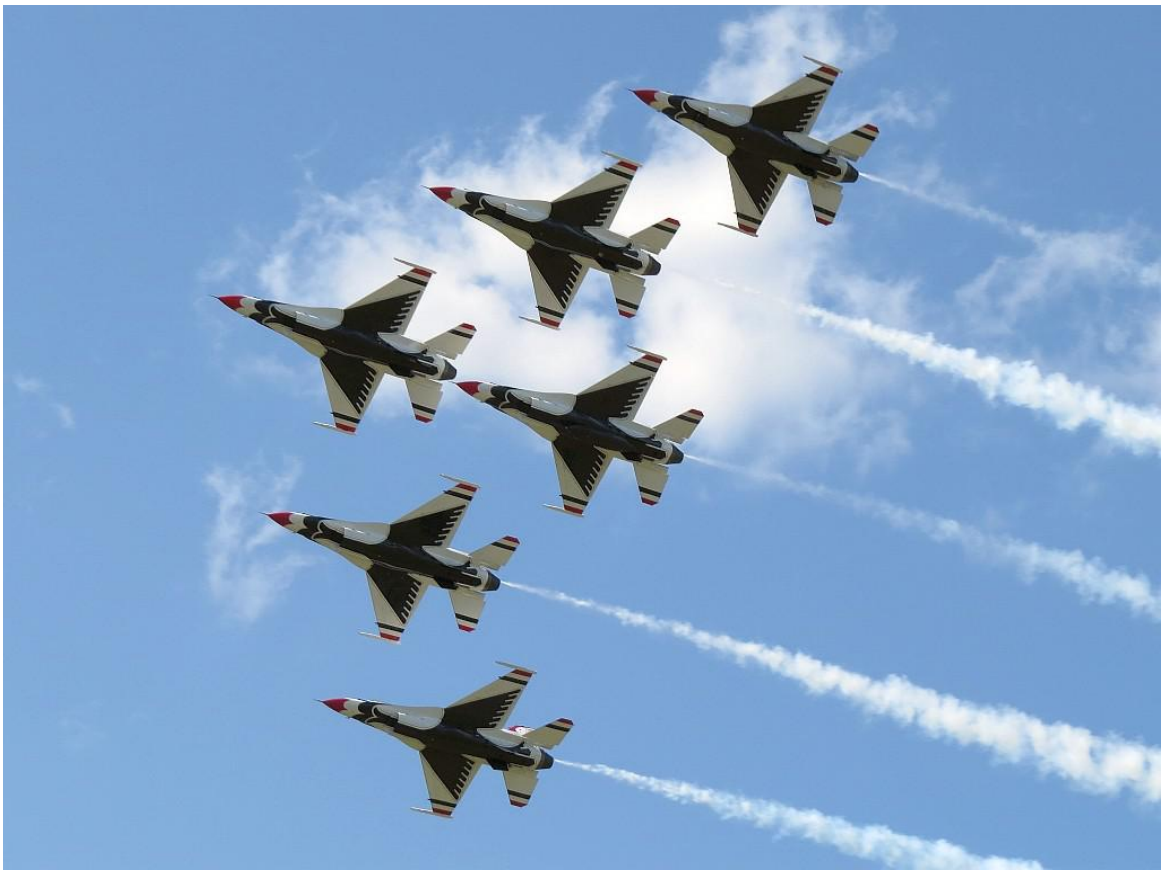


*The U.S. Air Force Thunderbirds fly in the "Five Card" formation during their flight demonstration at the 2024 New York Airshow. This formation showcases the underside of the team's F-16 Fighting Falcon aircraft, which displays the iconic "Thunderbird" image. This image represents the legendary birdlike creature that appears in the mythologies of several indigenous North American cultures. The Thunderbirds have carried this imagery on their aircraft since the team's formation in 1953.*

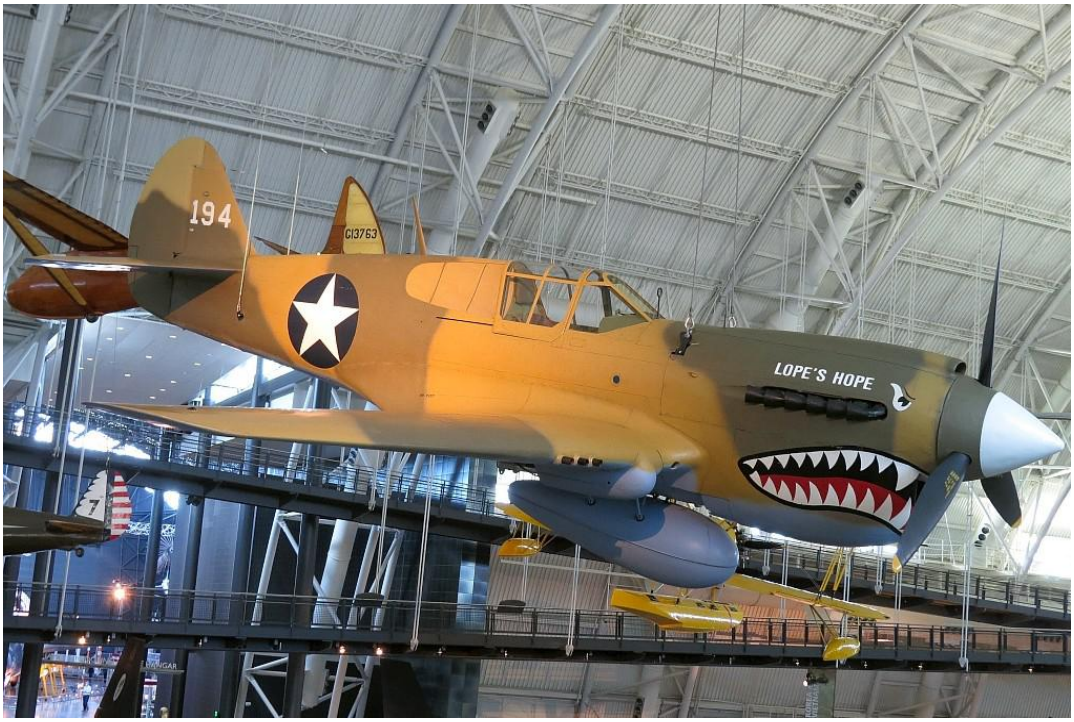



*Thunderbird #5, Lead Solo, Maj. Eric Tise climbs to altitude after performing a sneak pass on Saturday at the 2024 New York International Airshow. The Thunderbirds currently fly the Lockheed Martin F-16C Fighting Falcon. The F-16C is an updated variant of the F-16 Fighting Falcon multirole fighter developed by General Dynamics for the U.S. Air Force in the 1970s. The F-16C variant entered service in the mid-1980s and featured an improved engine, updated avionics, and all-weather combat capability.*

