

## North American F-86D Sabre



Early USAF F-86D-1-NA fighters

<b>Role</b>	Fighter interceptor
<b>Manufacturer</b>	North American Aviation
<b>First flight</b>	22 December 1949
<b>Primary users</b>	United States Air Force Italian Air Force SFR Yugoslav Air Force Venezuelan Air Force
<b>Number built</b>	2,847
<b>Unit cost</b>	US\$343,839 (F-86D)
<b>Developed from</b>	North American F-86 Sabre

The North American F-86D Sabre (sometimes called the "Sabre Dog" or "Dog Sabre") was a transonic jet all-weather interceptor. Based on North American's F-86 Sabre day fighter, the F-86D had only 25 percent commonality with other Sabre variants, with a larger fuselage, larger afterburning engine, and a distinctive nose radome.

## Design and Development

The YF-95 was a development of the F-86 Sabre, the first aircraft designed around the new 2.75 in (70 mm) Mighty Mouse Folding-Fin Aerial Rocket (FFAR). Begun in March 1949, the unarmed prototype, 50-577, first flew on 22 December 1949 piloted by North American test pilot George Welch and was the first U.S. Air Force night-fighter design with only a single crewman and a single engine, a J47-GE-17 with afterburner rated at 5,425 lbf (24 kN) static thrust. Gun armament was eliminated in favor of a retractable under-fuselage tray carrying 24 unguided Mk. 4 rockets, then considered a more effective weapon against enemy bombers than a barrage of cannon fire. A second prototype, 50-578, was also built, but the YF-95 nomenclature was short-lived as the design was subsequently redesignated YF-86D.



Rocket tray

The fuselage was wider and the airframe length increased to 40 foot 4 inches, with clamshell canopy, enlarged tail surfaces, and AN/APG-36 all-weather radar fitted in a radome in the nose, above the intake. Later models of the F-86D received an uprated J-47-GE-33 engine rated at 5,550 lbf/25 kN (from the F-86D-45 production blocks onward). A total of 2,504 D-models were built.

## Operational History

On 18 November 1952, F-86D-20-NA, *51-2945*, set a speed record of 698.505 mph (1,124.135 km/h). Captain J. Slade Nash flew over a three km course at the Salton Sea in California at a height of only 125 feet (38 meters). Another F-86D broke this world record on 16 July 1953, when Lieutenant Colonel William F. Barns, flying the first F-86D-35-NA, *51-6145*, in the same path of the previous flight, achieved 715.697 mph (1,151.803 km/h).



A Wyoming Air National Guard F-86L in the late 1950s.

## MAPS F-86D – Serial Number 53-658



The MAPS F-86D (Serial # 53-658) was originally ordered as one of 225 F-86D-55 aircraft for the United States Air Force. This order was placed with North American Aviation on September 12, 1952. With North American Aviation (NAA) construction number 201-202, serial number 53-658 was

manufactured at the NAA plant in Inglewood, California and delivered to the USAF on January 27, 1955.

The aircraft's first assignment was to the 60<sup>th</sup> Fighter-Interceptor Squadron (FIS), based in Westover AFB in Massachusetts which was part of the 4707<sup>th</sup> Defense Wing. The 60<sup>th</sup> FIS was in the process of converting from earlier model F-86Ds (that did not have the breaking parachute among other things) to the later D-55 models and 53-658 was one of the last of the newer aircraft to fly in to the unit.

The aircraft then had a further assignment, this time to the 337<sup>th</sup> FIS which occurred on August 18, 1955 but in reality, this did not represent a move to a new location. Under Project Arrow it was decided that, following World War II, many USAF Squadrons had become geographically and organizationally-divorced from their historical parent Wings and Groups. On August 18, 1955, a massive renumbering of squadrons enabled order to be restored. On that date, the 60<sup>th</sup> FIS was renumbered 337<sup>th</sup> FIS the "new" squadron remained assigned to the 4707<sup>th</sup> Defense Wing.

53-658 stayed with the 337<sup>th</sup> FIS until January 4, 1956 when the aircraft was sent to the NAA facility in Fresno, California and routed through conversion to the F-86L standard. The F-86L was basically an upgraded F-86D, capable of integrating into the new SAGE Defense Network and being one of the first aircraft to be converted, it appears that not all of the work was done in Fresno.

