6593 TEST SQUADRON (SPECIAL)

MISSION

LINEAGE
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STATIONS
Hickam AFB, HI, 1 Aug 1958-1 Jul 1972

ASSIGNMENTS
6594 Recovery Control Group

WEAPON SYSTEMS
C-119
JC-130B
NC-130H

COMMANDERS

HONORS

Service Streamers

Campaign Streamers

Armed Forces Expeditionary Streamers

Decorations

EMBLEM

MOTTO

NICKNAME

OPERATIONS

The 6593rd Test Squadron was not actually a test squadron. As the flying organization assigned to the 6594th Recovery Control Group, it was equipped with Fairchild C-119s early in the spy satellite program. The flying Boxcars were equipped with a trapeze-sling-hydraulic reel device designed to allow the aircraft to snatch the re-entry satellites as they descended in remote areas of the Pacific Ocean. Based at Hickam Field in Hawaii they were imminently successful despite the built-in shortcomings of the C-119. Crew coordination, practice and dedication resulted in an outstanding record of successful midair recoveries.

As the spy satellite program (Corona Harvest) progressed, new and more sophisticated satellites were developed and the size of at least one of these, code named SAMOS, precluded midair recovery. It was decided that a helicopter recovery using swimmers and buoyancy equipment similar to that utilized by the Navy in support of astronaut recovery could be developed. Johnston Island, some 800 miles southwest of the Hawaiian Islands, would be the approximate aiming point for the SAMOS vehicles and H-21s were the helicopter of choice for the recovery aircraft.

The top secret program involved the recovery of a cone shaped vehicle some 19 feet long and weighing approximately 1200 pounds. Helicopter crew training would be conducted at Johnston Island under a cloak of secrecy concurrent with civilian contractor establishment of tracking and communications facilities. This program continued even as the squadron at Hickam converted from their worn out C-119s to the newer turbo prop C-130 Hercules. Meanwhile the seven helicopter crews practiced and trained to peak proficiency. A series of events was to move the operation back to Hawaii where the helicopter mission was to be changed to provide a backup from the closest Hawaiian Island in the event the recovering fix wing aircraft were unsuccessful in the attempt to snag the airborne descending satellites. Either because of improvements in the smaller satellites or reduction in the size of the initial SAMOS, the initial plan had evolved to something else. Johnston Island, once a sleepy tropical atoll, became a busy base, firing nuclear tipped rockets. The limitations of the H-21 in range, speed, load capacity and ungainly size resulted in them being replaced by the only six CH-3B Sikorsky helicopters ever bought by the USAF.

The folding blades and twin engine performance were to be complemented by the addition of internal auxiliary fuel tanks and an inertial navigation system. A coupler offering night over-water hover capability was discarded. A training program at Pearl Harbor's Ford Island was conducted utilizing a scale presentation of the actual deck areas and obstacles common to the identical landing platforms of the U.S. Navy ships Longview and Sunnyvale. For the first time in history these two ships would serve under the tactical command of the USAF helicopter pilots. The ships continued to operate for another five years after 1964 without a major accident.

The introduction of the CH-53 with its capability for midair refueling negated the use for the ships and they were accordingly retired to other uses.

There are a number of lessons to be learned from the satellite recovery experience as pertains to helicopters and the men who maintained and flew them. Most important is the fact that the initial decision to utilize helicopters in satellite recovery, including which helicopters to use and the method of use, was made by staff officers with limited if any input by helicopter qualified personnel. Accordingly, the initial decisions reflected a great deal of wishful thinking and application of textbook information, not necessarily in step with actual performance data. Despite this shortfall in data the selection of the H-21 was the right decision, based on availability and luck of the draw in the assignment of experienced pilots and supervisory, helicopter experienced, management personnel. The group commander and his immediate staff obviously recognized that with their combined experience they needed to work closely with the helicopter staff. The group commander was reassigned in 1962 and his replacement continued with the established policy with gratifying results in safety and mission performance.

The subsequent introduction of the CH-3B was followed by assumption of tactical control of the ships. This was a major undertaking in that the ships operated not only as helicopter carriers but communications stations capable of telemetry operation.

The Navy surrendered operation of the ships with obvious mixed emotions. The often dangerous helicopter operation appeared to be a welcome relief, while the loss of control of two important vessels to USAF control was a different matter.

The training of helicopter crews in shipboard operations was imminently successful due to a number of factors which included willing coordination by the ship's civil service crew, repetitious training by the helicopter crews both in simulated and actual sea environment and great support by the commander of the Pacific Test Range and his staff. The inherent capabilities of the CH-3B in power, maintainability, reliability, and range instrument flying capability was complemented by the assignment of a highly qualified cadre of both pilots and maintenance personnel.

The one unfortunate aspect of the operation was the failure of the third Group Commander, an individual of limited imagination prone to avoiding decisions and hesitant to enforce good order and discipline. Assigned in 1965, he failed to recognize that he had inherited an elite and dedicated helicopter unit. The result was the establishment of a second class citizen situation (not uncommon throughout the Air Force) which was recognized by not only the helicopter personnel but staff at all

levels and those involved in C-130 aerial recovery. Failure of the group commander to act on the recommendations of his key helicopter staff was to result in a series of helicopter mishaps and accidents. As key helicopter supervisory personnel rotated to other assignments the group commander's failure to listen to the voices of helicopter experience was to pay sad dividends.

From 1965 throughout the summer of l967 the group commander complained privately and sometimes obviously about the efficiency of his senior staff, especially his deputy, the group operations officer and test squadron commander, all of whom were fixed-wing pilots although not recovery qualified in the C-130 recovery. Although a wealth of talent existed among the rotary wing (helicopter) pilots, all of whom were fixed-wing as well as helicopter qualified; no effort was made to use any of these individuals, who were not only recovery qualified but senior enough to have been assigned to the positions in question. Credit should be given the earlier group commanders, Lt. Co. Gus Ahola and Col. William R. Morton, and their staff officers for their recognition of the helicopter potential and the judicious management of helicopter personnel. Col. Irwin Myer and his deputy, Lt. Col. Phil Sheaffer, proved to be (to put it mildly) less effective managers.

Since the arrival of the group's H-21s in Hawaii and continuing with the CH-3B operations a variety of special operations including several spectacular lifesaving missions were hidden under a cloak of secrecy. This was in line with the strict security guidelines applied to the satellite operations. As a result of the inability of the fixed-wing leadership to recognize the difficult and often heroic nature of numerous recovery and rescue operations, no awards were forthcoming to helicopter crewmembers and efficiency reports received bland and often inappropriate endorsements. A series of senior helicopter officers pointed out these inequities with resulting unfortunate career implications.

Not only would a whole generation of capable and dedicated officers be denied the opportunity for advancement and promotion but the effectiveness of the entire Air Force structure would be reduced, as the other services (especially the U.S. Army) would go about learning the same lessons already mastered by a group of farseeing and dedicated Air Force Helicopter pioneers. We were inventing the bow and arrow all over again.

Aug 1960 The first recoveries of DISCOVERER satellite capsules were made by Hickam-based C-119 aircraft of the 6593rd Test Squadron, 6594th Recovery Control Group--a unit of the AF Ballistic Missile Division, which became a Hickam tenant in 1958.

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Sources
Air Force Historical Research Agency. U.S. Air Force. Maxwell AFB, AL.