*The U.S. Air Force Thunderbirds fly in the delta formation during their flight demonstration at the 2024 New York International Airshow. Although the visible part of the team is the six demonstration pilots, the team compromises six more officers, with two serving as the advance pilot and operations officer. Four other officers serve in critical roles within the Thunderbirds team. The team also consists of 120 enlisted personnel who represent over 30 different career fields in the U.S. Air Force.*



# Curtiss P-40E Warhawk (Kittyhawk IA)




*A Curtiss P-40E Warhawk hangs on display in the National Air and Space Museum's Steven F. Udvar-Hazy Center in Chantilly, Virginia. This P-40 was built as a Kittyhawk IA, the export variant of the P-40E, and was one of the P-40s sold to the Royal Canadian Air Force during World War II. Introduced in 1940, the P-40 was one of the only modern fighter aircraft available to the Allies in large quantities when World War II began.*

Known as the Warhawk, Tomahawk, or Kittyhawk, depending on which nation's air arm it served with, the Curtiss P-40 was a successful and versatile fighter aircraft in the first years of World War II. When the war began, the Curtiss P-40 was one of the only effective fighter aircraft available to the Allies in large numbers. Although not one of the best fighter aircraft to have fought in World War II, the P-40 was a reliable and rugged design, capable of operating in all climates and with minimal ground support equipment. Over 13,000 P-40s were built from 1939 to the end of 1944, and the type remained in service until the war's end in 1945.

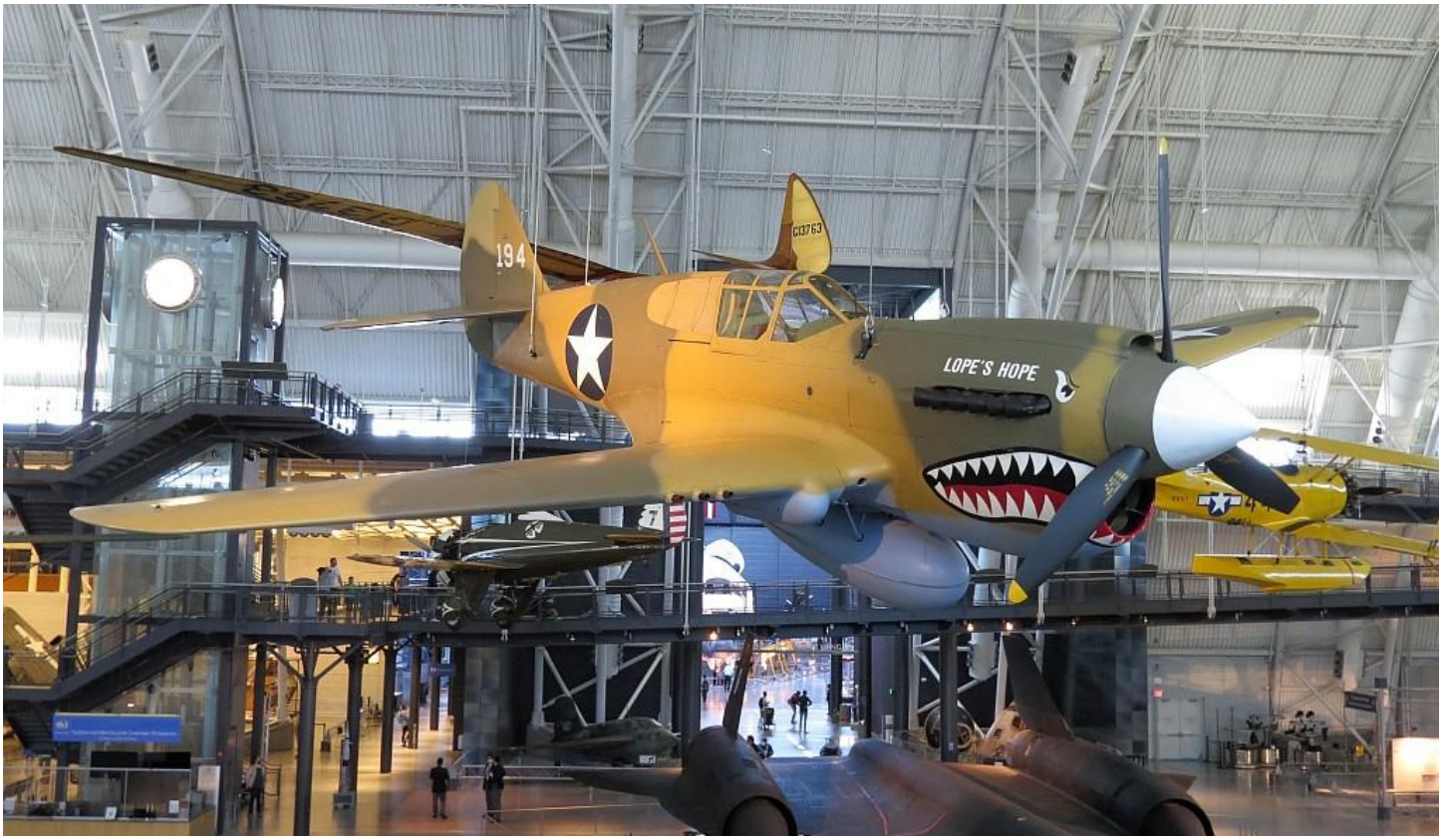
The design origins of the P-40 began in 1935 when Curtiss-Wright Corporation engineer Dr. Donovan R. Berlin designed the P-36 Hawk. The P-36 was a lightweight, agile, lightly-armed fighter powered by an air-cooled radial engine. Impressed with the P-36, the U.S. Army Air Corps awarded Curtiss-Wright a production contract for 210 aircraft in 1937. This production contract was the largest awarded by the U.S. Army Air Corps since World War I. During the late 1930s, the design of fighter aircraft matured rapidly. It was obvious that the P-36 was no match for the fighter aircraft designs emerging from European nations. Dr. Berlin set to work trying to improve the P-36's speed and high-altitude performance. Berlin redesigned the P-36's airframe to accommodate a turbo-supercharged Allison V-1710-11 inline, liquid-cooled engine. The new aircraft, the XP-37, was unpopular with test pilots. The turbo-supercharger was unreliable, and the cockpit, having been moved farther back in the fuselage to accommodate the larger engine, had restricted forward visibility.

