KAMAN Rotor Tips

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Rotor Tips

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Volume VII No 3

FEATURES

DEPARTMENTS

ON THE COVER

LSE aboard USS Springfield signals HH-2D pilot that the deck is "green" prior to practice personnel transfers utilizing the helicopter's hydraulic hoist. The photo is one of a series taken by PH1 "Moon" Mullins and PH2 Harry Deffenbaugh to show the activities of HSL-30's Support Detachment 31 aboard the Springfield. An article on Sup Det 31 will appear in the March-April issue of Rotor Tips. (USN photo)

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HELICOPTER SEA CONTROL - - Group One

VAdm William D. Houser, Deputy Chief of Naval Operations (AIR), addresses assembly at HELSEACONGRU ONE commissioning at NAS Lakehurst. In photo below, Cdr T. David Eyres, first commander of the Navy's new Helicopter Sea Control Group ONE, and his wife Pat are seen at reception afterward. (USN photos)

The Navy's first Helicopter Sea Control Group, HELSEACONGRU ONE, was commissioned recently at NAS Lakehurst, N. J., and Cdr T. David Eyres, a 10-year veteran of helicopter antisubmarine and training operations, assumed command.

Participating in the formal commissioning ceremonies at Lakehurst's Hangar No. 2 were VAdm William D. Houser, Deputy Chief of Naval Operations (AIR), VAdm F. H. Michaelis, Commander, Naval Air Atlantic, and Capt Obed R. Quelland, Chief of Staff, Commander Fleet Air, Quonset.

HELSEACONGRU ONE will provide on-scene management control and coordinate technical and material assistance for three operational helicopter squadrons at Lakehurst—HSL-30, which operates the Kaman SH-2D Light Airborne Multi-Purpose System (LAMPS), HS-15, helicopter antisubmarine squadron for the proposed Sea Control Ship, and HC-2, a rescue/utility helicopter squadron for more than 20 years.

Function of the Navy's Sea Control Forces is to control sea lanes of communication with our allies and trading partners throughout the world. Surface Sea Control Forces will include LAMPS-equipped frigates, destroyers and destroyer escorts; the proposed austere, aircraft carrier-type ships capable of operating both helicopters and short takeoff and landing (STOL) fixed wing aircraft; and possibly future patrol frigate (PF) class ships.

Commander Eyres entered the Navy in 1952 and was designated a naval aviator in 1954, serving as a pilot and flight instructor in fixed wing aircraft. He received helicopter flight training in 1962, served with both HS-8 and HS-10 and later commanded HS-8. Before becoming commander of HELSEACONGRU ONE, Commander Eyres was on the staff of the Chief of Naval Operations in the Office of Aviation Plans. In this capacity he visited Kaman Aerospace's Bloomfield, Conn., plant where UH-2Cs and HH-2Ds are being converted to the SH-2D LAMPS configuration.

Kaman Aerospace was a co-sponsor of the reception at the Lakehurst Officers Club following the commissioning ceremony. The company was represented by President William R. Murray, Vice President David W. Demers, Asst. Chief Test Pilot Jack C. Goodwin, Customer Operations Supervisor Robert L. Bassett, Public Relations Manager William McLaughlin and Senior Service Representative Jack L. King.

EVOLUTION OF THE MODERN

H-2 HELICOPTER

Owen F. Polleys, Manager
H-2/LAMPS Helicopter Programs

Ask the unqualified question, "How old is an aircraft?" and the answers received will vary radically. Age can be based on calendar time, or flight hours, perhaps modified by the kind of flying done, years of service, years since a major modification, etc. Ask how old the H-2 helicopter is and the answers will vary from:

10 years (fleet usage)

5 years (since twin engine UH-2C)

3 years (since uprating and growing to the twin HH-2D)

1½ years (since first LAMPS SH-2D)

0 years (because 101 rotor, -8F engines, and high sink speed landing gear have just arrived and will appear on the next block of SH-2D's)

Of course, it depends partly on your point of view, but from a technical standpoint two factors should be considered basic. That is, for any given aircraft, its age depends on how long its major hardware has been in existence and how well-matched the present aircraft is to the current mission. Now, let's look at the H-2 helicopter which first went to the fleet in 1963. Actually, about the only thing that has "aged" the full ten years since then is the serial numbers. The hardware has evolved throughout the period so that practically the whole aircraft is new. It now not only meets the mission requirements of today but those projected for several years hence.

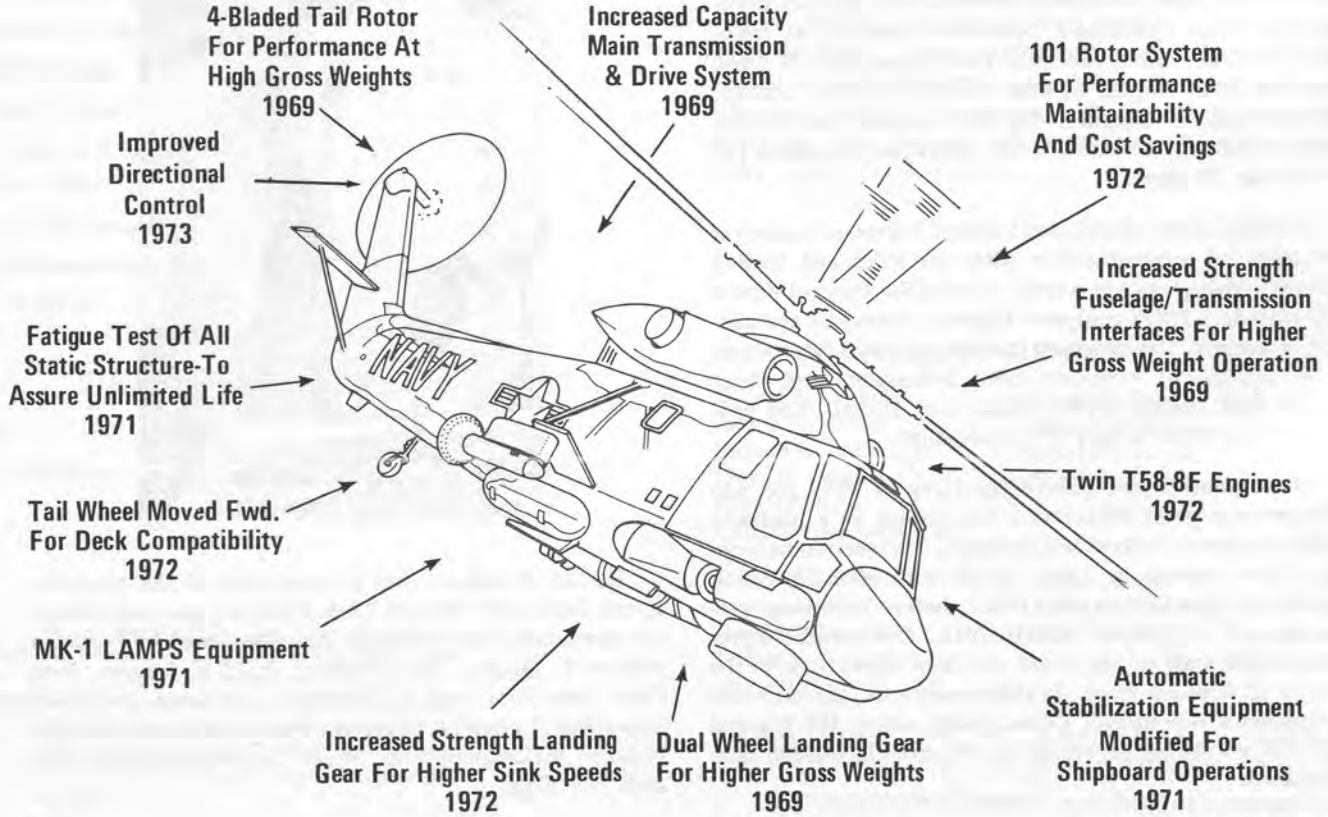
A look at the diagram shows that all major airframe components of the H-2 are of the latest design, capacity, and technology. How and why did they get that way? Actually, the process was one of evolution. That is, changes to accommodate additional fleet requirements, and improvements for reliability, maintainability, and safety were fed back to the H-2 via the modification route.

"Twinning"

The first major change to the H-2 was its "twinning." Starting in 1967 and extending through 1971, all the fleet's single engine H-2's were cycled back to Kaman and twinned by adding a second T58-8B engine. This H-2, designated the UH-2C, was unique in that its two engines were the same model as the single powerplant used on the original helicopter. Of course, this new machine with twice as much installed power was now able to do more and different missions than earlier models and could do them even on the hottest day, due to "flat rating." In addition, twin engine reliability was obtained.

MODERN TECHNOLOGY

ALL Major Areas Of The H-2 Have Been Modernized By The Navy In The Last 3 Years



Uprating Changes

Since twinning, other uprating changes were made in the transmission, tail rotor, and wheels, resulting in even more payload and a new model designation, the HH-2D. Again, the result was more and expanded missions capability. The HH-2D was then "made to order" when the first LAMPS missions appeared and it is now performing them as the SH-2D, with the addition of LAMPS equipment.

Structural Growth

Some questions have been raised regarding the growth of the H-2 with respect to its structure. After all, hasn't it progressed from 10,000 pounds maximum gross weight as a single engine machine up to 12,800 pounds as a twin SH-2D? The main item in question, apparently, is that the "same" fuselage carries this increase in gross weight. A closer look, however, reveals that a major structural change was made in all H-2's. Under Airframe Change 169, a whole new fuselage insert was incorporated in the roof area which connects the rotor-transmission mount to the fuselage. This major structural increase involved not only the "beef" necessary for any foreseeable weight or maneuver increase but also ensured an unlimited fatigue life, even when continually flying under the worst conditions. In addition, major beefups have been made in the pylon and also in the landing gear attaching structure. Finally, as proof of the design, an H-2 airframe was hung in a test jig and vibrated at appropriate loadings. An additional fact is that this fuselage, even at the increased gross weight, still conforms to the latest Navy specifications regarding crash survivability criteria.

"101" Rotor

A truly major change now on the H-2 scene, after four years of development, is the "101" rotor. A new rotor system from blade tip to blade tip (blades, hub, retentions, controls), it was developed to improve maintainability, reliability, and life through simplification. This goal was achieved through a 60 per cent reduction in the number of bearings and rotor elements, resulting in a 3000 hour Time Between Overhauls (TBO) or life (as applicable) to the Fleet. A secondary 101 goal, but one that is most noticeable to pilots, is the increased performance obtained as an adjunct to the original design premise. The 101 gives more level flight speed at maximum gross weight, 47 knots more stall margin, a new low in vibration in all flight regimes and maneuvers, and improved flying qualities, all of which set new standards.

Landing Gear

Another major change to the H-2 is the recently-developed high sink speed landing gear. Designed specifically for destroyer/small deck operations, this landing gear features a 50 per cent increase in sink speed allowable (well over twice as much energy absorption capability). In addition, the tail wheel has been moved forward six feet to provide a smaller foot print for better compatibility with small decks. To all the preceding items add the more powerful T58-8F engine now being incorporated and you have the modern H-2 helicopter. The same name and even same serial numbers perhaps, but a surprisingly "new" helicopter, ready to continue in its new role in LAMPS, with all that mission's diverse possibilities.

H-2's VERSATILE DESIGN PROMOTES EVOLUTION

Once in a great while an outstandingly versatile aircraft design comes into being. Recognition of this fact, however, is usually late in developing because such an aircraft does not achieve its full potential immediately. Typically, the aircraft goes into service and performs its designated missions and, because its design has inherent capability for flexibility, additional missions and performance requirements continually invite expansion of its scope and versatility. A good example of such an aircraft is the H-2 helicopter. The basic H-2 design philosophy, as established by the U. S. Navy, was to create the most flexible and versatile helicopter possible, designed especially for ship-based multi-purpose missions. As an indication of how well the Navy's plan was fulfilled, one can look at the H-2's ability to adapt and be adapted to an impressive array of configurations and missions. Its evolution from the single engine UH-2A/B to the twin engine UH-2C, to the armed and armored HH-2C twin, to the HH-2D uprated twin, to the SH-2D LAMPS twin is a matter of record and accomplishment. Of course, all these adaptions were the direct result of Navy operations and requirements, making the modern H-2 a unique Navy-oriented bird in its size class, still retaining the same operating dimensional envelope as the original requirements set forth.

If one considers the essential elements necessary for an aircraft to go through metamorphosis such as this into an essentially new model, it can be seen that the H-2 certainly possesses them. Notice also how well the H-2 fits the factors common to versatile aircraft as listed below:

Factors Common To Any Truly Versatile Aircraft

1. Original design not dedicated to a single purpose mission.
2. Operational usage spawns additional missions.
3. Later missions and requirements unheard of in original plans.
4. Many changes made to the aircraft to accomodate changing requirements and missions. These changes resulted in improved performance, revised configuration and model designations.
5. The aircraft's life cycle extends over a long period because of its versatility and the changes made to meet up-to-date requirements. This long life actually represents an effective in-the-field development cycle, producing essentially on-the-spot revisions for new requirements.
6. The aircraft exhibits a controversial image during its early life. Both supporters and non-supporters have definite opinions, but non-supporters usually refer to experiences in the past when the aircraft was actually another model by the same name. Supporters rapidly outnumber non-supporters as aircraft matures. Good examples of this phenomenon in the past are the Vought F4U, the Lockheed P-3A, or the Douglas DC-3.
7. Learning curve effect over the period on maintenance, reliability, and safety leads to the truly versatile and long-lived aircraft becoming the basis for the next generation. In other words, it has progressed beyond the original and present standards.
8. The aircraft is increasingly cost effective over the long range. Combining the gradual expenditure of development dollars with the continual adaptation to additional requirements results in maximum long term usefulness at less risk and expense.

