FIGHTER PROJECTS

Sabre Jet Classics

Volume 1 Number 1 Spring 1992

The feature publication of the Sabre Jet Historical Society

Welcome! • Meet Hank Buttelmann, Korea's 36th Sabre Ace
The History Of The F-86A • Photo Album • NASM's F-86A-5
Early Sabres That Never Went Into Production • And Much More!

Hank Buttelmann's F-86E

PREMIER ISSUE

Photo Credit: Courtesy of Hank Buttelmann

Flight Lines

Welcome

Welcome to the **Sabre Jet Historical Society.** It's great to have you with us!

This is the first issue of **Sabre Jet Classics.** Our feature publication is dedicated exclusively to the past, present and future activities (you will be surprised how many F-86s are still flying today!) of the North American Aviation F-86 Sabre and its foreign-built variants. We'll be bringing you historical articles, interviews, photographs and coverage of practically anything that is meaningfully related to the Sabre Jet.

The **Sabre Jet Historical Society** (or **Sabre Society** for short) was created in 1991 after your editor completed more than a year's worth of background research into the complete history of the F-86 and all foreign-built variants. **Sabre Jet Classics** was created as a means of further developing the history of the F-86 as an ongoing historical review to survey the experiences of others while publishing material the editor is developing on the Sabre Jet. But we wish to make it clear that the **Sabre Society** is **not competing with, nor intended to take the place of, several other very fine organizations currently in existence that promote the F-86, such as the Classic Jet Aircraft Association** or the **F-86 Sabre Pilots Association** (I have worked with members of the **Sabre Pilots**, and they are a tremendous group). Instead, we plan to fully promote their Sabre-related activities and assist them wherever possible. Their goal is to keep the legendary '86 alive, which is **our** goal, too.

Because we are a small historical society not directly affiliated with the Air Force, North American Aviation or Rockwell International, we may not have **all** the immediate answers to your inquiries. We will, however, do our best to find those answers, and we will report the results in our magazine. We welcome your letters and feedback, and future issues will have a "letters" column. If you have a story idea that you would like to submit for consideration in our magazine, please type and send it for our review. We'll help you polish the writing if needed. We'll also give you the byline as the writer.

Keep in mind we are a non-profit volunteer group. No one, not even your editor, is paid for services rendered in operating our organization. But don't let that stop you from writing an article about your Sabre-related experiences or loaning your photos. **Our goal is to promote the F-86 Sabre**. Putting together a storyline is one way of doing just that.

As I mentioned earlier, we will cover as many topics as we can in each issue. Together we will unfold the fascinating background and present day activities of the incredible F-86 Sabre.

Thanks for joining us!

SUPPORT SERVICES

- Help in answering questions or problems is always available for free provided a stamped return envelope is included with your request.
- Back issues of **Sabre Jet Classics** are available while they last of $3.00 each which includes shipping charges.
- If you receive any form of reminder letter from the Society, you are **required** to follow up promptly in answering the request, which is only to ask for additional information. Remember, incomplete or inaccurate information hurts **everyone** in the Society. *Please don't put off a request!*
- **Sabre Jet Classics** welcomes Sabre-related photographs and articles. If needed, we will work with you to polish your article and publish it. You will be credited in our magazine for your photos or articles, however, because we are an all volunteer organization, there is no monetary reimbursement for submitted materials.

Sabre Jet Classics

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Address all correspondence to: **Sabre Jet Historical Society**, 428 Madingley Road, Linthicum, Maryland 21090, USA. The group may also be referred to as the **Sabre Society** or **Sabre Jet Society**. **Sabre Jet Classics** is published quarterly by **FIGHTER PROJECTS.** Annual dues are $12.00. All memberships expire as of December 31 each year. Every paid member will receive a complete set of four issues of **Sabre Jet Classics** by that date. All payments are to be made payable to the **Sabre Jet Historical Society**. All mailings are sent first class.

