

F-82 Twin Mustang

P-82/F-82 Twin Mustang



XP-82 prototype

Type Heavy [fighter](#)

Manufacturer [North American Aviation](#)

Designed by [Edgar Schmued](#)

Maiden flight [6 July 1945](#)

Introduced [1946](#)

Retired [1953](#)

Primary user [United States Air Force](#)

Number built 270

Unit cost US\$215,154^[1]

Developed from [P-51 Mustang](#)

The [North American F-82 Twin Mustang](#) was the last [American](#) piston engine fighter ordered into production by the [United States Air Force](#). Based on the P-51 Mustang, the F-82 was originally designed as a long-range escort fighter in World War II, its postwar role changed to that of night-fighting. Radar-equipped F-82s were used quite extensively by the Air Defense Command as replacements for the [P-61 Black Widow night fighter](#). During the [Korean War](#), Japan-based F-82s were among the first USAF aircraft to operate over Korea. The first three North Korean airplanes destroyed by US forces were shot down by F-82s.

Design and development

Initially intended as a long-range [escort fighter](#), the F-82 was designed to escort B-29 bombers on long missions over Japan during a planned U.S. invasion of the Japanese home islands that never materialized. It consisted of a [two fuselage](#) design, somewhat similar to the experimental German [Messerschmitt Bf 109Z "Zwilling"](#). Although based on the [P-51H Mustang](#), it was actually an entirely

new design incorporating two lengthened [P-51H Mustang](#) fuselages mounted to a newly-designed center wing, tail and propellers, as well as having a unique four wheel landing gear. Prototype YP-82s, P-82Bs and P-82Es retained both cockpits so that both pilots could fly the aircraft, alternating control on long flights, while later night fighter versions kept the cockpit on the left side only, placing the radar operator in the right position.

Although some P-82B airframes were completed before the end of [World War II](#), most remained at the North American factory in California waiting for engines until 1946. As a result, none saw service during the war.

Like the [P-51 Mustang](#), the first two prototype YP-82s, as well as the next 20 P-82B models were powered by British designed [Rolls-Royce Merlin](#) engines. These provided the aircraft with excellent range and performance, but political pressure forced North American to switch subsequent production P-82C and later models to the inferior [Allison V-1710-100](#) engine. Allison powered P-82 models demonstrated a lower top speed and poorer high altitude performance than the earlier Merlin powered versions. The earlier P-82B models had been designated as trainers, while the "C" and later models were employed as fighters.

Operational service



The second prototype North American XP-82 Twin Mustang (44-83887) being flight-tested at [Muroc Army Air Base](#), California



Strategic Air Command 8th Air Force North American F-82E "Twin Mustangs" of the 27th Fighter Wing on the flightline of Kearney Air Force Base, Nebraska, 1948. Serials 46-322 and 46-332 are identifiable.



North American F-82F Twin Mustang Serial 46-414 of the 27th Fighter Wing, [Bergstrom AFB Texas](#) in black night fighter motif

On [11 June 1948](#), the newly-formed United States Air Force eliminated the P-for-pursuit category and replaced it with F-for-fighter. Subsequently, all P-82s were re-designated F-82. The F-82E was the first model to reach operational squadrons and its initial operational assignment was to the **27th Fighter Wing** at [Kearney Air Force Base, Nebraska](#) in 1948. The 27th used the F-82E to fly long-range escort missions for SAC B-29 bombers. F-82Es continued to fly actively until [1953](#) escorting B-29s, B-50s and B-36s becoming Strategic Air Command's last operational piston-engined fighters.

However, the cessation of hostilities in World War II brought an end to the need for a long-range bomber escort though the F-82 would continue as a replacement for the aging [P-61 Black Widow](#) night fighter.

