F4U Corsair

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F4U Corsair	
NATIONAL STREET, STREE	
Туре	Carrier-based fighter aircraft
Manufacturer	Chance Vought
Designed by	Rex Beisel
<u>Maiden flight</u>	<u>29 April 1940</u>
Introduction	28 December 1942
Retired	<u>1953</u>
Primary users	<u>U.S. Navy & Marines</u> (10,016) <u>Fleet Air Arm</u> (2,012) <u>RNZAF</u> (424) <u>Aéronavale</u> (119) ^[1]
Produced	1940-1952
Number built	12,571
Unit cost	\$1,500,000
Variants	F2G "Super Corsair"

The <u>Chance Vought</u> F4U Corsair was an <u>American fighter aircraft</u> that saw service in <u>World War II</u> and the <u>Korean War</u> (and in isolated local conflicts). <u>Goodyear</u>-built Corsairs were designated FG and <u>Brewster</u>-built aircraft F3A. The Corsair served in some air forces until the 1960s, following the longest production run of any piston-engined fighter in history (1940 - 1953). During World War II, it was the fighter the Japanese feared the most. The US Navy counted the average kill-rate as for every F4U shot down, 11 enemy aircraft were shot down.^[2]

Background

The Corsair started life as the result of a <u>U.S. Navy</u> requirement for a carrier aircraft which could match the performance of the best land and carrier-based fighter planes. Designed in 1938 by Rex Biesel, the first prototype Corsair designated XF4U-1 first flew on <u>29 May</u> <u>1940</u>.^[3] When flown in <u>1940</u>, the XF4U-1, powered by a <u>Pratt & Whitney R-2800</u> Double Wasp radial engine, became the first U.S. single-engine production aircraft capable of 400 mph (640 km/h) in level flight.^[4] It was a remarkable achievement for Vought, as compared to land-based counterparts, <u>carrier aircraft</u> are "overbuilt" and heavier to withstand the extreme stress of deck landings.^[citation needed]

The Corsair first entered service in 1942. Although designed as a carrier fighter, initial operation from carrier decks proved to be troublesome. Its slow speed handling was tricky due to the port wing stalling before the starboard wing.^[citation needed] This factor, together with poor visibility over the long nose (leading to one of its nicknames, "The Hose Nose"), made landing a Corsair on a carrier a difficult task. For these reasons, most Corsairs initially went to <u>Marine Corps</u> squadrons who operated off land-based runways, which in turn led Goodyear to build some early Corsairs with fixed, non-folding wings.^[citation needed] The USMC aviators welcomed the Corsair with open arms as its performance was far superior to the F4F-3 and -4 Wildcat, which were being used at that time, and superior in a number of ways to the F6F Hellcat, which replaced the Wildcat.^[citation needed]

Moreover, the Corsair was able to outperform the primary Japanese fighter, the <u>Mitsubishi A6M</u> <u>"Zero"</u>. While the Zero could out-turn the F4U at slower speeds, the Corsair was faster and could outclimb and out-dive the enemy fighters.^[5] Tactics developed early in the war, such as the <u>Thach</u> <u>Weave</u>, took advantage of the Corsair's strengths.

This performance advantage, combined with the ability to take severe punishment, meant that a pilot could place an enemy aircraft in the killing zone from the F4U's six <u>.50-caliber Browning machine guns</u> and keep him there long enough to inflict major damage. The 2,300 rounds carried by the Corsair gave over one full minute of fire from each gun, which, fired in three-to-six-second bursts, made the U-Bird a devastating weapon against aircraft, ground targets, and even ships. [citation needed]

The <u>Royal Navy</u> also received Corsairs from 1943 and went ahead with flying them from <u>Fleet Air</u> Arm (FAA) carriers successfully in combat with the British Pacific Fleet and in Norway.^[6]

The Corsair served with the US Navy, US Marines, the Royal Navy's Fleet Air Arm and the <u>Royal</u> <u>New Zealand Air Force</u> (postwar, the <u>French Aeronavale</u> and other services), and quickly became the most capable carrier-based fighter-bomber of the war. Demand for the aircraft soon overwhelmed Vought's manufacturing capability, resulting in additional aircraft being produced by the Goodyear Company (as the FG-1) and the Brewster Company (as the F3A-1). From the first prototype delivery to the US Navy in 1940, to final delivery in 1953 to the French, 12,571 F4U Corsairs had been manufactured by Vought^[7]

The **Corsair** is popularly known as "The Sweetheart of the <u>Marianas</u>" and "The Angel of <u>Okinawa</u>" for its roles in these campaigns respectively—the names were given by ground troops rather than by naval and Marine personnel. Among pilots, however, the aircraft was nicknamed "Ensign Eliminator" and "Bent-Wing Eliminator" because it required many more hours of flight training to master than other Navy carrier-borne aircraft. It was also called simply "U-bird" or "Bent Wing Bird".^[8] The

Japanese named the F4U "Whistling Death" because of the high-pitched sound it made (caused by airflow through the wing-root oil coolers).^[citation needed]

The **Corsair** has been named the official aircraft of <u>Connecticut</u>,^[9] due to its connection with <u>Sikorsky</u> <u>Aircraft</u>, in legislation sponsored by <u>state senator</u> <u>George "Doc" Gunther</u>; Gunther had also organized a **Corsair Celebration and Symposium** at <u>Sikorsky Memorial Airport</u> in <u>Stratford, Connecticut</u>, on <u>Memorial Day</u>, <u>29 May 2006</u>.^[10]

[edit] Design and development



2,000hp Pratt & Whitney R-2800-8 in a Goodyear FG-1 Corsair

The Corsair was designed by <u>Rex Beisel</u> and <u>Igor Sikorsky</u>, incorporating the largest engine available at the time, the 2,000 hp (1,490 kW) 18-cylinder <u>Pratt & Whitney R-2800 Double Wasp radial</u>. <u>Icitation</u> <u>needed</u> To extract as much power as possible, a relatively large, 13 ft 4 inch (4.06 m) <u>Hamilton</u> <u>Standard Hydromatic</u> three-blade <u>propeller</u> was used. To accommodate a folding wing, the designers considered retracting the main landing gear rearward, but for the <u>chord of wing</u> selected, it was difficult to fit gear long enough to provide sufficient clearance for the large propeller. Their solution was an <u>inverted gull wing</u>, considerably shortening the length of the main landing gear. <u>[11]</u> The "bend" in the wing also permitted the wing and fuselage to meet at the optimum angle for minimizing <u>drag</u>. Offsetting these benefits, the bent wing was more difficult to construct and would weigh more than a straight wing.