FIRST AWRS FLIGHT MADE

The first of a new breed of U. S. Air Force advanced hurricane and weather reconnaissance airborne systems made its initial flight recently at Bradley International Airport, Windsor Locks, Conn. The Air Weather Service storm hunter is called AWRS—Airborne Weather Reconnaissance System. It is designed to provide increased data on the structure and internal forces of tropical cyclones, lesser storms and other atmospheric phenomena with a level of accuracies previously unattainable. AWRS will contribute to the international storm warning system to reduce loss of life and property.

The Airborne Weather Reconnaissance System was designed, developed and assembled by Kaman Aerospace Corporation under contract to the Air Force's Electronic Systems Division (AFSC), Hanscom Field, Bedford, Mass. The system consists of an Air Weather Service WC-130B four-engine turboprop aircraft especially modified and equipped with a variety of integrated meteorological and atmospheric sensors, electronic instrumentation, navigation and communication equipment. Aircraft modification and installation of AWRS mission equipment were recently completed at Kaman's Bradley facility.

Following preliminary flight testing of aircraft systems, the AWRS prototype will be flown by a crew from Air Weather Service, a branch of the Military Airlift Command headquartered at Scott AFB, Il. In succeeding weeks, technical personnel from the Kaman AWRS team will perform calibration, performance testing and evaluation of the system during a series of flights in the New England area. Later, the aircraft will be flown to Eglin AFB, Fla., for Air Force pre-acceptance tests.

Developed under Defense Department "fly before buy" requirements, the system may eventually be installed in 21 additional Air Weather Service WC-130s for worldwide coverage of weather phenomena. Weather reconnaissance is now performed by aircraft using essentially standard flight instrumentation and specialized equipment, such as radio dropsondes. These aircraft have limited capabilities for in-flight measurement and analysis of winds and other critical atmospheric parameters necessary for accurate and timely reports on the internal forces, positions and movements of severe storms.

AWRS applies advanced technology for substantial qualitative and quantitative improvements in data collection, instant processing, recording and display, and automatic transmission to ground stations. Meteorologic sensors in the system will provide continuous, accurate measurements of such data as wind speed and direction at flight level, temperature, pressure and dew point/humidity at flight level and, with use of an improved dropsonde, down

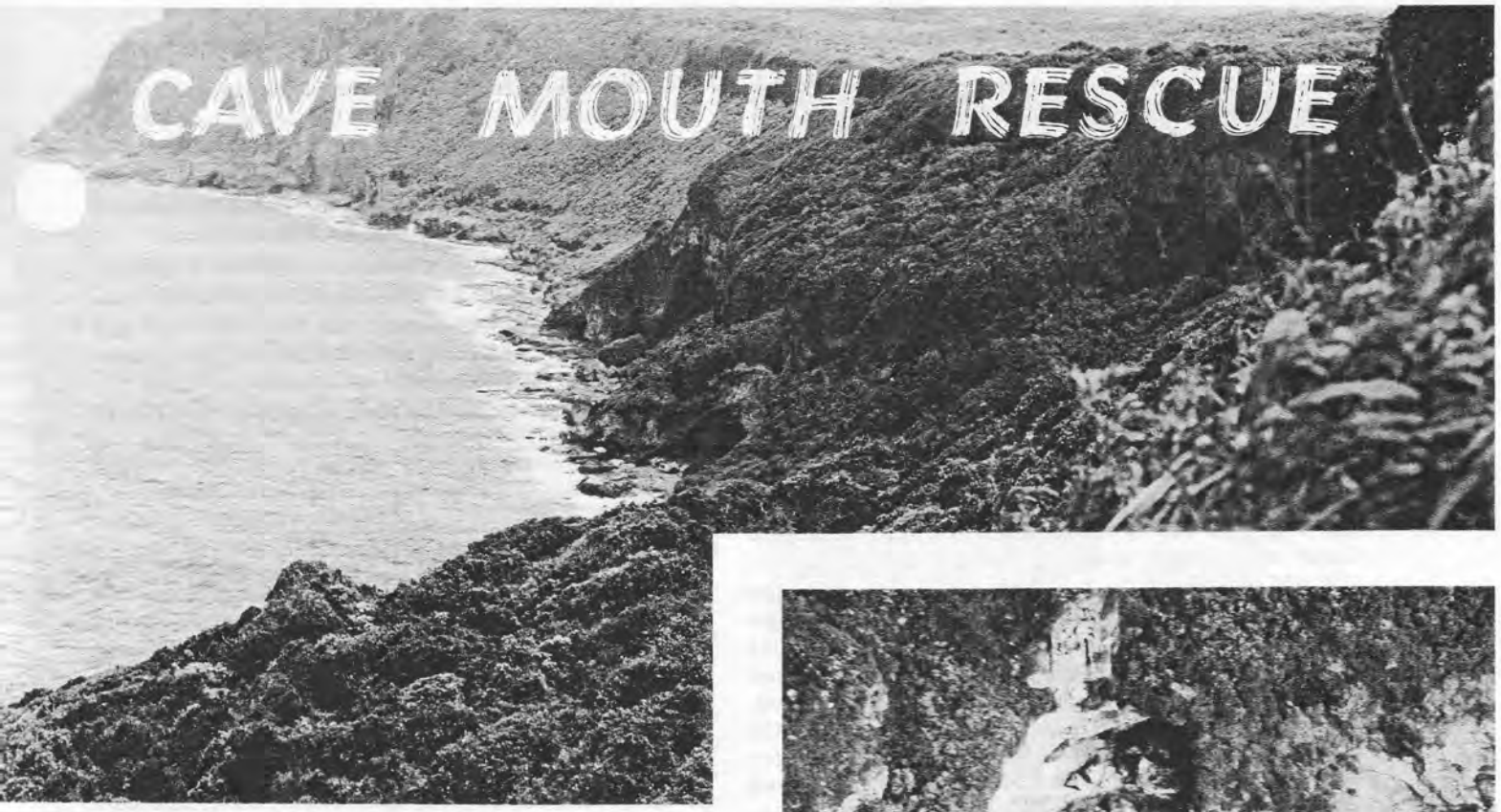
(Continued on page 19)

Continued development and refinement of the folding, telescoping rotor system on the Kaman SAVER rescue ejection seat are provided under an approximate $100,000 contract recently awarded by Naval Air Development Center, Warminster, Pa. The modifications are intended to enhance consistency of performance during SAVER's rotor deployment and lead into the next phase of the unique vehicle's development—transitional deployment of the entire system in unmanned air drop tests.

SAVER (Stowable Aircrew Vehicle Escape Rotoseat) is Kaman's approach to the joint Navy/Air Force AERCAB (Aircrew Escape/Rescue Capability) concept, which would provide aircrewmen with an improved means to reach safety when forced to eject over enemy or hostile terrain.

Equipped with a turbofan engine, landing gear and basic flight instrumentation, SAVER was test flown for the first time in December, 1971, becoming the world's first jet autogyro. SAVER is shown at left during the Air Force Association exposition in Washington, D. C., several weeks ago. Adding a glamorous touch to the display is model Joy Hawkins.

CAVE MOUTH RESCUE



Arrow indicates cave location on rugged Guam coast; circles show rescue site. These USAF photos were taken at low tide after mission accomplishment. During the actual rescue, the crashing surf was lifted into the rotor blades of the helicopter hovering 20 feet overhead.

ARRS crews have flown their HH-43Bs over storm-tossed waters, through fog, rain and snow, under trees, close to cliffs through canyons and so on to carry out their life saving rescue missions–so why not take "Pedro," the helicopter, into the entrance of a cave? And that is exactly what was done by Maj George S. Mangum and his copilot, 1stLt Hal S. Schwartz.

The unusual rescue took place on Guam and began when an HH-43 crew from Det 12, 41st ARRWg, took off in response to a call for assistance from the base dispensary. An airman on an exploring trip with a friend had fallen 50 feet from a cliff overlooking the Pacific and landed near the center of a cave opening. His unconscious body was lying only 10 feet from the pounding surf—and the tide was rising! It was impossible to reach the almost inaccessible location except from the air.

The following mission report was written by Capt Robert J. Hawley, information officer for Det 12:

"The alert crew launched at 0421Z. An attempt to direct the aircraft into position from a point approximately one mile from the victim was futile and the pilot elected to fly to the ambulance and the airman who had sounded the alarm. A landing was made and the airman was taken aboard to direct the crew to the scene of the accident. The survivor was located at 0436Z and an approach was made to the area. The only possible means of reaching the survivor called for an approach over a natural volcanic breakwater and into the entrance of the cave. The flight mechanic (Sgt Don K. Smith) was lowered into the thigh deep surf to make an actual depth determination. He was followed immediately by our non-swimming medical technician (SSgt Jerry L. Milton). Mouth-to-mouth resuscitation was begun and closed heart massage was administered at least twice. The survivor, in his unconscious state, was placed into the Stokes litter, carried through the surf and hoisted aboard the helicopter at 0450Z by the airborne firefighter (Sgt Daniel L. Arellano) who acted as hoist operator for the entire operation. This action took 14 minutes during which time the helicopter was hovered in a 12-kt right quartering tailwind within rotor tip radius of the cliff. In addition, surf crashing into the breakwater frequently was lifted into the rotors of the chopper in its 20-foot hover.

"The helicopter departed the area leaving the two crewmembers to be evacuated later. A landing was made at the alert pad at 0457Z. A flight surgeon, medical technician, pararescue specialist and fuel were taken aboard and Pedro departed at 0506Z for the naval hospital servicing Guam. The survivor was placed in the care of naval medical personnel at 0515Z. Final landing was made at Andersen AFB 30 minutes later after pickup of all rescue personnel."

LAMPS Activities ....

By Bruce Goodale, LAMPS Systems Manager

For a brief period in December, only two LAMPS detachments were deployed on ships in the Pacific and one in the Mediterranean. Det 6 from HSL-31, NAS Imperial Beach, Calif., is on the USS Jouett (DLG 29) and Det 7 is on the USS O'Callahan (DE 1051), both in WestPac. The O'Callahan is the first ship of the DE 1040 class to become operational with LAMPS aboard. The USS Harold E. Holt (DE 1074) returned Det 2 to HSL-31 December 1st, after an excellent 6-1/2 months cruise in WestPac where a great deal was learned about LAMPS operations from DE 1052 class escorts. The USS Marvin Shields (DE 1066) returned in early December after more than seven months in WestPac with Det 4, and Det 3 has left the USS Truxtun (DLGN 35) to return home after 7-1/2 months aboard three different ships. The USS Reasoner (DE 1063) and USS Sterett (DLG 31) are preparing to deploy soon with LAMPS "mini-detachments." Some LAMPS ships have deployed without a helo and det available.

The USS Biddle (DLG 34) returned from WestPac late in October after six months, during which Det 4, from HSL-30, NAS Lakehurst, N. J., flew an amazing 711 flight hours with less than 10 total maintenance manhours per flight hour.

The USS Joseph Hewes (DE 1078) is now enroute home from WestPac after more than six months deployment with Det 3. Both the USS William H. Standley (DLG 32) and the USS Bowen (DE 1079) returned in mid-December from the Mediterranean after extended cruises with Dets 2 and 6. The USS Wainwright (DLG 28) deployed to the Med in early December. USS Josephus Daniels (DLG 27) is scheduled to deploy soon with a LAMPS det.

The USS Fox (DLG 33) has completed its participation in the NADC D/V-98 Phase F-1 at-sea tests of potential improvements to the LAMPS equipment. NADC is now in full swing on Phase F-2, looking toward the next generation LAMPS requirements. Mock-ups of three typical existing aircraft are in process, including the H-2.

Work has commenced at Kaman on the first of the next batch of 25 H-2's to be modified into SH-2D LAMPS configuration, with deliveries starting in May. The new 101 rotor, the up-rated landing gear with the tail wheel moved forward, and T58-8F engines will be included, as well as some modifications to the mission equipment, some of which are not yet defined.

LAMPS Det 2 Proposes Changes

NAS IMPERIAL BEACH, CALIF. . .Helicopter Anti-Submarine Squadron Light Thirty-One's LAMPS Det Two returned recently from a seven-months deployment aboard the USS Harold E. Holt. It was the squadron's second LAMPS detachment to deploy to the Western Pacific (WESTPAC).

Lt Dennis Christian, officer-in-charge of LAMPS Det Two, and his crew were credited with compiling a solid record of achievements during the deployment. As a result of testing and trials conducted at sea, LAMPS Det Two submitted proposed changes in ship construction, lighting for night flying, arrangement of hangar spaces, and new procedures for tactical employment of new and complex equipment installed in the SH-2D SEASPRITE helicopter.

Serving with Lieutenant Christian on the deployment were: Lt Lewis D. Madden, Lt(jg) Peter J. Murphy, Lt(jg) Michael W. Skahan, AXC R. M. McCurdy, AX1 J. P. Wilson, AT2 M. R. Selander, AE3 J. P. Chaney, AE2 J. D. Sauer, ADJ2 L. E. Ottem, ADJ2 T. C. Brown, Jr., AMH3 D. W. Pinckard, AMS2 M. G. Lee, AWC A. H. Blood, AW3 J. E. Browne, AW3 G. E. Reilly.

Upon their return, the members of LAMPS Det Two briefed squadron personnel soon to be deployed to WESTPAC aboard other destroyers homeported along the West Coast.

