

KEEP 'EM FLYING

SEPTEMBER/OCTOBER 2023

WARBIRDS



» WASP
Bobcat

» Big, Beautiful
Broussard

RED-NOSE
BF 109

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The Erickson Collection's Bf 109 is shadowed by P-51B *Old Crow* near EAA Oshkosh. Photo by Scott Slocum

» BACK COVER:

In this month's issue we compare the P-40 and the Hurricane — both veterans of the desert campaign. Photo by Scott Slocum

For more on many of the topics in this issue, visit www.EAA.org/Warbirds.





Mustang HERITAGE

North American Aviation A-36A dive bomber

BY TOM GRIFFITH

ONE OF THE MOST iconic aircraft of all time was (and still is!) the North American Aviation (NAA) P-51D Mustang. Other models of the Mustang were built during World War II (the total number built across all models exceeded 15,000), and together they served the Allies with distinction. While the airplane was designed and built for the Royal Air Force (RAF), it saw time with a number of other nations' air forces as well. The U.S. Army Air Forces (USAAF) made by far the greatest use of the Mustang in combat zones.

This article will cover only one model: the A-36A attack/dive bomber. Many folks, some of whom write books about WWII aircraft and articles for print magazines and websites, insist on calling it the Apache. A similar number of people will tell you its official name is Intruder. Who's right?

Correct answer: Neither.

The Mustang sprang from a request the British Purchasing Commission (BPC) made to NAA in March 1940. The BPC requested that NAA build P-40s under license from Curtiss-Wright Corp. Curtiss had told the RAF that its plant was building as many P-40s as quickly as it could. NAA told the BPC representatives that it could build a better aircraft using the same Allison engine that powered the Curtiss P-40, and that it could have a flying example of this aircraft ready to go in 120 days. (NAA had a pursuit aircraft, NA-509, that had been drawn up, but there were no detailed blueprints. It's believed that the NA-73X sprang from that design.)

That much is history, but because of a delay in getting the necessary

A-11-G NAA Mustang file

Charge to the account of _____

CLASS OF SERVICE	CLASS
TELEGRAM	DAY
TELETYPE	NIGHT
WIRE	DAY
WIRE	NIGHT
WIRE	DAY
WIRE	NIGHT
WIRE	DAY
WIRE	NIGHT

WESTERN UNION
NEWCOMB EARLTON
CHAIRMAN OF THE BOARD
J. C. WILLEVER
FIRST VICE-PRESIDENT
A. N. WILLIAMS
PRESIDENT

1211-B

CHECK
ACCOUNTING INFORMATION
TIME FILED

Send the following telegram, subject to the terms on back hereof, which are hereby agreed to

JULY 13, 1942

15916

COL. ARTHUR I. ENNIS
CHIEF, PUBLIC RELATIONS BRANCH
U.S. ARMY AIR FORCES
MARITIME BUILDING
1818 H STREET, N.W.
WASHINGTON, D.C.

UNDERSTAND FROM AERONAUTICAL CHAMBER OF COMMERCE THAT AIR FORCES CONTEMPLATING OFFICIALLY NAMING ALL ARMY AIRCRAFT IN NEAR FUTURE. ACCORDINGLY, WE SUBMIT THE FOLLOWING AS OUR PREFERENCE FOR NORTH AMERICAN AIRCRAFT: FOR ALL NORTH AMERICAN FIGHTERS OF P-51 TYPE WE SUGGEST NAME "MUSTANG", WHICH HAS LONG BEEN USED BY THE BRITISH AND WIDELY PUBLICIZED THROUGH NEWS AND ADVERTISING. FOR ALL NORTH AMERICAN BOMBERS OF B-25 TYPE SUGGEST NAME "MITCHELL", WHICH ALSO HAS BEEN WIDELY USED, AND HAS JUST BEEN OFFICIALLY ADOPTED BY THE BRITISH FOR USE IN ALL NEWS DISPATCHES REFERRING TO B-25. LETTER FROM BRITISH GOVERNMENT STATING THEY WILL USE NAME "MITCHELL" FURTHER STATES THAT THEIR USE OF THIS NAME HAS BEEN APPROVED BY ARMY AIR FORCES. FOR ALL NORTH AMERICAN COMBAT TRAINERS OF AT-6 TYPE WE SUGGEST NAME "TEXAN." WE ARE PARTICULARLY ANXIOUS TO DROP THE NAME "HARVARD" PREVIOUSLY USED BY BRITISH FOR NORTH AMERICAN TRAINERS IN FAVOR OF THE NAME "TEXAN" INASMUCH AS ALL TRAINERS ARE NOW BUILT IN OUR TEXAS PLANT AND WE BELIEVE IT WOULD BE AN EXCELLENT TRIBUTE TO THE SPLENDID PRODUCTION JOB THEY ARE DOING.

