

Vought F4U Corsair

**11,700 planes produced, starting in July, 1942. Entered service mid-1943.
F4U-1D specs: 425 MPH, six 50 caliber machine guns**



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Originally designed as a carrier-based fighter, the Corsair's difficult handling and landing characteristics caused the Navy to rely on the Grumman Hellcat instead. The Marine Corps benefited from this policy change, and its land-based units eagerly adopted the "Bent-wing Bird." The famous Jolly Rogers, the Navy's VF-17, also flew the Corsair during its tour in the Solomons. Late in the war, as the handling problems were resolved, both Marine and Navy pilots operated F4U's from carrier decks.

But its speed, firepower, maneuverability, and ruggedness cause many to rate it with the Mustang as the best fighter plane of World War Two.

Tommy Blackburn (CO of the Jolly Rogers) on the F4U Corsair:

The Corsair appeared to be a superb fighting machine, but it was overengineered and thus hard to maintain. At the start of a typical day's ops, only about half of our full complement was safe to fly. By "secure," half of those could be expected to be "down."

The 2,800-cubic-inch engine was a monster to fire up after it had sat in subfreezing weather overnight. First, it took two strong men pulling on a prop blade to slowly accomplish the minimum revolutions needed to clear the lower cylinders of oil so the start-up could be accomplished in safety. Next, the engine had to be primed with raw gasoline. This touchy enterprise had to stop short of flooding and thus drowning the spark plugs and evade the obvious fire hazard while getting enough vaporized fuel into the cylinders to get the engine to cough to life. Some genius had equipped the Corsair with a shotgun starter in lieu of the heavy electric starter. When all was in readiness, the shotgun shell was fired. Sometimes it went bang and turned the prop through three or more revolutions. Mostly, however, it just went poof and the prop just twitched. Four abortive tries generally

overheated the starter, and that resulted in a fifteen-minute stand-down for cooling. So much for geniuses.

Each of fourteen cowl flaps had its own baby hydraulic cylinder to open and close it. These tended to leak. In addition, until the maintenance crews became expert, the big radial engine tended to throw a lot of oil. The combination rapidly coated the windshield and seriously decreased the airplane's inherently limited forward visibility. We all became expert at quickly locating rain showers through which we could fly in order to wash away the oil.

The landing flaps had a protective device to prevent extension at airspeeds high enough to cause overstressing. This was a dandy feature except that the flaps could and often did retract fully and without warning during the final stages of a landing approach. Of course, this resulted in a horrendous loss of lift and a rapid sinking. The pilot, ever alert for such mishaps, had to slam on full power to evade disaster. After too many narrow escapes, we got the "flap blowup" removed, it being our decision to risk tearing off a flap as against losing lift in this terrifying, dangerous manner. To my knowledge, no one ever did tear off a flap.

The Corsair's storage battery, which was located in the cockpit, had an unhealthy habit of boiling over. In one case, a battery exploded while the airplane was in flight. We later determined that it had been excessively over-charged, but the incident gave us one more in a long line of potential life-threatening problems to bear in mind while we were trying to fly - and eventually, fight - our irascible Hogs.

quoted from [The Jolly Rogers](#), by Tom Blackburn and Eric Hammel

Development

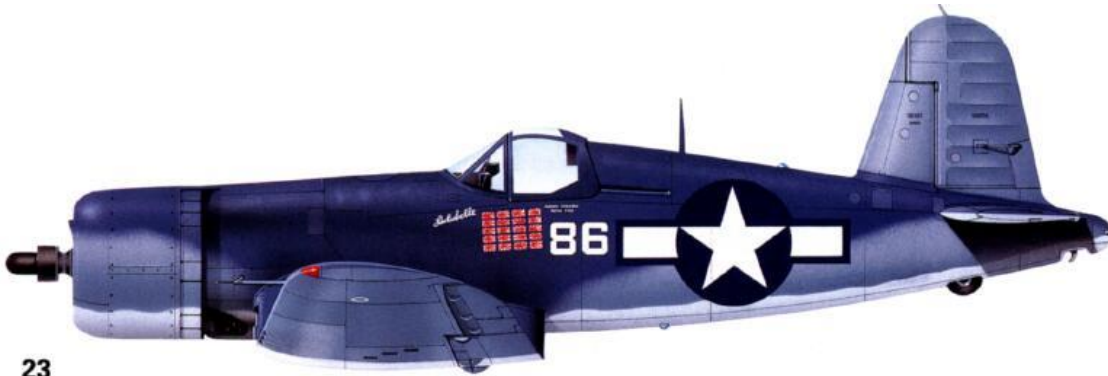
Originating in a 1938 Navy spec, when the need to replace the F2A and F4F could already be foreseen, the Vought Corsair was designed around an engine that also didn't exist yet: the Pratt & Whitney R-2800 Double Wasp, a monster 18 cylinder double radial, eventually capable of 2250 horsepower. (During the Corsair's development, corporate reorganizations brought the Vought company into Vought-Sikorsky and then Chance Vought, all part of United Aircraft, along with Pratt & Whitney and Hamilton Standard.)