Sabre Jet Classics is expertly printed by Mr. Donald Dailey and Mr. John Palmer and their fine staff at Minuteman Press, 10 Aquahart Road, Glen Burnie, Maryland 21061. The **Sabre Society** is an independent, civilian administered, non-profit organization, not directly affiliated with the United States Air Force, North American Aviation or Rockwell International. The views expressed in this publication are not necessarily those of these other organizations. The **Sabre Society** is dedicated to the history and future of all American F-86s and foreign-built Sabre variants. **Our goal is to promote the F-86 Sabre.**

Photo Album

Would you like to have your personal Sabre photos published in a future issue of **Sabre Jet Classics?** You bet! Let us know what you have to loan for our consideration in a future issue.

This issue we are pleased to present several of Hank Buttelmann's excellent 35 mm pictures from his private collection. All of Hank's pictures were taken at Suwon, Korea in 1953 when he flew with the 25th Fighter Interceptor Squadron.

F-86Es from the 25th FIS sitting on alert in February with pilots in their cockpits.

Numerous 25th FIS Sabres had just returned to Suwon from a combat mission when this picture was taken between April and June.

Sabres from the 25th FIS taxi for takeoff before a mission that spring.

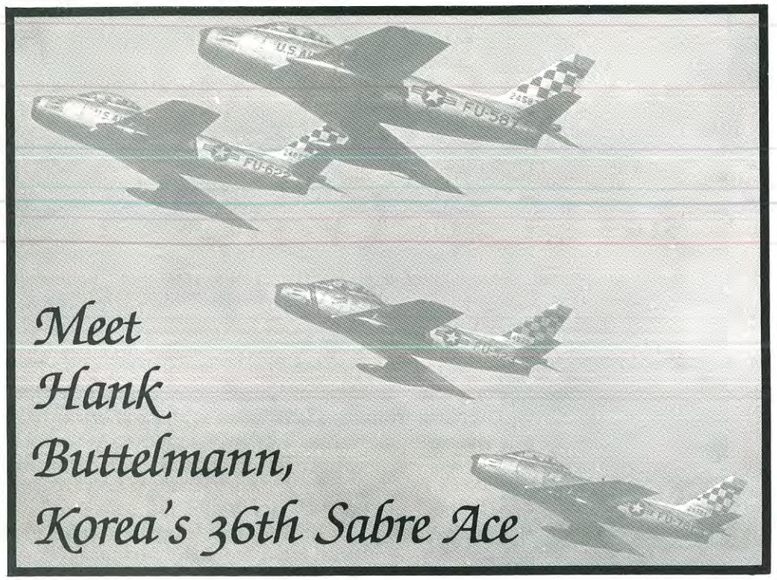
The pilots of "D" Flight gather for a picture in spring 1953 while at Suwon. From the left, Fred Mamerow, Hank Buttelmann, John Winters and Bob Brackett.

Sergeant Farmer removes the tail section of Hank Buttelmann's F-86E while at Suwon in June 1953. This is also this issue's cover Sabre.

Lieutenant Colonel Henry "Hank" Buttelmann is currently the president of the ***F-86 Sabre Pilots Association****, an outstanding group dedicated to maintaining contacts with other Sabre pilots. They currently have over 600 members. While your editor was researching the background information for our* ***Sabre Society****, I had the opportunity to interview Hank about his F-86 experiences in Korea.*

Hank graduated from the aviation cadet program in August 1952. He flew T-6s, T-28s and T-33s while in training. He went to advanced gunnery school at Nellis Air Force Base where he first flew F-80s and then both the F-86A and the "E". A month before he finished training at Nellis, Hank was assigned to go to Korea at age 23. On June 30, 1953, Hank shot down his fifth MiG-15 and became the war's 36th Sabre ace. He bagged two more MiGs in Korea before the truce was called. Later during the Vietnam War, Hank returned to combat in 1965 and flew 47 missions in the F-105. His second tour in southeast Asia in 1969 added 234 more missions, but this time in the F-100.

As Hank told us, "I have yet to meet any F-86 pilot that did not say that his one year in Korea was probably the high point of his life." Here then we present some of the highlights from our discussion with Hank Buttelmann . . .



Q: Were you with the 25th Fighter Squadron when you were in Korea?

A: Yes.

Q: Was that an exciting time?

A: Yes! Of course, the more we got into the fighter business, the more we became attached to it, and the more it became a part of us. It was pretty good! Fighters were aircraft with a mission that bound guys closely together. For most people I know who went to Nellis and Korea, it was the high point of their lives.

Q: When did you arrive in Korea?