Divident a Corsair

The Corsair's aerodynamics were an advancement over contemporary naval fighters. The F4U was the first US Navy airplane to feature landing gear that retracted fully, leaving a completely streamlined wing.^[13] Air intakes used slots in the leading edges of the wings rather than protruding scoops. Panels were attached with <u>flush rivets</u>, and the design took advantage of the newly-developed technique of <u>spot welding</u>. While employing this new technology, the Corsair was also the last American-produced, combat aircraft to feature fabric covered control surfaces. It had fabric covering for the top and bottom of each outer wing in addition to fabric-covered tail plane control surfaces.^[Citation needed] Despite being capable of speeds in excess of 400 mph (640 km/h), with full 60 degree <u>flap</u> deployment, the Corsair was capable of flying at speeds slow enough for carrier landings.

Despite advances in technology and a top speed greater than existing Navy aircraft, numerous technical problems had to be solved before the Corsair would enter service. Carrier suitability was a

major development issue, prompting changes to the main landing gear, tail wheel and <u>tailhook</u>. Early prototypes had difficulty recovering from developed spins since the inverted gull wing's shape interfered with <u>elevator</u> authority. A small <u>spoiler</u> was added to the leading edge of the starboard wing to reduce adverse stall characteristics.^[14]

The combination of an aft cockpit and the Corsair's long nose made landings hazardous for newlytrained pilots. The cockpit position in the prototype was 3 ft further forward, but a desire for more powerful armament necessitated changes. Putting three 50 caliber guns in each outer wing panel eliminated fuel tanks there, and the fuselage tank above the wings was enlarged to compensate.^[15] This required the seat to be moved rearward, behind the tank, an arrangement used in other piston fighters of the era, such as the Spitfire. Because the more docile <u>F6F Hellcat</u> was coming into service, Corsair deployment aboard U.S. carriers could be delayed. Following Vought modifications to the landing gear, repositioning of the seat, addition of the stall block to the starboard wing, and after a landing technique was developed that kept the LSO (landing signal officer) in view while coming aboard, Corsairs entered U.S. carrier service toward the end of <u>1944</u>.^[Citation needed]

[edit] Wartime variants

During World War II, Corsair production expanded beyond Vought to include <u>Brewster</u> (F3A) and <u>Goodyear</u> (FG) models. Allied forces flying the aircraft in World War II included the <u>Royal Navy's Fleet</u> <u>Air Arm</u> and the <u>Royal New Zealand Air Force</u>. Eventually, more than 12,500 F4Us would be built, comprising 16 separate models.^[16]

World War II variants included:

F4U-1: The first Corsair with the original cockpit seat height and "bird cage" canopy. It was based on the XF4U, but differed with the addition of a larger fuel tank and the removal of the fuselage windows behind the canopy as well as a modified armament consisting of six Browning MG53-2 0.50" machine guns. A land-based version for the USMC, without the folding wing capability, was built by Goodyear under the designation **FG-1**. In Fleet Air Arm service the F4U-1 was given the name **Corsair Mk I**.^[17]

F4U-1A: Variant incorporating the new "Malcolm" hood with only two struts, similar to the canopy of the <u>Supermarine Spitfire</u>. The cockpit seat was also raised to allow the pilot to see over the long nose as well. F4U-1As supplied to the <u>USMC</u> lacked folding wings and arrester hooks. Aircraft ready for naval service, however, had these features. Additionally, an R-2800-8W engine with water-injection was experimented on one of the late F4U-1As. After satisfactory results, many of the F4U-1As were fitted with the new powerplant. The aircraft carried 237 U.S. Gal. (897 L) in the main fuel tank located in front of the cockpit as well as an unarmored, non-self-sealing 62 U.S. Gal. (235 L) fuel tank in each wing. With drop tanks fitted in addition to these internal fuel tanks, the fighter could ferry a maximum range of just over 1,500 mi. (2,425 km). A land-based version for the USMC, without the folding wing capability, was built by Goodyear under the designation **FG-1A**. In British service known as the **Corsair Mk II**, the aircraft type was modified with clipped wings for use on smaller British aircraft carriers.^[18]

F4U-1B: Essentially identical to the F4U-1A. This new variant however had clipped wing tips so that it could fit in the smaller elevators/hangers of British carriers.

F4U-1C: This variant was in production in 1943, but was only introduced in combat during 1945, most notably in the Okinawa campaign. Intended for ground-attack as well as fighter missions, the F4U-1C was similar to the F4U-1A but its armament was replaced by four 20 mm (0.79") <u>AN/M2 cannons</u>, each containing 231 rounds^[19] of ammunition. The variant was very rare as only 200 were built. This

was due to the fact that pilots preferred the standard armament of six .50 calibre machine guns since they were already more than powerful enough to destroy most Japanese aircraft, and had more ammunition and a better firing rate.^[20] The weight of the Hispano cannons and their ammunition affected the flight performance, especially its agility, but the aircraft was found to be especially potent in the ground attack role.

F4U-1D: Built in parallel with the F4U-1C, but was introduced in 1944. It had the new water-injected engine known as the R-2800-8W. This change gave the aircraft up to 250 hp (187 kW) more power, which, in turn, increased performance. Speed, for example, was boosted from 417 mph (671 km/h) to 425 mph (684 km/h). Because of the US Navy's need for fighter-bombers, it had a double payload of rockets when compared to the F4U-1A as well as twin-rack plumbing for an additional drop tank to be carried under the fuselage. Such modifications necessitated the need for rocket tabs (attached to fully metal-plated underwing surfaces) and bomb pylons to be bolted on the fighter, however, causing extra drag. Additionally, the new job of fighter-bombing was a new task for the Corsair and the wing fuel cells proved too vulnerable and were removed. [citation needed] The extra fuel carried by the two drop tanks would still allow the aircraft to fly relatively long missions despite the heavy, unaerodynamic load. The regular armament of six .50 calibre machine guns were implemented as well. The canopies of most F4U-1Ds had their struts removed along with their metal caps, which were used - at one point - as a measure to prevent the canopies' glass from cracking as they moved along the fuselage spines of the fighters. [citation needed] Additional production was carried out by Goodyear (FG-1D) and Brewster (F3A-1D). In Fleet Air Arm service the former known as Corsair Mk IV and the latter was known as the Corsair III, and both aircraft types were modified with clipped wings for use on smaller British aircraft carriers.^[21]

F4U-1P: A rare variant fitted with a reconnaissance camera.^[22]

F4U-2: F4U-2: Experimental conversion of the F4U-1 Corsair into a carrier-borne night fighter, armed with 4x .50 cal MGs. The fighter was fitted with an Airborne Intercept (AI) radar set in a radome placed on the outboard, starboard wing. Since Vought was preoccupied with more important projects, only 32 were converted from existing F4U-1s by the <u>Naval Aircraft Factory</u> and another two by frontline units^{[23][24]}. The type saw combat with VF(N)-101 aboard <u>USS *Enterprise*</u> and <u>USS *Intrepid*</u> in early 1944, VF(N)-75 in the <u>Salomons</u> and VMF(N)-532 on <u>Tarawa</u>.