Capt T. C. Lonnquest, Jr., foreground, LAMPS project manager, Chief Naval Material, is shown in SH-2D cockpit before orientation flight with Kaman test pilot Al Ashley. At the time, Captain Lonnquest was attending a monthly LAMPS Program Review conference at KAC's Bloomfield, Conn., facility. In right photo is Ms. Helen Barker, an engineer in training at Naval Air Systems Command, before a similar flight during the conference. An assistant to Mr. Wayne Cerny, NAVAIR'S H-2 Assistant Program Manager, Logistics, she is the first female trainee from that department to fly in an aircraft related to her assigned program. (Ruggiero photo)

RECORD-SETTING EAST COAST LAMPS DET RETURNS

NAS LAKEHURST, N. J. . .Another LAMPS milestone was set by Helicopter Anti-Submarine Squadron Light Thirty on 26 October, 1972,when "Hard Charger" 15 set down here. With the touch down of the Kaman SH-2D SEASPRITE, assigned to HSL-30 LAMPS Det 4, deployment ended for the first East Coast detachment to participate in West Pac operations.

The previous month, the detachment also earned the distinction of making the first at sea rescue by a LAMPS helicopter when a detachment crew recovered Capt A. S. Dudley, USMC, who had ejected from his F-4 Phantom. At the time of the rescue alert, the LAMPS helo was secured in its hangar aboard the USS Biddle (DLG-34) and the crew was in an off-duty status. Within 10 minutes, the helo was airborne and enroute to the scene. Manning the SH-2D were Lt C. D. Nelson, the pilot; Lt T. J. Corcoran, copilot; AT1 R. L. Daniel, radar operator; and AWAN S. T. Mayo, hoist operator. The LAMPS crew updated their initial vector with Ultra High Frequency/Automatic Director Finder (UHF/ADF) radar equipment which homed in on the downed pilot's survival radio. A surface search was maintained with airborne radar, which spotted Captain Dudley long before visual contact was established. He was hoisted aboard the helo, which then uneventfully returned to the Biddle.

The detachment also logged 711.6 hours since May which it believes to be a record for a single H-2 detachment. Also believed to be a record was the 437.7 hours logged between 4 July and 21 September, 1972.

(For more on Biddle operation see page 10)

DADDY'S HOME—LCdr F. M. "Skip" Dirren, officer-in-charge of HSL-30 LAMPS Det 4, signs yellow sheets for last hop with "Hard Charger" 15, the unit's SH-2D. Looking on is daughter Amy Elizabeth, age 5, happy to see her daddy after his seven-month absence. Similar scenes took place in many other homes as Det 4 personnel were reunited with their families after the long WestPac cruise. (USN photo)

WEST COAST LAMPS DET LOGS 168 HOURS

By Lt R. J. Gray, PAO Officer
USS Truxtun

USS TRUXTUN (DLGN-35)—October 1972 was a banner month for the men of HSL-31 Detachment 3, aboard this guided missile frigate off the coast of the Republic of Vietnam. During operations as part of the U. S. Seventh Fleet, the SH-2D LAMPS helicopter flew a total of 168.1 hours, thus setting an unofficial record for the most hours flown in one month by a LAMPS detachment. The previous known high was 167.0 hours flown by the LAMPS helo aboard the USS Biddle (DLG-34) in July, 1972.

Each of the four detachment pilots also reached an important milestone in his flying career. LCdr Jack Wilson, the detachment officer-in-charge, reached the 2,500-hour mark in total flight hours, while Lt Jim Marsh passed the 1,000-hour mark. Lt(jg) Steve Crenshaw and Lt(jg) John Marino left their "nugget" status behind as they both exceeded 500 hours.

The LAMPS helo aboard Truxtun has been kept quite busy, at a wide variety of tasks. When not engaged in reconnaissance patrols and SAR (Search and Rescue) support, the Kaman-manufactured SH-2D participated in four Medivacs, 67 passenger transfers, and several times picked up the mail for the waiting Truxtun crew. Perhaps the most unusual mission was an "egg-replenishment," when the trusty helo delivered 36 cases of eggs, considered too delicate to transfer by highline, from the USS Wacamaw (AO-109).

All of this flight time and record-setting is an indication of the hard work and professional performance turned in by the maintenance personnel of the detachment.

The officers and men of Det 3, as well as the rest of Truxtun crew, ended October with an R and R visit to Sasebo, Japan. As for future plans, well, the flying weather is pretty good in November. Let's see now,. . . .!

MILESTONERS—Left to right, Lt(jg) John Marino, Lt(jg) Steve Crenshaw, Lt Jim Marsh, LCdr Jack Wilson. (USN photo)

USS Biddle

HELO-SHIP TEAMWORK EXTENDS COMBAT CAPABILITY

By Lt T. J. "Corky" Corcoran
HSL-30 LAMPS Det Four

On 28 April 1972, HSL-30 LAMPS Detachment 4 was notified that it would emergency deploy to the Southeast Asia Combat Zone within three days and join the USS Biddle (DLG 34) already enroute. Despite the fact that it had not been scheduled to deploy until July 1972, the det completed aircraft maintenance, C-5 on-load of aircraft and complete pack-up and joined Biddle in Subic Bay, P. I.

On 11 May the ship arrived in the Gulf of Tonkin to assume its three combat line tours totalling 107 days. Biddle served as North Search and Rescue (NSAR) and as the Positive Identification and Radar Advisory Ship (PIRAZ). Biddle also served 26 days additional duty as the SAR Coordinator for the Gulf of Tonkin.

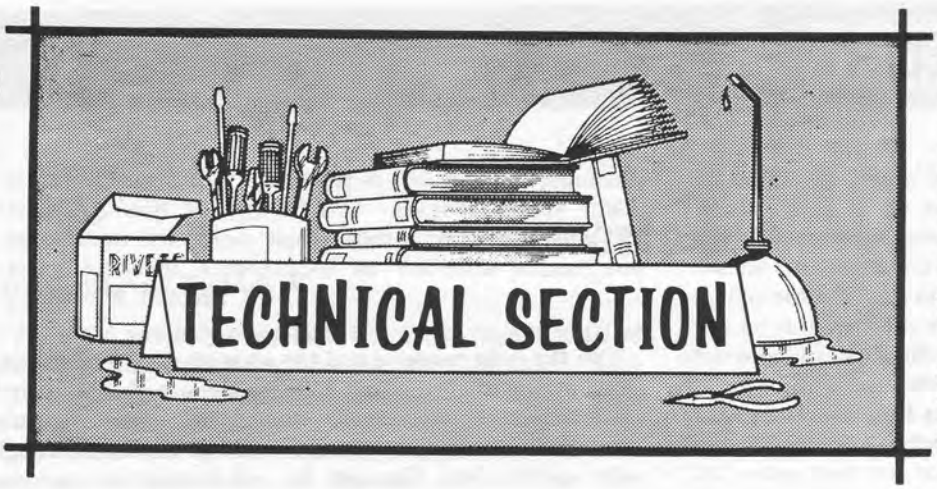
In its combat line tours Biddle was responsible for providing positive and/or advisory control for U. S. Navy and Air Force aircraft strikes against North Vietnam; for maintaining the location and identification of all aircraft operating in the PIRAZ; for detecting and intercepting enemy aircraft attempting to attack U. S. Forces in the Gulf of Tonkin and over North Vietnam; and for planning and directing all SAR efforts in the Gulf of Tonkin.

1000th LANDING—Capt E. W. Carter, commanding officer of the Biddle, congratulates LCdr F. M. Dirren, Jr., after the Det 4 OIC made the 1000th helo landing on the ship. The event was celebrated with cake on the flight deck immediately after.

In its combat line tours, USS Biddle controlled 102 Navy and 56 Air Force strikes against North Vietnam. Biddle's air intercept controllers directed the intercept and destruction of 13 enemy MIG aircraft by U. S. Navy and Air Force fighters. One night MIG aircraft attacked Biddle and were met by Biddle's missile and gun fire.

(Continued on page 19)

ONE OF MANY—SH-2D "Hard Charger" 15 prepares to come aboard the USS Biddle and then is guided to a safe landing by AT1 "Spike" Daniel. Seconds later Det 4 personnel chain helo to deck. The scene was repeated many times during the seven-month deployment. (USN photos)



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Technical Section information has been reviewed and approved by Service Engineering.

G. M. Legault, Supervisor

H-2 LATERAL/LONGITUDINAL TRIM STRUT ASSEMBLIES

W. Wagemaker, Service Engineer

When installing lateral and/or longitudinal control trim strut assemblies (items 1 and 2 in Photo A), be sure the curved rodends (item 3), P/N K654054-1, FSN RS1560-888-3766BH6X, are placed so the curve is AWAY from the trim motor and the electrical harness is facing aft as shown in Photo A.

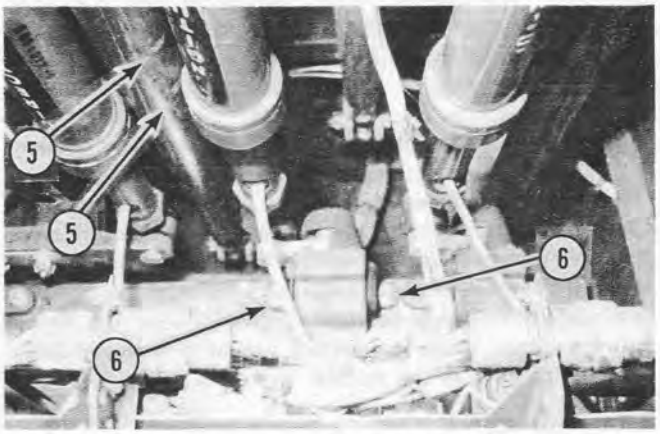
Also, be sure the rods are free to move without touching other rods. (An example of interference is shown in Photo B, item 5.) If an interference is discovered, reposition the trim motors. Trim motor bolt holes are slightly oversize to provide movement if required. Loosen the hold-down bolts (6), relocate the motors and lockwire the bolts after achieving the proper position.

Photo C shows an INCORRECT installation and a correct installation of the curved rodends. If this situation is discovered, disconnect the incorrectly installed rodend at the trim motor, rotate the trim strut 180 degrees and re-attach it to the trim motor.

NOTE

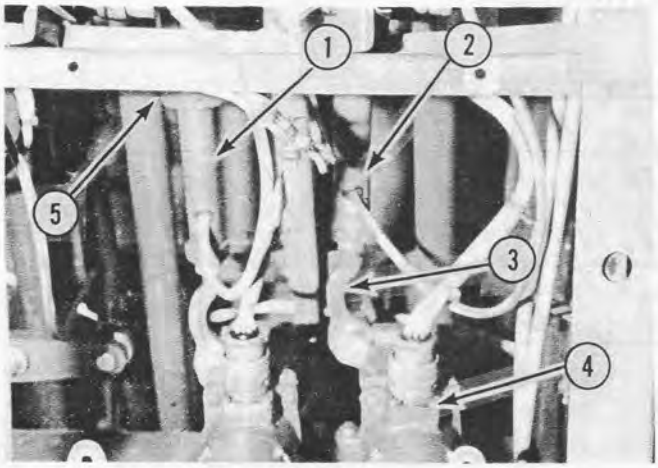
Be sure the harness does not become wrapped around the strut.

This information will be incorporated into applicable manuals by a future change. For further information, refer to NAVAIR 01-260HCA-2-2.1; and NAVAIR 01-260HCA-4-1; and NAVAIR 01-260HCB-4-3.



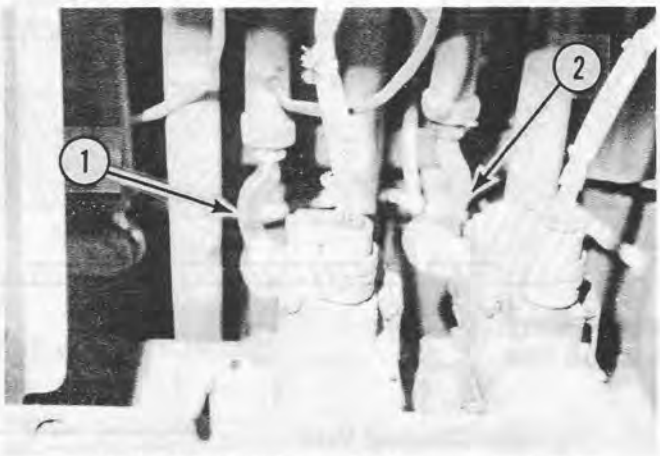
5. Interference areas 6. Bolts (trim motor)

Photo B



1. Longitudinal trim strut
2. Lateral trim strut
3. Rodend, P/N K654054-1
4. Trim motor
5. See Photo B

Photo A



1. Correct installation 2. Incorrect installation

Photo C

H-2 LIQUID SPRINGS

H. Zubkoff, Service Engineer

The liquid spring uses hydraulic fluid, introduced into the cylinder under pressure, as the "spring medium." The same column of fluid also provides the "shock absorber" action by controlling the rate of piston movement in both directions.

The piston is the "heart" of the liquid spring concept. Two close-tolerance orifices are provided through the piston to allow liquid flow from one side of the piston to the other. This metered rate of flow produces the cushioning action by controlling the rate of piston movement back and forth in the cylinder. Note that liquid flow from Chamber A to Chamber B occurs through both orifices, whereas from B to A, flow is possible through only one orifice because of the one-way flapper on the larger orifice. (The term "chamber" is used for explanatory purposes.) The reason for a greater flow from A to B is to provide for a relatively high rate of piston movement towards the Chamber A direction as a function of landing impact forces.

As can be seen, the piston face area exposed to Chamber A is greater than the Chamber B piston face area because the piston rod reduces the effective piston face area on the Chamber B end. Because of this piston face area differential, the pressure reacting against the greater piston face area in Chamber A will force the piston to the forward (rod fully extended) position. This is why the liquid spring extends when the aircraft weight is removed from the landing gear as the aircraft is jacked up.

