

Model Number : OS2U
Model Name : Kingfisher
Model Type: Scout, Observation

Convertible to either land or seaplane, its chief function was to be as a float plane operating from battleship or cruiser catapults. U.S. Navy battleships normally carried three OS2U's, while light cruisers of the Omaha Class carried two. Carriers normally carried a complement of four. For a short time, May 1940 to December 1943, OS2U's were operational experimentally from U.S. Navy destroyers. Kingfishers were also assigned duty with seaplane tenders, and two were outfitted for Navy admirals' use.



Model Number : XOS2U-1
Model Name : Kingfisher
Model Type: Scout, Observation



The XOS2U-1 was first in a series of Vought aircraft to become known affectionately around the world as the “Kingfisher, Saver of Men.”

In March 1937, Vought contracted with the Navy to build a new observation/scout prototype, the XOS2U-1. Engineers, led by Rex Beisel, set out to meet new and stiff requirements to produce a monoplane that would do the job better than the traditional biplane ever did. As recalled by Frank Allbright, project engineer on the OS2U-1, “...when the proposal for the XOS2U-1 was first submitted to the Navy, it was nearly turned down because the Navy engineers did not believe that a monoplane could be designed to meet the weight and performance requirements. Vought was requested to take the proposal back home and spend two weeks checking and re-checking the weight, and especially the landing speed, to see if some mistake had not been made.”

One XOS2U-1 was built. Using advanced design and structural features allowed the XOS2U-1 to attain the low landing speed and light weight that traditionally were believed to belong to the biplane. Some of these features included high-lift devices, “deflector plate” flaps used on the trailing edge of the wing, and “drooping” ailerons which served the same function as flaps at low speed.



Another innovative feature was spoilers, worked out by W.C. Schoolfield and test pilot Paul Baker on a Fairchild F-24. This feature supplanted the ailerons at low speeds and provided lateral control. The structure incorporated spot-welded aluminum alloy construction rather than the usual rivet-studded surfaces. This was the first design to use spot-welding, creating a non-buckling, smooth surface which was conducive to higher speeds. The aircraft was convertible to a seaplane by addition of float gear.

The XOS2U-1 made its first flight in May 1938. The low-powered monoplane with its Pratt & Whitney R-985-4 engine outperformed the biplanes in speed, range, and general performance.



Following successful flight testing of the XOS2U-1, Vought was awarded a contract in April 1939 for 54 OS2U-1's. These differed from the XOS2U-1 in small changes to the float attachments and by having an R-985-48 engine in place of the 4. They were delivered in 1940.

	Landplane	Seaplane
Dimensions		
Wingspan	35.91 ft	30.91 ft
Overall Length	30.09 ft	33.60 ft
Height	12.56 ft	14.67 ft
Weights and Capacities		
Empty Weight	3022.20 lb	3349.90 lb
Gross Weight	4677.20 lb	4841.40 lb
Useful Load		
Fuel Capacity	144 gal	144 gal
Oil Capacity	10 gal	10 gal
Powerplant Characteristics		
Type: P & W R-985-48		
Rating	450 hp	450 hp
Displacement	985 in ³	985 in ³
Weight	665 lb	665 lb
Size (length X diameter)		
Performance		
Maximum Speed, Sea Level	166.30 mph	166.00 mph
Landing Speed, Sea Level		
Stall Speed, Sea Level	57.70 mph	57.20 mph

Initial Rate-of-Climb	806 ft/min	735 ft/min
Climb in 10 minutes		
Range at Cruise Speed	805 miles	750 miles
Service Ceiling	17700 ft	16500 ft
Absolute Ceiling		
Crew: 2		
Armament: 1 fixed forward firing .30 caliber machine gun 1 Flex .30 caliber machine gun in rear cockpit Provisions for bomb racks (wing center section)		

Model Number : OS2U-1

Model Name : Kingfisher

Model Type: Scout, Observation

The OS2U-1 was a two-place low-wing monoplane designed to operate from land, carrier, battleship or cruiser. It was the first Vought production airplane to have an all-metal monocoque structure and also the first airplane to use spot welding on a production model. During WW II it became known as the “saver of men” for the many rescues of downed airmen. It became the oldest Vought aircraft in the United States when one was refurbished and displayed on the *USS North Carolina* memorial. The OS2U-1 was convertible from landplane to seaplane configuration by substituting a float for the landing gear. The seaplane configuration operated from cruisers and battleships while the landplane operated from carriers and land bases.