XF4U-3: Experimental aircraft built to hold different engines in order to test the Corsair's performance with a variety of powerplants. This variant never entered service. Goodyear also contributed a number of airframes, designated **FG-3**, to the project. A single subvariant **XF4U-3B** with minor modifications was also produced.^[25]



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An F4U-4 folding its wings with an F4U-1 flying by overhead

F4U-4: The last variant to be produced during WWII, entering service four months before the end of hostilities. It had the dual-stage, supercharged R-2800-18W engine which produced 2,100 hp (1,566 kW) of power. When the cylinders were injected with the water/alcohol mixture, power was boosted to

2,450 hp (1,827 kW). The aircraft required an air scoop under the nose and the unarmored wing fuel tanks of 62 U.S. gal capacities were removed for better maneuverability at the expense of maximum range. The propeller had one additional blade, bringing the total to four blades. Maximum speed was increased to a blistering 448 mph (718 km/h) and climb rate increased to over 3,800 fpm (1,180 metres per minute) as opposed to the 2,900 fpm (884 metres per minute) climb of the F4U-1A. The flight ceiling also increased significantly from 37,000 ft. (11,278 m) to 41,000 ft. (12,497 m). ^[citation needed] The "4-Hog" retained the original, 6x .50 cal armament and had all the external loads (i.e. drop tanks, bombs, etc.) of the F4U-1D. The armored windshield was now flat to avoid optical warping, unlike the curved, armored windshields of the earlier Corsairs. ^[citation needed].

F4U-4B: Designation for F4U-4s to be delivered to the British Fleet Air Arm, but were retained by the US for its own use. The Fleet Air Arm received no F4U-4s.^[26]

F4U-4C: 300 F4U-4s ordered with alternate gun armament of four 20 mm (0.79") AN/M2 cannons.^[27]

F4U-4E and F4U-4N: Developed late in the conflict, these night fighters featured radar radomes projecting from the starboard wingtip. The -4E was fitted with the APS-4 search radar, while the -4N was fitted with the APS-6 type. In addition, these aircraft were often refitted with four 20mm M2 cannons similar to the F4U-1C. The night fighter variants would see greater use during the Korean conflict.^[28]

F4U-4P: As with the -1P, a rare variant fitted with a reconnaissance camera.^[29]

F4U-5: A 1945 design modification of the F4U-4, first flown on December 21st of that year, was intended to increase the F4U-4 Corsair's overall performance and incorporate many Corsair pilots' suggestions. It featured a more powerful Pratt and Whitney R-2800-32(E) engine with a double supercharger, rated at a maximum of 2,450 hp. Other improvements included automatic blower controls, cowl flaps, intercooler doors and oil cooler for the engine, spring tabs for the elevators and rudder, a completely modernized cockpit, a completely retractable tail wheel, and heated cannon bays and pitot head. The nose cowling was lowered two degrees to help with forward visibility, but perhaps most striking was that the F4U-5 was the first variant to feature all-metal wings, replacing the fabric covering outboard of the wing spar found on all previous models.^[30]

[edit] Super Corsair variants

Main article: F2G Corsair

The **F2G-1** and **F2G-2** were significantly different aircraft, fitted with the <u>Pratt & Whitney R-4360</u> *Wasp Major* 28-cylinder 4-row "corncob" radial engine, and tear-drop canopy, as a specialized interceptor against Japanese suicide *Kamikaze* attacks. The difference between the -1 and -2 subvariants was that the -1 featured a fixed wing, while the -2 had the folding wing capability for carrier use. As World War II was drawing to a close, development problems emerged that led to the abandonment of further work on the F2G series.^[31]

[edit] Service

[edit] United States Navy and Marine Corps

In February 1938, the U.S. Navy Bureau of Aeronautics published two requests for proposal, for twinengined and single-engined fighters. For the single-engined fighter the Navy requested the maximum obtainable speed, and a stalling speed not higher than 70 mph (113 km/h). A range of 1,000 miles (1,610 km) was specified.^{[*citation needed*] The fighter had to carry four guns, or three with increased ammunition. Provision had to be made for anti-aircraft bombs to be carried in the wing. These small bombs would, according to thinking in the 1930s, be dropped on enemy aircraft formations.}

In June 1938, the USN signed a contract for a prototype, the XF4U-1, BuNo 1443. After mock-up inspection in February 1939 construction of the XF4U-1 powered by a XR-2800-4 engine, rated at 1,805 hp (1,350 kW) went ahead quickly. The first flight of the XF4U-1 was made on <u>29 May 1940</u>, with Lyman A. Bullard Jr. at the controls. The maiden flight was eventful; a hurried landing was made when the elevator trim tabs failed because of flutter. [*citation needed*]

On <u>1 October</u>, the XF4U-1 made a flight from <u>Stratford</u> to <u>Hartford</u> with an average ground speed of 404 mph (650 km/h), the first US fighter to fly faster than 400 mph. The XF4U-1 also had an excellent rate of climb. On the other hand, the testing of the XF4U-1 revealed that some of the requirements of the US Navy would have to be rewritten. In full-power dive tests, speeds of up to 550 mph (885 km/h) were achieved, but not without damage to the control surfaces and access panels, and, in one case, an engine failure. [citation needed] The spin recovery standards also had to be relaxed, as recovery from the required ten-turn spin proved impossible without recourse to an anti-spin chute. [citation needed] The spin recovery standards also had to be relaxed.

Reports coming back from the war in Europe indicated that an armament of two .30 caliber (7.62 mm) and two .50 caliber (12.7 mm) machine guns was insufficient, and so when the <u>US Navy</u> asked for production proposals in November 1940, heavier armament was specified. At the end of June 1941, the Navy ordered 584 F4U-1 fighters. One year later, on <u>25 June</u> 1942, Boone T. Guyton flew the production F4U-1 on its maiden flight.^[4] At that time, <u>Brewster</u> and <u>Goodyear</u> were already tooling up to join the Corsair production program. The performance of the F4U was impressive. In comparison with the two other fighters which were powered by Pratt & Whitney R-2800 engines, the F4U-1 was considerably faster than the competing <u>F6F Hellcat</u> and nine mph slower than the <u>P-47</u> <u>Thunderbolt</u>. *Icitation needed* The latter achieved its highest speed at 30,020 ft (9,150 m), with the help of a turbocharger while the F4U-1 reached its maximum speed at 19,900 feet and used a mechanically supercharged engine.

