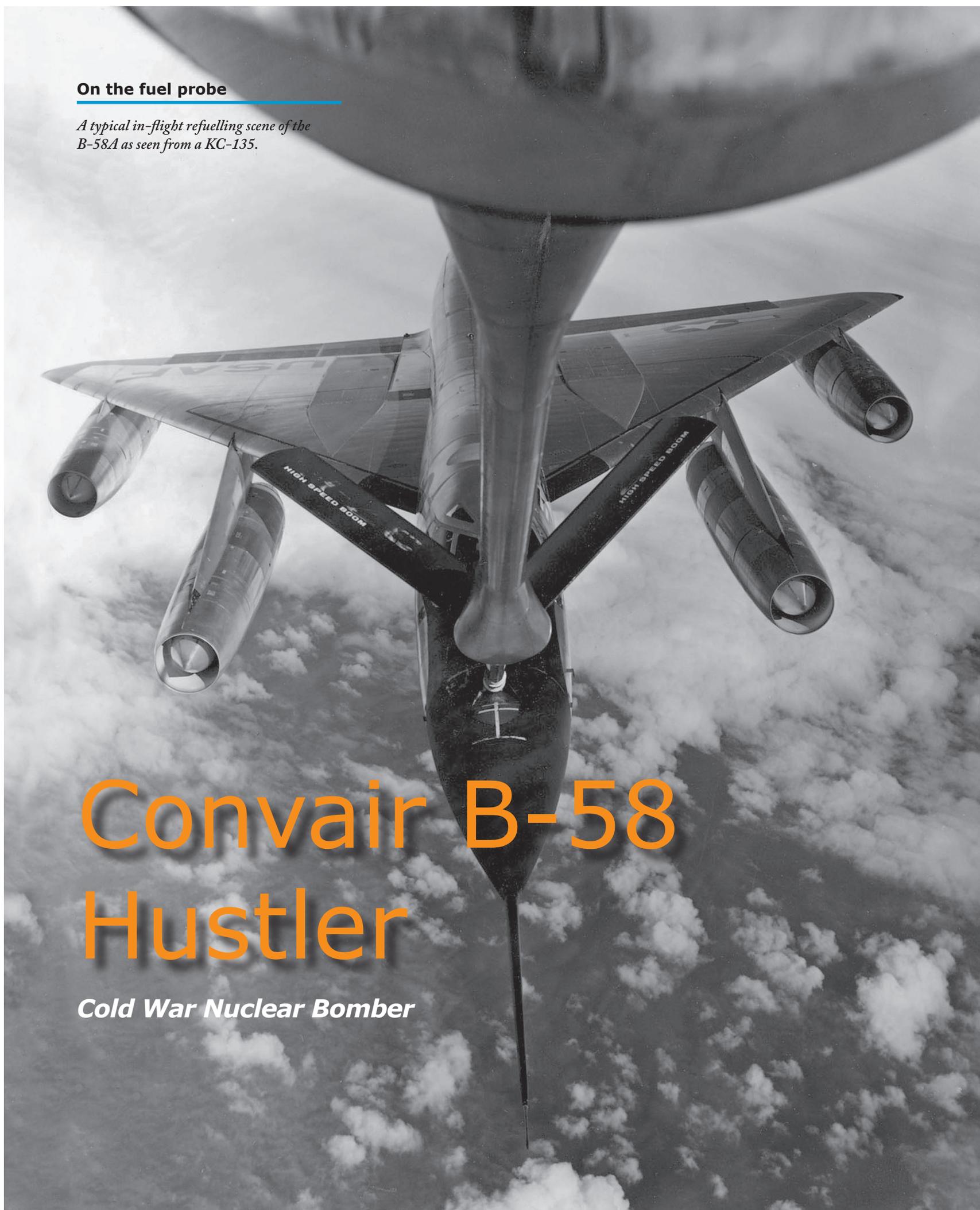


On the fuel probe

A typical in-flight refuelling scene of the B-58A as seen from a KC-135.

