

Sikorsky HO4S-2G / 3G; HH-19G "Chickasaw"



Historical Information:

Sikorsky's model S-55 first flew in November 1949. The S-55 was a two-deck helicopter, capable of carrying up to 10 passengers or seven stretchers in the lower cabin while the aircraft was flown by two crewmen on the upper flight deck. They were utilized by all branches of the U.S. Armed Forces and saw considerable action in Korea. Beginning in 1951, the Coast Guard acquired a number of the HO4S-1G and 2G models for use in search and rescue operations, building upon the experiences gained through the use of the earlier Sikorsky helicopters. The 1G and 2G models were powered by a 550 horsepower Pratt & Whitney R-1340. The service later acquired 23 of the 3G

models which were powered by a 700 horsepower Wright R-1300. All were fitted with a rescue hoist.

A February 1952 Coast Guard press release noted:

"Late in 1951, the U.S. Coast Guard acquired a new type helicopter, the Sikorsky HO4S-2G, for search and rescue duty. Seven of the planes are to be put in operation in various Coast Guard Districts throughout the country. . .Cruising speed is 80 knots and top speed, 115 knots, ceiling 16,000 feet and range, 400 miles. Equipped for instrument and night flying, the helicopter includes such equipment as a hydraulic hoist to pick up personnel or equipment up to 400 pounds in weight. . .Plans also have been drawn up for the installation of a collapsible rubber float attached to the landing gear, which can be inflated automatically by the pilot. The new helicopters are painted bright yellow, and are the largest helicopters operating in the Coast Guard."

The Coast Guard continued to develop and refine their search and rescue techniques and helicopter-borne equipment, including rescue hoists, slings, and baskets, with the HO4S. They also conducted some rather unique experiments with them. In an experiment known as Project Tugbird, the Coast Guard tested the practicality of towing vessels using a helicopter. The tests, which began at AIRSTA St. Petersburg in August of 1957, were carried out through January of the following year. HO4S helicopters based at AIRSTA St. Petersburg practiced towing a number of vessels, the largest being the 794-ton buoy tender *Juniper*. The tests were successful and on 1 July 1958 the Coast Guard directed that every airstation have at least one HO4S helicopter "permanently equipped with necessary apparatus ready for towing operations." The towing line was a steel cable, one-quarter of an inch in thickness, and had a pulling strength of 6,900 pounds. The cable was attached to the helicopter on a padeye installed on the bottom rear section of the fuselage. The helicopters were capable of towing a vessel of up to 800 tons for a total of 1 1/2 hours, which was the duration of their fuel supply, for a distance of up to 20 miles. This technique was first used on an official SAR case in September of 1958 when a Coast Guard HO4S based at AIRSTA St. Petersburg towed the pleasure cruiser *Nina-Jean* to safety.

In December of 1956, the Coast Guard also successfully experimented with placing flotation gear on an HO4S at Elizabeth City. In 1956 HO4S-3G 1298 flew in scientists and equipment to an observation station on Blue Glacier, Mount Olympus, in support of the 1956 International Geophysical Activities program. The HO4S was also capable of transporting heavy equipment. On 23 January 1958, CG-1252 airlifted a 300-pound foundation collar for a new navigation radar system on top of the tower at AIRSTA Elizabeth City.

A period narrative describing the Coast Guard's new helicopters noted:

"The Coast Guard utilizes the HO4S helicopter at various air stations in the United States and its territories. Designed for observation and search and rescue missions, the HO4S is one of the most valuable assets to Coast Guard aviation. Because of maneuverability permitting vertical take-offs and landings, speed from zero to 115 knots, a 400 mile flying range, and the ability to operate from small, unprepared areas such as the deck of a cutter, the HO4S can perform certain tasks which no other type of plane or vessel could handle alone.

Within minutes of the terrific explosion which recently rocked the aircraft carrier BENNINGTON, Coast Guard and Navy helicopters were rushing the seriously wounded to the very doors of hospitals ashore. By eliminating the ambulance trip from airport to hospital required in the rescue by conventional plane, life-saving minutes were preserved. These helicopters whirled back and forth from helicopter to shore making six or seven landings each before the carrier docked at Quonset Point.

Admiral John Hoskins, commandant of the Quonset Naval Air Station, commended the rescue work done by both Coast Guard and Navy copters. 'Without doubt,' he said, 'the helicopters were responsible for saving the lives dozens of the seriously burned crewmen by speeding them to the medical facility.'

In countless less spectacular cases the HO4S has saved lives at sea. Sometimes it's a matter of transporting a merchant seaman with acute appendicitis from ship to hospital. Again it may involve scooping the passengers of an overturned pleasure craft out of the water. In the latter case it is possible to spot the survivors and hover over them, lower a loop to which they can cling, and hoist them to safety.