With the jacks removed and the wheels resting on the deck, the weight of the aircraft reacting through the piston rod will force the piston back towards Chamber A. As the pressurized fluid is compressed, it will be displaced through the orifices into Chamber B. Ultimately, the pressure against the Chamber A piston face will be equal to the pressure against Chamber B piston face, plus the pressure created by the weight of the aircraft; and further piston movement will cease. This is referred to as the NULL position, the balanced piston position, or, more commonly expressed as the static position. The static position piston rod extension, on a properly serviced strut should be 5/8 to 3/4-inch. Developmental testing and service experience indicates that this amount of static position extension is ideal relative to proper shock absorption for landing impact forces and ground bounce control. Insufficient extension can cause the piston to bottom in the aft position with enough force to ultimately cause failure. Conversely, too much extension can cause the piston to bottom in the forward position. Assuming that the liquid spring has been properly charged, conditions which subsequently can influence piston rod extension, other than leakage, are changes in the helicopter gross weight and ambient air temperature changes of approximately 20° F or greater.

It is therefore suggested that daily observations for proper liquid spring extension be accomplished under similar or approximately similar conditions of OAT (Outside Air Temperature) and aircraft weight. Consistent piston rod extension of less than 1/2 inch or greater than 1-1/4 inches

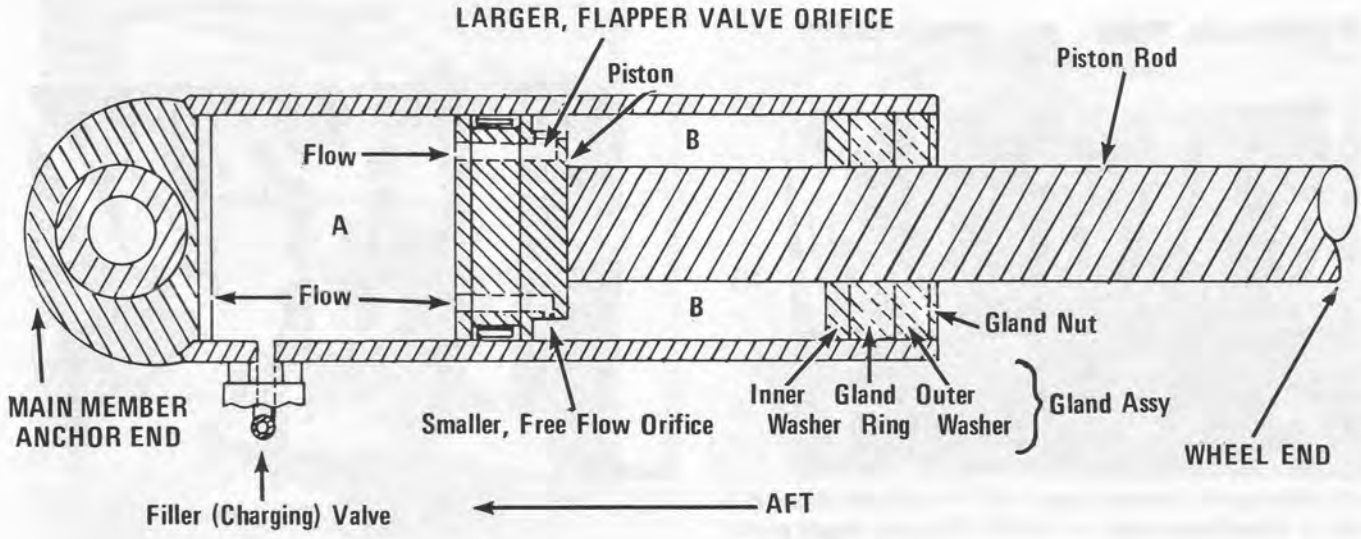


ILLUSTRATION 1

is an indication that reservicing is required in accordance with NAVAIR 01-260HCA-2-1. Another feature which contributes to proper liquid spring performance is the gland assembly, incorporated to minimize leakage and piston rod binding.

The gland assembly (exploded view, Illustration 2, installed in Illustration 1) is placed over the piston rod and is retained inside the cylinder against the gland nut by the pressurized liquid in Chamber B. The gland assembly is positioned with the outer washer (1) against the gland nut (which is threaded into the cylinder) and with the inner washer (7) facing the Chamber B piston face. The pressure developed in Chamber B reacts against the face of the inner washer (7) compressing the gland assembly components. The pegs (8) serve as guides to insure a true axial movement of the gland components. Compression of the gland assembly forces the gland ring (4) into tight contact with the cylinder walls to prevent leakage around the gland periphery and forces the piston rod chamfer ring (3) into tight contact around the piston rod. The 7 small chamfer rings (2) are forced into their respective seats in the gland ring (4) to prevent internal leakage along the guide pegs (8). The chamfer rings also serve to insure a true axial alignment of the gland ring relative to the cylinder walls.

The two wire gauze disc washers (5 and 6) provide numerous small passages as an escape path for the fluid during axial compression of the gland components. The outer washer (1), which is seated against the gland nut, incorporates 7 grooves, converging on the piston rod. These grooves serve as a liquid flow path to lubricate the piston rod and to dissipate trapped liquid between the washer and the gland nut.

Attention to piston cleanliness is as important to liquid springs as it is on any conventional air-oil shock strut. Abrasive particles adhering to the piston rod can cut and abrade the piston rod chamfer ring (3) causing leakage and a "flat strut." Flat or underextended liquid springs should not be automatically replaced; first determine that replacement is actually required. Leakage can usually be confirmed by the presence of hydraulic fluid. If it appears to be leaking from around the piston rod, replacement is required. If it appears to be leaking at the charging valve, remove the valve per NA 01-260HCA-2-2, replace the O-ring, P/N 011-1DSA9250 (01-260HCB-4-2, 1 September 1972, Fig. 83, Index 37), and recharge the spring per NA 01-260HCA-2-1. If leakage at the charging valve recurs, replace the complete valve assembly, P/N 3283327-1.

The H-2 liquid spring, despite its relatively small size, is a rugged, extremely effective shock absorber. By comparison, a conventional air-oil shock strut capable of absorbing the same loads would require a cylinder approximately 20 inches in length by 4 inches in diameter. However, as rugged and effective as it is, performance and reliability are still dependent on proper care and servicing. Piston rods should be kept clean of sand and dirty residue. Continuous over or under extension will ultimately result in premature replacement. Dirty, contaminated servicing fluid will cause leakage and malfunction. Conversely, with care and proper servicing, liquid springs can and have "performed as advertised" for the full service life.

1. Outer washer
2. Chamfer ring, peg
3. Chamfer ring, rod
4. Gland ring
5. Gauze washer
6. Gauze washer
7. Inner washer
8. Peg

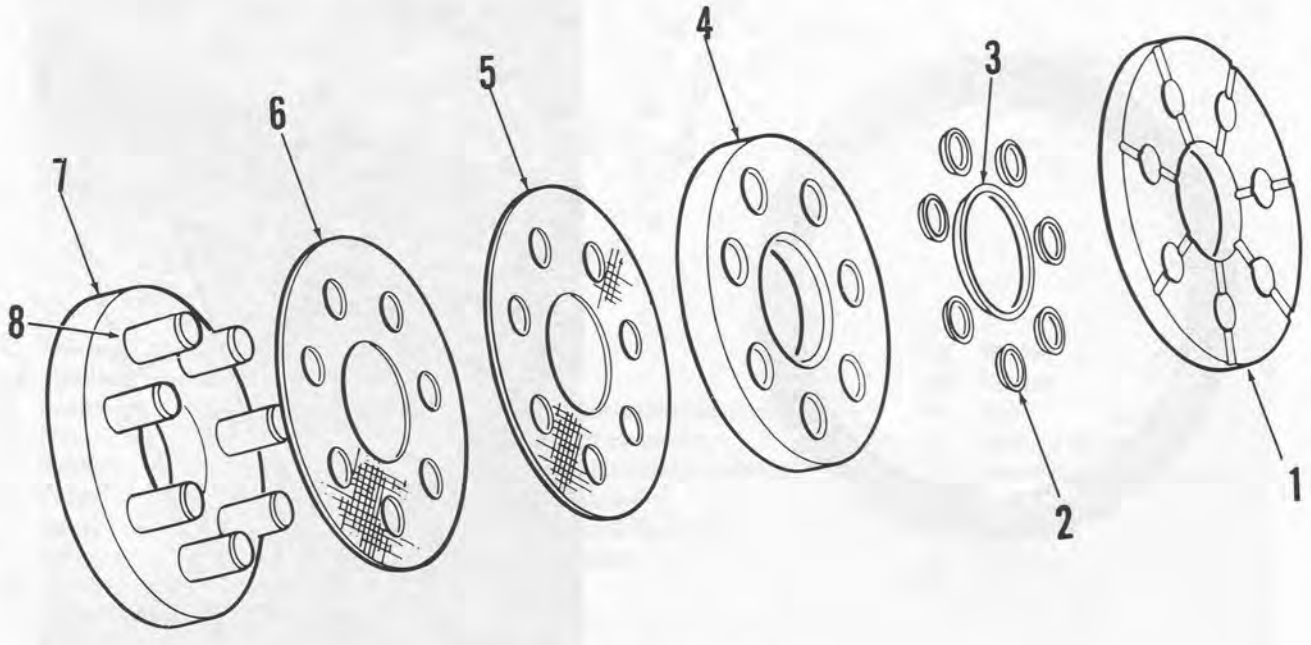


ILLUSTRATION 2

Q. (Applies H-2) Are there any limitations on mixing main rotor blade retention assemblies?

A. Yes. Retentions which have Airframe Change 176 incorporated cannot be used with other retentions. For example: retentions -607 and -609 have AFC 176 incorporated and can be intermixed with each other; retentions -603 and -605 can be intermixed with each other but since AFC 176 is not incorporated, these retentions cannot be intermixed with the -607 and/or the -609 series retentions. (AFC 176 provides KAcarb-type pivot bearings and improved attaching hardware for the retention controls.)

W. Wagemaker, Service Engineer

Q. (Applies H-2) What criteria should be used to inspect azimuth and mixer assemblies?

A. Azimuth and mixer assemblies are considered serviceable when minor nicks, scratches and/or dents on external surfaces do not exceed 0.015-inch in depth nor do they impair operation of the assembly. Defects are not permitted in bearing bores, on the collective thrust rod stud and rod-end, or where the fit of mating parts is affected. This information will be incorporated into applicable manuals by future Changes.

W. Wagemaker, Service Engineer

H-2 HORIZONTAL STABILIZER INSTALLATION-RESILIENT MOUNTS

H. Zubkoff, Service Engineer

Airframe Change 126 replaced the tail rotor pylon stabilizer spar tube ball bearings, P/N KP37BS, with vibration-absorbing resilient mounts, P/N K632103-1, shown in Photo A and the accompanying illustration. The mounts are constructed of a rubber core bonded to an inner and an outer aluminum alloy ring. To protect against corrosion, rubber deterioration, and to provide maximum resistance to wear, the components have been treated as follows:

Outer ring: Sulpheric acid anodized.

Rubber core: Exposed areas coated with oil-resistant urethane.

Inner ring: Electroless nickel plated.

The calendar MRC cards (NAVAIR 01-260HCB-6-4, card number 9) and the appropriate MIM, have not been updated to include the inspection criteria necessary to determine the serviceability of the new mounts. The following information may be used until the manuals are revised.

Replace resilient mounts, K632103-1, if they are discovered with any of the following conditions:

a. Missing chunks of rubber deeper than 1/8-inch.

b. Rubber deformed to the point of protruding beyond the width of the ring.

c. Rubber which has separated or cracked (completely through) at edge of either ring for a total of 90° or more. (Crack depth may be determined by using a probe.)

Resilient mounts which have the appearance of surface deterioration (cracks in the urethane coating, discolored, etc.) such as that shown in Photo B are still serviceable. All resilient mounts are replaced at each PDLM (Periodic Depot Level Maintenance).