The huge engine dictated much of the plane's design. Such a powerplant needed a comparably big propeller to absorb all that horsepower. Thus the 13' 4" diameter Hamilton Standard prop, the largest fittest to a fighter at that time. The Corsair's fuselage had to be high in the air, to give the prop clearance, But ordinary, straight wings at that height would have implied long (and weak) landing gear. The distinctive bent wings were developed to permit a reasonably short undercarriage.

The XF4U first flew in May 1940, and in October flew faster than 400 MPH, a record for a production fighter. A major re-design pushed the cockpit back 32 inches, which resulted in poor forward vision for the pilot, at least on take-off and landing. Development continued into 1942, when Vought delivered the first production F4U-1 to the Navy, which didn't like what it saw, especially when compared to the easier-handling, and very capable F6F Hellcat. The F4U had dangerous stall behavior, had tendency to yaw suddenly when landing, and, worst off all, bounced when it hit the deck. For use on carriers, these problems caused the Navy to insist that they be fixed, while it went ahead equipping with the Hellcat. By the summer of 1943, most of the Marine fighting squadrons had transitioned to the F4U-1, the first operational model. Based on combat experience, Vought improved the next version, the **F4U-1A**:

- a better visibility bubble-top canopy. The different canopy tops show clearly in the illustrations.

- a more powerful engine, the R-2800-8W. Equipped with water-injection, this engine could achieve 2,250 horsepower for brief periods.
- a spoiler on outside edge of right wing
- a longer tailwheel leg



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F4U-1A white 86 *Lulubelle*/BuNo 18086 of Maj Gregory Boyington, CO of VMF-214, Vella Lavella, December 1943

This list of changes is typical for the modifications made in WWII aircraft, as the manufacturers absorbed the lessons of the battlefield and adapted the airplanes in response.

The F4U Corsair went on through many different models. It saw service in Korea, where [Guy Bordelon](#) flew an F4U-5N to become the Navy's only prop ace of that war. The Corsair remained in production until 1952 (over 12,000 built), they served with many nations' air forces until the 1960's. Corsairs flew their last combat missions in the 1969 "Soccer War" between Honduras and El Salvador.

F2G

Quinn Elliot made these observations on the F2G variant:

Perhaps I missed it on the Corsair page - the most powerful Corsair ever built, the Goodyear built F2G with the Pratt & Whitney R-4360 corncob 28 cylinder engine (four rows of seven cylinders), contrasting with the P & W R-2800 18 cylinder engine in the normal Corsair. Fifteen of these were built, five being the F2G-1 beginning with bureau number 88454. These five were land lubbers, although the wings could be folded manually. The remaining 10 were fully carrierized and were F2G-2's.

I took photos of BuNo 88454 about 1970. It had been preserved at NAS Norfolk and stored by O & R/NARF. It was in beautiful condition-until a ranking Naval Officer wangled it away from the Navy, for racing, or so the story went. That plan went afoul, and it wound up derelict at Newport News. (As I recall Corsair F2G-1 88454 is/was in the Champlain Fighter Museum in Mesa, Arizona. Cook Cleland raced these super Corsairs in the late 1940's?)