The night fighter versions, designated the F-82F/G, required numerous modifications to be made to make this possible. The right side cockpit was replaced with a radar operator's position lacking flight controls. More significant was the addition of a long radar pod attached to the underside of the center wing. Resembling a sausage, and irreverently known as a "long dong," the radar unit was installed in such a manner to keep its dish in front of aircraft's propellers. It was also necessary that it be hung from the underside of the wing to prevent it from interfering with six .50 caliber machine guns buried in the center wing. Surprisingly, this unconventional arrangement did little to affect the aircraft's speed or performance. Additionally the unit could be jettisoned in an emergency, or for belly landings and was sometimes lost during high-G maneuvers.

The first F-82F/G models began to reach operational squadrons in late 1948. By the middle of 1949 the F-82 was in widespread service with some 225 E/F/G models being in use by the USAF at [Bergstrom](#), [Hamilton](#), [McChord](#), Mitchel and [McGuire AFB](#). F-82Gs were also deployed to the 347th Fighter Group in [Japan](#). Modified F-82s for cold weather (F-82Hs) were assigned to [Ladd AFB](#), [Alaska](#), and make a brief appearance in the movie "Top of the World" ^[2] (1955).

Korean War

See also: [United States Air Force Aircraft of the Korean War](#)

Although missing its opportunity to fight in World War II, the F-82G would go on to distinguish itself during the [Korean War](#), beginning with one of the least known, and most important air combat missions of the 20th century. In June 1950, US forces in Seoul, South Korea were attempting to evacuate U.S. civilians, including many women and children, from the advancing North Korean Army. A total of 682 civilians had been evacuated on the 26 June aboard the Norwegian freighter *Reinholte*, then visiting [Inchon](#) Harbor and transported to [Sasebo, Japan](#). The remaining civilians were to be evacuated the following day by an Air Force [C-54](#). Fearing that the North Korean Air Force might try to shoot down the transport (a C-54 had been destroyed on the ground at [Kimpo](#) by North Korean fighters on June 25th) the Air Force requested air cover to protect the aircraft during takeoff. The [F-80 Shooting Star](#) was available, but its thirsty jet engine meant it could only remain over the airfield for a few minutes before having to return to base and no P-51 Mustangs were available.

Fortunately, the 4th and 339th Fighter All Weather Squadrons F(AW)S with their F-82Gs were based in Japan and Okinawa at [Misawa](#) and [Yokota](#) Airfields, and the 68th F(AW)S was based at Itazuke airfield. With Lt. Col. John F. Sharp in command, 27 F-82Gs of the 35 in the theater answered the call. Arriving in the early morning, they orbited Kimpo Airfield in three flights, each above the other. Suddenly, at 1150 hours, a mixed lot of five North Korean fighters (Soviet-built [Yak-9s](#), [Yak-11s](#) and [La-7s](#)) appeared, heading for the airfield. One of the Yak-9s immediately scored several hits on 68th F(AW)S pilot Lt. Charles Moran's vertical stabilizer. Moments later, Lt. William G. "Skeeter" Hudson, also of the 68th F(AW)S, initiated a high-G turn to engage the Yak. Soon Hudson was closing in on the Yak's tail. He then fired a short burst at close range, scoring hits with his six .50 caliber machine guns. The Yak banked hard to the right, with the F-82G in close pursuit. A second burst hit the Yak's right wing, setting the gas tank on fire and knocking off the right flap and aileron. The North Korean pilot bailed out, but his observer, who was either dead or badly wounded, remained in the doomed aircraft. Parachuting down to Kimpo Airfield, the North Korean pilot was immediately surrounded by South Korean soldiers. Surprisingly, he pulled out a pistol and began firing at them. The South Korean soldiers returned fire, killing the pilot. Moments later, Lt. Moran shot down an La-7 over the

airfield, while a few miles away, Maj. James W. Little, commanding officer of the 339th F(AW)S, shot down another La-7. The C-54 was able to escape safely. Of five North Korean fighters, only two returned to their base. In the process, Lt. William G. "Skeeter" Hudson, with his radar operator Lt. Carl Fraiser had scored the first aerial "kill" of the Korean War.