Photo A

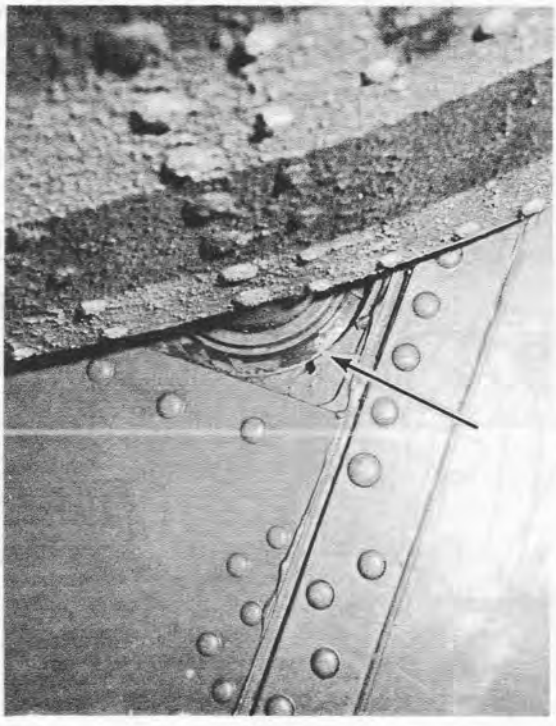
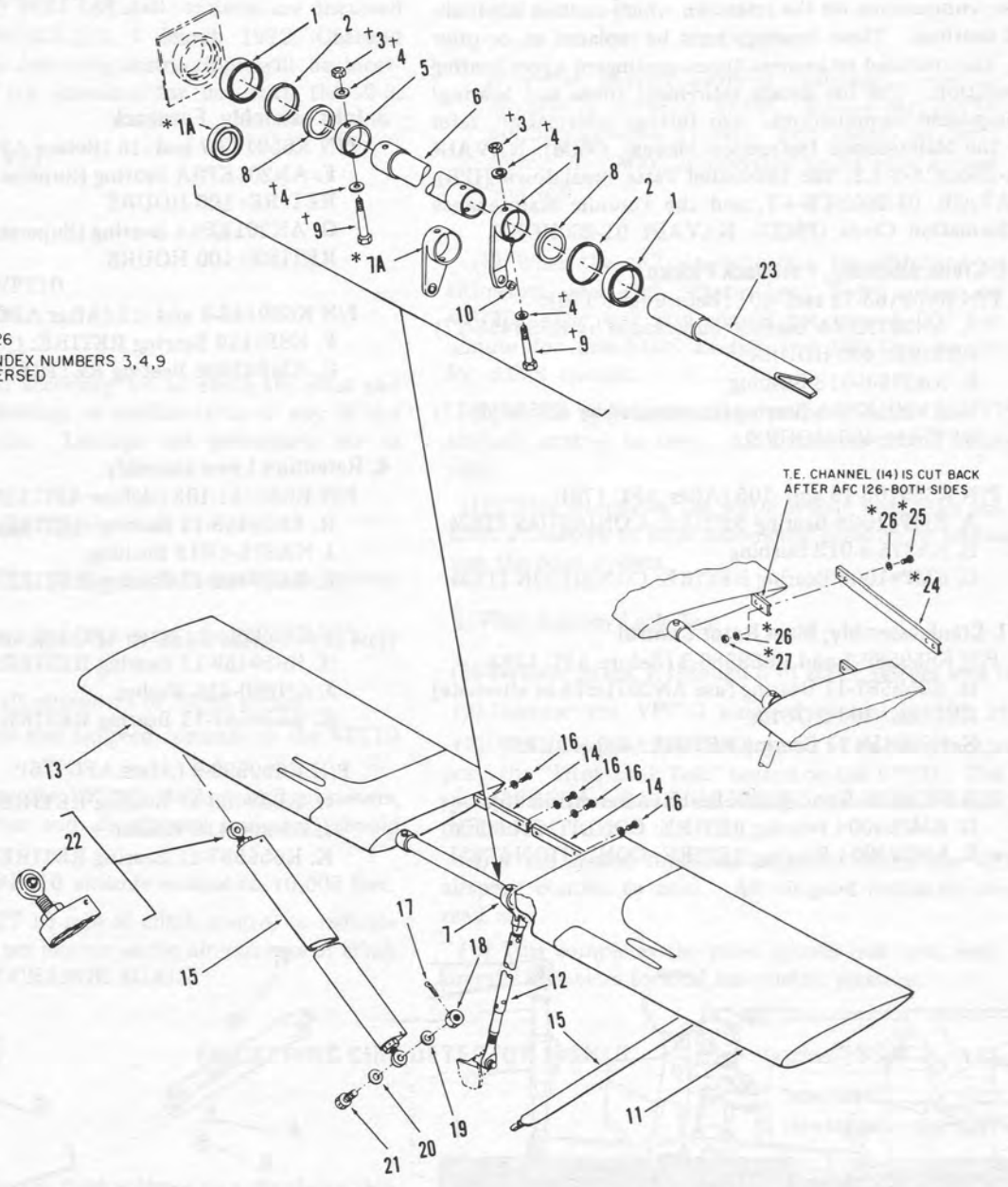


Photo B



1. Bearing
1A. Resilient mount
2. Snap ring
3. Nut
4. Washer
5. Collar
6. Sleeve
7. Lever
*7A. Lever
8. Shim (laminated)
9. Bolt
10. Bearing
11. Left-hand horizontal stabilizer
12. Adjuster rod assembly
13. Right-hand horizontal stabilizer
14. Support channel
15. Horizontal stabilizer struts
16. Bolt and washer
17. Cotter pin
18. Nut
19. Washer
20. Washer
21. Bolt
22. Bearing rodend
23. Stabilizer spar extension
*24. Splice channel
*25. Bolt
*26. Washer
*27. Nut

*After AFC 126

Illustration 1

HORIZONTAL STABILIZER INSTALLATION – RESILIENT MOUNTS

H-2 MAIN ROTOR BLADE RETENTION BEARING–RETIREMENT TIMES

W. Wagemaker, Service Engineer

The accompanying illustration shows the location of the four components on the retention which contain life-limited bearings. These bearings must be replaced at, or prior to, the specified retirement times contingent upon bearing condition. The list details retirement times and bearing/component combinations. For further information, refer to the Maintenance Instruction Manual, (MIM), NAVAIR 01-260HCA-2-4.2, the Illustrated Parts Breakdown (IPB), NAVAIR 01-260HCB-4-7, and the Periodic Maintenance Information Cards (PMIC), NAVAIR 01-260HCB-6.

1. L-Crank assembly, Feedback Pickup.

P/N K659163-15 and -101 (Before AFC 176):
- A. AN201KP8A Bearing (Superseded by K659458-17) RETIRE: 400 HOURS
- B. NAS75-8-013 Bushing
- C. AN201KP8A Bearing (Superseded by K659458-17) RETIRE: 400 HOURS

P/N K659163-19 and -105 (After AFC 176):
- A. KMP41008 Bearing RETIRE: CONDITION ITEM
- B. NAS75-8-013 Bushing
- C. KMP41008 Bearing RETIRE: CONDITION ITEM

2. L-Crank assembly, Main Rotor Control

P/N K659586-1 and K659586-3 (Before AFC 176):
- D. K659587-11 Bearing (use AN207DPP4 as alternate) RETIRE: 400 HOURS
- E. K659458-17 Bearing RETIRE: 400 HOURS

P/N K659586-5 and K659584-15 (After AFC 176):
- D. KMP54004 Bearing RETIRE: CONDITION ITEM
- E. KMP43004 Bearing RETIRE: CONDITION ITEM

3. Idler assembly, Feedback

P/N K659143-7 and -15 (Before AFC 176):
- F. AN201KP8A Bearing (Superseded by K659458-15) RETIRE: 100 HOURS
- G. AN201KP6A Bearing (Superseded by K659458-15) RETIRE: 100 HOURS

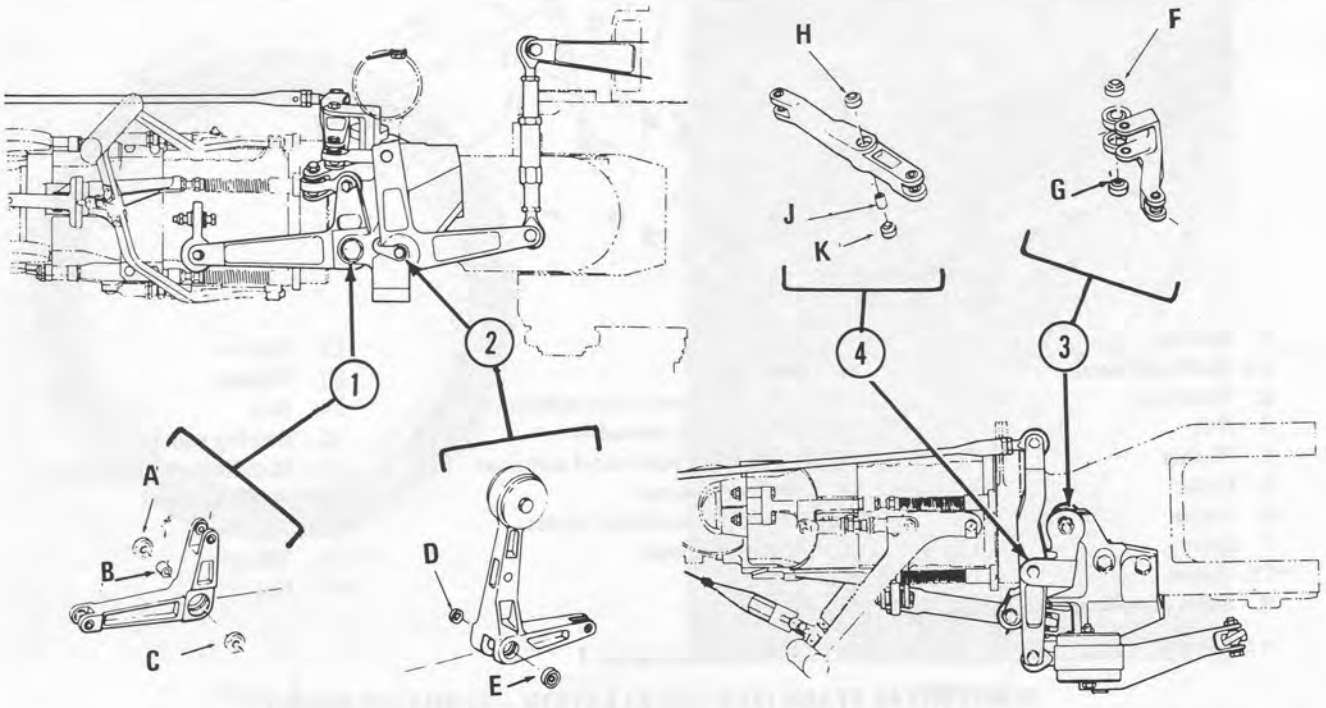
P/N K659143-9 and -17 (After AFC 176):
- F. KSP6110 Bearing RETIRE: CONDITION ITEM
- G. KMP41006 Bearing RETIRE: CONDITION ITEM

4. Retention Lever assembly.

P/N K659141-103 (Before AFC 125):
- H. K659458-11 Bearing RETIRE: 200 HOURS
- J. NAS75-4-018 Bushing
- K. K659458-11 Bearing RETIRE: 200 HOURS

P/N K659598-1 (After AFC 125 and before AFC 176):
- H. K659459-11 Bearing RETIRE: 400 HOURS
- J. AN960-416 Washer
- K. K659587-11 Bearing RETIRE: 400 HOURS

P/N K659598-9 (After AFC 176):
- H. K659459-11 Bearing RETIRE: 400 HOURS
- J. AN960-416 Washer
- K. K659587-11 Bearing RETIRE: 400 HOURS



H-2

PITOT AND STATIC SYSTEM LEAKAGE TEST

N. Hankins, Service Engineer

Maintenance of H-2 Pitot and static systems are discussed in NAVAIR 01-260HCA-2-3, 1 March 1972, Changed 1 July 1972. The following instructions will be incorporated into and are intended for use with the -2-3.

Testing (See Figure 9-2)

AGE Required

Air Data Test Set VPT10
Accessory Kit 11209

Use the test set and accessory kit to check the pitot and static systems for leakage or malfunctions of any of the associate components. Leakage test procedures are as follows:

A. Static System Leak Test

(1) Connect VPT10 to the aircraft pitot/static system (See Figure 9-2).

(2) Set the VPT10 altimeter to 29.92 inches. DO NOT CHANGE AGAIN.

(3) Set both aircraft altimeters to 29.92 inches.

(4) Set the altitude and airspeed controls on the VPT10 to zero.

(5) Apply power to the VPT10. Both aircraft altimeters, the VPT 10 altimeter and all airspeed indicators should read zero.

(6) Increase the VPT10 altitude control to 10,000 feet.

(7) Adjust the VPT 10 rate of climb control to indicate less than 5,000 feet per minute on the aircraft rate of climb indicators. DO NOT CHANGE AGAIN.

CAUTION

If either aircraft airspeed indicator shows an increase in airspeed, STOP. Return the VPT10 altitude control to zero, and check the pitot system for leaks, as described under pitot system leak test.

(8) When the altitude indication has stabilized on all altimeters, press the "Static Leak Test" button on the VPT10. The leak rate should not exceed 300 feet per minute for non-AIMS aircraft and 100 feet per minute for AIMS aircraft.

(9) If the system functions properly, return the VPT10 altitude control to zero. All altimeters should return to zero.

(10) This completes the static system test; reset the aircraft altimeters to local barometric pressure or proceed to test the pitot system.

B. Pitot System Leak Test

(1) Perform Steps 1 through 5 of static system leak test.

(2) Increase the VPT10 airspeed control to 100 kts.

(3) When airspeed has stabilized on all airspeed indicators, press the "Pitot Leak Test" button on the VPT10. The airspeed indication should not change more than 5 knots per minute.

(4) If the system functions properly, return the VPT10 airspeed control to zero. All airspeed indicators should read zero.

(5) This completes the pitot system leak test; reset the aircraft altimeters to local barometric pressure.

FLICKERING CHIP DETECTOR LIGHTS

H-2

N. Hankins, Service Engineer

A recent report from the field referred to a flickering chip detector light. During trouble shooting, one of the rubber boots covering the stud and terminal of a chip detector was found to contain water. Since further investigation did not reveal a gearbox failure or contamination, it was apparent that the flickering light was caused by the water trapped in the boot. Photo A typifies what occurred. The boot was lace-tied at the wire end (1) and left untied at the terminal end (2). Water found its way into the boot (during washdown or heavy rains) and was trapped by the tied end. It is accepted practice to tie both ends of a boot to ensure proper installation; tying only the lower end is almost a guarantee of water entrapment and subsequent problems.