Credit: The Boeing Company

J. H. KINDELBERGER
PRESIDENT
NORTH AMERICAN AVIATION, INC.

WANT A REPLY?
"Answer by WESTERN UNION"
or similar phrase may be
included without charge.

Exhibit A.

Allison delivered to NAA, the aircraft, NAA Model NA-73X, flew for the first time on October 26, 1940. That was approximately 155 days, give or take, from the contract date.

The fourth Mustang model was the NA-97. Its USAAF designation was A-36A. The contract for 500 A-36s didn't get filled until August 1942. That timeline is significant in light of the telex NAA President James H. "Dutch" Kindelberger sent to Col. Arthur I. Ennis, chief of the USAAF public relations branch, on July 13, 1942. (See the telex scan above. The Boeing Co.'s historical archivist emailed it to me in 2019.)

Prior to this, the NAA had designated two Mustang models Apache. They were the two XP-51 aircraft (serial Nos. 41-038 and 41-039) taken from the first 10 NA-73s, which were being built for the RAF as Mustang Mk. I aircraft, and the NA-91 aircraft "held back" from the RAF order.

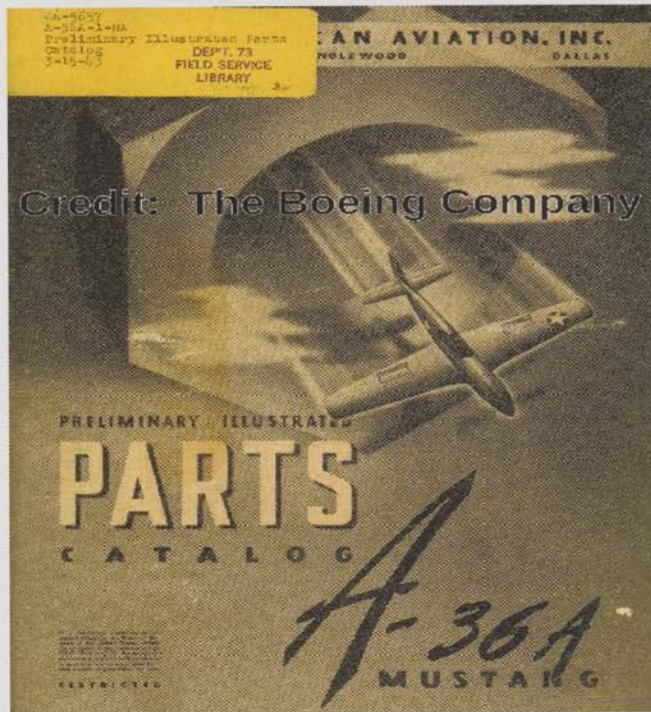


Exhibit B.

The A-36A attack/dive bomber. Many folks, some of whom write books about WWII aircraft and articles for print magazines and websites, insist on calling it the Apache. A similar number of people will tell you its official name is Intruder. Who's right?



North American Apache (U.S.) The British call it "The Mustang"

Enlargement of image and text on advertisement

EVERY piston nose plane seeing our air force today is Allison powered. Only plane with liquid-cooled engines like the Allison can have such complete consistency with all the new in added fighting efficiency.