OS2U:

	Landplane	Seaplane
Dimensions		
Wingspan	35.91 ft	30.91 ft
Overall Length	30.09 ft	33.60 ft
Height	12.56 ft	14.67 ft
Weights and Capacities		
Empty Weight	3022.20 lb	3349.90 lb
Gross Weight	4677.20 lb	4841.40 lb
Useful Load		
Fuel Capacity	144 gal	144 gal
Oil Capacity	10 gal	10 gal
Powerplant Characteristics		
Type: P & W R-985-48		
Rating	450 hp	450 hp
Displacement	985 in ³	985 in ³
Weight	665 lb	665 lb
Size (length X diameter)		
Performance		
Maximum Speed, Sea Level	166.30 mph	166.00 mph
Landing Speed, Sea Level		
Stall Speed, Sea Level	57.70 mph	57.20 mph
Initial Rate-of-Climb	806 ft/min	735 ft/min
Climb in 10 minutes		
Range at Cruise Speed	805 miles	750 miles
Service Ceiling	17700 ft	16500 ft
Absolute Ceiling		
Crew: 2		
Armament: 1 fixed forward firing .30 caliber machine gun 1 Flex .30 caliber machine gun in rear cockpit Provisions for bomb racks (wing center section)		

Model Number : OS2U-2
Model Name : Kingfisher
Model Type: Scout, Observation

While the OS2U-1 was proving itself, Vought introduced the OS2U-2, which had the R-985-50 P&W Wasp Junior engine.

One-hundred-fifty-eight of these aircraft were delivered in 1940-41, the first models to be known officially as “Kingfishers.” Forty-five aircraft were delivered with float-type landing gear and 73 with land-type landing gear.



	Landplane	Seaplane
Dimensions		
Wingspan	35.90 ft	35.90 ft
Overall Length	30.00 ft	30.00 ft
Height	12.50 ft	12.50 ft
Weights and Capacities		
Empty Weight	3060 lb	3417 lb
Gross Weight	4717 lb	4910 lb
Useful Load		
Fuel Capacity		
Oil Capacity		
Powerplant Characteristics		
Type: P & W “Wasp Junior” R-985-50		
Rating	450 hp	450 hp
Displacement		
Weight		
Size (length X diameter)		
Performance		
Maximum Speed, Sea Level	166 mph	159.5 mph
Landing Speed, Sea Level	57.70 mph	57.50 mph
Stall Speed, Sea Level		
Initial Rate-of-Climb	806 ft/min	724 ft/min
Climb in 10 minutes		
Range at Cruise Speed	805 miles	
Service Ceiling	17700 ft	16200 ft
Absolute Ceiling		

Crew: 2		
Armament: 1 forward firing machine gun (synchronized) 1 flex machine gun in rear cockpit Provisions for two 100lb bombs or eight 30lb bombs		

Model Number : OS2U-3
Model Name : Kingfisher
Model Type: Scout, Observation

The OS2U-3, eventually the most widely known “Kingfisher”, was introduced in 1941. This model had the latest P&W-985 (AN-2) engine, extra fuel tanks in the wings, and additional armor protection for the crew. Vought produced 1,006 OS2U3’s.