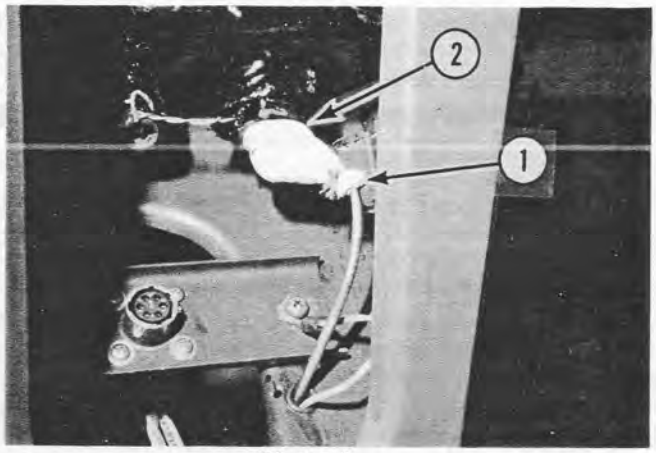


Photo A

PUBLICATION INFORMATION

This list reflects latest manual changes and technical directives released to the field.

R. H. Chapdelaine, Supervisor, Service Publications

NAVAIR 01-260HCB-1-6 — NATOPS FUNCTIONAL CHECK FLIGHT CHECKLIST, Navy Models HH-2C/ HH-2D/SH-2D/UH-2C Helicopters
1 October 1972

NAVAIR 01-260HCB-1B — NATOPS PILOT'S POCKET CHECKLIST, UH-2C Helicopter
15 September 1969
changed 1 September 1972

NAVAIR 01-260HCB-1C — NATOPS AIRCREWMAN'S POCKET CHECKLIST, UH-2C/HH-2C/HH-2D Helicopters
15 September 1969
changed 1 September 1972

NAVAIR 01-260HCC-1 — NATOPS FLIGHT MANUAL, Navy Models HH-2C/HH-2D Helicopters
1 September 1972

NAVAIR 01-260HCC-1B — NATOPS PILOT'S POCKET CHECKLIST, HH-2C/HH-2D Helicopters
1 September 1970
changed 1 September 1972

NAVAIR 01-260HCD-1 — NATOPS FLIGHT MANUAL, Navy Model SH-2D Helicopter
1 September 1972
changed 15 December 1972

NAVAIR 01-260HCD-1B — NATOPS PILOT'S POCKET CHECKLIST, SH-2D Helicopter
1 September 1972

NAVAIR 01-260HCD-1C — NATOPS AIRCREWMAN'S POCKET CHECKLIST, SH-2D Helicopter
1 September 1972

NAVAIR 03-40KAM-1 — Manual, Overhaul Instructions, FLIGHT CONTROL SYSTEM, Navy Models UH-2C/ HH-2C/HH-2D/SH-2D Helicopters
15 November 1965
changed 15 December 1972

NAVAIR 03-95D-17 — Manual, Overhaul Instructions, TAIL ROTOR BLADE AND GRIP ASSEMBLY, P/N K614001-201, -205, -207; K614701-1
15 December 1972

NAVAIR 03-95D-22 — Manual, Overhaul Instructions, MAIN GEARBOX ASSEMBLY, P/N K674877-1, -3
15 December 1969
changed 15 October 1972

NAVAIR 03-95D-23 — Illustrated Parts Breakdown, MAIN GEARBOX ASSEMBLY, P/N K674877-1
15 April 1968
changed 15 October 1972

NAVAIR 03-95D-30 — Manual, Overhaul Instructions, MAIN GEARBOX ASSEMBLY, P/N K671802-1, -3, -5, -105
15 November 1970
changed 15 October 1972

NAVAIR 03-95D-31 — Illustrated Parts Breakdown, MAIN GEARBOX ASSEMBLY, P/N K671802-1, -3
15 April 1970
changed 15 October 1972

* * * * * * * * TECHNICAL DIRECTIVES RELEASED * * * * * * * *

This list reflects information released to the customer by KAC for distribution.

SEC/AFC No.	TITLE	RELEASE DATE (KAC)
H-2 Airframe Change 190, Part 2	Radio and Radar Systems, AIMS INSTALLATION	6 November 1972
H-2 Airframe Change 194	Flight Controls, ANTI-ROTATION AZIMUTH LINK AND ATTACHMENT TO MAIN GEARBOX, MODIFICATION OF	3 November 1972
H-2 Airframe Change 204, Part 1	LN66HP RADAR SYSTEM, INSTALLATION OF IMPROVED RADOME	13 December 1972
H-2 Airframe Change 215	ASE System, DOPPLER APPROACH IMPROVEMENT	6 November 1972

Helo-Ship Teamwork– continued from page 10

One MIG was destroyed and the others were driven off. Biddle planned, directed and otherwise participated in the rescue of 17 downed U. S. flyers. One of those rescues included the night pick-up reported on page 9. It was the first successful Combat SAR recovery by a LAMPS helo. Biddle detected and reported a total of 1341 ESM (Electronic Support Measures) intercepts.

Throughout its three combat line tours USS Biddle was able to meet all of its obligations without any equipment casualty or degradation; Biddle established for itself—both with the Navy and the Air Force—a reputation for unsurpassed performance and effectiveness.

Biddle's LAMPS Detachment—HSL-30 LAMPS Detachment 4—proved to be one of the most productive LAMPS deployment to date. Despite adverse working conditions, extremely long working hours, and isolation from the mainstream of aviation maintenance, the detachment produced a 90% availability while flying over 700 flight hours in five months.

Extending Biddle's weapons systems, the LAMPS Detachment's missions included Electronic Support Measures, Anti-submarine Warfare, Search and Rescue, Surface Surveillance, and non-aviation ship support. The detachment and its single SH-2D aircraft provided the northern Gulf of Tonkin with daily ELINT information, assisted in the vital SAR effort, and ensured operational commanders the flexibility necessary in the combat zone.

Det 4 would like to express its thanks to LCdr Charles Kiseljack, HSL-31 Det Liaison at NAS Cubi Point, R. P.; Mr. Bill Wells, Kaman senior service rep at Cubi; and Mr. Dick Collier, the Kaman logistic rep. They made our work at Cubi easier by prearranging items like hangar space, transportation, locating parts when there seemed to be none, and providing technical expertise for maintenance.

HSL-30 LAMPS Det 4 TEAM

LCdr Frank M. Dirren, Jr.	*AMS3 Jackie D. Kradel*
Lt Carl D. Nelson	*AO2 Gregory Vanhof*
Lt Thomas J. Corcoran	*AW3 James E. Keiper*
Lt Robert W. Phillips, Jr.	*AMS3 Russell M. Wells*
ADJC Henry D. Jones	*AE3 Danny H. Stiles*
AW1 Lawrence R. Waugh	*AT3 John S. Nahm*
ADJ1 Robert O. Fite	*AXAN John T. Richardson*
AT1 Robert L. Daniel	*ATAN Thomas M. Smith*
ADJ2 Leonard King	*AW3 Stephen T. Mayo*
AE2 Kenneth W. Flippo	

CONFAB–Shown in informal photo taken aboard the Biddle are, left to right, Lt "Corky" Corcoran, Lt Rob Phillips, Lt Carl Nelson, LAMPS Det 4; LCdr Ed Bednar, Biddle supply officer; and LCdr "Skip" Dirren, OIC of the detachment. (USN photo)

GOOD NEWS–Bruce Goodale, left, Kaman LAMPS program manager, smiles appreciatively during briefing by LtCommander Dirren while visiting the Kaman plant in Bloomfield, Conn. He reported the detachment's SH-2D flew 711.6 hours during the deployment, availability was 90 percent and the maintenance man-hours per flight hour was 10. A total of 900 ESM (Electronic Support Measures) intercepts were made and 63 SAR missions flown. Eighty-four percent of all missions flown by the SH-2D were of a LAMPS operational nature. With LtCommander Dirren on the visit to Kaman were Lieutenants Corcoran and Nelson. (Ruggiero photo)

AWRS–continued from page 6

to sea level. AWRS will have the world's first integrated Omega/inertial navigation system for positional accuracies of approximately one nautical mile on typical 3000-mile overwater missions. It will have the data processing capability to receive, analyze, evaluate, display and store the large volume of information produced by the system.

The AWRS design allows for ease of incorporation of future developments, such as improved weather radar, advanced sensors and other equipment which will provide meteorological information not now readily obtainable.

In addition to its storm reconnaissance responsibility, which it shares with the U. S. Naval Weather Service and National Oceanic and Atmospheric Administration, Air Weather Service supports other military and governmental agencies.

Twelve more pilots have qualified for the plaque awarded by Kaman Aerospace to those logging 1000 hours in helicopters produced by the company. In top left photo, Lt Charles Raysbrook, HSL-31, NAS Imperial Beach, Calif., is congratulated by Don Alexander, Kaman senior service representative, after logging his 1000th hour in an H-2 SEASPRITE. H-2 pilots showing 1000-hour plaques in the second photo are Lt J. F. Buchanan, right, and Lt C. L. Cook. At the time they were attached to NAF Naples, Italy. They are now serving with HSL-30, NAS Lakehurst, N. J. The presentation was made by Horace F. Field, Kaman senior service representative, Capt H. E. Camp, commanding officer, NAF Naples, Italy is on the left. Warrant Officer R. Alvand, an HH-43 pilot from the Imperial Iranian Air Force, appears at left. He is the only warrant officer in IIAF to be so honored. Other pilots who passed the 1000 hour milestone during the last few months are: HH-43 – Maj Gerald L. Petty, Detachment Four, 44th ARRSq, Keesler AFB, Miss. Capt Lamont K. Churchill, Capt Jack D. Cusano, Capt Paul L. Lantz, Maj Arlie L. Mustoe, Jr., and Capt David A. Voigt, all from 1550th Flying Training Squadron, Hill AFB, Ut. H-2 – Lt Robert A. Smith, HSL-30, NAS Lakehurst, N. J. and Lt Roy E. Hey, NAS Pensacola, Fla.

FISH-EYE VIEW—Purposely-distorted photo shows an HH-2D from HSL-31 hoisting a Navy officer from the deck of the destroyer Benjamin Stoddert. Among other duties, helicopters from the NAS Imperial Beach, Calif., squadron airlift mail, spare parts and personnel to and from the ships in the combat zone in the Gulf of Tonkin. (USN photo)

1550th Rescues Hunters

Canyon Mission Saves Two

Two hunters lost in the snow-covered mountains of the northwest section of Morgan, Ut., were rescued recently by an HH-43 crew from the 1550th Flying Training Squadron, Hill AFB, Ut. Also participating in the search was an HH-53 from the training squadron.

As the hunting party was located in a closed canyon with steep sides, the HH-43 elected to go in for the pickup. Capt David A. Voigt set the helicopter down on a slope approximately 100 yards from the survivors. The landing was made without incident despite drifts in the area and blowing snow which caused white-out conditions. Capt Lawrence L. Foster (MC), a flight surgeon on board, examined the men and found that they were suffering from exposure and colds. Medical treatment for frostbite and other symptoms was administered enroute to Hill AFB Hospital.

Captain Foster said afterward that if the survivors had not been removed from the site their lives might have been in jeopardy. Other members of the rescue crew were LtCol Walton C. Ritchie, copilot and MSgt Boyd C. Walters, a firefighter.

Earlier, the two helicopters located four other hunters digging their way out through the snow drifts. After landing and confirming they were all right, the helicopters began searching for, and then located the two hunters trapped by snow in the canyon.

Maj E. E. "Henry" Wallace, right, bids farewell to BrigGen Frank K. Everest, Jr., after ARRS commander's visit to Det 5, 40th ARRWg, Hahn AB, Germany. General Everest recently toured all ARRS detachments in Europe. (USAF photo)

Log 2000 HH-43 Hours

A combined total of more than 12,000 HH-43 flying hours has been logged by six pilots attached to the 1550th Flying Training Squadron, Hill AFB, Utah. Contributing 2,000 hours each to this impressive figure are: LtCol Welton C. Ritchie, Jr., and Majors Jimmy D. Gammon, William F. Glover, Jr., Michael F. Langford, Paul D. McComb and Donald D. Metzinger.

At Det 15, 40th ARRWg, Zaragoza AB, Spain, Maj David B. Hightower recently passed the magic 2,000-hour flight mark in the HUSKIE to join two other det pilots who have logged this magic number. One, Maj Harold L. Hering, accumulated 2000 hours several months ago and Maj Dennis M. Chase has already passed the 2,500-hour figure. Det commander LtCol James W. Langston has accumulated over 1400 HH-43 hours.

Pensacola Det Medevacs Sailor

An ill sailor was airlifted from the USS Lexington to shore by a UH-2C crew from the SAR Unit at NAS Pensacola, Fla. Due to the weather conditions, a special clearance was required to launch and 25-knot winds gusting to 40 were sweeping across the flight deck of the ship when the SEASPRITE arrived. The UH-2C landed without incident, however, and the patient was placed aboard. A few minutes later the helicopter was airborne and headed for the hospital at Pensacola.

Manning the SEASPRITE were Lt Charles T. Fowinkle, pilot; Lt(jg) David C. Pallesen, copilot; AE3 Roderick G. Tafoya and ADJAN W. G. Bertelson, crewmen.

In another mission, which took place in fog and haze shortly after midnight, a UH-2C crew from the SAR unit located a sinking 30-foot pleasure craft and gave assistance until the five occupants were rescued by the Coast Guard. The distressed vessel, 25 miles from Pensacola, had established contact with a civilian radio operator who relayed his information through the Sherman Rescue Coordination Center manned by Ens James Adamson. He, in turn, was in constant communication with the pilot of the SEASPRITE, Lt Michael O'Leary, and copilot, Lt Philip C. Jamison.

Due to IFR weather and 10-12 foot sea state, it was impossible to immediately locate the boat, which had only one flare remaining. Twenty miles south of Pensacola the vessel radioed that it heard a helicopter in the area so the UH-2C pilots turned on the search and flood lights. They told the boat to fire the flare when the helo was headed in their direction. Moments later, the rescue crew saw the flare and headed for the disabled craft, visible now only as the point of light coming from a flashlight on board.