It is generally believed that the aircraft Hudson and Fraiser flew that day was an F-82G named "Bucket of Bolts" (s/n 46-383), as their usual aircraft was down for repairs. "Bucket of Bolts" would survive the Korean War and eventually be reassigned to escort duty in Alaska. It is believed to have been scrapped at Ladd AFB, Alaska in 1953.

It is impossible to know exactly what impact the shooting down of a C-54 containing dozens of American women and children would have had on US policy at the beginning of the Korean War. This much is certain, as U.S. forces were being driven south and overrun by advancing North Korean soldiers, President [Harry S. Truman](#) was facing increasing pressure both from his military advisers, as well as members of his own cabinet to strike back decisively, including pressure from Gen. [Douglas MacArthur](#) and [Curtis LeMay](#) to authorize the use of nuclear weapons. Such actions could easily have drawn the [Soviet Union](#) into the conflict.

1951 was the last full year of F-82 operations in Korea, as they were gradually replaced by the jet-powered [F-94 Starfire](#). Twin Mustangs destroyed 20 enemy aircraft, four in the air and 16 on the ground during the conflict.^[1]

By summer 1952, the last surviving Korean War veteran F-82s were flown to [Tachikawa, Japan](#) to be upgraded to F-82H models with the addition of cold weather equipment and additional de-icers. Many of these planes would end up operating with [Strategic Air Command](#) from airfields in [Alaska](#) where they would serve as escorts for the massive [Convair B-36](#) bombers during long flights over the Arctic, finally fulfilling their original mission as a bomber escort. The F-82 did not disappear from USAF inventory until 1953, when a lack of parts and high airtime made it impossible to keep them flying. Many were ultimately scrapped in Alaska.

Record-setting

On 27 February 1947, a P-82B (44-65168) named "Betty Jo" made history when it flew nonstop from Hawaii to New York without refueling, a distance of 5,051 miles in 14 hr 32 min (347.5mph). To this day, it remains the longest nonstop flight ever made by a propeller-driven fighter (the record for the longest nonstop flight by a propeller-driven aircraft is held by the [Rutan Voyager](#)), and the fastest such a distance has ever been covered in a piston-engined aircraft. It should be noted that the aircraft chosen was the earlier "B" model powered by Rolls-Royce Merlin engines.

Variants

NA-123

Basic Development design. The NA-123 design was presented by North American Aircraft to the USAAF in February 1944. The design for the new aircraft was for a long range fighter to penetrate deep into enemy territory. Its immediate role would be to escort the [B-29 Superfortress](#) bombers used in the [Pacific Theater of Operations](#) against [Japan](#). The USAAF endorsed it at once. A letter contract to construct and test four experimental XP-82 aircraft (P-82 designation) gave way in the same month to an order for 500 production models.

XP-82 / XP-82A

Prototype. The USAAF accepted the first XP-82 in August 1945 and a second one in September. Both were equipped with Packard Merlin V-1650-23 and -25 engines. The third

experimental plane, designated XP-82A, had two Allison V-1710-119 engines. It was accepted in October 1945. There is no evidence that the XP-82A was ever actually flown, due to problems with the Allison engines. The fourth XP-82A prototype (44-83889) was cancelled.

At an early stage, it was suspected that once the war was over, the [Packard Motor Car Company](#) would be unlikely to continue the manufacture of V-1650 Merlin engines. In addition, the British economy was severely crippled and [Rolls Royce](#) was forced to charge a substantial license fee for its Packard-built Merlin. This increase, coupled with the Air Force's desire to develop US-designed liquid-cooled engines, led to the decision to switch to the Allison engine. Consequently, the V-1710-119 was specified for the third and fourth prototypes. All the remaining production F-82s ended up being powered by Allison engines.