	Landplane	Seaplane
Dimensions		
Wingspan	35.80 ft	35.80 ft
Overall Length	30.00 ft	33.80 ft
Height	12.50 ft	14.70 ft
Weights and Capacities		
Empty Weight	3060 lb	3440 lb
Gross Weight	4661 lb	4878 lb
Useful Load		
Fuel Capacity	141 gal	120 gal
Oil Capacity		
Powerplant Characteristics		
Type:	P & W R-985(AN-2)	

Rating	450 hp	450 hp
Displacement		
Weight		
Size (length X diameter)		
Performance		
Maximum Speed, Sea Level	165.6 mph	158 mph
Landing Speed, Sea Level	57.00 mph	57.00 mph
Stall Speed, Sea Level		
Initial Rate-of-Climb	847 ft/min	724 ft/min
Climb in 10 minutes		
Range at Cruise Speed	994 miles	805 miles
Service Ceiling	18100 ft	16350 ft
Absolute Ceiling		
Crew: 2		
Armament: 1 forward firing machine gun (synchronized) 1 flex machine gun in rear cockpit Provisions for two 100lb bombs or eight 30lb bombs		

OS2U Kingfisher – Engineering Triumph and War Hero

Behind the Kingfisher's wartime achievements stands the story of the engineering accomplishments that made it all possible. In designing this aircraft, Vought engineers had to meet specified basic design requirements to produce an aircraft which would do a better observation-scouting job than had ever been done before. Among the goals sought were excellent vision (for tactical missions), limited size (for shipboard use), low landing speed (for rough water landings), excellent water handling (for serviceability), long endurance for special missions, and good all-around performance. That the job was well done is apparent from the Kingfisher's versatile record – a record that earned it the title "Workhorse of the Fleet."



Hundreds of these observation scout aircraft, the OS2U1's, -2's, and -3's, were delivered to the Navy and established superlative records in convoy duty and rescue work.

Although intended almost solely for gunnery-spotting and routine observation tasks, the Kingfisher was adapted to many other tasks. In the South Pacific, three Kingfishers teamed up to depth charge and destroy one of Japan's largest submarines. Kingfishers were used to maintain constant vigilance in anti-submarine patrol along most of the North American coast, carrying enough bombs to do their own sinking of enemy undersea craft.



Convertible to either landplane or seaplane, the Kingfishers were called upon for a great variety of missions. In the initial assault against the Japanese based on Attu in the Aleutians, they were rigged as dive bombers with conspicuous success. In this action, they carried 335-pound bombs instead of the lighter bombs for which they were designed. They came through in characteristic Vought style.

The Kingfisher was designed specifically for catapult operation from battleships and cruisers. Previously, all aircraft used by the Navy for this type operation had been biplanes. The OS2U-1 was the first monoplane to be placed in catapult service. The ingenuity of Vought engineers, who had developed the special high-lift and control devices made this possible.



Based with the fleet, Kingfishers ranged far during World War II, seeing action in widely scattered war theaters. The British Fleet Air Arm received 100 OS2U-3's with both float and wheel gear. Twenty-four OS2U-3's were allocated to the Royal Netherlands Navy. The Naval Aircraft Factory built another 300 similar aircraft under the designation OS2N-1

OS2U Kingfisher – Fisher of Men

Kingfishers carried out many of the war's most thrilling rescues, putting into practical use the Navy's humane policy of doing everything possible to save pilots and crewmen forced down or shot down at sea.



One of the earliest and most publicized of the Kingfisher rescues in the Pacific was that of America's World War I ace-of-aces, Captain Eddie Rickenbacker. He was a passenger in a B-17 on a special mission into the Pacific



in October 1942 when the B-17 was forced to ditch. The occupants took to the sea in two rubber life rafts with a minimum of provisions. An extended search that lasted more than three weeks was launched once the B-17 was deemed overdue, but no signs of survivors were found. On November 11, 1942, L.H. Boothe, the observer in an OS2U-3 (named "The Bug") that had survived Pearl harbor and was now stationed on Ellice Island, 600 miles east of Guadalcanal, spotted one of the rafts. His pilot, Lt. F. E. Woodward, radioed the news and then landed to carry out the rescue. However, this was the raft occupied by the B-17 pilot and four others, not the raft occupied by Rickenbacker.