In spite of the strong winds, the pilots were able to keep the UH-2C in a steady hover over the sinking craft as it wallowed in the high seas. HM2 Philip T. Palmer, a corpsman, was lowered by ADJ1 Archie Chadwick to assist those on board. One, a 72-year-old man was suffering from exposure. For 45 minutes, Lieutenants O'Leary and Jamison held the SEASPRITE in a hover until the Coast Guard made the pickup. During that time the corpsman worked to keep the boat afloat and reassured the occupants.

Speedy Rescue By Oceana SAR Det

Just 11 minutes after word was received that a catamaran had capsized a mile off Sandbridge Beach, an HH-2D was overhead and a crewman was being lowered to assist. The helicopter, from the SAR Unit at NAS Oceana, Va., was manned by Lt David D. Bashista, pilot; Lt(jg) Warren R. Eckert, copilot; and AE2 Theodore Wicker and AMH2 Kenneth Conner, crewmen.

Petty Officer Wicker was lowered to assist the man and woman in the water and to give them instructions regarding hoisting procedures. The woman and helo crewmen were taken aboard while the male survivor, who had a life vest on, elected to stay with the catamaran. The other survivor was taken to the beach and then the HH-2D stayed on the scene until a boat arrived to help right the capsized vessel.

In his report, Lieutenant Bashista complimented Petty Officers Conner and Wicker for the "professional and outstanding" manner in which they had performed during the rescue.

Hospital Employees Learn Helo Guide Signals

Helicopters from NAS Lakehurst, N. J., have landed at the Community Memorial Hospital in Toms River on numerous occasions. While a regular procedure had been established to clear the hospital helo landing area, one thing was lacking—no one on the ground really knew the proper hand signals which should be used to guide helicopters approaching the landing area.

As part of its continuing community relations effort, HSL-30 at the naval air station recently took action to remedy the situation. Two hospital employees were given several hours of instruction at the station to familiarize them with the proper signals. The instruction included discussion with HSL-30 crewmen as well as practical experience in directing one of the squadron's H-2 SEASPRITE's. Much of the instruction was given by 1st Class Petty Officer Richard Mastriano.

The knowledge gained during the training session at Lakehurst is now being passed on to the rest of the hospital personnel.

HSL-31 DET A LAUDED FOR VALUABLE ASSISTANCE

By Ens Paul F. Quinn

Oceanographic Unit Four

USN Photos by PH1 Charles V. Renaud

USNS Chauvenet. . . .Due to the nature of a shallow water hydrographic survey, the aid of a helicopter detachment is critical to the success of the mission. Oceanographic Unit Four, aboard the USNS Chauvenet (T-AGS-29), is proud to have the assistance of Helicopter Antisubmarine Squadron (Light)-31 Marine Coast and Geodetic Detachment A from NAS Imperial Beach, Calif.

The unit, which is now surveying the waters off the coast of the Republic of Korea, relies heavily on the helicopter detachment for its everyday operations. The primary function of the helicopter detachment is to provide mobility between the mother ship and the two land-based navigational transmitter sites. These land-based sites send out signals which the mother ship homes in on for the purpose of determining its precise position. The transmitter sites are temporary and are moved periodically as survey operations progress. Without a helicopter, the movement and replenishment of personnel, equipment, and supplies to the shore sites would be impossible on the rugged Korean coastline.

The helicopter detachment provides several other functions for Oceanographic Unit Four. Occasionally there are operational requirements for aerial photographs of the survey areas, which could not be obtained without the aid of a helicopter. One of the most important functions of the helicopter, from a morale standpoint, are its frequent flights to the mainland for supplies and mail. This seemingly routine weekly flight is responsible for the upkeep of the high morale aboard the Chauvenet, and is looked forward to by every crew member.

In addition to these functions, the helicopter crew is on call 24 hours a day for search and rescue missions, and to assist other ships in the area in handling any emergencies that might occur. Recently, the helicopter crew was called on to assist in evacuating a sick man from the USNS Barrett and transporting him to a hospital in Pusan, Korea. An on-scene photograph and description of the medevac appears on the back cover.

The three pilots and nine enlisted men assigned to HSL-31 MC&G Detachment A are responsible for the complete operation and maintenance of the HH-2D SEASPRITE. The helicopter must be ready for any operational requirement at a moments notice. In order to perform their mission more efficiently, each man is crosstrained so that he can handle any job on the flight deck. When asked about the facilities on board the USNS Chauvenet, Lt O. C. Fowler, Officer-in-Charge of the detachment, replied: "The flight deck and hangar facilities here are excellent. We have a good working relationship with the entire ship's crew, which makes our job much easier."

Det A pilots take a moment out of their busy day to pose in front of their aircraft. Left to right, Lt Gary L. Lee, Lt O. C. Fowler, and Lt(jg) Joseph J. Cimenski.

HSL-31 MC&G Detachment A, front row, left to right, AT2 George R. Gunter, AMS3 Ernest G. Henningfield, AEAN James M. Jones,AMH2 Douglas R. Colwell, ADJ3 Stephen D. Hill, and AN David A. Bell. Back row, AEC Kurtis E. Pool, Lieutenant Fowler, officer-in-charge,Lieutenant Lee, Lieutenant Cimenski, AMS3 Donald L. Williams, ADR1 Charles T. Hartness.

HH-2D crew lands supplies at shore site in the recent Philippine survey.

Det A crew members roll HH-2D from the hanger of the USNS Chauvenet onto the flight deck. Left to right are, AN David A. Bell, AT2 George R. Gunter, ADJ3 Stephen D. Hill, and AMS3 Ernest G. Henningfield. AMS3 Donald L. Williams is sitting in the pilot's seat working the brakes.

In photos below, plane director AN Bell signals the aircraft to remain steady while AMS3 Henningfield and ADJ3 Hill attach a load of oil drums to its underside for transport to the Cheju Do shore site. In the background is the island of Cheju Do off the south coast of Korea. Pilots Cimenski and Lee release a load of plywood onto the flight deck of the Chauvenet. In the background is the island of Orerado off the coast of Korea.

Unfolding the helicopter blades in preparation for a flight are left to right on deck, AMS3 Williams and AT2 Gunter. On the aircraft, left to right, are, AMS3 Henningfield and AMH2 Douglas R. Colwell.

MILITARY ASSISTANCE TO SAFETY AND TRAFFIC

HH-43 crews flying MAST (Military Assistance to Safety and Traffic)missions continue to add to the list of persons saved or aided by ARRS detachments participating in the program.

Two hazardous night flights were made by Det 22, 42nd ARRSq, Mt. Home AFB, Id., to medevac seriously-injured accident victims and a heart-attack patient from isolated mountainous sections of the State. Det 15, 42nd ARRSq, Luke AFB, Ariz., flew almost a dozen missions to save the lives of premature babies born in small mining towns or on Indian Reservations far from hospital facilities.

An HH-43 crew launched in the darkness after Det 22 was notified by the State Police that there had been an accident 45 miles from the base. A pickup truck had left a curving mountain road, throwing both occupants out, and then apparently rolled over one of the men before it came to rest in a ravine.

When the helicopter crew arrived at the crash scene, 6,700 feet above sea level, the Owyhee County sheriff had cleared a small landing area and positioned his car with the headlights pointed into the wind. On one side of the ravine a cliff dropped off some 30 feet, and on the other side was a rocky slope. A crosswind approach through night-shrouded hills was made to reach the site prepared by the police officer and a landing was made without incident. The accident victims had been loaded in an ambulance earlier, but the distance and time traveling on the ground was considered too long due to their serious injuries. They were placed in the helicopter and flown to the hospital.

Manning the HH-43 were Capt James L. Woolace, pilot; 1stLt Eric A. Vranek, copilot; SSgt Richard G. Robbins, helicopter mechanic; Capt Orie E. Kaltenbaugh (MC), flight surgeon and A1C Samuel C. Walker, medical technician.

The other MAST mission took place under equally unfavorable conditions. Capt Harold W. Jackson, Jr., and his crew launched shortly after midnight in response to a call for assistance from Atlanta, Id., a town with about 30 inhabitants, located 55 miles from the base. It was feared that the heart-attack patient would not survive the five-hour drive over rough mountain roads—and his condition would not permit waiting for a daylight launch.

Captain Jackson had flown the tortuous route into Atlanta before, so he knew how the small valley wound its way among the mountain peaks. Without this prior experience, Captain Jackson would not have attempted the mission at night since surrounding mountains and ridge lines vary between 7000 and 9300 feet.

Capt Leonard B. Hughes (MC), a flight surgeon, accompanied the rescue crew and brought the supplemental oxygen which he knew would be required. After takeoff, the HH-43 climbed to 10,000 feet and obtained radar vectors to assist in navigation. Although contact was lost at 51 NM, Captain Jackson was able to locate the rescue site without radar assistance. It was lighted, as requested, by several automobile headlights directed downwind so he would be able to approach into the wind, without the headlight glare.

Once directly over the lighted area, the rescue pilot began a spiralling descent from 10,000 to 5400 feet and landed in the lighted meadow at 0100 local. Captain Hughes began immediate treatment of the patient who was soon stabilized enough for transport. The HH-43 took off at 0130 local, climbed again to 10,000 feet and headed toward Boise, Id. An hour later the patient was transferred to a waiting ambulance and the Det 22 crew took off for the base. The touch down there was made at 0325.

Others sharing in the life-saving mission were LtCol Thomas E. Fallows, copilot; TSgt Byrl D. Proctor, helicopter mechanic; and TSgt Bedford T. Locard, medical technician.

(Additional MAST missions appear on pages 25 and 27)

Hazardous Rescue By Guam Det

Appearing on page 7 is an account of a "Cave Mouth Rescue" made by an HH-43 crew from Det 12, 41st ARRWg, Andersen AFB, Guam. Described below is another hazardous mission flown by a rescue helicopter crew from Det 12.

The HH-43, "Pedro 13," launched after a request for helicopter assistance was received from a Navy HU-16 searching for four missing fishing boats. A Naval security ground party had reported an apparent shipwreck on a coral reef at the base of a vertical 400-foot cliff. When the Navy aircraft investigated, the crew spotted six survivors and three boats, one overturned and washed up on the coral. The bodies of two other shipwreck victims were also seen. The site was inaccessible by foot because of the cliff, or by boat due to the reef and 20-foot seas driven by high, on-shore winds from Typhoon Maria more than 300 miles away.

When the HH-43 arrived, winds were blowing at 26 knots and gusting to 40. Maj H. L. Pierce, pilot of Pedro 13, decided that the only feasible means of recovering the survivors was an over-water hoist operation, approximately 50 feet from the cliff. This provided minimum safe blade clearance from the cliff and was a short distance from where the high waves were breaking over the reef. Hover was established at 25 feet to avoid the swells and into the wind, requiring a backward hover to the rescue site.

The pararescueman, Sgt B. L. Perdue, was lowered to determine the physical condition of the survivors and to assist them onto the forest penetrator seat. Four survivors were recovered and transferred to a Navy ambulance at the top of the cliff. Pedro 13 returned to the rescue site and picked up the other two fishermen and Sergeant Perdue. The survivors were evacuated to Guam Memorial Hospital for treatment from exposure and exhaustion. After refueling, the HH-43 returned to the rescue site and recovered the two bodies.

Other members of the Pedro 13 crew were 1stLt J. B. Gilloon, the copilot; SSgt R. K. Pierce, a firefighter; SSgt J. L. Milton, medical technician, and SSgt E. E. Brewington, helicopter mechanic.

Luke Medics Lauded For MAST Saves

Two medical technicians attached to HH-43 crews from Det 15, 42nd ARRSq (MAC), at Luke AFB, Ariz., were singled out for praise recently after premature infants were medevaced to the hospital.

Sgt Jeff Miekam, who made two such flights in one day, and MSgt Peter J. Lee, who made another, were cited for keeping the tiny patients alive although they were in critical condition. Capt C. E. Cole, who reported on the missions, said Sergeant Miekam was a "key factor" in keeping one child alive and that his professional skill saved the life of the other. In referring to the third medevac, Captain Cole said, "Master Sergeant Lee's professional knowledge enabled him to detect a situation that could have cost the infant its life. He was a vital factor in keeping the infant alive."

Piloting the HH-43 on one of the mercy flights in which Sergeant Miekam was involved was LtCol Zack L. Stockett. A1c David Perry was crewman. Pilot on the other flight was Captain Walker, copilot was 1stLt Ralph Winton and Sgt Ralph Gay was helicopter mechanic. Captain Cole was also pilot during the mercy flight flown by Sergeant Lee. Capt Larry Lindberg was copilot and Sergeant Gay, helicopter mechanic.

Eight other medevacs, all involving premature infants and all classified as "saves," were made by the Det 15 rescue crews. Two of the flights were made at night and all were to comparatively isolated desert towns or the San Carlos Indian Reservation. Participating in one or more of these medevacs were: Captain Walker, Captain Lindberg, A1c Albert Schaff, Airman Perry, Capt John Drexler, Lieutenant Winton, Sgt M. E. Bankson, Capt Larry Windberg, Sgt Robert Vecchio, Capt Robert Nelson, Sgt Robert Prunty and Sgt David Joe, Jr.