Carrier qualification trials on the escort carrier <u>USS Sangamon Bay</u>, on <u>25 September</u> 1942, caused the U.S. Navy to release the type to the US Marine Corps. ^[Citation needed] After all, the US Navy still had the Grumman F6F Hellcat, which did not have the performance of the F4U but was a far better deck landing aircraft. The Marines needed a better fighter than the F4F Wildcat. For them it was not as important that the F4U could be put on a carrier, as they usually flew from land bases. Growing pains aside, <u>Marine Corps</u> squadrons readily took to the radical new fighter.

Those who insist that the Corsair was superior to the Hellcat in every respect should realize that the Hellcat was cheaper than the Corsair – the Navy could buy five Hellcats for the price of three Corsairs – and that the Hellcat was a perfectly effective and very rugged fighter and fighter-bomber.^[citation needed] More importantly, the Hellcat was much easier to fly, with Corsair pilots freely admitting that the F4U was unforgiving and not a good choice for a green pilot, earning it the nickname "Hog" (as in "Like a hog on ice").^[citation needed] Over half the losses of Corsairs in the Pacific Theater were credited to noncombat accidents.^[Citation needed] To experienced pilots, the Corsair was a more exciting and challenging aircraft, but Hellcat's docility was admired as well. Official kill records give the Hellcat the majority of kills in the Pacific Theater;^[32] however, the Hellcat was in service from US carriers at least half a year earlier.^[33]

Despite the decision to issue the F4U to Marine Corps units, two Navy units, <u>VF-12</u> (October 1942) and later <u>VF-17</u> (April 1943) were equipped with the F4U. By April 1943, VF-12 had successfully

completed deck landing qualification. ^[citation needed] However, VF-12 soon abandoned its aircraft to the Marines. VF-17 kept its Corsairs, but was removed from its carrier, <u>USS Bunker Hill (CV-17)</u>. The squadron operated as a shore-based unit in the Solomon Islands due to perceived difficulties in supplying parts at sea.^[34]. In November 1943, VF-17 reinstalled its tail hooks so that its F4Us could land and refuel while providing top cover over the task force participating in the <u>carrier raid on Rabaul</u>. The squadron's pilots successfully landed, refueled and took off from their former home, *Bunker Hill,* and the <u>USS Essex (CV-9)</u> on 11 November 1943.^[35].

The US Navy didn't get into combat with the type until September 1943 and the Royal Navy's Fleet Air Arm (FAA) would qualify the type for carrier operations first. The US Navy finally accepted the F4U for shipboard operations in April 1944, after the longer <u>oleo</u> leg was fitted, which finally eliminated the tendency to bounce. ^[citation needed] The first Corsair unit to be based effectively on a carrier was the pioneer USMC squadron, <u>VMF-124</u>, which joined the USS *Essex*. They were accompanied by <u>VMF-213</u>. The increasing need for fighters, as a protection against <u>Kamikaze</u> attacks, resulted in more Corsair units being moved to the carriers. ^[citation needed]

From February <u>1943</u> onward, the "U-Bird" flew from <u>Guadalcanal</u> and ultimately other bases in the <u>Solomon Islands</u>. Corsairs were flown by the famous <u>Black Sheep Squadron VMF-214</u> led by Marine Fighter Ace Maj. <u>Gregory "Pappy" Boyington</u> in an area of the Solomon Islands called "<u>The Slot</u>." Other noted Corsair pilots of the time included <u>VMF-215</u>'s <u>Robert Hanson</u> and Don Aldrich, VMF-124's <u>Kenneth Walsh</u>, <u>Joe Foss</u>, <u>James Swett</u> and Archie Donohue, and VF-17's Tommy Blackburn, Roger Hedrick and Ike Kepford. <u>Night fighter</u> versions were produced, equipping Navy and Marine units ashore and afloat. At war's end, Corsairs were ashore on <u>Okinawa</u> combating the <u>Kamikaze</u> suicide pilots and flying from fleet and escort carriers. <u>VMF-312</u>, <u>VMF-323</u>, VMF-224 and a handful of others met with success in the <u>Battle of Okinawa</u>.^[36]

The Corsair was in frontline service by early 1943. A dozen USMC F4U-1s arrived at <u>Henderson Field</u> on <u>Guadalcanal</u> (code name "Cactus") in the Solomon Islands on <u>12 February 1943</u>. The first recorded combat engagement was on <u>14 February 1943</u>, when Corsairs of Marine Squadron VMF-124 under Major William E. Gise assisted <u>P-40 Warhawks</u> and <u>P-38 Lightnings</u> in escorting <u>B-24</u> <u>Liberators</u> on raids against Japanese installations in the Solomons. Japanese fighters contested the raid and the Americans got the worst of it, with four P-38s, two P-40s, two Corsairs and two Liberators lost. No more than four Japanese Zeroes were destroyed. A Corsair was responsible for one of the "kills," but it wasn't anything to boast about since it was due to a midair collision. The fiasco was referred to as the "Saint Valentine's Day Massacre."^[37].



A Corsair fires its rockets at a Japanese stronghold on Okinawa

Although the Corsair's combat debut was not impressive, the Marines quickly learned how to make better use of the machine and demonstrate its superiority over Japanese fighters. By April 1943, the Corsair was getting the upper hand. By May, VMF-124 had produced the first Corsair ace, 2nd Lieutenant Kenneth A. Walsh, who would rack up a total of 21 kills during the war.^[38].

Corsairs also served well as fighter bombers in the Central Pacific and the <u>Philippines</u>. By spring 1944, Marine pilots were beginning to exploit the type's considerable capabilities in the close-support role during amphibious landings. The famed pilot <u>Charles Lindbergh</u> flew Corsairs with the Marines as a civilian technical advisor in order to determine how best to increase the Corsair's warload and effectiveness in the attack role. ^[citation needed] Lindbergh managed to get the F4U into the air with 4,000 lb (1,800 kg) of bombs, with a 2,000 lb (900 kg) bomb on the centerline and a 1,000 lb (450 kg) bomb under each wing. ^[citation needed] In the course of such experiments, he performed strikes on Japanese positions during the battle for the <u>Marshall Islands</u>. ^[citation needed]

By the beginning of 1945, the Corsair was a full-blown "mudfighter," performing strikes with highexplosive bombs, napalm tanks and HVARs. It was a prominent participant in the fighting for the Palaus, <u>Iwo Jima</u>, and <u>Okinawa</u>, with the ground-pounders calling it the "Sweetheart" for its welcome services when things were getting nasty.^[Citation needed]