The next day another plane spotted Rickenbacker's raft and radioed for a seaplane to make the pickup. The same "Bug", with the same observer but a different pilot, went to the rescue again. It took all three survivors aboard, with a badly injured man in the rear cockpit and Rickenbacker and one other lashed to the wing. Unable to take off with the overload, the two-ton plane taxied 40 miles to the nearest land. The Kingfisher had been designed for loitering. Officially, it was not conceived to carry large loads, but this would soon change.

OS2U Kingfisher - One Saves Ten Men



One Kingfisher Saves Ten Men On April 30, 1944, two Kingfishers were sent out to locate a Navy pilot from the carrier USS Enterprise who was reported down at sea. The two Kingfishers, piloted by Lt. J.J. Doble and Lt. John Burns, soon spotted the downed pilot, Lt. Robert Kanze, afloat in his life raft. Doble then landed to pick Kanze up. As Kanze grabbed the wing float, he was lifted out of his raft. A wave then hit the float broadside which, with his weight on the float, submerged it and caused the Kingfisher to capsize, throwing Doble and his radioman R. E. Hill into the water. The three were able to retrieve the raft and hold onto it. Burns observed all of this and decided to land and pick up all three. With five men aboard, the Kingfisher could not take off, so Burns taxied to the

submarine USS Tang that was on the surface nearby. The sub then sank Doble's still-floating Kingfisher by gunfire to prevent its drifting into Japanese hands.

After his three passengers were safely aboard the USS Tang, Burns got a call to go after another downed pilot, who was soon found and taken aboard. Again unable to take off, Burns decided to wait for the USS Tang to reach the scene. While he was waiting, he saw two TBM torpedo planes, each with three men aboard, ditch nearby. With nothing else to do while waiting for the sub, Burns decided



to go after the TBM crews that had taken to their rafts. He secured both rafts to the Kingfisher and tried to tow them in the direction of the now far-distant sub, but their drag was too much. He then took the six men aboard, distributing them along



the wings to balance the weight, and started taxiing. The sub, which had gone after still another pilot, finally reached the now-sinking Kingfisher and took all nine occupants aboard.

Since there was no way in which the sub could salvage the heroic little plane that had just rescued 10 men, it, like Doble's, was sunk by gunfire to keep it out of Japanese hands.

The following rescue, however, is perhaps the most bizarre of all, and it occurred on the last day of the war. On August 9, 1945, Lt. Vernon T. Coumbre ditched his damaged F4U Corsair five miles off the Japanese coast after a carrier strike against the Ominato Naval Air Base. He took to his raft, which was quickly blown to shore in what was fortunately a deserted area. He avoided Japanese searchers during the night, and heard the sounds of U.S. planes that were looking for him the next morning. Fighters kept the Japanese at a distance while two Kingfishers tried to effect a rescue. One Kingfisher, flown solo by Lt. Ralph Jacobs, landed to pick Coumbre up. Seeing that Coumbre couldn't make it through the surf to the plane, Jacobs tried to throw him a line. A heavy wave rocked the plane, and Jacobs, with one foot still in the cockpit and one on the wing, was thrown into the water. As his foot left the cockpit, it hit the throttle and the plane began taxiing away.

The other Kingfisher, piloted by Lt. Almon P. Oliver, was circling overhead and saw all this, the runaway plane and the two swimming pilots. Oliver then landed and picked both up, putting them in the rear cockpit. He then flew back to his ship, the USS North Carolina, the same ship from which Lt. Burns had flown. Jacobs' Kingfisher also was sunk by the fighters to keep it out of Japanese hands as a windup to one of the strangest and most spectacular rescues of the war.