# **CONVAIR B -58 HUSTLER**

# THE FIRST OPERATIONAL BOMBER TO REACH MACH 2 (LITTLE ROCK AFB AND THE B-58 HUSTLER)

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When it comes to awards and accolades, the Convair B-58 Hustler is truly unrivaled. The first bomber to ever reach Mach 2, its speed is what set the B-58 apart from the rest - but this also came with its own consequences. The aircraft was constructed with top-of-the-line technology and piloted by the best the US Air Force had to offer, but it was also equipped with a fatal flaw.



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## **DEVELOPMENT OF THE FIRST SUPERSONIC BOMBER**

In 1946, the US Army Air Corps launched its first investigation into developing a supersonic bomber. Known as the <u>Generalized Bomber Study</u> (GEBO I), the country's three leading aerospace companies - Boeing, Convair and North American - raced to see who could design the service's next strategic bomber.



The four General Electric J79-5A engines and delta wing configuration of the Convair B-58 Hustler

By 1949, another study was commissioned, the GEBO II, which included input from the three companies, as well as Douglas, Curtiss and Martin. Each submitted a proposed design, with Convair's delta wing configuration chosen as the superior model.

In December 1952, the <u>US Air Force</u> issued a contract with Convair to continue developing what became the B-58 Hustler, <u>with the initial test flight occurring on November 11,</u> 1956.

It was a success, and the bomber was officially introduced into service in March 1960, although it wasn't ready to stand alert <u>until 1962</u>. In total, 116 B-58s were produced - 30 for training and 86 for service. Only 8 still survive today and are on display at various AFB's around the USA.

A total of 116 planes were built at a <u>program cost of \$3-billion</u>. This meant that each plane was worth more than their weight in gold. The Hustler did have several problems with service, especially a weak nose gear and a few loss of control crashes, <u>and it had its share of opponents</u>. In the end, the ICBM took away their primary mission, and the Hustler could not adapt to low level penetration flight. <u>They were all but gone by 1970</u>

## THE "HUSTLER" WAS SMALL, BUT MIGHTY

The Convair B-58 Hustler had a maximum speed of <u>1,325 MPH</u>, with a service ceiling of <u>64,800 feet</u> and a range of <u>4,400 miles</u>. The bomber was outfitted with four General Electric J79-5A turbojet engines, each capable of producing 15,000 pounds of dry thrust.

Since the fuselage of the aircraft was small and thin, the droppable pod underneath was fitted with a nuclear weapon and extra fuel. At 95 feet long and 57 feet wide, the B-58 was much smaller than other bombers of the time, and it could be armed with either a single nine-megaton B53 nuclear bomb, or four B43 or B61 bombs.

The B-58 also set 19 world speed and altitude records and won five aviation trophies. However, this success came at a cost. By 1961, the program had cost \$3 billion dollars (roughly \$30 billion today). Also, maintenance costs were exceptionally high. For example, the average maintenance cost per flying hour for the Boeing B-47 Stratojet was \$361, while it was \$1,440 per hour for the B-58.

Until its retirement in 1970, the B-58 was operated by two Strategic Air Command (SAC) bomb wings: the 43rd Bombardment Wing and the 305th Bombardment Wing.

Both Bombardment Wings were transferred to Little Rock AFB in 1964 and brought the B-58 with them.



#### AUGUST 10, 1964: THE FIRST B-58 ARRIVES AT LITTLE ROCK AFB IN ARKANSAS

For the first fifteen years of its existence, LRAFB served as a bomber base under the U.S. Air Force's Strategic Air Command - or SAC, as it is still commonly referred to.

The earliest units here operated the B-47 Stratojet; and when the B-47 era ended in 1964, the USAF relocated the 43d BW from Carswell AFB, Texas to "The Rock," bringing with it a new jet bomber: the supersonic B-58 Hustler.



SAC

The first B-58 touched down here 53 years ago on August 10, 1964. B-58 crews stationed here provided strategic bombardment readiness for nearly five and a half years before the Air Force began retiring the aging fleet. The 43d BW retired its last B-58 in January 1970 before officially inactivating. These moves signaled the conversion of Little Rock AFB's primary mission from strategic deterrence to a new one: tactical airlift - and the Hustler was replaced by the C-130 Hercules.