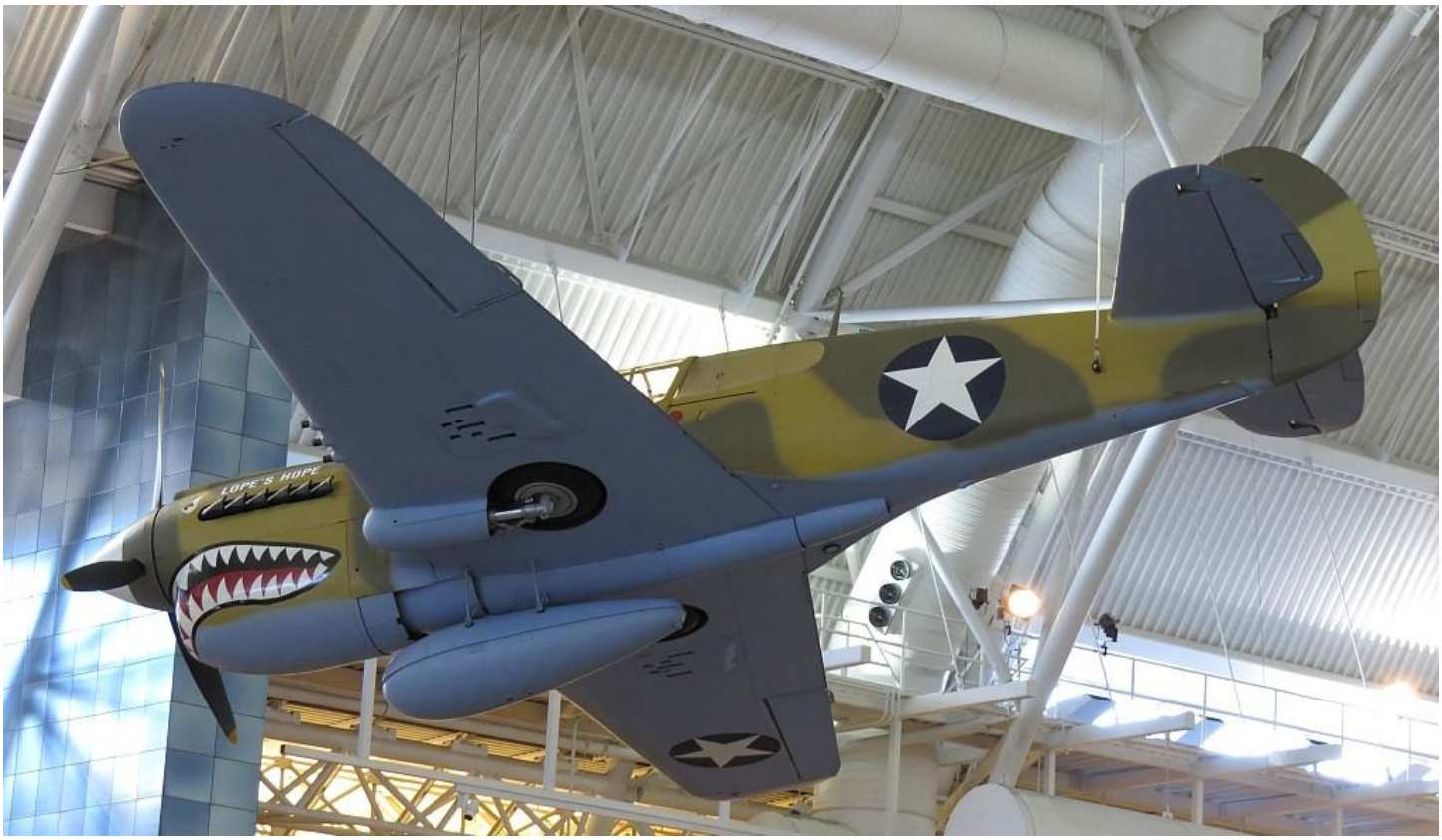
In 1938, Curtiss-Wright and Dr. Berlin made another attempt to redesign the P-36 with a larger engine. This time, an Allison V-1710-19 engine was used, and the aircraft was designated the XP-40. First flying on October 14, 1938, the initial performance of the XP-40 in flight tests was promising. After evaluation of the XP-40 by U.S. Army Air Corps officials in 1939, Curtiss-Wright won a production contract for 540 P-40s with an armament package of two .50-caliber machine guns in the fuselage and four .30-caliber machine guns in the wings.

When P-40 production began in 1940, one of the first nations to order examples of the new fighter was France. France operated the Hawk 75, an export version of the P-36, and was enthusiastic about the potential of the new P-40. France ordered 140 examples of the P-40, but they were not built and delivered before France surrendered. The aircraft destined for France were sent to Britain instead, where they were named Tomahawks. The British found the P-40s performed poorly in high-altitude combat in Europe and instead sent their examples to North Africa. The rugged nature of the aircraft and its ability to operate in most climates made the P-40 ideally suited to combat operations in the North African theater. The Russians also bought more than 2,000 examples of the P-40.

When the United States entered the war in 1941, the P-40, named the Warhawk in U.S. Army Air Forces service, was the standard fighter for many of the U.S. Army Air Forces front-line squadrons. During the Japanese Attack on Pearl Harbor on December 7th, P-40s were some of the few aircraft that got airborne that morning to put up any resistance against the Japanese air raid. The U.S. Army Air Forces used the P-40 early in the war extensively in the China-Burma-India theater of operations and the Aleutian Islands. Eventually, the P-40 was superseded in U.S. Army Air Forces service by faster and more advanced fighter aircraft such as the Republic P-47 Thunderbolt, Lockheed P-38 Lightning, and the North American P-51 Mustang.

The unit that remains the most famous for its use of the P-40 during World War II is the American Volunteer Group (AVG) or the Flying Tigers, which fought in the China-Burma-India theater. The unit was organized by U.S. Army Air Forces Captain Claire Lee Chennault in 1940. During that year, the Chinese government gave Chennault over nine million dollars to buy airplanes and recruit pilots to fight against the overwhelming Japanese airpower in China. Chennault's efforts were strongly supported by the Chinese government, especially by Madam Chiang Kai-shek, a Lt. Colonel in the Chinese Air Force and who, for a time, was the service's overall commander.