A: December 23, 1952.

Q: Where were you based?

A: I went to Suwon, about twenty miles south of Seoul.

Q: When did you fly your first mission?

A: We had five or six local rides in the F-86. Then I flew my first mission the 15th of January, 1953.

Q: Was that as a wingman?

A: Yes. We flew wing from Suwon for 55 to 57 missions. We had to fly a number of missions and work our way up the ladder. When we became more senior with enough time and number of missions in the theatre, then we moved into a number three slot, a shooting position.

Q: Which model Sabre did you fly?

A: We flew the F-86E.

Q: What briefings were you given about the MiG-15?

A: We knew they flew higher and were lighter than us. We knew what armament they had. We knew the MiG accelerated faster because it was lighter, but we also knew it could not go through the Mach like the F-86. But as far as other comparisons with the F-86, we had nothing.

Photo courtesy of Hank Buttelmann

Hank Buttelmann stands in the alert area at Suwon in March 1953.

Q: When was your first combat with a MiG-15?

A: When I was checked out as the number three man by my operations officer. It was around my 57th mission when I was fortunate enough to get my first MiG. Our mission was a MiG sweep. We were in MiG Alley on a normal patrol when I noticed a flight of MiGs. They were very low. Most of their flying during that time was usually at lower altitudes. We patrolled at altitude simply because we were 220 miles from home and had droptanks. After we punched our tanks off, I saw these MiGs heading home. I called the leader, and he rolled in after them. We were high and they were low. I was behind the leader as he went in on his bounce. He had his speed brakes down and came in fast. Unfortunately, he misjudged and rolled out way behind the MiGs. He obviously was not closing on them. I popped my speed brakes in and slid behind one MiG. I gave several short bursts when suddenly his canopy blew off. He was still flying. Then I gave him two more short bursts, and the pilot ejected. I was very fortunate.

Q: Did they see you attack?

A: I never believed they saw us. The odd part about the kill was that after we rolled in, the MiG pilot never rolled his wings more than ten or fifteen degrees from straight and level. We came in behind in that kill, and I hit him with several bursts. I saw an explosion which must have been in a critical area. Even with that, the guy never made a single turn! It was an easy kill.

Q: When did this occur?

A: June 19, 1953.

Q: Did you have your fifth kill by June 30, 1953?

A: That is right.

Q: So from mid-June through the end of the war in July, this was another very concentrated period for you?

A: Yes, it was. I was checked out as an element leader with 57 missions on June 19, 1953. June and July '53 turned out to be the two months where more MiGs were shot down than any other time in the war. From January '53, when I flew my first mission, until mid-June, I saw the MiGs only twice, and on both cases, there were no engagements. From mid-June through July 1953, I saw MiGs on 80% of my missions.

Q: Did you notice the quality of the communist pilots deteriorating toward the end of the war?

A: It is hard for me to evaluate this because all my encounters came in a short period, from mid-June through July 1953. During this period, I had one encounter that I was more than happy with when it was all over. I got bounced by a MiG but I was able to get him to overshoot me, and I immediately wound up in a scissor with him. The scissor was not my favorite maneuver with a MiG, but I had no choice. After four or five scissors, I was able to stay even with him, but we were loosing altitude and airspeed. This guy gave absolutely no sign of exiting the hassle, and while I still had enough altitude and airspeed to dive away, I exited the engagement feeling eventually he would be able to outturn me. The rest of my engagements were not this tough.

Q: Which one was the most difficult kill out of your seven?

A: The most difficult kill came when our flight got involved with two flights of MiGs. I had just shot down a MiG when I looked back and saw another MiG firing at me. I was lucky because he was a little out of range. I broke into him, and at that instant, I was hit underneath my fuselage about one foot behind my burner cans. I immediately got two fire warning lights. I pulled my power back to about 90% and kept turning into the MiG. At this point he broke off. Had he stayed, he would have done alright! As he broke, I rolled out. Again I was extremely fortunate because there were thunderstorms in the area. I got into the weather and stayed there. That saved me. Had it not been for the poor weather, I would have been in *real* trouble! I climbed through the weather and worked my way home. I was fortunate enough to bring the aircraft back. That was also my most difficult mission.

Q: How many missions did you fly in Korea?