On June 27, 1956, still designated as an F-86D, 53-658 was assigned to the 49<sup>th</sup> FIS at Lawrence G. Hanscom AFB, Massachusetts. The 49<sup>th</sup> FIS was heavily involved in testing the new SAGE systems and it seems that further conversion work was undertaken at Hanscom (possibly in conjunction with the nearby MIT Cambridge Research Center, which was responsible

for developing SAGE), and one October 23, 1956, the conversion to F-86L was finally noted in the aircraft records.

During its time with the 49<sup>th</sup> FIS, the aircraft took part in Temporary Duty (TDY) attachment to Portsmouth from August 1<sup>st</sup> to November 7<sup>th</sup>, 1957. As the new Squadron began to phase out, it's F-86L aircraft, 53-658 was sent to the Air National Guard.

53-658's new assignment was with 158<sup>th</sup> FIS, Georgia ANG at Travis Field near Savanna, Georgia, effective September 11, 1958. Little is known about this period of the aircraft's life. In 1962 the 158<sup>th</sup> transitioned from the F-86L to C-97F transport aircraft (following a change to Air Transport Squadron). It seems probable that the aircraft was donated at this time – probably sometime after April of 1962.

53-658 was next noted at West Point in the mid-1970s. From here it went to Yesterday's Air Force at Pinellas Park in Florida for the museum there. Next, it was on to the St. Petersburg/Clearwater Airport for the Florida Museum of Military Aviation by 1996. By this time, it had gained a fairly accurate 49<sup>th</sup> FIS color scheme, representative of its previous assignment in 1956-58.

When the museum closed, the aircraft was removed and placed in outside storage. Still officially owned by the USAF Museum, the F-86L was placed on indefinite loan to MAPS Air Museum, who recovered the aircraft from Florida in 2007. The MAPS team volunteered to acquire the aircraft and to restore it to "D" configuration in the markings of the 496<sup>th</sup> FIS, Hahn Air Force Base, Germany.

## **Variants**

### **YF-95A**

Prototype all-weather interceptor; two built; designation changed to YF-86D (North American model NA-164)

### **YF-86D**

Originally designated **YF-95A**.

### **F-86D**

Production interceptor originally designated F-95A, 2,506 built.

### **F-86G**

Provisional designation for F-86D variant with updated engine and equipment changes, 406 built as F-86Ds.

### **YF-86K**

Basic version of F-86D intended for export with rocket tray replaced by four 20 mm cannon and simplified fire control system, two conversions.

### **F-86K**

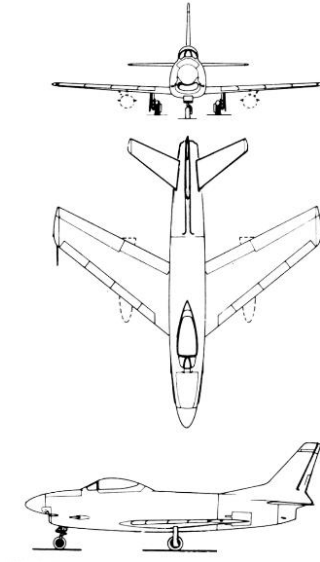
NATO version of F-86D; MG-4 fire control system; four 20 mm M24A1 cannon with 132 rounds per gun; APG-37 radar. 120 were built by NAA, 221 were assembled by Fiat.

### **F-86L**

Upgrade conversion of F-86D with new electronics, extended wingtips and wing leading edges, revised cockpit layout, and updated engine; 981 converted.

## General characteristics

North American F-86K Sabre



- **Crew:** 1
- **Length:** 40 ft 3 in (12.27 m)
- **Wingspan:** 37 ft 1.5 in (11.31 m)
- **Height:** 15 ft in (4.57 m)
- **Empty weight:** 13,518 lb (6,132 kg)
- **Gross weight:** 19,975 lb (9,060 kg)
- **Power plant:** 1 × General Electric J47-GE-17B, 5,425 lbf (24.1 kN) dry, 7,500 lbf (33.4 kN) with afterburner

### Performance

- **Maximum speed:** 693 mph (1,115 km/h)
- **Maximum speed:** Mach .91
- **Range:** 330 miles (531 km)
- **Service ceiling:** 49,750 ft (15,163 m)
- **Rate of climb:** 12,150 ft/min (61.7 m/s)

### Armament

- 24 × 2.75 in (70 mm) Mighty Mouse FFAR rockets in ventral tray