The payment from China diverted an order of 100 P-40B Tomahawks destined for the Royal Air Force to the Chinese Air Force. The next step in creating an air unit was pilots. A quietly signed executive order by President Roosevelt in April 1941 allowed Chennault to recruit from the ranks of American military reserve pilots. Within a few months, Chennault had 350 pilots for the unit. The pilots were a mixture of U.S. Navy, Marine Corps, Army Air Forces, factory test pilots, and commercial airline pilots.

The Flying Tigers' name was derived from the distinctive fangs and teeth painted on the noses of the P-40s at either side of the distinctive radiator intake. Royal Air Force P-40s operating in North Africa also had similar style markings on their noses. The unit flew their first mission on December 20. In seven months of action, the Flying Tigers destroyed approximately 115 Japanese aircraft for only 11 of their own in air-to-air combat. The American Volunteer Group disbanded in July 1942, and its planes and pilots became part of the U.S. Army Air Forces 23rd Fighter Group in the 14th Air Force. Chennault was promoted to Brigadier General and assumed command of the 14th Air Force. By the war's end, the 23rd Fighter Group was one of the highest-scoring fighter groups in the U.S. Army Air Forces.

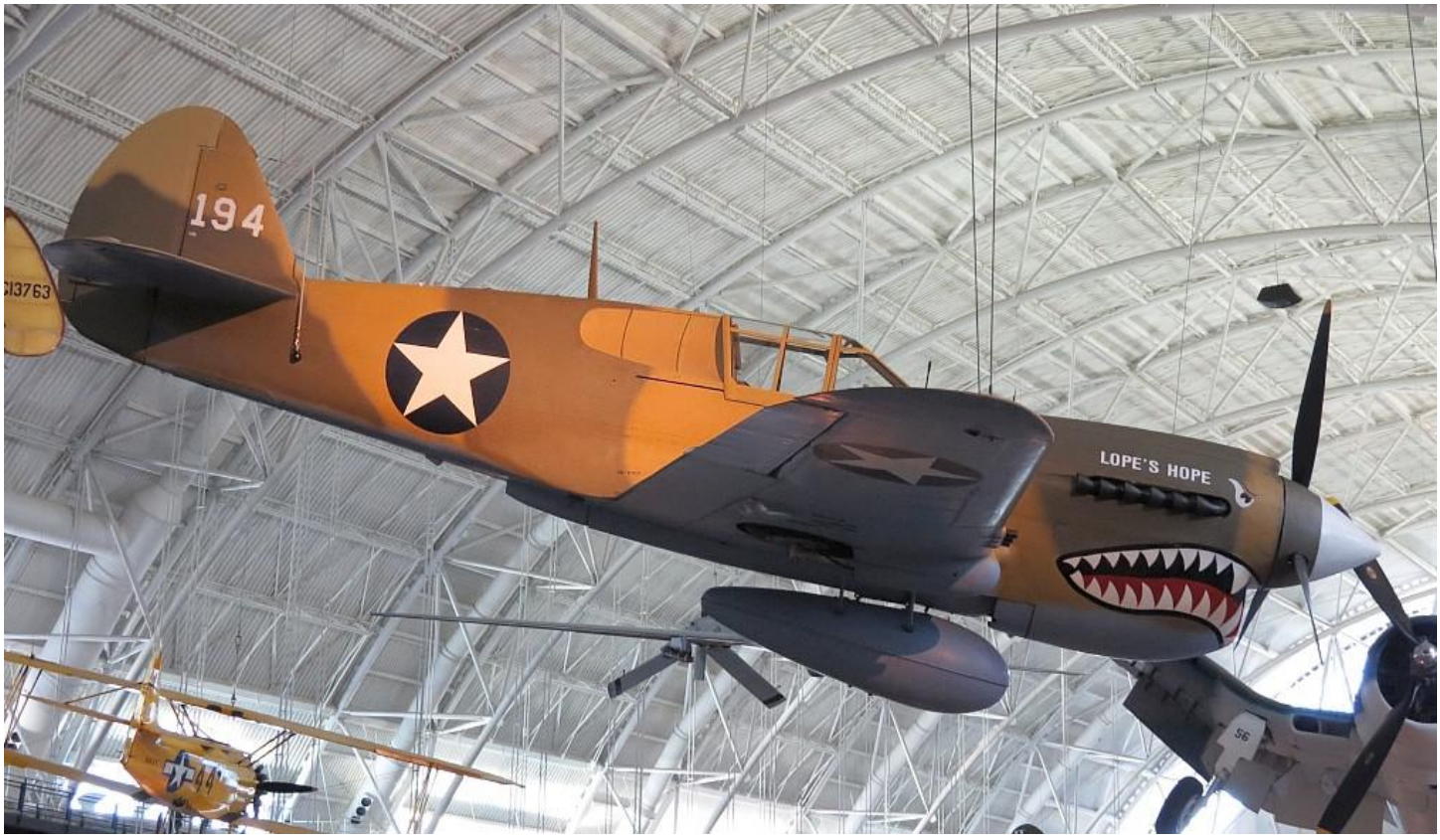
As the war progressed and lessons learned from combat experience, Curtiss continued to improve the P-40. The P-40 gained additional armor plating, better self-sealing fuel tanks, airframe changes for improved aerodynamics, and more powerful engines. Curtiss changed the cockpit to improve visibility and modified the armament package to six .50-caliber machine guns mounted in the wings. The P-40E Kittyhawk was the first variant with this gun package installed. The last model of the P-40 built in large numbers was the P-40N. The lightest P-40 built, the P-40N was substantially faster than previous variants. Curtiss built a single P-40Q, which was even faster, but it could not match the performance of the P-51 Mustang, so Curtiss ended the development of the P-40 with this model. Allied nations that bought and flew P-40s included England, France, China, Russia, New Zealand, Canada, South Africa, and Turkey.

The National Air and Space Museum's P-40E did not serve in the U.S. military. The P-40 was built as a Kittyhawk IA and delivered to Canada on March 11, 1941. The Kittyhawk IA was assigned to 111 Squadron of the Royal Canadian Air Force. When the Japanese launched a diversionary attack on the Aleutian Islands during the Battle of Midway, 111 Squadron moved to Alaska to help the U.S. military units stationed there defend the island chain. When the Japanese retreated and the threat ended, the squadron returned to Canada. The squadron eventually transferred to England and left their P-40s behind in Canada. In 1946, the Royal Canadian Air Force declared this Kittyhawk IA surplus.