A: I had 65.

Q: Did the MiG-15 have the edge over the F-86 in maneuverability?

A: No. I never worried I was flying against a superior aircraft or one that had an edge. The F-86 was probably the most honest, easiest, most forgiving and the most fun aircraft I ever flew in the service. The MiG had certain advantages over the F-86, but the MiG pilots could not take those advantages in most cases because of poor training.

Q: How did you feel when you got your fifth kill and were on ace?

A: When I got my fifth kill, it topped what eventually became the most memorable eleven months of my life. My three months at Nellis in advanced gunnery training was just great flying, and when I left there, I knew I had passed a major milestone leading to starting my fighter career. Then the seven months in Korea were unbelievable! They had to be experienced to be fully understood. The combat flying, the parties, the rest and recreation, and the close relationships with my flight and squadron pilots developed into the tightest comraderie one could imagine. Then top that off with being in the right place at the right time, and I had a situation that generally only happens once in a lifetime.

Q: Do you have a favorite F-86 story?

A: Whenever I think about the F-86, I think of that one mission when we ran into a tremendous number of MiGs, and I got hit. I had both the forward and aft fire warning lights on, and it was the worst situation I ever had flying. It was a time when the F-86 held together and brought me away from a really tough situation. It also carried me 200 miles home. The F-86 was a super airplane. It was one of the first true day fighter aircraft. Many jets followed the F-86. They had more sophisticated equipment and flew faster, but none were the pure day fighter the F-86 was. On that one mission, that bird truly took care of me. That is the mission that will stick with me forever simply because the Sabre took a bad hit, got me out of there and back home again.

Q: Do you have any final thoughts on the Sabre?

A: I flew the F-100 after the F-86, but it did not compare with the F-86. I flew the F-105 which was not a day fighter. It was a fighter-bomber, and in that respect, it did an excellent job. We have to go to the F-16 before we come across probably the next best day fighter aircraft. The F-16 is probably in the same class today as the F-86 was then. There was no aircraft that was as honest or as good as the F-86 was in the Air Force for a number of years after the F-86. **Most of us have a soft spot for it**. Our feeling for the aircraft was more enhanced after we got into combat. There is nothing like combat that really brings guys or memories together, because we were out there laying our backsides on the line with other guys that had the job protecting us. There was a little organization within the flight, and there were certain rules we had to follow. Korea was a time when we were young, overseas and in combat, and we connect that with the F-86. That combination left a deep impression on me that I never duplicated elsewhere. Flying the F-86 in combat was a major time in my life.

Thank you, Hank!

The History of the F-86A

On November 20, 1946, North American received its first order for 33 model P-86s. This contract was increased to 221 on December 28, 1947, with 33 to be P-86As and 188 to be P-86Bs, powered by General Electric J47-GE-1 jet engines developing 5,200 pounds of thrust. The first production Sabre was the P-86A-1, North American Model NA-151, which by June 1948 was redesignated F-86A-1. It was produced at Inglewood, California and therefore carried the company suffix "NA", such as in F-86A-1-NA. Its production began on the assembly line when the last FJ-1 Fury was completed for the Navy. The F-86B, which is discussed later in this issue, never went into production.

The F-86A was a day fighter. These Sabres were armed with six .50 calibre M-3 machine guns in their forward fuselages, and early "A"s had gun "doors" or covers over their gun blast exits. The Type M-3 .50 calibre machine guns each had a removable ammunition container below to hold a maximum of 300 rounds per gun. There were also containers in the lower fuselage to collect the spent shell cases and links. The guns were charged on the ground through a manual charger in each fuselage side. Stoppages in the guns could not be cleared while flying. The gun camera in the nose of the fuselage ran automatically when the guns or rockets were fired. The camera could also be operated independently of the guns or rockets. Electric gun heaters were provided in the gun compartments. The gunsight in the cockpit projected an image of either a dot and a circle or a dot and ten diamond-shaped dots on the windscreen armor glass or on the reflector glass behind the windscreen. This image allowed for the necessary lead for the machine guns to be fired. The radar equipment provided only for ranging information. The radar automatically locked onto the desired target. It also indicated when lock-on was made. The radar-ranging gunsight was affected by ground effects to some extent when flying below 6,000 feet.

