= Vought F6U Pirate =

The Vought F6U Pirate was the Vought company 's first jet fighter , designed for US Navy during the mid @-@ 1940s . Although pioneering the use of turbojet power as the first naval fighter with an afterburner and composite material construction , the aircraft proved to be underpowered and was judged unsuitable for combat . None were ever issued to operational squadrons and they were relegated to development , training and test roles before they were withdrawn from service in 1950 .

= = Design and development = =

A specification was issued by the U.S. Navy 's Bureau of Aeronautics (BuAer) for a single @-@ seat , carrier @-@ based fighter powered by a Westinghouse 24C (later J34) axial turbojet on 5 September 1944 . Chance Vought was awarded a contract for three V @-@ 340 (company designation) prototypes on 29 December 1944 .

The XF6U was a small aircraft with tricycle landing gear and with straight wings and tail surfaces . The wings were short enough that they did not need to fold . In order to fit more aircraft into crowded hangars , the nose gear could be retracted and the aircraft 's weight would rest on a small wheel attached by the ground crew . This raised the tail up so that it could overlap the nose of the aircraft behind it , allowing more aircraft to fit into available hanger space . The turbojet engine was mounted in the rear of the fuselage and was fed by ducts in each wing root .

The most unusual feature of the aircraft was its use of " Metalite " for its skin . This was made of balsa that was sandwiched between two thin sheets of aluminum . " Fabrilite " was also used for the surfaces of the vertical stabilizer and rudder ; this was similar to Metalite , but used fiberglass instead of aluminum . Two fuel tanks were fitted in the center of the fuselage . The forward tank , ahead of the wing , contained 220 US gallons (830 l ; 180 imp gal) and the rear tank , 150 US gallons (570 l ; 120 imp gal) . These were supplemented by two jettisonable 140 @-@ US @-@ gallon (530 l ; 120 imp gal) tip tanks . The cockpit was well forward and was provided with a bubble canopy which gave the pilot good visibility . He was provided with a Mk 6 lead @-@ computing gyro gunsight . Underneath the cockpit were four 20 mm (0 @.@ 79 in) M3 autocannon . Their 600 rounds of ammunition were carried behind the pilot . The empty casings of the two upper guns were retained in the aircraft , while those from the two lower guns were ejected overboard .

After a company @-@ wide contest to name the aircraft , the initial prototype received the name Pirate and made its first flight on 2 October 1946 . Flight testing revealed severe aerodynamic problems , mostly caused by the airfoil section and thickness of the wing . The vertical stabilizer also had to be redesigned to smooth out the airflow at the intersection of the horizontal and vertical stabilizers . Other changes included the addition of dive brakes on the sides of the fuselage and the replacement of the Metalite panels near the engine 's exhaust with stainless steel ones .

The first XF6U @-@ 1 prototype was powered by a Westinghouse J34 @-@ WE @-@ 22 turbojet with 3 @,@ 000 lbf (13 @.@ 34 kN) thrust , one third of the weight of the aircraft . To help improve the underpowered aircraft 's performance , the third prototype , which first flew on 10 November 1947 , was lengthened by 8 feet (2 @.@ 4 m) to use a Westinghouse J34 @-@ WE @-@ 30 afterburning engine of 4 @,@ 224 lbf (18 @.@ 78 kN) thrust , the first United States Navy fighter to have such a powerplant .

= = Operational history = =

In 1947 , before the flight testing of the prototypes was completed , 30 production aircraft were ordered . They incorporated an ejection seat and a redesigned vertical stabilizer as well as two auxiliary fins , one towards the tip on each side of the tailplane in an attempt to improve the directional stability of the aircraft . The fuselage was lengthened to fit additional equipment and the wing had fillets added at the rear junction with the fuselage .

During the production run , the Navy decided to move the Chance Vought factory from Stratford , Connecticut to a much larger facility in Dallas , Texas which had been vacant since the end of World

War II ; this badly disrupted the production of the Pirate . The airframes were built in Stratford and trucked to Dallas where government @-@ furnished equipment , such as the engines and afterburners , were installed . The completed aircraft were then taxied around the new plant 's airfield , but the runway was deemed too short to handle jets . The aircraft had to be disassembled and trucked to an abandoned airfield at Ardmore , Oklahoma with a runway long enough for acceptance testing .

The first production F6U @-@ 1 performed its initial flight on 29 June 1949 , and 20 of the aircraft were provided to VX @-@ 3 , an operational evaluation squadron based at Naval Air Station Patuxent River in Maryland . The judgment from the evaluation was that the Pirate was unacceptable for operational use . Naval aviators disparagingly called the F6U the " groundhog " . On 30 October 1950 , BuAer informed Vought of the Navy 's opinion of the Pirate in terms both bureaucratic and scathing : " The F6U @-@ 1 had proven so sub @-@ marginal in performance that combat utilization is not feasible . "

The aircraft ended up being used primarily to develop arresting gear and barriers , but were used operationally for a short time by at least one Texas @-@ based United States Naval Reserve squadron as they transitioned to jets . Between them , the 30 production aircraft had only a total of 945 hours of flight time , only 31 @.@ 5 hours each . Some aircraft flew only six hours which was enough for little more than their acceptance flight and the flight to their ultimate disposition .

= = Variants = =

XF6U @-@ 1 : Three prototypes , two with an Westinghouse J34 @-@ WE @-@ 22 turbojet engine (BuNo 33532 , 33533) , one with an J34 @-@ WE @-@ 30 with afterburner (BuNo 33534) .

F6U @-@ 1 : Afterburner @-@ equipped production version , 30 built (BuNo 122478 @-@ 122507) , 35 cancelled .

F6U @-@ 1P : Conversion of one F6U @-@ 1 (BuNo 122483) for photo @-@ reconnaissance .

= = Operators = =

United States
United States Navy
VX @-@ 3

= = Survivors = =

Although the F6U had a very short operational career , one example remains intact (122479 , Vought production number 2) and has undergone restoration by the Vought Aircraft Heritage Foundation , at the Vought plant in Grand Prairie , Texas . As of 2012 , the aircraft is currently at the National Naval Aviation Museum in Pensacola Florida .

= = Specifications (F6U @-@ 1) = =

Data from The Complete Book of Fighters
General characteristics
Crew : 1
Length : 37 ft 7 in (11 @.@ 46 m)
Wingspan : 32 ft 10 in (10 m)
Height : 12 ft 11 in (3 @.@ 39 m)
Wing area : 203 @.@ 4 ft ² (18 @.@ 9 m ²)
Empty weight : 7 @,@ 320 lb (3 @,@ 320 kg)
Loaded weight : 12 @,@ 900 lb (5 @,@ 850 kg)
Powerplant : 1 × Westinghouse J34 @-@ WE @-@ 30A turbojet

Dry thrust : 3 @,@ 150 lbf (14 @.@ 0 kN)
Thrust with afterburner : 4 @,@ 224 lbf (18 @.@ 78 kN)
Performance
Maximum speed : 596 mph (517 kn , 959 km / h)
Range : 1 @,@ 170 mi (1 @,@ 020 nmi , 1 @,@ 880 km)
Service ceiling : 46 @,@ 260 ft (14 @,@ 100 m)
Rate of climb : 8 @,@ 060 ft / min (40 @.@ 95 m / s)
Wing loading : 63 @.@ 4 lb / ft ² (304 kg / m ²)
Thrust / weight : 0 @.@ 327
Armament
Guns : 4 × 20 mm (0 @.@ 79 in) M3 cannon under the nose