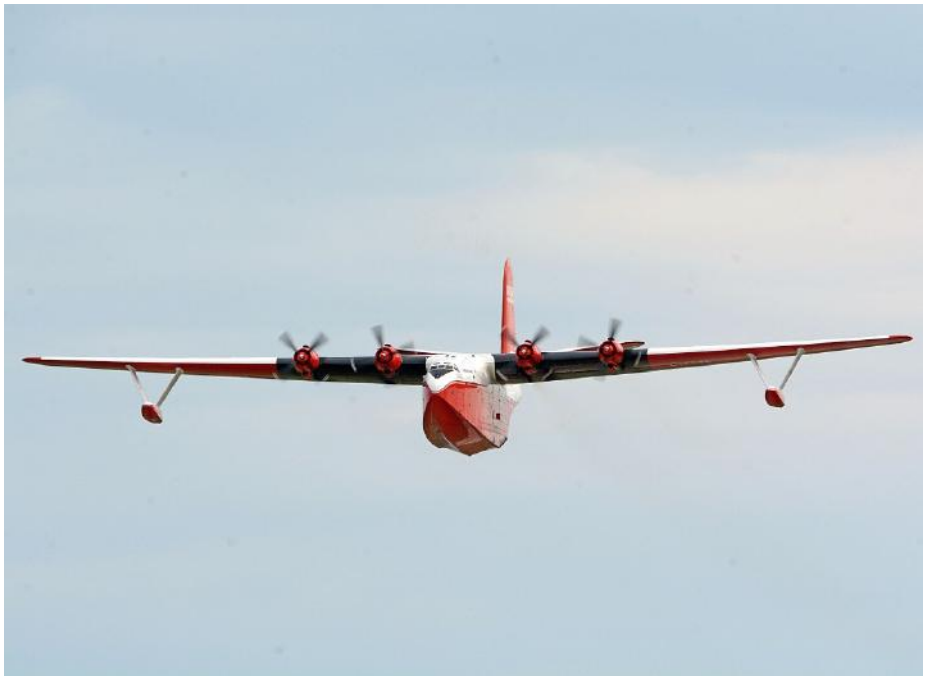
The Kittyhawk IA eventually found its way back to the United States. After changing hands several times, the aircraft ended up with the Explorer Scouts Youth Group in Meridian, Mississippi. The Kittyhawk IA was with the youth group when in the 1960s, the Smithsonian Institution began searching for a P-40 for the National Air and Space Museum collection. The Smithsonian Institution attempted to find a P-40 for the national collection with a documented history of having served with the AVG but found none.

The Smithsonian Institution eventually settled on this Kittyhawk IA, and in 1964, the Exchange Club in Meridian donated the Kittyhawk IA to the National Air and Space Museum. The donation was made in memory of Mr. Kellis Forbes, a local man who had devoted time and resources to many Boys Club activities. In March 1964, a U.S. Air Force military transport aircraft and its crew airlifted the Kittyhawk IA to Andrews Air Force Base in Maryland.

In 1975, personnel from Andrews Air Force Base restored the Kittyhawk IA. When restoring the P-40, U.S. Air Force personnel painted the fighter to represent it as a P-40E assigned to the 75th Fighter Squadron, 23rd Fighter Group, 14th Air Force during World War II. National Air and Space Museum staff painted *Lope's Hope* on the nose of the P-40E during the restoration to honor its Deputy Director, Col. Donald S. Lopez (USAF Ret.). Lopez had flown P-40s and later P-51 Mustangs as a member of the 23rd Fighter Group during World War II.



# Martin JRM-3 Mars (*Hawaii Mars II*) (1945)



*The Hawaii Mars II is an example of the Martin JRM Mars, a four-engine flying boat designed and built by the Martin Company during and after World War II. Initially conceived as a patrol bomber, the JRM Mars evolved into a long-range military transport aircraft. The JRM Mars was the largest flying boat to see service during World War II and was used to transport cargo and personnel between San Francisco and Honolulu. After the type's retirement from the U.S. Navy in the mid-1950s, four surviving aircraft were converted into water bombers in Canada. Two of these aircraft survived to serve decades as water bombers, primarily in British Columbia. The Hawaii Mars II operated until 2016. In August 2024, the Hawaii Mars II was officially retired and donated to the British Columbia Aviation Museum. (Photo Courtesy of Ken Kula)*