F-86As were built in production blocks. They used serial numbers 47-605 to 47-637, 48-139 to 48-316 and 49-1007 to 49-1339. A total of 554 "A"s were built using General Electric J47-GE-1, -3, -9 and -13 engines developing 5,200 pounds of thrust. This jet engine used a 12-stage compressor with eight combustion chambers and a single-stage turbine. The F-86A's wingspan was increased by one inch to 37 feet, 1 inch. The empty weight rose to 10,093 pounds, but the maximum speed at sea level greatly increased to 679 miles per hour, an improvement of 80 miles per hour over the three prototypes. Cruising speed was 533 miles per hour, and 40,000 feet could be reached in 10.4 minutes. The service ceiling stood at 48,000 feet, but the range fell to 660 miles. A total of 2,000 pounds of bombs could be carried. The horizontal tail surfaces were of conventional design without any "artificial feel system" as later models used. The head and back rests were armorplated. Early "A"s had fiberglass forward fuselage intakes, vertical stabilizer tips and vertical stabilizer forward dorsal fins. All "A"s had cockpits painted black.

The first P-86A-1, serial number 47-605, was flown by North American's chief engineering test pilot, George S. "Wheaties" Welch, a hero from the Pearl Harbor attack, on May 20, 1948. The first two F-86As were accepted by the Air Force on May 28, 1948. On the next day, another 333 F-86As (Model NA-161) were ordered. North American built 33 F-86A-1s with most used for testing. At least one, 47-608, was tested to –65 degrees F at the climatic hangar at Eglin Air Force Base in Florida.

The F-86A was the fastest combat aircraft in the United States Air Force at this time. On September 5, 1948, North American and the United States Air Force decided to break the official world speed record at the Cleveland National Air Races. Major Robert L. Johnson of the Air Materiel Command flew an F-86A-1, 47-611, to 669.480 miles per hour, but it was an unofficial record because of poor weather and timer problems. On September 15, 1948, however, he flew another F-86, 47-608, to an official record of 670.981 at Muroc Dry Lake in California to set a new speed record over a three kilometer course. Accelerated service tests were initiated on the F-86A at Edwards Air Force Base in January, 1949. Major Frank Everest set an unofficial speed record from Dayton, Ohio to Washington, D.C. in February 1949 at 33 minutes and 3 seconds. Engine production delays, however, held the last F-86A-1s from delivery until March 1949.

The next Sabre model was the F-86A-5 which used J47-GE-7 jet engines. The A-5 model also had a "V"-shaped bulletproof windscreen with heated gun compartments. The -5 could carry two 206 gallon droptanks, rockets or bombs. A total of 521 were built between March 1949 and December 1950. One A-5, serial number 49-1172, was fitted with a refueling receptacle in its upper forward fuselage where its radar had been. The concept was a success, but refueling probes were never used on *any* F-86 models.

The A-1 and A-5 soon equipped Air Force units. The first F-86s went to the 94th Fighter Squadron of the 1st Fighter Group at March Field in California in February 1949. Their assignment was the defense of the Inglewood plant. One member of the 1st suggested calling the new fighter the "Sabre". The Air Force approved it, and its usage began in spring 1949. The 1st was composed of the 27th and 71st Fighter Squadrons along with the 94th. The 4th Fighter Group, based at Langley Air Force Base, Virginia, and the 81st Fighter Group, based at Kirtland Air Force Base, New Mexico, next received Sabres. The 4th was composed of the 334th, 335th and 336th Fighter Squadrons stationed at Langley flying in defense of Washington, D.C., and the 81st was formed from the 78th, 91st, 92nd and 93rd Fighter Squadrons. The 93rd protected the atomic bomb plant at Los Alamos, New Mexico. Soon after, the 33rd Fighter Group (58th, 59th and 60th Fighter Squadrons), the 56th Fighter Group (61st, 62nd and 63rd Fighter Squadrons) and the 51st Fighter Group (16th, 25th, and 26th Fighter Squadrons) received Sabres. Many of these aircraft later flew combat in Korea beginning in late 1950.

The first F-86As sent to Europe were from the 81st Fighter Wing when it went to (Royal Air Force) RAF Bentwaters in England in August 1951. The 81st was the first outfit from the United States based in England since World War Two.