Ashore the HO4S has also demonstrated its ability to get into places where other craft would be useless. A famous Arctic rescue on Goose Bay was made on icy fields where no land or sea plane could have landed. Two small boys were removed from a precarious perch atop an old wharf which was too flimsy for rescuers to climb

On May 22 of last year a Coast Guard HO4S located 2 1/2 year old Beverly Kay Bradley in the thick woods of Menominee County, Michigan, after extensive efforts of searchers on the ground had failed. Here, and in similar rescues of lost children, a larger plane could not have hovered low over treetops or executed a landing in thick forest

In addition to rescues on land and sea, the Coast Guard used the HO4S for a wide variety of other purposes. On more than one occasion small craft becalmed or otherwise in distress have literally been blown to shore by the air currents from the rotors of a skillfully handled helicopter. Grounded boats have been towed to deeper water by lines from helicopters.

In law enforcement helicopters have had unique assignments, such as dropping rapidly out of the clouds and swooping down on whiskey stills or fishing boats illegally moored to navigational buoys. When the Coast Guard icebreakers take their Arctic tours, a helicopter scouts ahead, spotting weak spots and likely channels and directing the vessel from the air.

The HO4S normally flies with a pilot and two crewmen. The crewmen perform numerous functions, among which is the operation of the hoisting apparatus. The equipment is mounted in the main entrance door of the cabin. Hence, during an actual rescue the crewman standing in this doorway can readily view the victims being rescued and thus is in an ideal location to operate the hydraulic hoist. At this stage of the rescue, it is the crewman who gives the orders and the officer pilot who follows instructions. Nowhere in the Coast Guard is there a more tightly-knit group teaming up to save lives and to serve their country."

According to Percy, eight HRS-3 variants were borrowed from the Navy and used for a number of years. Under a 6 July 1962 Department of Defense directive, Navy designations were standardized with those of the Air Force and hence the HO4S became known as the HH-19G. The Coast Guard elected to follow this directive as well. The HO4S remained in service with the Coast Guard until 1966 when they were replaced by Sikorsky's HUS-1G (later designation HH-52A) Seaguard. One of the last operations mentioned in the scant historical records note that AIRSTA Brooklyn's HO4S-3G 1308, piloted by CDR T. F. Epley, made an ice reconnaissance flight over the Hudson River during the winter of 1965 in company with the tender *Sassafras* (WAGL-401). While passing over the Tappan Zee area, they reported that several vessels were icebound and required assistance.