In Allison powered planes the consistency is essential by the most necessary for the pilot. The engine is so vital that the pilot's demands.

You're going to see more and more nose like this from now on—because thousands of Allison engines were last service starting 1929—and that's only the beginning.

Allison production has hit its stride. More than 14,000 trained mechanics—working in more than 2,000,000 square feet of floor space—are turning out these superb engines so fast as plane manufacturers can take them.

You'll be seeing more of them in our own way airfields, and in pictures from Hawaii, the Philippines and the Hawaiian and African fronts, because they're giving a great amount of distinction to action that around the world.

The engine of General Henshaw is illustrated and shown here in the engine room of the Allison of the engine of the engine. It is a real beauty to hold and look at. It is a real beauty to hold and look at.

Allison DIVISION GM

The Kindelberger telex was Exhibit A. Exhibit B, (see above left) which was sent along with the telex scan from Boeing, shows the cover of the A-36A's Preliminary Illustrated Parts Catalog.

Note: The RAF reportedly considered designating these NAA aircraft "Apache," but it wanted a name that would "relate more to the American West and the legends of the West." According to at least one reliable source, the British chose "Mustang" because the name fit that bill. They were also reportedly inspired by the popular song "Saddle Your Blues to a Wild Mustang" from February 1936.

When the NA-91 batch came along, it inherited the Apache name because that's what the folks at NAA called it from the outset. But according to some sources, the USAAC/USAAF may have



National Museum of the U. S. Air Force in Dayton, OH

never actually used that name for either the XP-51 or the various aircraft within the NA-91 batch. The Apache name had appeared in some magazine ads during the war's first couple years. Perhaps the Mustang name was therefore not depicted on purpose, lest the Axis find out before the aircraft entered combat. (It may be worth noting that neither of the XP-51s — the first two Apaches — had ever gone overseas, let alone served as combat aircraft, so the only Apache the ad could have been referring to was the NA-91, which had officially been designated "P-51," with no suffix letter):

The NA-97, the Mustang's fourth production model, was designated "A-36A" by the USAAF. It was designed as an attack aircraft — hence, the "A-" prefix. It was the first Mustang that the USAAF ordered for itself, and the contract called for 500 aircraft. All were designated "A-36A." There was no XA-36 prototype nor any later models. After completing numerous calculations and drawings, the engineering department came up with the A-36, but there had been a test-bed aircraft: an NA-83 (Mustang Mk. I in the RAF), which had the RAF serial number AM118 and was that

test-bed aircraft. NAA modified it by strengthening the wing and making other relatively significant changes to the wing structure and the wing's plumbing. One of the A-36A's defining features is the pair of dive brakes on each wing — one above the wing and one below. The dive brakes were rectangular — with slots across them, front to rear — and hydraulically actuated. The top one extended up about 90 degrees, and the bottom one swung down the same number of degrees. The mechanism that deployed the upper dive brake was connected to the lower dive brake, and the pilot could deploy and retract them simultaneously. There was one such set on each wing. (I won't go into the mostly apocryphal story that the dive brakes were usually wired shut in the war zone because of problems with them.)

I took the photo above at the National Museum of the U.S. Air Force in Dayton, Ohio. Aside from the dive brakes, the pylon with a bomb attached, and the two .50-caliber Browning machine guns in the wing, another unique feature of the A-36A can be seen: the wide lens with two lights behind it. This is the landing/taxi light for the aircraft, and it appears only on the left wing. No other Mustang had this type of landing/taxi light setup. Obviously, the flap can also be seen in this photo.

The armament setup was unique to the A-36A: It was the only Mustang with two .50-caliber Browning "nose/cheek" machine guns to go with two .50-caliber Brownings in each wing. To the right is a photo of the first A-36A that I saw. It was at the Lone Star Flight



A-36A at the Lone Star Flight Museum in 1995.