Statistics compiled at the end of the war indicate that the F4U and FG flew 64,051 operational sorties for the U.S. Marines and U.S. Navy through the conflict (44% of total fighter sorties), with only 9,581 sorties (15%) flown from carrier decks.^[39] F4U and FG pilots claimed 2,140 air combat victories against 189 losses to enemy aircraft, for an overall kill ratio of over 11:1.^[40] The aircraft performed well against the best Japanese opponents with a 12:1 kill ratio against <u>Mitsubishi A6M</u>, 7:1 against <u>Nakajima Ki-84</u>, 13:1 against <u>Kawanishi N1K-J</u>, and 3:1 against <u>Mitsubishi J2M</u> during the last year of the war.^[41] The Corsair bore the brunt of fighter-bomber missions, delivering 15,621 tons of bombs during the war (70% of total bombs dropped by fighters during the war).^[40]

Corsair losses in the World War II were as follows:

- By combat: 189
- By enemy anti-aircraft artillery: 349
- Accidents during combat missions: 230
- Accidents during non-combat flights: 692
- Destroyed aboard ships or on the ground: 164^[40]

One particularly interesting kill was scored by a Marine Lieutenant R.R. Klingman of VMF-312 Checkerboards, over Okinawa. According to the story, he was in pursuit of a <u>Kawasaki Ki-45 Toryu</u> ("Nick") twin engine fighter at extremely high altitude when his guns jammed due to the gun lubrication thickening from the extreme cold. He simply flew up and chopped off the Ki-45's tail with the big propeller of the Corsair. Despite missing five inches off the end of his propeller blades, he managed to land safely and was awarded the <u>Navy Cross</u>.^[42].

[edit] Korean War

During the Korean War, the Corsair was used mostly in the close-support role. The **AU-1** Corsair was a ground-attack version produced for the Korean War; its Pratt & Whitney R-2800 engine, while supercharged, was not as highly "blown" as on the F4U. ^[citation needed] As the Corsair moved from its air superiority role in World War II into the close air support role in the Korean Conflict, the gull wing proved to be a useful feature. A straight, low-wing design would have blocked most of the visibility from the cockpit toward the ground while in level flight, but a Corsair pilot could look through a "notch"

and get a better ground reference without having to bank one way or the other to move the wing out of the way. [*citation needed*]

The AU-1, F4U-4B, F4U-4C, F4U-4P and F4U-5N logged combat in Korea between <u>1950</u> and <u>1953</u>.^{[*citation needed*]</sub> There were dogfights between F4Us and Soviet-built <u>Yakovlev Yak-9</u> fighters early in the conflict, but when the enemy introduced the fast <u>Mikoyan-Gurevich MiG-15</u> jet fighter the Corsair was outmatched, though one Marine pilot did get lucky. On <u>10 September 1952</u>, a MiG-15 made the mistake of getting into a turning contest with a Corsair piloted by Captain Jesse G. Folmar, with Folmar shooting the MiG down with his four 20 millimeter cannon.^[43] The MiG's wingmen quickly had their revenge, shooting down Folmar, though he bailed out and was swiftly rescued with little injury.}

Corsair night fighters were used to an extent. The enemy adopted the tactic of using low-and-slow <u>Polikarpov Po-2</u> intruders to perform night harassment strikes on American forces, and jet-powered night fighters found catching these "Bedcheck Charlies" troublesome. U.S. Navy F4U-5Ns were posted to shore bases to hunt them down, with U.S. Navy Lieutenant <u>Guy Pierre Bordelon Jr</u> becoming the Navy's only ace in the conflict.^[44] "Lucky Pierre" was credited with five kills (two <u>Yakovlev Yak-18</u> and three Po-2).^[43] Navy and Marine Corsairs were credited with a total of 12 enemy aircraft.^[43]

More generally, Corsairs performed attacks with cannon, napalm tanks, various iron bombs and unguided rockets. The old HVAR was a reliable standby, however sturdy Soviet-built armor proved resistant to the HVAR's punch leading to a new 6.5 in (16.5 cm) hollow-charge antitank warhead being developed. The result was called the "Anti-Tank Aircraft Rocket (ATAR)." The big <u>Tiny Tim</u> <u>rocket</u> was also used in combat. There is a story of a Corsair pilot who cut enemy communications lines by snagging them with his arresting hook. ^[citation needed]

Lieutenant <u>Thomas J. Hudner, Jr.</u>, flying with naval squadron VF-32 off the <u>USS Leyte</u>, was awarded the Congressional <u>Medal of Honor</u> for crash landing his Corsair in an attempt to rescue his squadron mate, Ensign <u>Jesse L. Brown</u>, whose aircraft had been forced down by antiaircraft fire near the <u>Chosin Reservoir</u>.^[45] Brown, who did not survive the incident, was the US Navy's first African American naval aviator.^[46]

[edit] Royal Navy

The <u>Fleet Air Arm</u> (FAA) introduced the Corsair into service before the U.S.N. British units flying from aircraft carriers solved the landing visibility problem by approaching the carrier in a medium left-hand turn, which allowed the pilot to keep the carrier's deck in view over the dip in the port wing, allowing safe carrier operations.^[47]

In the early days of the war, RN fighter requirements had been based on cumbersome two-seat designs, such as the <u>Blackburn Skua</u>, <u>Fairey Fulmar</u> and <u>Fairey Firefly</u>, on the assumption they would only be fighting long range bombers or flying boats. The RN hurriedly adopted higher performance but less robust types derived from land based aircraft, such as the <u>Supermarine Seafire</u>. The Corsair was welcomed as a much more robust and versatile alternative to naval adaptations of these. *Intervention Preceded*

In RN service, most Corsairs had their outer wings clipped to assist with carrier storage as well as benefitting its low-altitude performance.^[citation needed] Despite the clipped wings and the shorter decks of British carriers, the pilots of the RN found landing accidents less of a problem than they had been to USN aviators due to the curved approaches mentioned above. Royal Navy Corsairs saw widespread

service with the <u>British Pacific Fleet</u> from late 1944 until the end of the war, some six carrier-based squadrons flying intensive ground attack/interdiction operations and also claiming 47.5 aircraft shot down.

The Royal Navy received 95 Corsair **Mk** Is and 510 **Mk** IIs, these being equivalent to the F4U-1 and F4U-1A. Goodyear-built aircraft were known as **Mk** IIIs (equivalent to FG-1D), and Brewster-built aircraft as **Mk** IVs (equivalent to F3A-1D). British Corsairs had their wing tips clipped, 20 cm being removed at the tips, to allow storage of the F4U on the lower decks of British carriers. The Royal Navy was the first to clear the F4U for carrier operations. It proved that the Corsair Mk II could be operated with reasonable success even from small escort carriers. It was not without problems, one being excessive wear of the arrester wires due to the weight of the Corsair and the understandable tendency of the pilots to stay well above the stalling speed.