There were also DF-86A Sabres which were F-86As later modified into radio-controlled target drones.

The history of the F-86A in Korea and elsewhere, as well as the history of later Sabre models, will be reviewed in future issues of ***Sabre Jet Classics.***

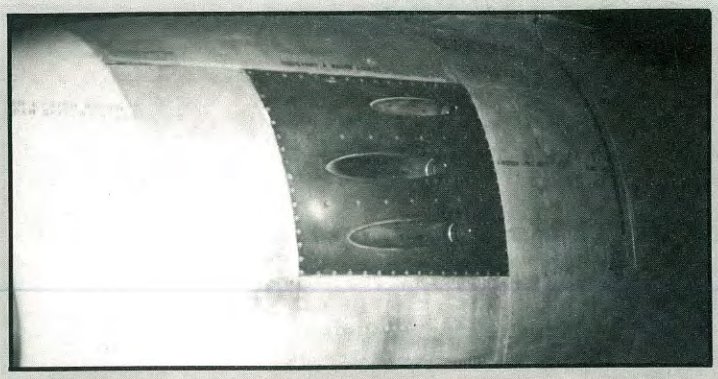
Early Sabres That Never Went Into Production

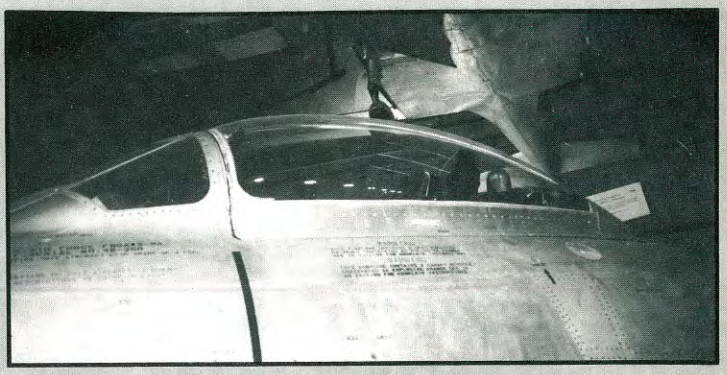
The F-86B

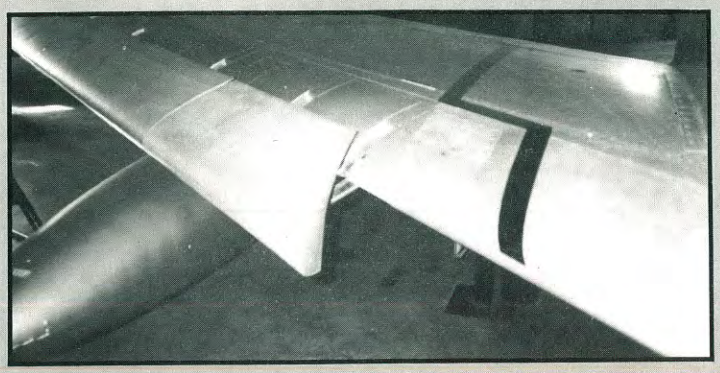
The F-86B was a brief attempt to meet an Air Force requirement for bigger tires on the Sabre. Had the Sabre changed, it would have meant increasing the width of the fuselage by seven inches. Fortunately, advances in tire and brake technology by 1949 allowed the Sabre to retain its original tire size as the Air Force was convinced it could handle the loads. A planned 190 F-86Bs became 188 more F-86A-5s and two F-86Cs. No F-86Bs were built.