P-82B

Planned production version. With the end of World War II, production plans were cut back significantly. Against the 500 P-82Bs initially planned, overall procurement was finalized on 7 December 1945 at 270 P-82s. Included were 20 P-82Bs already on firm order and later allocated to testing as **P-82Z**. The USAAF accepted all P-82Zs in fiscal year 1947. Two EA were accepted in January 1946, four in February 1947, and 13 in March 1947. By December 1949, no P-82Bs (by then redesignated F-82Bs) remained in the Air Force inventory. These P-82Bs were basically similar to the XP-82, but differed in having provisions for underwing racks.



P-82C 44-65169 in black night fighter motif. Note the large bulge that carries the radar array, under the wing.

P-82C

Night fighter version. A P-82B, (44-65169) modified in late 1946, for testing as a night interceptor. The P-82C featured a new nacelle (under the center wing section) housing an SCR-720 radar. The SCR-720 was the same radar installation which was carried aboard the [Northrop P-61 Black Widow](#), a considerably larger aircraft which had clearance problems with the engine propellers. The right-hand cockpit became the radar operator's position.

P-82D

Night fighter version. Another P-82B (44-65170) modified with a different radar, the APS-4. The APS-4 was a much smaller set than the SCR-720, and operated in the three cm waveband. As like the P-82C, the right-hand cockpit became the radar operator's position.

P-82E

Escort fighter version. The F-82E followed the F-82B, which it so closely resembled. They were equipped with two counter-rotating Allison liquid-cooled engines, V-1710-143 and V-1710-145. The first four F-82Es were redesignated as F-82As and were allocated for engine testing. After production delays by engine problems and additional testing, F-82Es entered operational service in May 1948. The Air Force accepted 72 F-82Es in fiscal year 1948 (between January and June 1948), and 24 in fiscal year 1949 (22 in July 1948, one in October, and one in December). F-82Es quickly disappeared from the SAC inventory. The first sizeable lot was declared surplus in March 1950.



North American F-82F Twin Mustang night fighter Serial 46-415
P-82F/G/H

Night fighter versions. A nacelle beneath the center-wing that housed radar equipment (F-82F's ANIAPG28 and F-82G's SCR-720C18); automatic pilot; and a radar operator replacing the second pilot. When winterization was added to the F or G, it became an F-82H. Entered operational service in September 1948. One F-82G was accepted in fiscal year 1948 (February 1948), all other F-82s (F, G, and H models) in fiscal year 1949. The last F-82G and six winterized F-82Hs were received in March 1949. In mid-1950, Air Defense units began trading F-82s for F-94s, and in early 1951, the few Twin-Mustangs remaining in ADC were towing targets. The F-82s coming out of Korean combat in February 1952 lingered a bit longer in the inventory. After June 1953, no F-82s appeared on Air Force, Air National Guard or Air Reserve Forces rolls.

Production totals (F-82)

The Air Force accepted a total of 272 F-82s (including 22 prototype, test and early production aircraft). Models and serials were as follows:

- 44-83886/83887 North American XP-82 Twin Mustang
- 44-83888/83889 North American XP-82A Twin Mustang
- 44-65160/65168 North American P-82B Twin Mustang
- 44-65169 North American P-82C Twin Mustang
Conversion of tenth P-82B
- 44-65170 North American P-82D Twin Mustang
Conversion of 11th P-82B
- 44-65171/65179 North American P-82B Twin Mustang
- 46-255/354 North American P-82E Twin Mustang
- 46-405/495 North American P-82F Twin Mustang
- 46-355/383 North American P-82G Twin Mustang
- 46-389/404 North American P-82G Twin Mustang
- 46-384/388 North American P-82H Twin Mustang
- 46-496/504 North American P-82H Twin Mustang

All examples were redesignated as F-82 in 1948. Specifically, the F-82 program consisted of two XF-82s, one XF-82A, ten F-82Bs (known for a while as P-82Zs and all allocated to testing), four F-82As, 96 F-82Es, 91 F-82Fs, 45 F-82Gs and 14 F-82Hs.