Museum in 1995. It shows the two nose guns. (Note that they're staggered. The right gun is set 6 or 7 inches farther back so the linked .50-caliber ammo can "feed" into the left gun.)

Another Mustang feature worth noting is the pitot probe. Here is a mini-collage. On the top is a wartime photo of an RAF Mustang Mk. I (from the NA-73 batch). I took the photo on the bottom during my previously mentioned visit to the USAF Museum in Ohio. The Mustang Mk. I — and all other Mustangs, regardless of their model number — have an L-shaped pitot probe.

For what it's worth, the strengthened wing in the A-36A — minus the dive brakes and associated hydraulic lines, etc. — was pretty much

the same as the wing on some of the follow-on models: the last production Allison-powered member of the Mustang family, the NA-99 (P-51A); the first production Merlin-powered P-51B; and, a little later, the P-51C, which was identical to the P-51B but was built in Dallas instead of Inglewood, California (the P-51B/C had various NAA model numbers). There were minor visual differences

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between the A-36A and the P-51 models when it came to the pitot assemblies and the landing/taxi lights for the P-51B/Cs. Furthermore, the P-51B/C's wing was further strengthened because the maximum aileron "throw" angle was increased.

So where did the Apache name come from?

The more-or-less temporary Apache designation for the two XP-51s and the approximately 58 P-51s – combined with ads in both popular and aviation-related magazines – led to some confusion as recently as the early 1970s.

If you're researching this "obscure, almost-unknown, underpowered, probably useless member of the Mustang family" (as so many writers like to describe the aircraft), you can consult one of the relevant wikis, look to books and magazines from the 1940s, or find other contemporary information sources. Some of these sources might lead you to believe that the A-36 was named the Apache. Here's one of two widely printed North American Aviation ads that have contributed to many writers' confusion about the name.

Note that this is an ad from a *September 1941* magazine that probably was written in July or August 1941. The A-36A didn't even exist at the time. The United States had not even entered the war yet. The two XP-51 aircraft from the NA-73 batch



On the left: Page 175 of the September 1941 issue of *Flying and Popular Aviation* magazine. On the right: The issue's cover.

that was built for the RAF existed, and the NA-91 aircraft were just beginning production. Again, the XP-51s and NA-91s were the only aircraft in this family that were ever called Apache, and that was for less than a year. The A-36A contract was opened in April 1942 (and wasn't finalized until August 1942). This April 1942 date is important because, obviously, the A-36 wasn't even a dream yet. The Apache name was dropped for Mustang family aircraft as a result of Dutch Kindelberger's telex to Col. Ennis.

These facts should be enough to settle the issue, but the A-36A Apache error continues to this day.

It brings to mind the old adage, often attributed to Nazi propagandist Joseph Goebbels, that if you repeat a lie often enough, it becomes the truth.

So what about the Invader name, which many folks claim is the A-36A's true designation? The 12th Air Force, which fought in North Africa, Sicily, and Italy, relied heavily on A-36A aircraft. They made tactical air strikes against Axis gun emplacements, bridges, railroads, etc. As they advanced northward, pushing the enemy basically to the north, A-36s (as well as other aircraft) in the 86th and 27th fighter-bomber groups began to use former Axis air bases.

As the story goes, a ground crewman or pilot quipped that they should have named the A-36 "Invader" because that's what they were doing: invading Axis territory and taking over the enemies' airstrips. This name was then used in the same way that current Air Force members call the F-16 Fighting Falcon by the nickname "Viper." Various books and periodicals note that the pilot who advocated for the change was Lt. Robert Walsh of the 86th Fighter-Bomber Group of the 12th Air Force. He was reportedly so adamant about calling this aircraft "Invader" instead of "Mustang" that he started a petition among the pilots and ground crew members in his group asking that the A-36's designation be changed. The request was reportedly sent to NAA and the USAAF, but it was a nonstarter because the Douglas A-26 attack aircraft was already called the Invader.