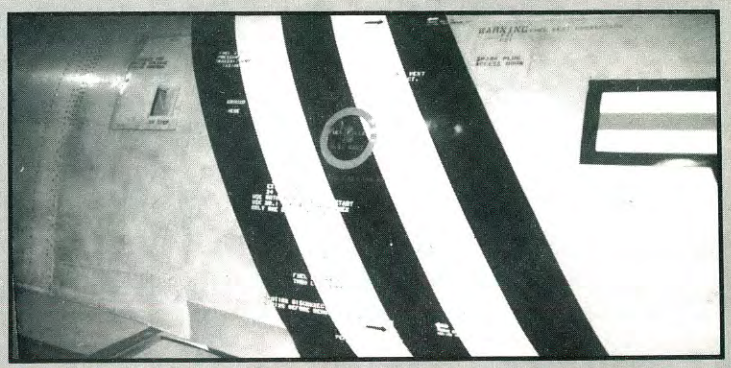
The F-86C

The F-86C, or Model NA-157, was North American's reply to the Air Force's request for a "penetration fighter interceptor" or long-range escort fighter. Its design was begun on December 17, 1947. The F-86C was greatly changed from the now familiar F-86 design. It had a bullet-shaped nose with scooped air intakes on its fuselage sides, six 20mm cannons and additional nose radar. It was a much larger aircraft than the F-86A. The F-86C was powered by a J48-P-1 engine with afterburner that developed 8,000 pounds of thrust. This jet engine was an American-built version of the British Rolls-Royce Tay assembled by Pratt and Whitney. Because the F-86C was so radically redesigned to accomodate this jet engine, the new Sabre was redesignated YF-93A in 1950. The aircraft was bigger and heavier requiring dual main wheels and a larger internal fuel supply. The F-86C/YF-93A competed with the McDonnell XF-88 and Lockheed XF-90, and 188 of North American's entry were ordered on June 9, 1948. The first of two YF-93As built was flown by George Welch on January 25, 1950, but the program had been cancelled in 1949. No further YF-93As were assembled. The Air Force instead ordered more bombers. NACA, the National Advisory Committee for Aeronautics, purchased both YF-93As for testing lateral air intakes, and they were assigned to NACA's Ames Test Center near San Francisco, California. Neither the F-88 nor the F-90 went into series production.









Today's Sabres

NASM's F-86A-5

The National Air and Space Museum, located in our nation's capitol, has one of the earliest F-86s in its prestigious collection. This Sabre, serial number 48-260, is an F-86A-5 painted as it appeared in December 1950 at the beginning of its combat career in Korea.

NASM's Sabre is fully restored and accessible to the public, but it is not in the museum in downtown Washington, DC. Instead it is located at the Paul E. Garber restoration facility on open public display while in storage, at the site where most of NASM's aircraft are restored. The Garber facility is located in Silver Hill, Maryland, southeast of the District. Tour information may be obtained by calling (202) 357-1400. NASM's beautiful Sabre is one of the finest restored F-86s available.

On March 14, 1990, William T. Hardaker of NASM's Archives Division prepared a background report on the history of 48-260. Excerpts from this Sabre's career are as follows:

"The museum's F-86A, serial number 48-260, was accepted by the U.S. Air Force on July 22, 1949. After a short tour in the 4th Fighter Interceptor Group at Langley Air Force Base, it was enroute with the 4th to Taegu Air Base, Korea, in December 1950, where the group was then attached to the Far East Air Force. During the next two years, it operated from Kimpo, Tsuiki, Kisarazu, Suwon and Johnson Air Bases still attached to the 4th and the 334th Squadron. Available records show that it returned to Conus in June 1952, and eventually was assigned to the 116th Fighter Interceptor Squadron, Air National Guard, Geiger Field, Washington on January 7, 1954. It was transferred to the 195th Fighter Interceptor Squadron, Van, Nuys Air National Guard Base, California, on November 8, 1955. On December 6, 1955, it was transferred to the Pacific Airmotive Corporation, Chino, California, and remained there, presumably on bailment, until July 25, 1957 and then transferred back to the 195th having accumulated 1309 flight hours up to that time. After a short period in storage at the Arizona Aircraft Storage Facility, Davis-Monthan Air Force Base, Arizona, it was transferred in December 1957 to the Boeing Aircraft Company, Seattle, Washington, where it remained on bailment until transfer to NASM from the USAF on January 25, 1962. It had accumulated a total of 1683:15 flying hours before its last flight to Andrews Air Force Base on January 9, 1962. The aircraft is in natural metal finish and has droptanks installed. The museum's aircraft was restored by May 5, 1975. It was to be representative of F-86 aircraft assigned to the 4th Fighter Interceptor Wing when pressed into service during the opening days of the Korean War."

This Korean War Sabre veteran may be viewed by contacting the Garber facility and scheduling a tour.

All photos by the editor. Mr. Hardaker's historical report courtesy of Fred Dieter, Archives Division, NASM.