One F-82G was accepted in fiscal year 1948 (February 1948), all other F-82s (F, G, and H models) in fiscal year 1949. The last F-82G and six winterized F-82Hs were received in March 1949.

USAF F-82 Units

- 27th Fighter Wing, F-82E (1948-1950)
 - (522nd, 523rd, and 524th Squadrons)
- 325th Fighter Wing, F-82F/G (1948-1950)
 - (317th, 318th, and 319th)

- 51st Fighter Wing, F-82F/G (1949-1950)
 - (4th*, 16th, 25th, and 26th Squadrons)
- 52d Fighter Wing, F-82F/G (1948-1950)
 - (2d and 5th Fighter Squadrons)
- 347th Fighter Wing, F-82F/G (1949-1950)
 - (4th*, 68th, and 339th Squadrons)
- 5001st Composite Wing, F-82H (1949-1953)
 - (449th Squadron)

* 4th Fighter (All Weather) Squadron assigned to 347th Fighter Group effective 20 February 1947, but attached to 51st Fighter Group 20 February 1947 - 24 June 1950. Squadron permanently reassigned to 6302d Air Base Group, 20 September 1950.

The 4th, 68th and 339th Fighter (All Weather) Squadrons served in combat during the [Korean War](#).

- 4th F(AW)S Assigned to:
 - 6302d Air Base Group (20 September 1950 – 24 June 1951)
 - 6351st Air Base Wing (25 June 1951 – 1952)
- 68th F(AW)S Attached to:
 - 8th Fighter-Bomber Group (1 March - 1 December 1950)
 - 51st Fighter-Interceptor Group (25 September - 9 October 1950)
- 339th F(AW)S Attached to:
 - 8th Fighter-Bomber Group (26 June - 5 July 1950)
 - 35th Fighter-Interceptor Group (6 July - 1 December 1950)

Operators

[United States](#)

- [United States Army Air Force](#)
- [United States Air Force](#)

Survivors

"Betty Jo" is currently on display at The [National Museum of the United States Air Force](#), in [Dayton, Ohio](#) in its Cold War gallery.

Three other F-82s are known to exist. F-82E (46-262) has been a "gate guard" for many years outside Lackland AFB in Texas as part of the USAF History and Traditions Museum in San Antonio, Texas while a second F-82B that had been on display next to it, was acquired by the former [Confederate Air Force](#) in 1966 and was operated for many years by its Midland, Texas squadron. That F-82B stalled and crashed in Harlingen, Texas in 1987. The aircraft was restorable but its unique props and landing gear were destroyed in the crash and replacement parts could not be obtained. In 2002, the CAF included it with a crashed P-38 in a trade for a flyable P-38. The USAF stepped in and demanded the F-82 be returned since it was only loaned to the CAF on the condition that the CAF keep it. The matter has now been resolved in favour of the [Commemorative Air Force](#) (the renamed organization). A single fuselage of the second YP-82 was located for many years on the farm of Walter Soplata in Newbury, Ohio. It was sold several years ago and its current whereabouts are unknown.



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Related development

- [P-51 Mustang](#)

Comparable aircraft

- [de Havilland Mosquito](#)
- [F7F Tigercat](#)
- [Heinkel He 111Z](#) - another "twinned" aircraft
- [Heinkel He 219](#)
- [Messerschmitt Bf 109Z](#) - also a "twin" aircraft
- [Messerschmitt Me 609](#)
- [P-61 Black Widow](#)

Designation sequence

- *Pre-1948 USAAC/F:*
 - [XP-79](#) - [P-80](#) - [XP-81](#) - **P-82** - [XP-83](#) - [P-84](#) - [XP-85](#)
- *Post-1948 USAF:*
 - [F-80](#) - [F-81](#) - **F-82 Twin Mustang** - [F-83](#) - [F-84](#) - [XF-85](#) - [F-86](#)