Fleet Air Arm units were created and equipped in the US, at Quonset Point or <u>Brunswick</u> and then shipped to war theatres on board <u>escort carriers</u>. The first Corsair unit of the FAA was <u>No. 1830</u> <u>Squadron FAA</u>, created on the first of June 1943, and soon operating from <u>HMS *Illustrious*</u>. At the end of the war, 19 FAA squadrons were operating with the Corsair. British Corsairs operated both in Europe and in the Pacific. The first, and also most important European operations were the series of attacks in April, July and August 1944 on the <u>German battleship *Tirpitz*</u>, for which Corsairs from <u>HMS</u> <u>*Victorious*</u> and <u>HMS *Formidable*</u> provided fighter cover.^[48] It appears the Corsairs did not encounter aerial opposition on these raids.

FAA Corsairs originally fought in a camouflage scheme, with a light-green/dark-green disruptive pattern on top and white undersides, but were later painted overall dark blue. Those operating in the Pacific theater acquired a specialized British insignia - a modified blue-white roundel with white "bars" to make it look more like a US than a Japanese insignia to prevent friendly-fire incidents. A total of 2,012 Corsairs were supplied to the <u>United Kingdom</u>.^[citation needed]

In the Pacific, the FAA Corsairs also began to operate in April 1944, participating in an attack on Sabang, and later in the attack on oil refineries at <u>Palembang</u>. In July and August 1945, the Corsair squadrons, No 1834, No 1836, No 1841 and No 1842 took part in a series of strikes on the Japanese mainland, near Tokyo. They operated from the carriers HMS *Victorious* and *Formidable*.^[49]

At least one Corsair was captured by the Germans, this was Corsair *JT404* from No. 1841 squadron (HMS *Formidable*). Pilot, Wing Leader Lt Cdr RS Baker-Falkner, made an emergency landing on <u>18</u> <u>July 1944</u> in a field at Sorvag, near <u>Bodo</u>, Norway. The Corsair was captured intact and it is not known if the Corsair was taken to Germany.^[50]

On <u>9 August 1945</u>, days before the end of the war, FAA Corsairs from *Formidable* were attacking Shiogama harbor on the northeast coast of Japan. Canadian pilot, Lieutenant <u>Robert Hampton Gray</u>, was hit by flak but pressed home his attack on a Japanese destroyer, sinking it with a 450 kilogram (1,000 pound) bomb but crashing into the sea. He was posthumously awarded Canada's last <u>Victoria</u> <u>Cross</u>, becoming the second fighter pilot VC of the war as well as the final Canadian casualty of the Second World War^[51].

[edit] Royal New Zealand Air Force

Equipped with obsolescent <u>Curtiss P-40s</u>, the <u>Royal New Zealand Air Force</u> Squadrons in the <u>South</u> <u>Pacific</u> performed impressively compared to the <u>American</u> units they operated alongside, in particular in the air-to-air role. The American government accordingly decided to give <u>New Zealand</u> early access to the Corsair, especially as it was not initially being used from carriers. Some 424 Corsairs equipped 13 RNZAF squadrons, including <u>No. 14 Squadron RNZAF</u> and <u>No. 15 Squadron RNZAF</u>, replacing <u>SBD Dauntless</u> as well as P-40s.^[citation needed]

In late 1944, the F4U equipped all twelve Pacific-based fighter units of the RNZAF.^[52] The first squadrons to use the Corsair were Nos 20 and 21, on Espiritu Santo island, operational in May 1944. In the RNZAF Corsair units, only the pilots and a small staff belonged to the squadron; aircraft and maintenance crew were grouped in a pool.^[citation needed]

However by the time the Corsairs arrived, there were virtually no <u>Japanese</u> aircraft left in New Zealand's allocated sectors of the Southern Pacific, and despite the RNZAF Squadrons extending their operations to more northern islands, the Corsairs were primarily used for close support of <u>American</u>, <u>Australian</u> and <u>New Zealand</u> soldiers fighting the Japanese. New Zealand pilots were aware of the Corsair's poor forward view and tendency to ground loop, but found these drawbacks could be solved by pilot training in curved approaches before use from rough forward airbases. <u>Icitation</u> <u>needed</u>

The RNZAF Corsair mainly flew close-support missions, and as a consequence did not claim a single enemy aircraft shot down. At the end of 1945, all Corsair squadrons but one (No. 14) were disbanded. That last squadron was based in Japan, until the Corsair was retired from service in 1947.^[53]

No. 14 Squadron took its Corsairs to <u>Japan</u> as part of the <u>British Commonwealth Occupation Force</u>. Only one airworthy example of the 424 aircraft procured exists today: NZ5648/ZK-COR, owned by the Old Stick and Rudder Company at Masterton, NZ. One other mostly complete aircraft and the remains of two others were known to be held by a private collector at Ardmore, NZ, in 1996. Their current whereabouts are unknown.^[54]

[edit] French Navy (Aeronavale)

A total of 94 **F4U-7**s were built for the <u>Aeronavale</u> in 1952, with the last of the batch, the final Corsair built, rolled out in December 1952. The F4U-7s were actually purchased by the U.S. Navy and passed on to the Aeronavale through the <u>U.S. Military Assistance Program</u> (MAP). The French used their F4U-7s during the bitter end of the <u>Indochina War</u> in the 1950s, where they were supplemented by at least 25 ex-U.S.MC AU-1s passed on to the French in 1954, after the end of the Korean War.^[56]

French Corsairs also performed strikes in the <u>Algerian War</u> in 1955 and 1956 and assisted in the Anglo-French-Israeli seizure of the <u>Suez Canal</u> in October 1956, codenamed <u>Operation Musketeer</u>. The Corsairs were painted with yellow and black recognition stripes for this operation. In 1960, some French Corsairs were rigged to carry four SS-11 wire-guided missiles. This was a more or less experimental fit and it is hard to believe it worked well, since it required a pilot to "fly" the missile after launch with a joystick while keeping track of a flare on its tail – an exercise that might be very tricky in a single-seat aircraft under combat conditions. All French Corsairs were out of service by 1964, with some surviving for museum display or as civilian warbirds.^[57]

[edit] The "Football War"

Corsairs flew their final combat missions during the <u>1969</u> "Football War" between <u>Honduras</u> and <u>El</u> <u>Salvador</u>. The conflict was famously triggered, though not really caused, by a disagreement over a football (soccer) match. Both sides claimed various numbers of kills, and predictably each side disputed the claims of the other.^[58]

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5

A Corsair F4U-5N, showing the markings of <u>VMF-312</u>, appearing at the 2005 AirVenture Air Show at Oshkosh, Wisconsin.

Both Honduras and El Salvador flew Corsairs during the conflict. The Air Force of El Salvador had 13 FG-1D corsairs in it inventory and the Honduran Air Force had a total of 17 Corsairs (nine F4U-5s and eight F4U-4s) in its roster but it is unlikely that all of the fighters from either air force were operational.