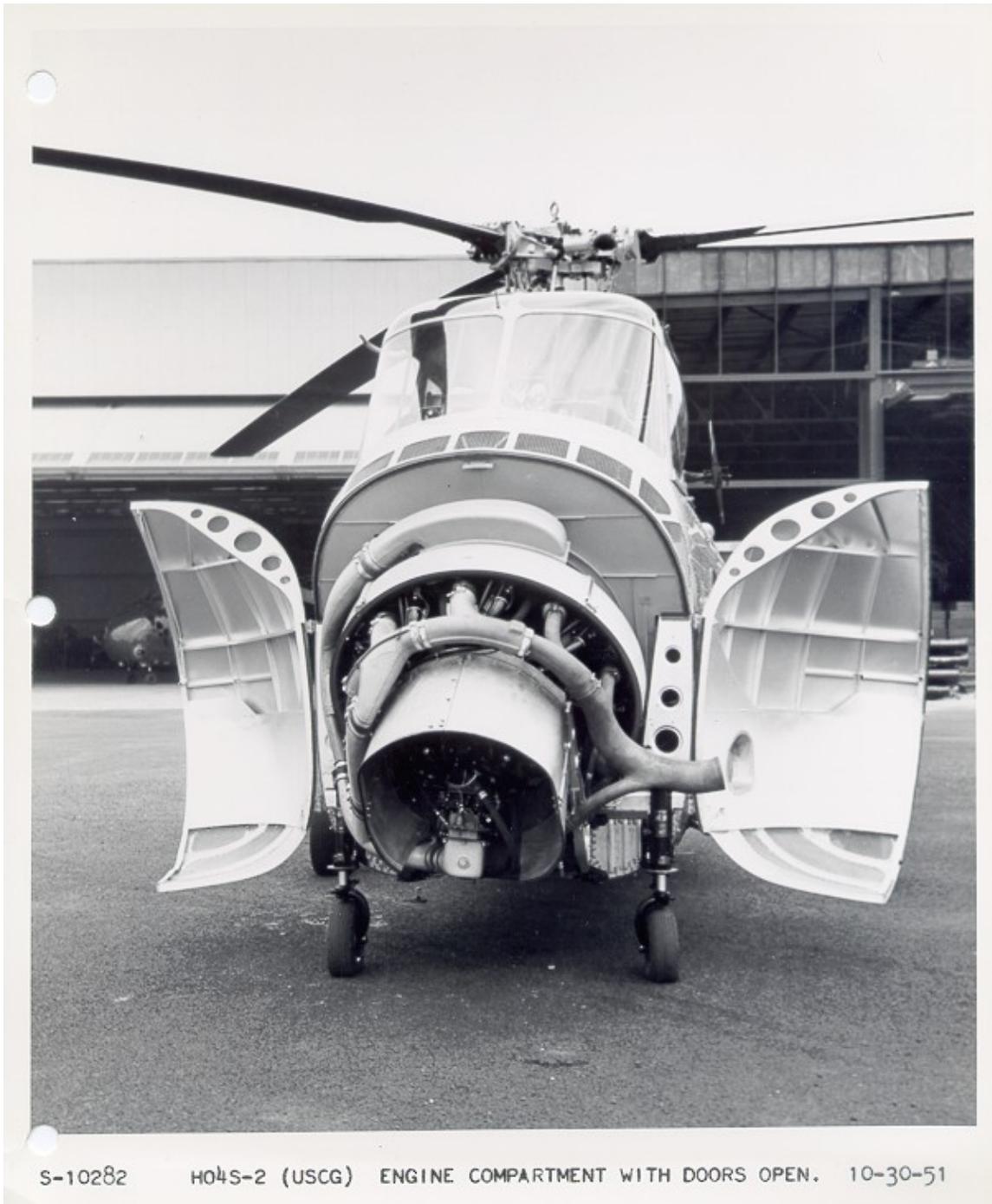


S-10280

HO4S-2 (USCG) STARBOARD SIDE VIEW.

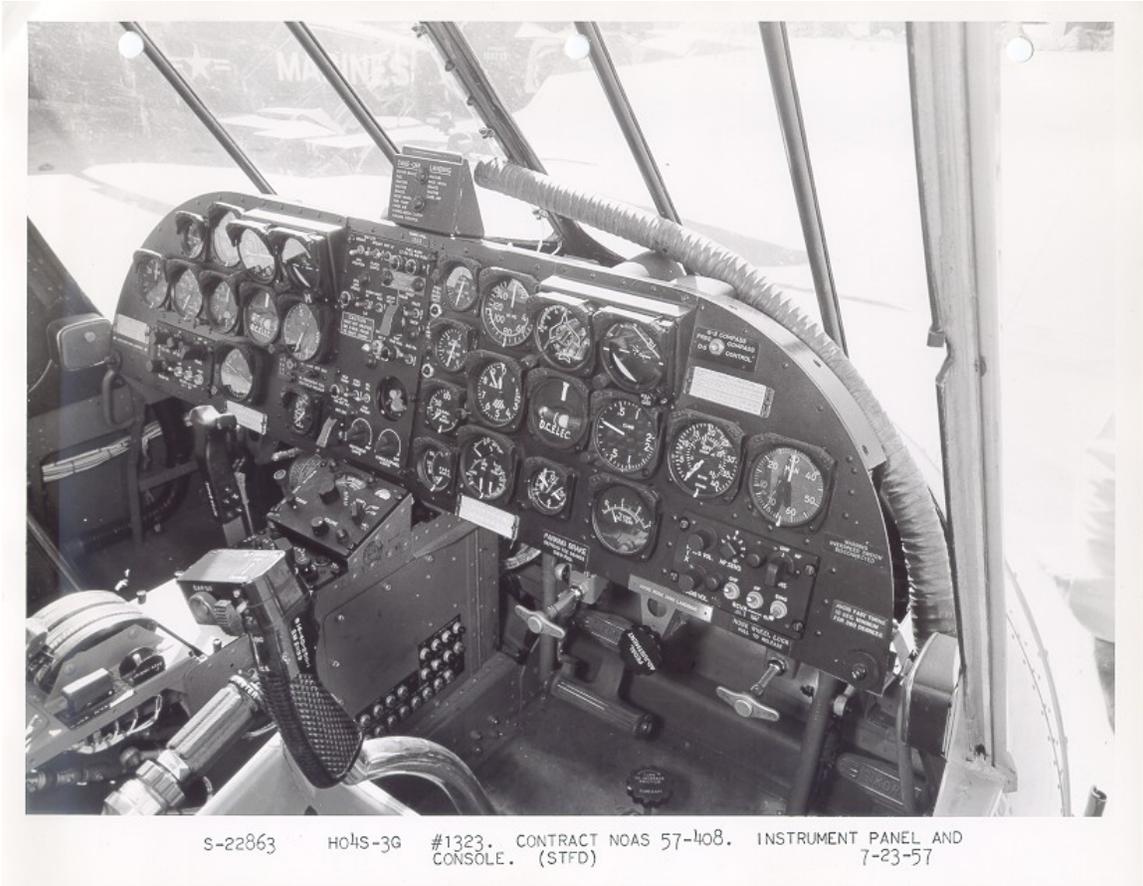
10-30-51

"HO4S-2 (USCG) STARBOARD SIDE VIEW."; 30 October 1951; Photo Number S-10280; photographer unknown (Sikorsky photo). Taken from "Photographs of Model HO4S-2, submitted under Addendum No. 428 to NAVAER Spec. SR-6J-1, Contract Number NOa(s) 51-220, 11-12-51."



