



PAINTING of SPECIAL AIRCRAFT

By JOHN M. ELLIOTT

All photographs courtesy of Author

Above, the Curtiss XF8C-7 provided for the use of the Assistant Secretary of the Navy for Air, based at Anacostia. The "Curtiss Navy Hell Diver" emblem on the fuselage was non-regulation. (Photo 80-G-461115, An 30166 dtd. 11/5/30, Smithsonian Neg. No. 655)

Opposite page, upper, Curtiss SOC-1 used by the Commander, Cruisers Scouting Force. Smithsonian Institution photo No. A53262, date unknown)

Center: This photograph was denoted as "Figure 1 of Spec. PF-6 dated 2 August 1934, and may also be the illustration, Photo 2614, supplied with an earlier letter from the Chief, Bureau of Aeronautics, now being investigated. The airplane was the SU-1, A-9067, assigned to the Assistant Chief of the Bureau of Aeronautics.

Lower: The photograph of the O3U-2, A-9065, was the illustration supplied as "Figure 2" of Spec. PF-6. It also is the illustration marked "Photo 2004" by which airplanes assigned to flag officers were to be painted.

The special paint schemes used on U.S. Navy Staff and Command aircraft prior to World War II has always aroused the interest of the aviation enthusiast. The schemes were so different and yet their entire story is not known because of the classification placed on all military documents of the period. In discussing these aircraft with personnel who used to paint them at the Naval Aircraft Factory, it was stated that they thought the special painting was a command prerogative as were other non-regulation markings of the time. It thus came as a surprise to learn that they had been working to a detailed specification written at the Factory.

Exactly when the practice of painting Staff and Command aircraft started has not been determined. However, in 1926 Admiral W.A. Moffett, Chief of the Bureau of Aeronautics had a Vought UO-1 painted as shown here. The metal skin on the forward portion of the fuselage was highly polished and a dark (possibly blue) area was painted on top of the fuselage to include both cockpits. The Bureau emblem and the two stars denoting a Rear Admiral were displayed on the sides of the fuselage. By 1930 the Assistant Secretary of the Navy for Air was flying his own distinctively painted aircraft with an overall blue fuselage and cowl.

Specification PF-6, "Tentative Process Specification for Painting Special Aircraft" dated 2 August 1934, appears to be the first formal directive as it does not cancel any previous directive.* As so often happens, every new bit of information generates new questions. In this case it is the color of paint used.

Throughout the specification, "Admiral Blue" is designated. A

*As this goes to press, Major John Elliott, USMC (Ret), of the Armed Forces Museum Advisory Board, is investigating further information, aided by a letter forwarded by William A. Riley from the Chief, Bureau of Aeronautics, dated May 5, 1934, Subject "Painting of Special Aircraft."



check with the Paint and Camouflage Office, as well as queries to those who painted the aircraft at the Naval Aircraft Factory, has failed to turn up any reference to "Admiral Blue" in any other paint document. Going further afield, a check of old Bureau of Ships files for reference to painting the Admirals Barge or Captains Gig failed to turn up any reference to Admiral Blue. Most of those asked remember it as a dark blue, approximately the same as Insignia Blue.

PF-6 was prepared to provide detailed instructions governing the methods and materials to be used at the Naval Aircraft Factory for painting and dopping the exterior of aircraft assigned senior officers. These aircraft were to be painted in two schemes. Class I for aircraft assigned to Flag Officers (Admiral), and Class II for aircraft assigned to the Assistant Chief of the Bureau of Aeronautics, Commanding Officers of aircraft carriers, tenders, fleet air bases, and major air stations with the rank of Commander or Captain. Parts finished with Admiral Blue were to be painted with enamel. Parts finished in aluminum were to be painted with aluminum enamel or dope depending on the surface to which it was applied.*

A streamline shape was to be applied to the outside surface of each wheel fairing. The shape to be painted on the Admiral Blue enamel with "gold leaf size," this then to be sprinkled with aluminum powder before it dried.

Letters and/or figures on the fabric were to be Black on Aluminum or Aluminum on Admiral Blue. To avoid the feather edge at the junction of the aluminum letters and figures and the blue, a

Further discussion of the terminology of "Staff and Command airplanes" is given in Larkins. Use of the terms was apparently informal, at least until Spec. PF-6 in August 1934. See Larkin, William T. *U.S. Navy Aircraft 1921-1941*, p. 132. Concord, Cal: Aviation History Publ.; 1961.