The planes were primarily used in ground attack roles and all reports seem to indicate that Honduras made better use of their Corsairs than their opponents. The success of the Honduran Corsairs in the war was due in large part to their strategy of using the fighters for both strategic and tactical targets. In one notable raid carried out by Honduran Corsairs, they were able to crater the runway of their opponent's principal airbase and, in the process, destroy an El Salvadoran Corsair on the ground. Another raid by the Honduran Corsairs against a commercially run oil storage facility resulted in the destruction of 20% of the Salvadoran fuel reserves.

While aerial combat was rare in this conflict, there were some air-to-air engagements for the Corsair. On the morning of 17 July, a Honduran F4U-5 flown by Maj. Fernando Soto Enrique (then a Capt.) downed one of two Salvadoran P-51s that had been attacking two Honduran Corsairs on a ground support mission. Later, on his fourth sortie of the day, Maj. Soto shot down two FG-1D Corsairs from El Salvador in a single engagement. It is ironic that the last dogfighting victories for the Corsair would be over other Corsairs. To this day, Maj. Soto is the only pilot from any Central American Air force to be credited with an air combat victory.

While Maj. Soto's second engagement on the 17th represented the final "kill" for a Corsair in combat, the last Corsair lost to enemy fire was another FG-1D from El Salvador, which was downed by AAA fire on the afternoon of the same day.

The war between Honduras and El Salvador ended two days later on 19 July and with it, the combat history of the Corsair culminated. Vought's 1938 design, which first saw action in 1943 saw its last action over Central America in 1969 after 26 years of combat service.

[edit] Survivors



Vought F4U-4 #97388 at Corsairs Over Connecticut event, June 2005



5

F2G-1 "Super Corsair" #88458, painted as Race #57, owned by Bob Odergaard of Kindred, North Dakota, flying at the 2005 AirVenture at Oshkosh, Wisconsin.

Over two dozen Corsairs are believed to be still airworthy, most in the United States. Others are found in museum collections worldwide.

- FGID 92436: In flying condition (currently undergoing complete restoration in Idaho) owner: Olympic Flight Museum, olympia airport, Olympia, Washington state
- F4U-1A #17799: in flying condition at the "Air Museum Planes of Fame," Chino, California
- F4U-1D #50375: on static display at the <u>Smithsonian Air and Space Museum</u>'s <u>Steven F.</u> <u>Udvar-Hazy Center</u>, Chantilly, Virginia
- XF4U-4 #80750: on static display at the <u>New England Air Museum</u>, Windsor Locks, Connecticut
- F4U-4 #97142: on static display at the Pima Air & Space Museum, Tucson, Arizona
- F4U-4 #97280 / NX712RD: on static display at the Cavanaugh Flight Museum, Addison, Texas
- F4U-4 #97286: *Angel of Okinawa* on static display at the <u>Fantasy of Flight</u> Museum, Polk City, Florida. This aircraft was owned by <u>Merle B. Gustafson</u> from 1972 until 1984.
- F4U-4 #97349: on static display at the <u>National Museum of Naval Aviation</u>, NAS Pensacola, Florida
- F4U-4 #97369: on static display at the <u>United States Marine Corps Air/Ground Museum</u>, Quantico, Virginia
- F4U-5N: former Argentine Navy aircraft (although missing its radome) restored in the colors of Lt. Guy Bordelon. Flying as a night fighter in Korea as a member of VC-3 Squadron, US Navy, Lt. Bordelon was the only US ace in Korea who flew a propeller driven airplane. <u>Lone Star</u> <u>Flight Museum</u>, Galveston, Texas
- F4U-5N #122189: on static display at the MCAS EI Toro Historical Foundation, Irvine, California
- F4U-5N: In flying condition, served with the Honduran Air Force and saw combat in the ground-attack role in 1969 against El Salvador. Indiana Aviation Museum, Valparaiso, Indiana
- F4U-7 #133704: on static display at the <u>USS Alabama Battleship Memorial Park</u>, Mobile, Alabama
- F2G-1 "Super Corsair" #88458: in flying condition, painted as Race #57 at the Fargo Air Museum, Fargo, North Dakota
- F2G-1D "Super Corsair" #88463: Race No. 74 was sold to Walter Soplata, of Newberry, Ohio. This F2G was acquired by the Crawford Auto-Aviation Museum in Cleveland, Ohio. Bob Odergaard of Kindred, N.D. is restoring the aircraft to static condition.

[edit] Handling characteristics

All variants of the Corsair are known for a tendency to *fall off* on the left wing in power-on stalls, rolling over onto the side or back and losing as much as several hundred feet of altitude before control can be fully regained. When there is sufficient altitude, the pilot is easily able to regain control,

but at low altitudes this can prove fatal, leading to the moniker, "Ensign Eliminator" during early Navy tests of the plane. [*citation needed*]

Ground handling was a challenge for inexperienced pilots, due to the combination of a castoring tailwheel (that is, it freely swivels unless locked) and the length of the fuselage and cowling ahead of the cockpit (which inspired the nickname "Hose Nose"). The Corsair must be taxiied as a series of S-turns, with the pilot using the brakes to turn the plane first one direction then the other, in order to see past the nose. Crosswinds or sloppy use of the throttle or brakes rapidly leads to embarrassment for the pilot, as the plane veers off the taxiway or (in extreme cases) spins around in a low-speed *groundloop* and finally stops pointing the wrong direction. When the plane is taxiied a long distance, *brake fade* —the tendency for hot brakes to become unreliable— can also cause these problems. Pilots may wait a few moments before beginning the takeoff roll in order to let the brakes cool, so that they will have even steering during the first part of the roll before the rudder becomes effective. ^[citation needed]

The early models of the F4U had a major problem in landing, as the oleo struts in the landing gear would compress, then bounce the plane upward, riding the ground-effect cushion between the wing and the ground, which was increased when the tail was low in a three-point landing. A bad bounce could leave the pilot with tons of airplane, now out of ground effect, falling out of the sky without enough airspeed to keep the left wingtip from dropping toward the ground. The main gear would hit the ground hard enough to begin the cycle again, finally ending either in a series of smaller bounces or in a crash. Until the problem was solved (in a test program which took months), F4U pilots learned to land at high speed and keep the tail high until airspeed and lift bled off enough to keep the plane on the ground when the tail came down. ^[citation needed]

An added danger was that the shape of the inverted gull wing on the Corsair *blanks out* the elevators and rudder when the tail is down on the ground. This problem was relieved somewhat by lengthening the tail gear struts to lift the tail a few inches, where there was cleaner airflow. [Citation needed]