S-10282 HO4S-2 (USCG) ENGINE COMPARTMENT WITH DOORS OPEN. 10-30-51

"HO4S-2 (USCG) ENGINE COMPARTMENT WITH DOORS OPEN."; 30 October 1951; Photo Number S-10282; photographer unknown (Sikorsky photo). Taken from "Photographs of Model HO4S-2, submitted under Addendum No. 428 to NAVAER SPec. SR-6J-1, Contract Number NOa(s) 51-220, 11-12-51."



"HO4S-3G #1323. CONTRACT NOAS 57-408. INSTRUMENT PANEL AND CONSOLE (STFD)."; 23 July 1957; Photo No. S-22863; photographer unknown (Sikorsky photo). Taken from Sikorsky A/c Addendum No. 777 to SR-6J-7 "Contract Design Data Requirements Model HO4S-3G, Contract Noa(s) 57-408" photographs, 7-23-57.



"HO4S-3G, #1323. CONTRACT NOAS 57-408. 600 LB. HOIST INSTALLATION. (STFD)."; 23 July 1957; Photo No. S-22857; photographer unknown (Sikorsky photo). Taken from Sikorsky A/c Addendum No. 777 to SR-6J-7 "Contract Design Data Requirements Model HO4S-3G, Contract Noa(s) 57-408" photographs, 7-23-57.



No caption/date/photo number; photographer unknown.



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No caption/date/photo number; photographer unknown.



"NEW YORK, N.Y., November 3. --- Today was 'Coast Guard Day' at The Battery during observances of the 50th Anniversary of Powered Flight. Here, a crewman is readied for lowering by special hoist-harness from an HO4S helicopter. The operation was repeated four times, as part of a 15-minute demonstration of Coast Guard means of aerial rescue."; 3 November 1953; no photo number; photographer unknown.



"HO4S-3G."; 23 October 1956; Photo No. 1153; photo by Klein (ARSC photo).



"COAST GUARD PROJECT TUGBIRD: A HO4S-3 helicopter tows the 75-ton buoy tender BIRCH during tests recently completed at the U.S. Coast Guard Air Station, St. Petersburg,

Florida, proving the potentials of Coast Guard helicopter use in towing fishing vessels, pleasure and other types of surface craft in air-sea rescue operations. Tests were made on craft 794 tons and under."; 24 March 1958; Photo No. 5794; photographer unknown.



"Seven aircraft -- four UF-1G Grumman Albatross amphibious planes and three HO4S-3 helicopters -- stationed at the Coast Guard Air Station, Port Angeles, Washington, took to the air in a demonstration of 100 percent availability. These aircraft have participated in 94 search and rescue cases during the first two months of fiscal year 1959."; 21 September 1958; no photo number; photographer unknown.



No caption/date/photo number; photographer unknown.

The Coast Guard adopted this new paint scheme, based on the pattern used on its fixed-wing aircraft, for its helicopters beginning in 1960. Tests had shown that it was a better "high visibility" scheme than the all-yellow pattern used previously.



"Helicopter HH-19G (HO4S-3G) demonstrating hoist pick-up of men from water using seadrome buoy, St. Petersburg, Fla."; 11 January 1963; no photo number; photographer unknown.

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"Coast Guard HH-19G helicopter piloted by LCDR James Dillon, USCG, locates the wreck of Boeing 720-B lane crash in Florida, 43 mi west of Miami. 35 passengers killed."; 14 February 1963; no photo number; photo by PH1 P. Meyer.



"U.S. Coast Guard helicopter at wreck of Boeing 720-B, 43 mi west of Miami. Northwest Orient Airlines jet with 35 passengers, Chicago to Miami flight. 35 killed. CG helicopter pilot LCDR James Dillon, USCG, located the wreck."; 14 February 1963; no photo number; photo by PH1 P. Meyer.

Sources:

Gordon Swanborough & Peter M. Bowers. *United States Navy Aircraft Since 1911* (Annapolis: Naval Institute Press, 1990-third edition), p. 406.

Arthur Percy, *U.S. Coast Guard Aircraft Since 1916* (Annapolis: Naval Institute Press, 1991), pp. 288-291.