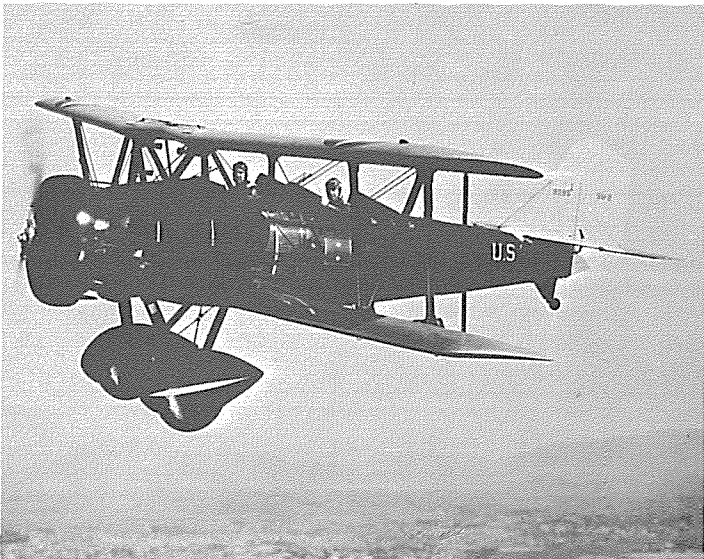
narrow red stripe was to be traced at the junction line.

For Class II aircraft the requirements were the same except the forward section of the fuselage covering was painted Admiral Blue to just aft of the trailing edge of the wing root fillet at the lower longeron and the blue area was then "faired in."

These aircraft had a minimum of four coats of clear dope, two heavy spray coats of aluminum dope followed by two medium coats and one light coat of enamel. A good grade of automobile polishing wax was applied to the exposed surfaces to give a high gloss. Parts that were specified to be chromium were to be chrome plated except that tie rods could be of corrosion resisting steel in lieu of chromium plated rods provided they were highly polished.

No reference is made in PF-6 concerning the painting of the aircraft for use by the Assistant Secretary of the Navy for Air. Photographs show it as having a blue tail in addition to the painting specified for Flag Officers.

No changes were made to this specification through the years even though it was written specifically for Vought SU type aircraft, and the entire specification was cancelled early in 1943 as no longer being required. All requirements pertaining to the exterior color, insignia, and markings of Naval aircraft by that time were contained in Specification SR-2, Exterior Color, Insignia and Marking of Naval Aircraft.



Vought SU-2, A-9095, Rear Adm. John Halligan's airplane over San Diego, c. 1933. (U.S. Navy photo, courtesy of Pratt & Whitney Aircraft). Below, the UO-1 used by Adm. W.A. Moffett, Chief of the Bureau, c. 1926. (Photo — National Archives 80-G-459894, AN-4226 April 1926)

The color scheme for Class I aircraft was specified by a table as follows (and as shown by Figure 2 of the Specification):		
Wing Group		
Outer Panels	Upper surface of upper wing, Chrome Yellow. Under surface of upper wing and both surfaces of lower wings, Aluminum	Admiral Blue
Wing Struts and Cuffs	Admiral Blue	Admiral Blue
Inter-aileron Strut	Admiral Blue	Admiral Blue
Aileron Control, Exposed	Admiral Blue	Admiral Blue
Wing Root Fairing	Admiral Blue	Chromium
Wire Anti-vibration Birds	Admiral Blue	Chromium
Wing Wires	Chromium	
Body Group		
Nose Shutter, Fixed	Admiral Blue	
Nose Shutter, Moveable	Burnish and Lacquer (clear)	
	Anti-drag Ring	Admiral Blue
	Engine Compartment Cowl	Admiral Blue
	Cockpit Cowl, Headrests, and Windshield Frames	Admiral Blue
	Exposed Surfaces of Fuel Tanks	Admiral Blue
	Landing Gear, Chassis, Wheels, Tail Wheel	Admiral Blue
	Arresting Hook (if any)	Admiral Blue
	Fuselage Fabric	Admiral Blue
	Fuel Tank Straps	Chromium
	Chassis "X" Wire Bracing	Chromium
	Miscellaneous Trim and Hardware (Latches, Fasteners, Wires, Locks)	Chromium
	Tail Group	
	Fabric Covering	Aluminum
	Fairing	Aluminum
	Brace Wires	Chromium