F2G-2 specifications which should be about the same as the F2G-1=399 MPH at sea level, 431 mph at 16,405 feet, initial climb rate 4,400 feet per minute, internal fuel range 1,190 miles, empty weight 10,249 pounds, gross weight 13,346 pounds, span 41 feet, length, 33 feet 9 inches, height 16 feet 1 inch, wing area 314 sq. ft. The max speed performance was very close at sea level, but at altitude quite a difference. The Super Corsair had a bubble type canopy, different cowling to cover the longer engine, thus it had a longer snout. It had smaller wing root inlets than the standard Corsair. Since it wasn't equipped with a supercharger, intercoolers weren't necessary. The F2G's came with a taller fin and rudder, with a straight section auxiliary rudder just below the normal rudder, which moved only to the right by 12 plus degrees-as an aid for torque correction whilst landing on aircraft carriers.

Check out the story behind [Pappy Boyington's Corsair](#).

Recommended Reading (available from Amazon.com): [Corsair Aces of World War 2](#)

Top Corsair Aces of WW2	Kills	Medals	Squadron	Plane
Robert M. Hanson	25.0	MH	VMF-215	F4U
Gregory "Pappy" Boyington	22.0	MH	VMF-214	F4U
Kenneth Walsh	21.0	MH	VMF-124	F4U
Donald N. Aldrich	20.0	-	VMF-215	F4U
Wilbur J. Thomas	18.5	-	VMF-213	F4U
Ira Cassius "Ike" Kepford	16.0	NC	VF-17	F4U
James E. Swett	15.5	MH	VMF-221	F4F F4U
Harold L. Spears	15.0	-	VMF-215	F4U
Archie Glenn Donahue	14.0	DFC	VMF-112	F4U
James N. Cupp	13.0	-	VMF-213	F4U
Edward O. Shaw	13.0	-	VMF-213	F4U
Roger R. Hedrick	12.0	DFC	VF-17/VF-84	F4U
Harold E. Segal	12.0	DFC	VMF-221	F4U
John T. "Tom" Blackburn	11.0	NC	VF-17	F4U
Chris Magee	9.0	NC	VMF-214	F4U
John Bolt	6.0	-	VMF-214	F4U
R. Bruce Porter	5.0	DFC	VMF-121 VMF(N)-542	F4U F6F
VMF-214 Black Sheep Aces	5+	-	VMF-214	F4U
VMF-323 Death Rattlers	5+	-	VMF-323	F4U

Pappy Boyington's Corsair

F4U-1A, Bureau Number 18086

Modeller's love it: Major Gregory "Pappy" Boyington's F4U-1A Corsair, decorated with 20 little Japanese flags, adorned with the nickname *Lulubelle*, and just below the canopy stencilled "Gregory Boyington, Major - USMC." There's even a contemporary photograph of Pappy in the famous plane.

The only problem is that it was really nothing more than a "photo op." Boyington never flew #883 in combat.

In fact, the Marine fliers during the Solomons campaign flew any plane they could get. It wasn't like the Eighth Air Force in Europe, where each pilot had a personal plane and supporting crew. At the end of a thin supply line, largely dependent on Navy logistics, dedicating specific planes to specific pilots was a luxury the Marines just didn't have. Also, it's my speculation that the Marines, as a "Naval" service, followed the habits and customs of the senior service. The Navy pilots, operating from cramped carriers, always shared planes.

In [*The Black Sheep*](#), Bruce Gamble describes a typical scene at VMF-214's flight line, before a mission in the pre-dawn hours:

Those scheduled for flights piled onto a vehicle--often a sagging, overloaded jeep, perhaps a larger weapons carrier--for a ride down to the flight line. The pilots did not have preassigned Corsairs. **No one, including Boyington, had a personal airplane.** Instead the jeep rolled down the line past the revetments, where an enlisted plane captain waiting by each Corsair signaled either "thumbs up" or "thumbs down." In the dark he used a hooded flashlight. If the signal was affirmative, a pilot jumped from the jeep and climbed in; if the plane was grounded, the jeep simply rolled to the next plane in line.

Bruce Matheson later remarked on the informalities. "Off you'd go with no idea what the tail numbers were, whose squadron [the aircraft] belonged to, nothing. They were just airplanes, there to be flown. Looking back on it, the absence of record-keeping was unbelievable. We kept our own log books. There were no Yellow Sheets. There was no such thing as writing down anything, when you came back from a hop, which had to do with maintenance. When you came back, some young kid naked to the waist would bring you in, put chocks under it and say, "What about it?" You'd say, "It's okay," or "fix the radio," and walk away from it."