Convair B-58 Hustler

Cold War Nuclear Bomber

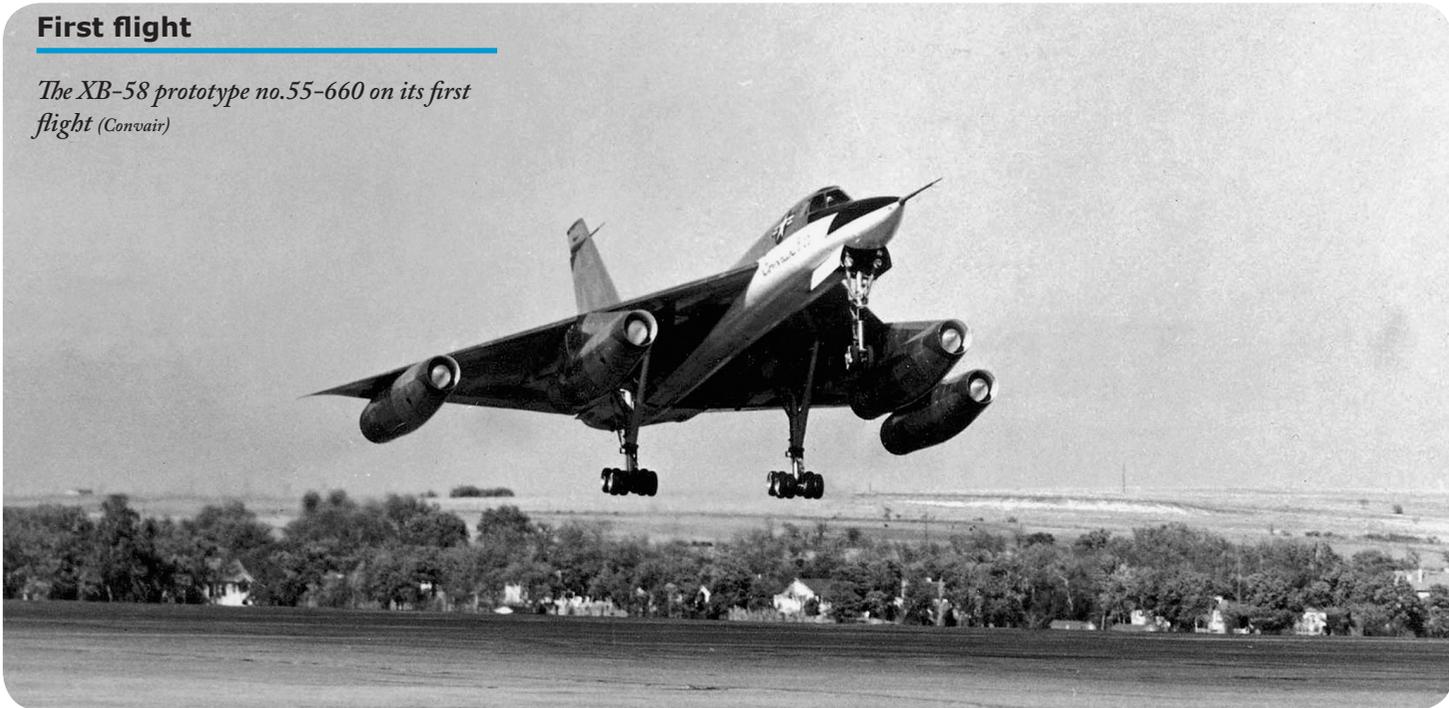


When the B-58 Hustler bomber entered service in 1958 it was a very futuristic looking delta wing bomber creating a lot of sensation. Intended as a successor of the B-47 Stratojet it was capable of reaching twice the speed of sound.

However, development went not without problems and costs risings went so out of control that the whole project was almost cancelled a few times. Strategic Air Command was initially against ordering the B-58 for service, not only because of its complexity but also since they saw no advantage of a Mach 2 bomber over other types. In spite of this the B-58 entered into service at S.A.C. in 1960. It would have a relatively short operational career...

First flight

The XB-58 prototype no.55-660 on its first flight (Convair)



Armed with nuclear weapons as a 'deterrent force' it was a typical product of the Cold War and the Soviet Union, at that time 'The Enemy' had nothing comparable. At this point the Cold War scene changed drastically in a short time. The first nuclear-armed ballistic missiles became reality and long-range anti-aircraft missiles were stationed at both sides. With extensive Early Warning systems also 'on the other side', the B-58 seemed to have very slight chances to penetrate enemy airspace undetected and survive. Since it was unsuitable to fly at very low altitude below the radar it had a relatively short operational career of less than ten years. Most of the B-58s still operational by the end of the sixties went to the big aircraft depository at Davis Monthan in the Arizona desert and they were soon scrapped. They had outlived their operational usefulness by the changing situation in the world and the B-58 was not followed by a successor that could beat its performances..