## *Martin JRM-3 Mars (Hawaii Mars II)*

**Crew:** 4 (with accommodations available for second relief crew)

**Water/Foam Capacity:** 60,000 lb

**Length:** 117 ft 3 in

**Height:** 38 ft 5 in (afloat), 48 ft (beached)

**Wingspan:** 200 ft

**Wing Area:** 3,686 sq ft

**Powerplant:** Wright R-3350-24WA Duplex-Cyclone 18-cylinder air-cooled, radial engines (x4)

**Range:** 4,300 nmi

**Cruise Speed:** 190 mph

**Maximum Speed:** 221 mph

**Empty/Maximum Takeoff Weights:** 75,573 lb/165,000 lb

**Service Ceiling:** 14,600 ft

# British Columbia Water Bomber

## Military Career

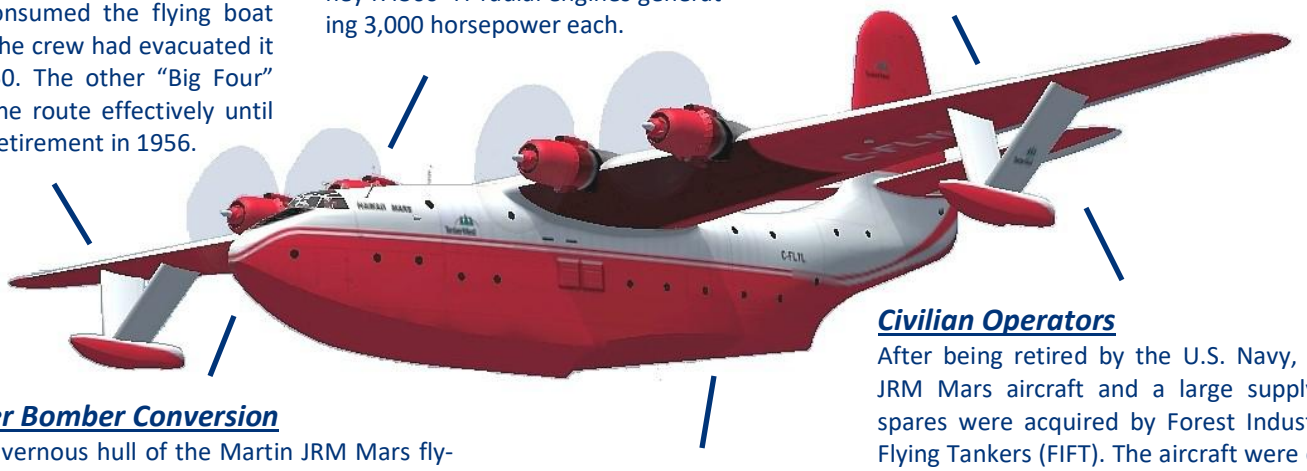
Initially planning to order 20 aircraft, the U.S. Navy only purchased the five Mars already on the production line with the end of World War II. The production variant of the JRM Mars differed from the prototype by having a longer hull, a single tail, and equipment in the cargo bay for moving and securing loads. These aircraft regularly transported cargo and personnel between San Francisco and Honolulu. One aircraft, the *Marshall Mars*, was lost off Hawaii after an engine fire consumed the flying boat after the crew had evacuated it in 1950. The other "Big Four" flew the route effectively until their retirement in 1956.

## Powerplant

The Martin JRM Mars was powered by four Wright Duplex R-3350-24WA air-cooled radial engines. These 18-cylinder engines generated 2,500 horsepower each and drove four-blade Curtiss Electric propellers that had a diameter of 16ft 8 in. Of the five JRM-1 variants built, four were converted to the JRM-3 variant. On these JRM-3s, the two inboard engines were fitted with reversible-pitch devices to shorten the flying boat's landing distance. The last Martin Mars built was a JRM-2 variant, powered by four Pratt & Whitney R4360-4T radial engines generating 3,000 horsepower each.

## Fire Operations

The *Hawaii Mars II* assisted in extinguishing several wildfires along the coast of British Columbia and in the province's interior during its decades of service. In 2003, the *Hawaii Mars II* assisted in extinguishing a large forest fire that threatened the town of Kelowna, British Columbia. In 2007, the *Hawaii Mars II* flew to Lake Elsinore to assist in fighting wildfires in California. In 2009, the flying boat assisted in fighting the La Brea Fire near Santa Maria, California. In July 2010, the *Hawaii Mars II* was used to fight the Mason Lake/Bonaparte Lake fire near Kamloops. The last year the *Hawaii Mars II* was awarded a firefighting contract by the British Columbia provincial government was in 2015. This was due to the operation of newer, more versatile firefighting aircraft, such as the Lockheed Martin C-130 Hercules.



## Water Bomber Conversion

The cavernous hull of the Martin JRM Mars flying boat and its ability to operate off of the large lake surfaces in Canada made it ideal for conversion into a water bomber. The conversion involved fitting a 7,200-gallon water tank made of plywood in the cargo hold and fitting pick-up scoops to the bottom of the hull. These scoops allowed the aircraft to pick up water while it was taxiing on the surface of a lake. The cargo bay was also fitted with large tanks to hold 600 gallons of foam concentrate, which is mixed with the water and used for gelling the load drop, and each aircraft was given a high-visibility red and white paint scheme. The *Hawaii Mars II* could cover an area of three to four acres on a single drop and operate for a duration of over five hours working a fire. The *Hawaii Mars II* also received numerous avionics upgrades throughout its career as a water bomber to improve its safety and reliability.

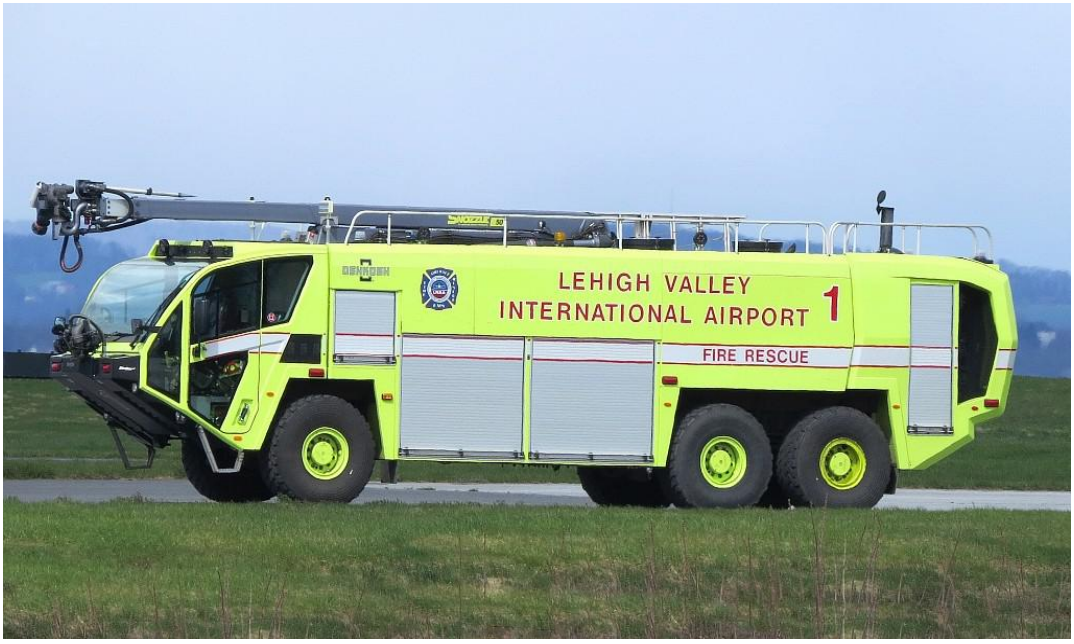
## On Land

Similar to most flying boats, the Martin JRM Mars had attachment points on the side and rear of its hull where beaching gear in the form of wheel assemblies could be fitted to the aircraft. This beaching gear allowed maintenance crews to pull the flying boat ashore for maintenance that could not be done on the water, such as engine changes or other major repair work. Using the beaching gear, maintenance crews could store the flying boat securely on land or in a hangar in the event of bad weather.