Due to the long nose, pilots landing on aircraft carriers were unable to see the <u>Landing Signal Officer</u> (LSO)—or the rest of the aircraft carrier, for that matter—during the final, critical moments of final approach. American pilots developed a technique of applying right rudder and left aileron, *crabbing* the plane toward the flight deck, keeping the LSO in sight by keeping the nose pointed at an angle. British Commonwealth pilots simply modified their approach pattern into a long, shallow turn to the left, again to keep the nose pointed to the right until the signal to land had been given. (Plenty of footage shows USN and USMC pilots landing while making a left turn. The goal was to see the LSO. Pilots did not land unless the LSO gave the "OK and Cut". It is reasonable to think that a combination of left turn and crabbing were used while coming aboard.^[citation needed] Interviews with US Corsair pilots support this as well.^[citation needed]

[edit] Operators



An <u>Aéronavale</u> F4U-7 Corsair of 14.F flotilla



Corsair FG-1D (Goodyear built F4U-1D) in the Royal New Zealand Air Force markings

- Argentine Navy
- El Salvador
 - El Salvador Air Force
- France
 - <u>Aéronavale</u>
- Honduras
 - Honduran Air Force
- New Zealand
 - Royal New Zealand Air Force
- State Contended State St
 - Fleet Air Arm

United States

- <u>United States Navy</u>
- <u>United States Marine Corps</u>

[edit] Amateur-Built Corsair replicas

The Corsair design is one of the most readily-identifiable aircraft in the world. This has designers of experimental, "homebuilt" aircraft to develop their own versions of the Corsair, near-duplicate except in size. [*Litation needed*]

None are currently available as a prefabricated kit, but instead all are built from plans. The most popular of the available plans sets is offered by War Aircraft Replicas International (W.A.R.), generally considered a 1/2-scale though some dimensions are necessarily not exactly 50% of the original size. Most noticeable is that the cockpit is directly over the wing, with the fuselage behind the wing somewhat shortened, but the shape is clearly that of the "Bent-Wing Bird." One other complaint by homebuilders is the lack of propellers with the proper appearance. ^[citation needed]

One enthusiast is building an 82%-scale version, scaled to match the size of the radial engine which he intends to use, which is approximately 4/5 the size of the radial used in the original Corsair. Due to the expense of radial engines, most replicas use readily-available opposed inline engines, and at least one owner is experimenting with a <u>Wankel</u> engine taken from a <u>Mazda RX-7</u> sports car. <u>Citation needed</u>

Handling characteristics of the scaled-down version are similar to the original F4U, and a number of Corsair replicas have been involved in ground-handling accidents, due to the close-coupled landing gear configuration. [citation needed]

[edit] Specifications

[edit] F4U-1A

Data from Aeroweb^[59]

General characteristics

- Crew: 1 pilot
- Length: 33 ft 4 in (10.1 m)
- Wingspan: 41 ft 0 in (12.5 m)
- **Height:** 16 ft 1 in (4.90 m)
- Wing area: 314 ft² (29.17 m²)
- Empty weight: 8,982 lb (4,073 kg)
- Loaded weight: 14,000 lb (6,300 kg)
- Powerplant: 1x Pratt & Whitney R-2800-8 radial engine, 2,000 hp (1,500 kW)

Performance

- Maximum speed: 417 mph (362 knots, 671 km/h)
- <u>Range</u>: 1,015 mi (882 nm, 1,634 km)
- <u>Service ceiling</u>: 36,900 ft (11,200 m)
- Rate of climb: 2,890 ft/min (14.7 m/s)

Armament

- Guns:
 - 4x 0.50 in (12.7 mm) <u>M2 Browning machine guns</u>, 400 rounds per gun
 - 2x 0.50 in Browning M2 machine guns, 375 rounds per gun
- **Rockets:** 4× 5 in (12.7 cm) High Velocity Aircraft Rockets and/or
- Bombs: 2,000 lb (910 kg)

[edit] F4U-4

Data from Aeroweb^[60]

General characteristics

- Crew: 1 pilot
- Length: 33 ft 8 in (10.2 m)

- Wingspan: 41 ft 0 in (12.5 m)
- **Height:** 14 ft 9 in (4.50 m)
- Empty weight: 9,205 lb (4,174 kg)
- Loaded weight: 14,669 lb (6,653 kg)
- Powerplant: 1× Pratt & Whitney R-2800-18W radial engine, 2,100 hp (1,565 kW)

Performance

- Maximum speed: 446 mph (388 knots, 718 km/h)
- Range: 1,005 mi (873 nm, 1,618 km)
- Service ceiling: 41,500 ft (12,649 m)
- Rate of climb: 3,870 ft/min (19.7 m/s)

Armament

- Guns:
 - o 6x 0.50 in (12.7 mm) M2 Browning machine guns, 400 rounds per gun or
 - o 4x 20mm <u>AN/M2</u> cannons
 - **Rockets:** 8× 5 in (12.7 cm) High Velocity Aircraft Rockets and/or
- Bombs: 4,000 lb (1820 kg)

[edit] Popular culture

- <u>Flying Leathernecks</u> (1951) starring <u>John Wayne</u>, was about a Marine Corps squadron flying Corsairs while developing close-support tactics.
- The exploits of Marine Corps squadron <u>VMF-214</u> which flew the Corsair in the Pacific during the war were depicted in the popular 1976 made-for-TV movie *Baa Baa Black Sheep* (also released as *Flying Misfits*) and the follow-up <u>television series</u> *Baa Baa Black Sheep*, which aired from 1976 to 1978). The TV series featured six genuine flying Corsairs, but the storylines were fictional. See also <u>Pappy Boyington</u>.
- The Corsair plays a prominent role in W.E.B. Griffin's book series, *The Corps* (1986- present).
- In the <u>Clint Eastwood</u> film, <u>Flags of Our Fathers</u> (2006), <u>U.S. Marine</u> Corsairs can been seen firing machine guns and rockets at Japanese bunkers during the <u>Battle of Iwo Jima</u>.

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- 54. <u>^</u> Tillman 1979, p. 192.
- 55. <u>[5]</u> Old Stick and Rudder Company site.
- 56. <u>^</u> Tillman 1979, p. 179-182.
- 57. <u>^</u> Tillman 1979, p. 192.

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- <u>Connecticut Corsair</u>
- Warbird Alley: F4U Corsair page
- <u>Corsairs in French service</u>
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- <u>http://www.F4Ucorsair.com Information on the remaining Corsair projects, museum Corsairs,</u> and blueprints
- Baa Baa Black Sheep the television series

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- http://history.navy.mil/branches/hist-ac/fighter.htm U.S. Navy performance charts for F4U-4 http://www.geocities.com/slakergmb/id3.htm Comprehensive collection of historical flight data • charts and reference material
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