But the illustrations of Pappy's alleged plane, Bu. No. 18086, reveal a lot of interesting stuff about the Corsair, about PR, and about Boyington's own life.



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F4U-1A white 86 *Lulubelle*/BuNo 18086 of Maj Gregory Boyington, CO of VMF-214, Vella Lavella, December 1943

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But the Marines, operating from land bases in the Solomons, needed capable new fighters to replace their aging F4F Wildcats. By late 1942, the first USMC squadron, VMF-124, took delivery of the Corsair **F4U-1**. In early 1943, they began to see combat, and were a huge success - with speed, maneuverability, firepower, and ability to absorb battle damage. By the summer of 1943, most of the Marine fighting squadrons had transitioned to the F4U-1, the first operational model, fitted with a distinctive "birdcage" canopy, as shown in the detail of a plane flown by Ed Olander (number 576). Boyington's squadron, VMF-214, switched over to Corsairs before they started their September 1943 combat tour. Based on combat experience, Vought improved the next version, the **F4U-1A**:

- a better visibility bubble-top canopy. The different canopy tops show clearly in the illustrations.
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PR - Public Relations

In November 1943, Pappy was publicly credited with 20 aerial victories (his actual total was almost certainly less, but that's another story). The press had begun to pay attention to the Marine Corps ace.

On November 26, at Turtle Bay on Espiritu Santo, Boyington posed in the cockpit of plane #86, decorated with 20 little Rising Sun flags, and painted *Lu**belle*. The bystander's arm obscures two letters of the word, which was either *Lucybelle* or *Lulubelle*. At the time, Boyington was involved with Mrs. Lucy Malcolmson, and Frank Walton recalled the name on the plane as **Lucybelle**. Makes

sense, at the time. But after their messy break-up, Lucy kept \$15,000 of Boyington's money that he had entrusted to her.

In later years, Pappy stated that the name on the plane was *Lulubelle*. As Bruce Gamble put it, "He had about fifteen thousand reasons to forget Lucy, each one worth a dollar." So even the apparently innocuous nose art of a Corsair illustrates some of the themes of Pappy's troubled life -- his difficulties with money, women, and the truth.

There were more photo ops. Frank Walton, the Air Combat Intelligence Officer (ACIO), was a talented writer himself, and went along with the press coverage of Boyington. On day, they staged a pretty good event for the cameras. The World Champion St. Louis Cardinals offered to trade Boyington one of their baseball caps for each plane shot down. One photo shows a grinning Greg Boyington exchanging a stack of little Jap flags for a stack of hats. In the most well-known photo, now on the cover of [The Black Sheep ... Marine Fighting Squadron 214 in WW2](#), all the pilots stand on a Corsair, while Boyington, Bolt, Magee and the other aces stand in front with baseball bats in their hand. Other photos featured Black Sheep aces perched on the wing of #740, aiming bats like guns.

Corsair Numbers

For what it's worth, it is known that Pappy Boyington flew the following Corsairs:

- BuNo 18086, an F4U-1A, in November 1943, or he at least sat in it for the photos
- BuNo 17740, an F4U-1A, in December 1943, used in "baseball" photo session
- BuNo 17883, an F4U-1A, in December 1943, also flown by [Bob McClurg](#)
- BuNo 17915, an F4U-1A, January 3, 1944, lost on Boyington's last mission

What was their ultimate disposition? Number 915 definitely wound up at the bottom of St. George's Channel; the others were almost certainly scrapped. Only a handful of Corsairs survived.

The profile paintings on this page are from Mark Styling's [Corsair Aces of World War 2](#), #8 in the Osprey Aircraft of the Aces series.

The [Vought Aircraft History](#) site is an outstanding resource: lots of photos of the aces and the planes. Slow-loading, but worth it. Click on the "1940-1949" section; then click on "F4U." It's a framed site, so it's tough to describe all the navigation, but if you can, keep digging. Eventually, in the F4U section, you'll find major menu choices for "PEOPLE" and "AIRPLANES."