## Civilian Operators

After being retired by the U.S. Navy, four JRM Mars aircraft and a large supply of spares were acquired by Forest Industries Flying Tankers (FIFT). The aircraft were converted to water bombers in the late 1950s. Two aircraft, the *Marianas Mars* and the *Caroline Mars*, were lost in the early 1960s. The survivors, the *Philippine Mars* and the *Hawaii Mars II*, had their conversions completed and were operated by Flying Tankers Inc., and later Timber West Ltd., until 2006. In 2007, Coulson Forest Products bought the two surviving flying boats and based them at Sproat Lake near Port Alberni, British Columbia. The Coulson Group operated the *Hawaii Mars II* until 2016. On August 11, 2024, the *Hawaii Mars II* flew its final flight to the British Columbia Aviation Museum in North Saanich, where it will be the centerpiece exhibit in a collection of over 40 other historic aircraft. The *Philippine Mars* will be donated and transferred to the Pima Air and Space Museum.

# Oshkosh Striker 3000: Ready For Any Airport Emergency

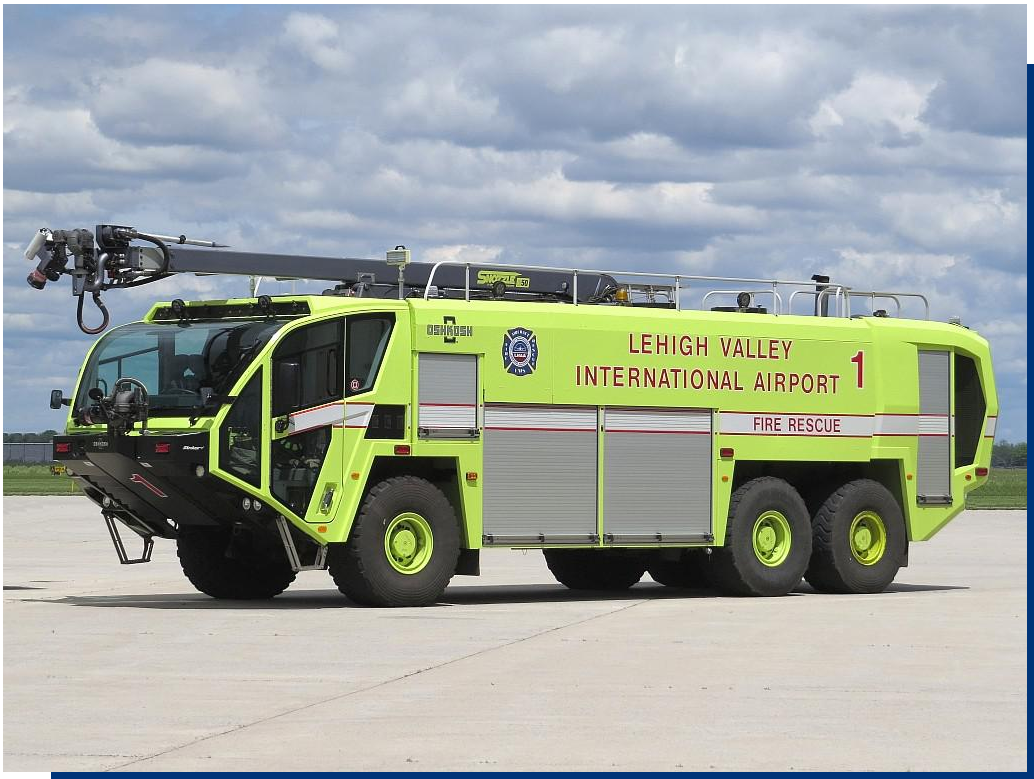



*The Oshkosh Striker is one of the common airport crash tenders used at airports and military air bases worldwide. These specialized fire trucks are designed to reach aircraft crash sites rapidly and disperse many types of fire retardants to extinguish aircraft and aviation fuel fires quickly. This Oshkosh Striker 3000 belongs to the Lehigh Valley International Airport Fire Department and was purchased by the Lehigh Valley International Airport in 2017.*

Airport crash tenders are specialized fire trucks designed for aircraft firefighting operations at airports and military air bases. These trucks are usually mounted on 4x4, 6x6, or 8x8 wheeled chassis and feature large tires to negotiate rough terrain on airport properties. On some of these chassis, the front and rear wheels are steerable to decrease the truck's turning radius. Heavy-duty diesel engines coupled with multi-speed transmissions give these airport crash tenders excellent acceleration and speed for their size and weight. Airport crash tenders are equipped with water/foam cannons and can carry large amounts of water and firefighting foam. Newer airport crash tenders can inject a stream of Purple-K dry chemical into the foam stream to extinguish large jet fuel fires quickly, and Halotron-1 tanks for handling a situation where a clean agent is needed to extinguish a fire. Newer airport crash tenders have multiple turrets to disperse retardant, elevating extinguishing arms, and reinforced nozzles designed to pierce an airplane's fuselage and extinguish a fire in the cabin or cargo hold.

The Oshkosh Striker is a specialized airport aircraft firefighting (AARF) vehicle built by the Oshkosh Corporation. The Oshkosh Corporation manufactures specialized, heavy-duty trucks for airport operations, construction, and military use. The Striker is available in three models depending on an airport's size and vehicle needs, the 1500, 3000, and 4500. The 1500 model is a 4X4 vehicle, the 3000 is a 6x6 vehicle, and the 4500 is an 8x8 vehicle. All Striker models have multiple tanks to carry water, foam, dry chemicals, and Halotron-1. The truck has numerous compartments for additional firefighting equipment, such as extra fire suits, hoses, wrenches, saws, and other handheld tools. All models of the Striker are powered by a 16-liter V-8 diesel engine, and equipped with a seven or six-speed automatic transmission. A step-up platform in the rear of the truck allows the engine and other major systems to be serviced easily. All models of the Striker are available with an elevated arm and a reinforced nozzle (snozzle) capable of piercing an aircraft fuselage to deliver fire-retardant material directly into the airframe.