Det 6 Medevac, Rescue

An HH-43 crew from Det 6, 44th ARRSq (MAC), Andrews AFB, Md., responded to a night call for assistance when notified that a man suffering from shotgun wounds in the head required immediate evacuation from the base hospital to the George Washington Medical Center. Due to the lack of a clear landing area and the close proximity to the White House, Capt Richard G. Humphreys decided to airlift the patient to Kehoe Football Field next to the Georgetown University Hospital. Arrangements were made to have a police ambulance waiting at the field. The 15-minute flight was made at 200 feet as specified for the helicopter route through the Washington DC Terminal Control Area. As the HH-43 made its way along the east bank of the Potomac River, Capt Frank Johnson (MC), and the two medical technicians on board, TSgt Robert A. Twigg and A1c Dennis G. Quinn, administered external cardiac massage to keep the patient alive. A "save" was later credited to the Pedro crew. Other members of the rescue crew were Capt Robert A. Sheppard, copilot and SSgt Howard S. Colliflower, helicopter mechanic.

In another mission, Det 6 was notified that the McLean, Va., Fire Department had requested helicopter assistance in rescueing a man from a rock, approximately 25 to 35 feet from shore, in the Potomac River. The man became stranded after his canoe overturned in the rapids. Pedro launched at 1804L and arrived at the scene at 1815L. Using the Forest Penetrator, the man was hoisted aboard and airlifted to a schoolyard about one mile away where he was turned over to the fire department's rescue squad. Participating in the rescue were Maj Richard D. Griffiths, pilot; Maj Gayl D. Bernhardt, copilot; SSgts David W. Lilliston, and William L. Irwin, crewmen.

Eglin LBR Det Saves Pilots, Injured

A U. S. Air Force instructor and his Vietnamese student, in danger of being engulfed by a forest fire started when their plane crashed, were rescued by an HH-43 crew from the LBR Det, 44th ARRSq (MAC), at Eglin AFB, Fla.

The two pilots had ejected successfully and were located in the immediate area of the crash. The instructor was picked up without incident, but the student was trapped in a tree and approximately 25 feet above the ground. As Capt Richard L. Oliver held the HUSKIE in a hover, the medical technician was lowered on the forest penetrator. The Vietnamese was freed and taken aboard the HH-43 which then returned to base. With Captain Oliver on the mission were SSgt Clinton H. Godown, SSgt John L. McGee and TSgt Felix H. Havis.

In another mission, an HH-43 crew from the LBR Det medevaced an Air Force sergeant and a civilian, critically injured when a photo flash flare on an aircraft exploded. Emergency first aid was given to the men, both suffering from numerous injuries of a serious nature, and they were airlifted to the hospital. Two saves were credited to the rescue crew by ARRS.

Manning the HH-43 on the mission, which took place at night, were Capt William H. Austin, pilot; Maj Leonard N. Buck, copilot; SSgt Gary Ellison, medical technician; Sergeant McGee and Sgt Ronnie E. Campbell, firefighters; and SSgt William Ingram, III, helicopter mechanic.

The Eglin Det also evacuated an ROTC cadet who suffered a critical heat stroke while in a swamp. The HH-43 crew was credited with a save in view of the patient's condition and the promptness with which he was airlifted to the hospital. Manning the HUSKIE were Captain Austin, pilot; 1stLt Jack E. McPhie, copilot; SSgt Charles E. Veasey, Sergeant McGee and A1c Wayne Beaulieu.

An infant, hemorrhaging after suffering a skull fracture, was airlifted from Eglin to the hospital at Keesler AFB, Miss., by an HH-43 crew consisting of Maj David A. Cochenour, pilot; Lieutenant McPhie, copilot; Maj Carol A. Wolf, flight nurse; Sgt Lawrence B. Tyndall, medical technician; and SSgt William Amendalare, Jr., helicopter mechanic. A save was credited to the crew.

Also airlifted to the hospital at Keesler was a retired officer who had suffered a heart attack. During the 135-mile night flight, the patient was assisted by the medical technician, Airman Beaulieu, and helicopter mechanic, Sergeant Godown. Upon arrival at the air base, the patient was rushed to the hospital for open heart surgery. The doctor in charge said afterward that the patient's life was saved by the rapid response of the HH-43 crew. Major Buck was pilot of the helicopter and Captain Oliver was copilot.

Unusual Mission For UH-2C

Thousands of Roman Catholics await the arrival of the Madonna "Our Lady of Sorrows" in Piazza Plebiscito. The statue was carried by a UH-2C SEASPRITE from NAF Naples, Italy.

A five-foot, 18th Century Madonna is safely back in the Church of Santa Brigida—and a possible traffic jam averted—through the efforts of a UH-2C crew from NAF Naples, Italy.

The unusual mission began with a request from the Archbishop of Naples for U. S. Navy assistance. The Madonna, "Our Lady of the Sorrows," was being returned to the Neapolitan church after a three-months restoration period in the northern Italian town of Ortisei. It was feared, however, that the number of devout who would crowd around the Madonna if it were transported through city streets would ensnarl traffic.

The transfer was made in less than one hour during the late afternoon. Lt John F. Buchanan set the SEASPRITE down in the Piazza Plebiscito as thousands watched and a few minutes later the precious statue was back in its church.

Others manning the UH-2C were Lt(jg) M. D. Meloy, the copilot, and ADR2 L. A. Lee, crewman. Operating the hoist on this special mission was Capt H. E. Camp, commanding officer of the U. S. Naval Air Facility in Naples.

Det 3 Makes Night Rescue

Two pilots whose F-4 crashed on a rainy night in potentially hostile territory two miles north of Ubon RTAFB, Thailand, were rescued soon afterward by an HH-43 crew from Det 3, 40th ARRSq, stationed at the base.

Weather enroute and in the search area was light-to-moderate rain, with scattered low clouds and thunderstorms. The rescue crew made voice contact with the downed airmen in the rice paddy below but they couldn't see the HH-43 because of the rain and darkness. A circling F-4 dropped parachute flares at the request of Capt Donald C. Blair, HH-43 pilot, and the survivors were sighted. The forest penetrator seat was lowered and the pickups made without incident despite the poor visibility, weather and ever-present danger of enemy action.

Other members of the Pedro crew were 1stLt David R. Kraner, copilot; Sgt Walter L. Loftus, mechanic; TSgt Noel S. Codner, medic; SSgt Donald W. Covington and Sgt Duane D. Christensen, firefighter.

HC-2 Makes Homeward-Bound Rescue

For 10 months the HH-2D crew had flown plane guard, utility and other types of missions while deployed as members of HC-2's Det 67 aboard the USS J. F. Kennedy. Then, the long Mediterranean cruise over, they headed for home—NAS Lakehurst, N. J. Before getting very far, however, the men manning the SEASPRITE had the opportunity to add a "Stateside rescue" to their list of overseas accomplishments.

Detachment personnel debarked from the aircraft carrier after it docked at Norfolk, Va., and began the Lakehurst flight. Shortly afterward, the HH-2D encountered heavy rains so Lt James Harrison regretfully headed the helicopter back toward Norfolk. Minutes later word was received that there was an overturned boat in Willoughby Bay.

The HH-2D immediately made a 180-degree turn and flew to the area at top speed. Within minutes the overturned craft was spotted and one of the two crewmen aboard the helicopter was lowered to assist the elderly man clinging to it. He had been in the water since six o'clock the night before. A rescue sling pickup was made and soon the survivor was on his way to the hospital. Later he was reported in satisfactory condition.

Other members of the SEASPRITE crew were the copilot, Lt(jg) Richard Purcell, and crewmen, AK3 James Urbanawiz and AMS3 Fred Barthold.

PJ HONORED ON TV SHOW

TSgt Michael E. Fish, an ARRS pararescueman and former HH-43 crewmember who holds nine Kaman Mission Awards, was the surprised guest of honor recently on the Ralph Edwards "This is Your Life" television program. Now stationed at Elmendorf AFB, Alaska, with the 71st ARRSq, the Sergeant served in Vietnam in 1969 with Det 11, 38th ARRSq, at Tuy Hoa AB. After just one month of service in Vietnam, Sergeant Fish earned the Air Force Cross, the next highest medal to the Medal of Honor, for a rescue in which he participated as a member of an HH-43 crew. In all, he is credited with 11 combat rescues in Southeast Asia.

Sergeant Fish was chosen to appear on the television show (although he didn't know it) after Ralph Edwards submitted a request to the Department of Defense to select someone from all five branches of service who had distinguished himself in the performance of his job—rescue.

The Sergeant was sent to Los Angeles, Calif., on a temporary duty assignment, supposedly to be a technical advisor on air rescue training film. Instead, when he went to the studio to review film clips, he suddenly found himself on a stage facing 500 people and heard a voice saying "This is your life!"

Det 22 MAST Missions Aid Three

An Air Force sergeant who cut his leg with an axe while camping, was medevaced by an HH-43 crew from Det 22, 42nd ARRSq, Mt. Home AFB, Idaho. The pickup was made at 5700 feet in mountainous terrain near Baumgardner, Idaho. Light rain showers, low ceilings and turbulence were encountered during the flight to and from the base. Maj Roger L. Engstrom was pilot on the mission and 1stLt Eric A. Vranek was copilot. SSgt Richard A. Henderson was helicopter mechanic and A1c Samuel C. Walker was medical technician.

An airman, seriously wounded when he accidently shot himself while on a hunting trip, was also medevaced by an HH-43 crew from Det 22. He required immediate transfer to Boise for medical treatment not available at the local hospitals. The night flight to the hospital landing pad was uneventful. The quick action of the HH-43 crew was credited with helping save the man's life. Members of the crew were Capt John W. Petersen, pilot; Major Engstrom, copilot; SSgt Richard G. Robbins, helicopter mechanic and Capt Paul Bostrum (MC), flight surgeon.

In a third medevac mission, Det 22 airlifted a rancher with a broken leg to the Elko Nevada Airport. The man, who had been kicked in the leg by a horse, was treated by Captain Bostrum and then onloaded into the helicopter. The 110NM flight from the isolated ranch to the hospital was made at night over mountainous terrain in light snow and rain. Shortly afterward, the HH-43 landed at the airport where an ambulance was waiting.

Other members of the HH-43 crew were Capt Harold W. Jackson, Jr., pilot; LtCol Thomas E. Fallows, copilot; Sergeant Robbins, helicopter mechanic; and A1c Walker, medical technician.

Aviano Det Credited With Two "Saves"

AVIANO AB, Italy—HH-43 helicopter crews from Det 10, 40th ARRWg here have been credited with saving the lives of a sergeant and an officer. The "saves," made in separate missions, were the second and third in a month for the wing for a total of four in the last year.

The sergeant suffered a depressed skull fracture, concussion, scalp lacerations and a fracture of the left shoulder in an automobile accident. The 80-mile airlift to the Vicenza post hospital two hours after the accident saved his life according to the examining physician. The sergeant, transferred to Padova Hospital for neuro-surgery afterward, was last reported in satisfactory condition and was to be released shortly.

When the captain reported for sick call here, it was learned that he had upper gastro-intestinal bleeding and he was airlifted to the Vincenza hospital.

The flight surgeon later credited the HH-43 crew with a save. The captain was admitted to intensive care and was last reported in satisfactory condition.

The HUSKIE crew delivering the sergeant included Capt James Bauer, pilot; 1stLt Sherman Chisom, copilot; SSgt Rocco Albano, medical technician; and TSgt Jimmie Rodgers, crew chief. The HH-43 crew for the captain consisted of Capt Fred Ayoub, pilot; 2ndLt Thomas Carter, copilot; Sergeant Albano, medical technician; and Sgt Richard Hutton, crew chief.

Vietnam Pilots Honored

Colonel Brown congratulates Captain Norris, left photo, and Major Lockart after presentation. (USAF photos)

Two Vietnam veterans now attached to Det 7, 44th ARRSq (MAC), as HH-43 pilots, were decorated recently during a flight-line ceremony at Seymour Johnson AFB, N. C. The presentations were made by Col Royal A. Brown, commander of the 44th, on a recent visit to the detachment.

Capt William H. Norris, Jr., received the Distinguished Flying Cross for flying an "intricate and extremely hazardous mission through adverse weather conditions and the constant threat of hostile fire and attack." The Captain was also awarded the First through Fourth Oak Leaf Cluster to the Air Medal for "meritorious achievements while participating in hazardous flights from March to November, 1971." At the time he was a pilot with the 360th Tactical Electronic Warfare Squadron and stationed at Tan Son Nhut AB, RVN.

Maj Floyd R. Lockart, who was stationed at Da Nang AB, was presented the 20th and 21st Oak Leaf Cluster to the Air Medal for "outstanding airmanship and courage during the successful accomplishment of important missions under extremely hazardous conditions." Major Lockart holds seven Kaman Scrolls of Honor, and two Mission Awards, for flights made in HH-43s.

In addition to its regular duties of aiding Oceanographic Unit Four, the HSL-31 detachment deployed aboard the USNS Chauvenet is on call 24 hours a day for emergency missions.

In the photo above, the detachment's HH-2D hovers over the bow of the USNS Barrett while a seriously-ill Korean soldier is hoisted aboard for medical evacuation to the Chin Hae Korean Naval Hospital 120 miles away. Piloting the SEASPRITE are Lt O. C. Fowler, Jr., officer-in-charge of HSL-31 MC&G Det A, and Lt(jg) J. J. Cimenski. The crew chief is AEC K. E. Pool and crewman is AMS3 D. L. Williams.

The transfer took place in the Korean Strait. As the Barrett did not have a suitable frequency for communication with the helicopter, coordination for the operation was made by utilizing radio facilities on board the Chauvenet some 60 miles away.

At right, the HH-2D performs one of its more routine duties: airlifting a load of equipment from the shore site at Orerado, Korea, to the ship. Directing the helicopter safely onto the flight deck of the USNS Chauvenet is Petty Officer Williams. In the background are two of the many islands off the southern coast of Korea.

A description of Detachment A's activities aboard the ship, and additional photographs, may be found on page 22. (USN photos)