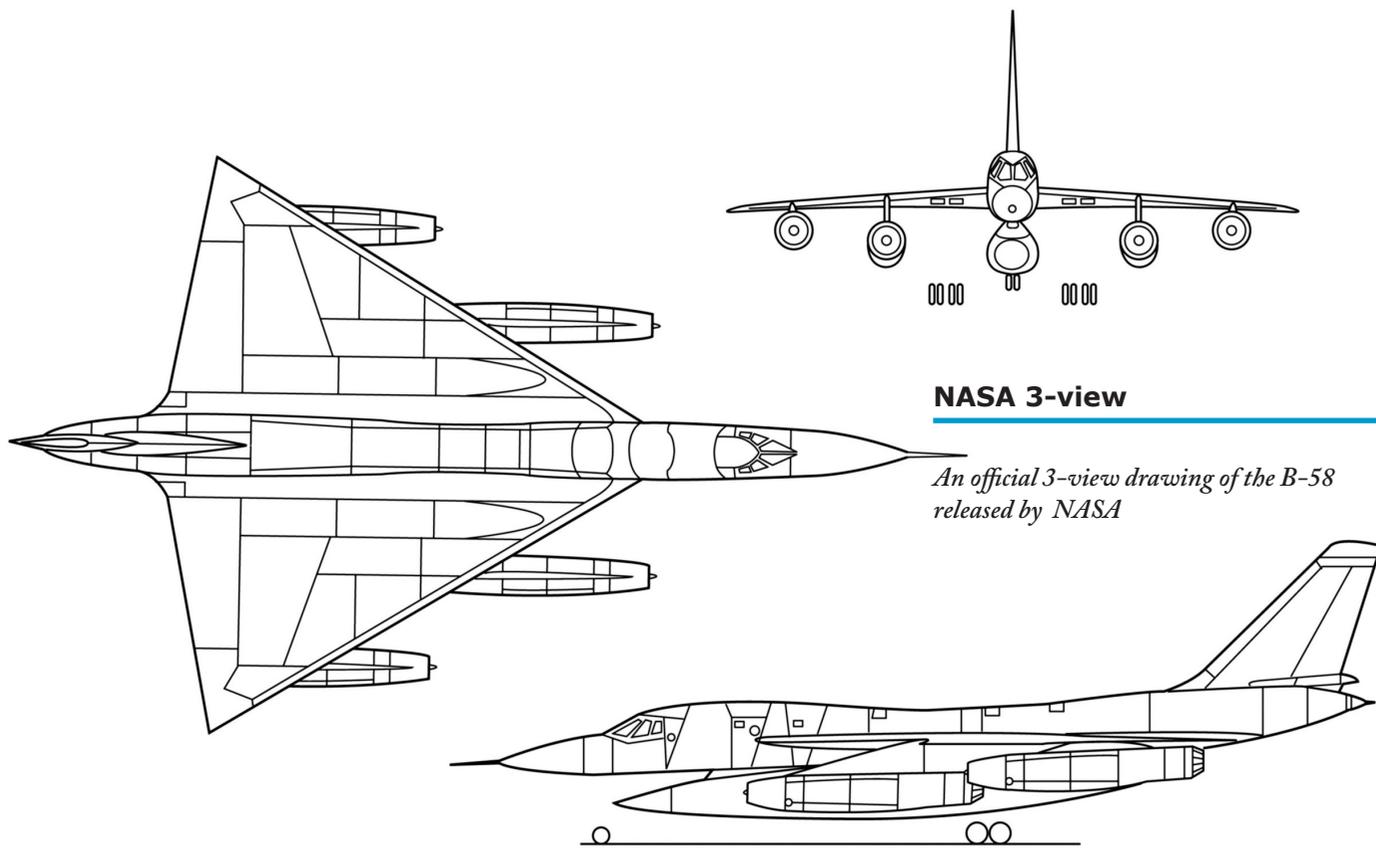
Early development:

The design study for a supersonic medium bomber to replace the B-47 Stratojet started at Convair by late 1951 although preliminary work was already done as early as 1947. Both Convair and Boeing prepared design proposals known as Project MX-1965 from Convair and Project MX-1964 from Boeing. Convair's project showed a delta wing layout with four engines originally fitted in double nacelles beneath the wings and a sleek area-ruled fuselage. In fact, the first mock-up showed this engine layout that was later replaced by four separate engine pods.

Readied

XB-58 prototype being readied for flight with the fuel car standing by.

(Convair)





In-flight

One of the first in-flight pictures showing the prototype without mission pod.

(Convair)

Prototype

The XB-58 prototype no. 55-660 in its first colour scheme used at the first flights without mission pod. For some odd reasons an extra zero has been added to the serial number.

(Srecko Bradic)

The Boeing project showed four jets engines buried in pairs under the wing roots with broad-chord swept wings. The Boeing project, receiving the bomber designation B-59, was finally rejected in favour of the Convair design which received the type designation B-58. Characteristic for the final B-58 design

was its streamlined fuselage pod. Originally this pod was designed as an autonomous stand-off nuclear bomb with small wings but later this was changed into the final single or dual pod containing fuel and/or a nuclear explosive device. The dual pod consisted actually of two pods mounted into each other!



Final choice of the engine for the new bomber was the General Electric J79, the same as used in the Lockheed F-104 Starfighter. The B-58 had a crew of three: pilot, navigator/bomber and the operator of the defensive systems. Initially the B-58 was fitted with standard ejector seats, but after a few fatal accidents a more sophisticated solution was developed. To enable

also a safe bail out at supersonic speeds the crew had ejector seats in escape pods that were in fact tested not only from a rocket propelled B-58 forward fuselage but also from a 'live' B-58! The escape pods were installed when the B-58 was already in operational service, but all B-58s already supplied were retrofitted with the new escape pods. When the crew was aboard

it was a tight fit in the escape capsules without the possibility to leave their seats during flight and that meant that long range missions at high speed and altitude in a standard pressure suit were very fatiguing.



Lift-off

*No. 55-660 at lift off during one of the first flights at Carswell AFB
(Convair)*