The airport crash tender seen here is an Oshkosh Striker 3000 operated by the Lehigh Valley International Airport Fire Department as RESCUE 1. The truck can carry 3,000 gallons of water, 420 gallons of foam, 500 pounds of dry chemicals, and 460 pounds of Halotron-1. RESCUE 1 can disperse fire retardant from two turrets, one in the front of the vehicle and one on the vehicle's roof, and carries 600 feet of hose on board. This Striker's purchase was funded through a grant in 2017 and cost over $800,000.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INTERNATIONAL AIRPORT 1
FIRE RESCUE
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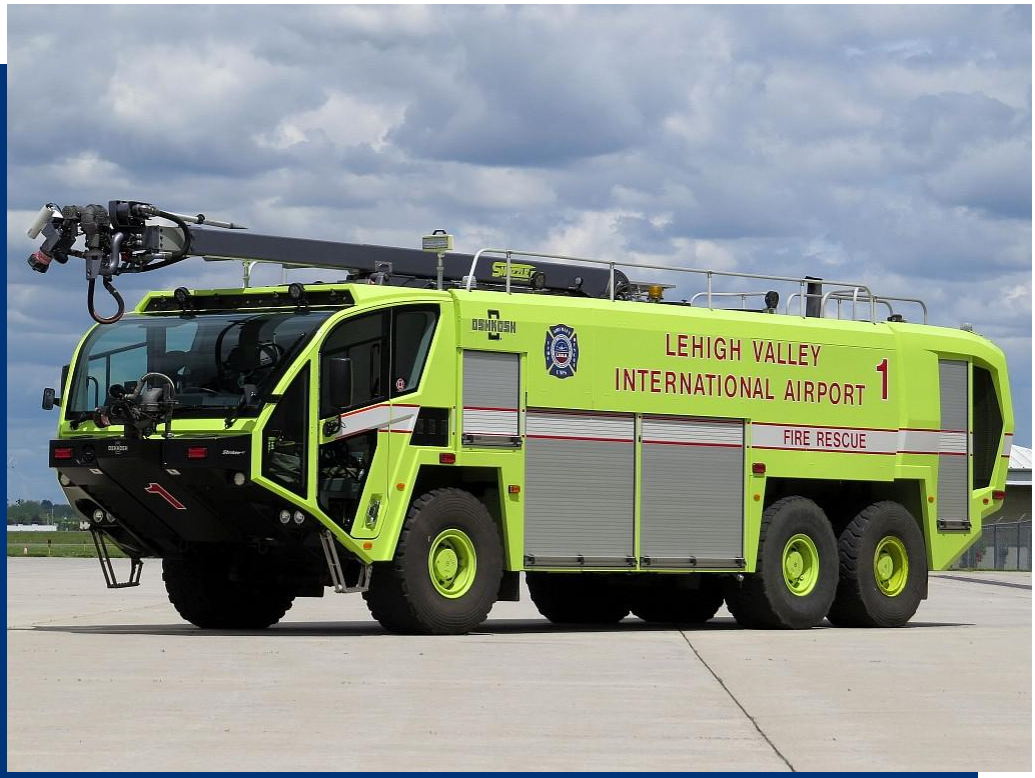
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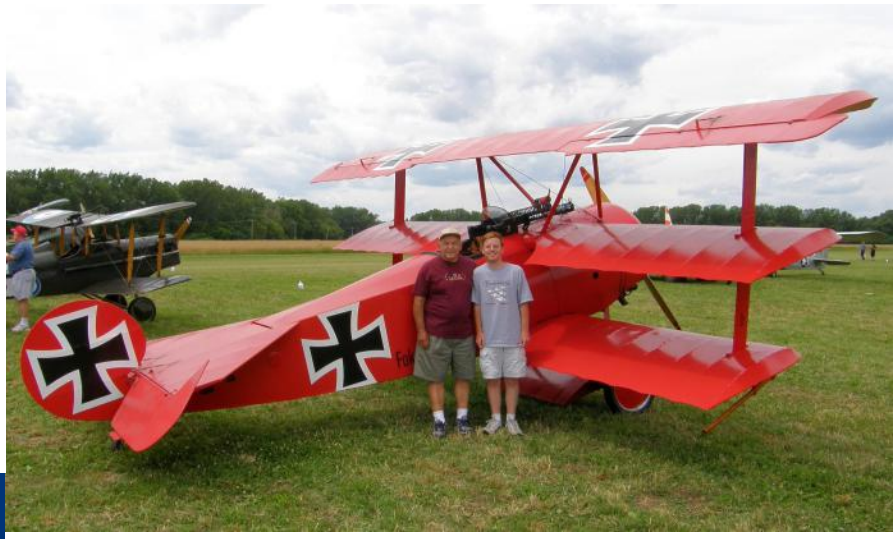
Distelfink Airlines

Est. 2013

# ABOUT DISTELFINK AIRLINES



*My late grandfather, John Brey, and I at the 2007 Geneseo Airshow. This was one of the few times that we had our photo taken together at an airshow.*

***The story of "Distelfink Airlines" begins in the early 1990s when my late grandfather, John Brey, began building and flying remote control model aircraft in his retirement. He enjoyed the hobby and quickly amassed a large fleet of model airplanes, which filled his garage and woodworking shop. He gave a name to his fleet of aircraft, "Distelfink Airlines". For the symbol of his fleet, he chose the Pennsylvania Dutch/German hex sign featuring the "Distelfink", a colorful bird that is a symbol of good luck and happiness. This hex sign and symbol is very common on Pennsylvania Dutch/German barns in Eastern Pennsylvania and is an important part of our local culture. He had custom "Distelfink" decals made for all his airplanes and had T-shirts made with "Distelfink Airlines" printed on them. It wasn't long before curious people began asking about "Distelfink Airlines" and what it was. My grandfather told anyone who asked that "Distelfink Airlines" was a new startup airline that was going to be offering service between the Lehigh Valley International Airport and Philadelphia International Airport with more routes to come soon.***

***In addition to flying his model airplanes, my grandfather enjoyed attending airshows and we traveled to airshows together for almost 20 years. He also enjoyed local aviation history and was particularly fascinated by the history of the Consolidated TBY Sea Wolf, a torpedo bomber that was built locally in Allentown, Pennsylvania during World War II. He also remembered when famous aviator Amelia Earhart visited the Lehigh Valley in the early 1930s to raise funds for her failed attempt to become the first woman to fly around the world.***

***Established in 2013 in memory of my grandfather, "Distelfink Airlines" is an online aviation newsletter that carries on a tradition of sharing a love for aviation that my grandfather shared with me. This newsletter features photographs and writings on a variety of aviation topics. The logo that was chosen for "Distelfink Airlines" is the hex sign that my grandfather chose for his fleet of remote control model aircraft many years ago. This proud symbol of local Pennsylvania Dutch/German culture is joined by a pair of Consolidated TBY Sea Wolf torpedo bombers, the aircraft that was built locally in Allentown during World War II and is such an important part of our local aviation history. Thank you for reading "Distelfink Airlines" and sharing in the passion for aviation that my grandfather shared with me.***