And for the past 47 years - since the departure of the last B-58 in 1970 - LRAFB has operated as a C-130 installation; but it's worth recalling those early bombardment years that established the base's prominent reputation within the Air Force as well as solidifying its ties with the local community that stretch back to the base's roots beginning in the early-1950s.



One of the last 8 B-58's still around. On display at Little Rock AFB, Arkansas

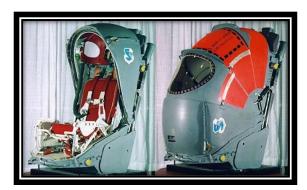
FIRST FLIGHT: May 13, 1958
NICKNAMES: Wildchild 2 and Peeping Tom
LAST B-58 ASSIGNED TO 43<sup>rd</sup> BOMB WING AT LRAFB

#### THE B-58'S UNCONVENTIONAL CONFIGURATION

One of the most unique aspects of the Convair B-58 Hustler was its crew configuration. Comprised of a pilot, navigator and defense systems operator, the three-person crew was each housed in their own tandem cockpit. Apparently, they had <u>no physical contact</u> with each other and had to resort to passing notes along a string and pulley system inside the cabin.

The defense systems operator had a wide range of complex systems available in their own cockpit, making the B-58 one of the most difficult aircraft to operate at the time.

Another distinct feature of the B-58 was its <u>ejection seats</u>. Called an "ejection capsule," the crew members each had a protective clamshell that enclosed the seat and control stick, along with an attached oxygen cylinder. This allowed the pilot to fly right up until the very last second before ejecting. Once ejected, the crew could pop open the clamshell exterior and use it as a life raft.



The "Hustlers" Ejection Seat



An ejection capsule test for the Convair B-58 Hustler. (Photo Credit: U.S. Air Force / Wikimedia Commons / Public Domain)

# **THE BOMBERS FATAL FLAW**

The Convair B-58 Hustler's main defense was its speed. At the time, it was believed that, if you could fly higher, farther and faster than the enemy, no one would be in harm's way.

According to the overwhelming number of recorded accidents, however, that couldn't be farther from the truth.

Of the 116 B-58s that were built, 26 of them were lost and 36 crew members were killed. Several <u>major accidents</u> occurred throughout the bomber's 10 years of service. One happened on October 27, 1959, before the aircraft was introduced into service.

A B-58 was being flown from Texas to Florida by three civilian crew members: pilot Everett Wheeler and two flight engineers, Michael Keller and Harry Blosser. During the fight, the bomber developed a problem, forcing the three to eject. Keller and Wheeler both landed safely, but Blosser's body was found the next day, still strapped to the ejection seat. The plane crashed into a field in Mississippi.

In June 1961, a B-58 <u>crashed</u> during the Paris Airshow, killing all three crew members. The same aircraft had previously accomplished the first supersonic transatlantic crossing, flying from New York to Paris in record time.

Another incident could have ended in nuclear catastrophe, when a B-58 carrying five nuclear weapons <u>slid off the runway</u> at Bunker Hill Air Force Base (now <u>Grissom Air Reserve Base</u>) and burst into flames. The weapons were burned, but contamination was still detected in the area

The overwhelming number of accidents and fatalities related to the B-58 were likely due to its lighter frame, making it more susceptible to structural failure.



Convair B-58 Hustler equipped with a B61 nuclear bomb.

## THE B-58 "HUSTLER BOMBER NEVER SAW ACTION

Despite its troubled past, the Convair B-58 Hustler's legacy continues to influence the development of supersonic aircraft. Some of the many records it holds are still intact today.

# Even though it was the most advanced aircraft of its time, the B-58 never saw combat.

The <u>Cold War</u> drove demand for bombers capable of penetrating Soviet airspace, with the possibility of launching an attack, but the B-58's small size meant that, in order to reach the USSR, the aircraft would need an established base in Europe to fly out of or a substantial amount of resources dedicated to aerial refueling.

In 1970, the B-58 was retired and never reconfigured for non-nuclear bombing missions. Of the 116 produced, only eight remain. The B-58's short range, expensive upkeep and disastrous death count were its downfall. One director at the Strategic Air Command even commented that, so long as the "Soviet Union and not Canada was the enemy, range would matter."



DAYTON, Ohio - Convair B-58 Hustler in the Cold War Gallery at the National Museum of the United States Air Force.