Many of us have seen the Invader name in NAA ads, and even on some "official" aircraft identification/recognition documents of the day. One thing I'm about 99.9 percent sure of is that the A-36 was never called Apache during the World War II.

There's one more A-36A myth that just won't die, and it's just as easy to disprove through use of historical records, popular magazines of the day, and the airframe and engine manufacturers' documents and newsletters. That myth: the A-36 is a derivative of the P-51A. In fact, the P-51A Mustang's design and production began after the A-36A's production, and it incorporated many of the same features in the wing that were introduced with the A-36. Bill Marshall, co-author of *P-51B Mustang: North American's Bastard Stepchild That Saved the Eighth Air Force*, has stated more than once that production of the P-51B overlapped with that of the A-36s and P-51As for a time. This means that, for a short while, the A-36A, P-51A, and P-51B were being built at the same time, in the same NAA location, in Inglewood, California.

Finally, after seeing a photo of the A-36 signage at the National Museum of the U.S. Air Force with the Apache name on it, I contacted the curator. He naturally wanted documentation (and I didn't have nearly as much documentation then as I do now). That was in late 2017, and after the curator looked into it, he told me that they would change the sign but that "the wheels of the government turn slowly," and nothing would happen until the following year. I found out in

The Apache name was dropped for Mustang family aircraft as a result of Dutch Kindelberger's telex to Col. Ennis.

September 2018 that the signage had been changed, and my wife and I were able to take a side trip during a driving vacation in October of that same year to see "my" sign and take numerous photos of the object of my affection.

I can't say that my work here is done because I am working on curators at a couple other aircraft museums. While the USAF Museum is the only such facility with an A-36, other museums include the aircraft on their websites, and the majority of them have the name as Apache, while some say that the official name of the A-36 was Mustang but that it's also known by the nickname Invader. ✈

North American

A-36A MUSTANG

Also nicknamed the "Apache" or "Invader," the A-36A dive bomber was the first US Army Air Forces version of the Mustang, officially developed for Britain in 1940. The first A-36 flew in September 1942, and North American Aviation completed production of 500 A-36As in March 1943. Assigned to the 27th and 86th Bombardment Groups (Dive), the A-36A first saw action over the Mediterranean island of Pantelleria in June 1943.

During the Italian campaign, A-36A pilots flew bomber escort and strafing missions as well as ground support bombing attacks. A-36As also served with the 311th Fighter-Bomber Group in India. In 1944, bomb rack equipped P-51s and P-47s replaced the A-36A when experience showed that these high-altitude fighters were more suitable for low-level missions than the A-36As.

The Museum's A-36A was donated by Charles P. Doyle of Rosemount, Minnesota and was restored by members of the Minnesota Air National Guard. It is marked to represent the A-36A flown by Capt Lawrence Dye, a pilot of the 522nd Fighter-Bomber Squadron, during combat in North Africa and Italy.

WWII

World War Two

TECHNICAL NOTES

Armament: Six .50-cal machine guns; 1,000 lbs of bombs externally

Engine: Allison V-1710 of 1,325 hp

Maximum speed: 365 mph

Range: 550 miles

Ceiling: 25,100 ft

The new sign is pictured in the top part of this mini-collage.

North American

A-36A APACHE

Unofficially named the "Invader," the A-36A Apache dive bomber was first US Army Air Forces (AAF) version of the Mustang (the Mustang was originally developed for Britain in 1940). The first A-36A flew in September 1942, and North American completed production of 500 A-36As in March 1943.

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TECHNICAL NOTES

Engine: Allison V-1710 of 1,325 hp

Maximum speed: 365 mph

Range: 550 miles

Armament: Six .50-cal machine guns; 1,000 lbs of bombs externally

The aircraft on display was obtained from Mr. Charles P. Doyle of Rosemount, Minnesota in 1971. Restored by the 148th Fighter-Interceptor Group, Minnesota Air National Guard, it is painted as the A-36A flown by Capt Lawrence Dye, 522nd Fighter-Bomber Squadron, in Tunisia, Sicily, and Italy.