

KAMAN

Rotor Tips

KAMAN AEROSPACE CORPORATION

Be it known that

has piloted a Kaman helicopter on one or more missions of mercy, has displayed an unusually high degree of skill, courage and judgment under adverse or hazardous conditions, and has thereby relieved fellow beings of extreme suffering, or impending bodily harm, or imminent death, and in recognition thereof, his name is now and forever inscribed on the

SCROLL OF HONOR

of Kaman Aerospace Corporation

William P. Murray
Vice President
Kaman Aerospace Corporation

Charles H. Kaman
President
Kaman Corporation

Date of Mission

RESCUE



KAMAN MISSION AWARD

Charles H. Kaman
President

MAY-JUNE-JULY, 1970

CHARLES H. KAMAN
President—Kaman Corporation

JACK G. ANDERSON
President—Kaman Aerospace Corporation

WILLIAM R. MURRAY
Vice President—Test Operations/ Customer Service

WILLIAM E. ZINS
Director of Customer Service

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Customer Service Manager



Rotor Tips

Volume VI Number 6

ON THE COVER

Kaman's Award Program began in 1955. Since that time the company has presented more than 2,000 Scrolls of Honor, 7,000 Mission Awards, and 340 One-Thousand-Hour Pilot Awards. Cover by E. M. Enders, Service Publications.

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The Kaman Awards Program

By William H. Weaver

Assistant to the Vice President

Calvin Coolidge once stated with characteristic brevity that "the business of America is business." Here at Kaman Aerospace, our primary business for a quarter of a century has been "rescue." During this period, the design and manufacturing of rescue helicopters and rescue equipment has been our forte, with more recent further diversification into other programs and products.

Today, rescue helicopters continue to occupy our imagination as well as a significant portion of our resources, as do the skillful pilots, and airborne and ground crews who operate and maintain this equipment throughout the world. On these pages, and on pages of prior issues of Rotor Tips, appear accounts of dramatic rescues performed at night, at sea, in the jungle, on a mountainside, under enemy fire, or tossed by wind and storm. Here are portrayed the thousands of successful rescue enterprises where the life of a human being has been mercifully withdrawn from the grip of otherwise certain death or bodily injury. Is it surprising that we at Kaman share a sense of excitement, pride, and enthusiasm?

As a way of expressing our appreciation for the humanitarian and courageous rescue work accomplished by the men who fly in our aircraft, Kaman established a rescue award program in 1955. The precipitating event was the severe flooding that swept through New England, and particularly Connecticut, in August of that year. It was at that time that 13 people were rescued by Kaman Chief Test Pilot W. A. Newton, and Flight Crewman Tom George. Since that time, we have received at Kaman literally thou-

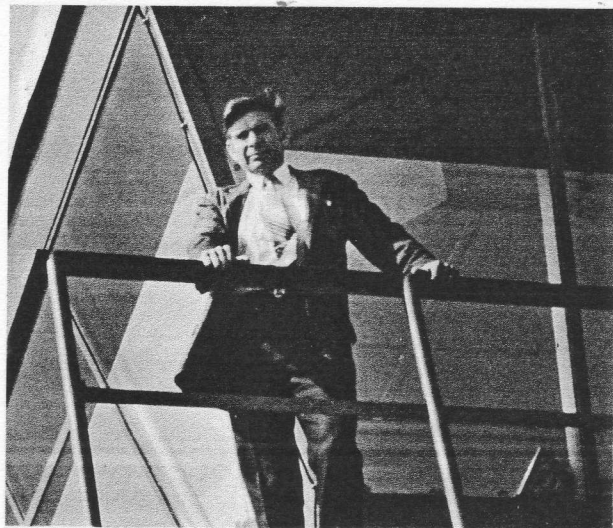
sands of rescue reports from Air Force, Navy and Marine helicopter crews. In professional, unemotional tones, these reports reveal a continuing story of courage and humanitarian service. It is the purpose of this article, to describe the awards program at Kaman, however, not to expound on "the record" of rescues which has been adequately chronicled at other times and places.

As many readers know, there are two types of rescue awards made by Kaman: the Scroll of Honor and the Mission Award. The following description of these awards, is much the same as it appears on the back of the rescue form that Kaman supplies to rescue units for the purpose of making award nominations.

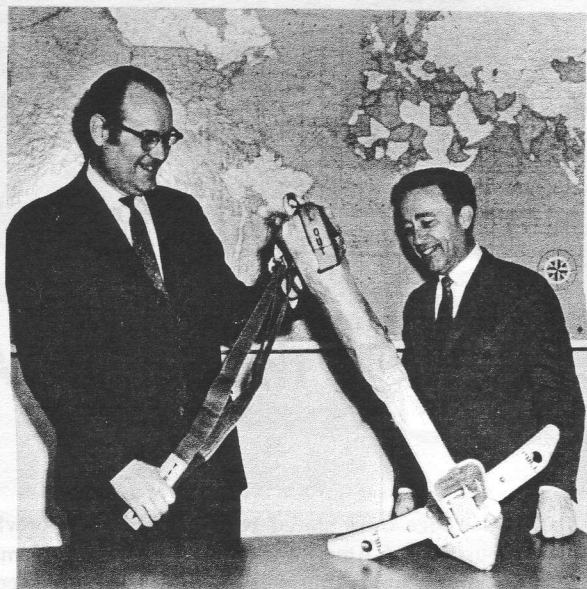
Scroll of Honor

The KAMAN SCROLL OF HONOR is awarded in recognition of outstanding pilot and crew performance while conducting a rescue or mission of mercy with a Kaman helicopter. As most pilots and crewmen of Kaman helicopters know, each recipient is presented with a plasticized Scroll of Honor certificate. This certificate is personalized with the name and rank of the recipient and the date on which the mission was performed, and is well suited for framing by the recipient. In addition, a winged rescue lapel pin is awarded for the first, fifth, tenth and twentieth Scroll

Navy and Air Force personnel shown above in photographs taken after award ceremonies typify the UH-2 and HH-43 rescue crews honored by Kaman. Photographs of recent award presentations appear on page 5.



Award Review Board—A wealth of experience is represented in the four-man board which appraises each mission nominated for Scroll of Honor consideration. Appearing in the top left photo is Andy Foster, KAC chief test pilot. A former Marine pilot, Mr. Foster has almost 6,000 flight hours in helicopters. In top right photo is Anthony J. Carbone, vice president of Sales. An engineer and former U. S. Air Corps radar technician, Mr. Carbone has been associated with aviation oriented industries for many years. At right, Robert L. Bassett, supervisor, Customer Operations Section, and William E. Zins, director of Customer Service, examine a Kaman-produced forest penetrator seat widely used by helicopter rescue crews in Southeast Asia. Mr. Bassett, a former Air Corps technician, has served with KAC for almost 20 years and was chief service representative before being promoted to his present position. Mr. Zins, a former helicopter pilot, served with the Air Force for 20 years before coming to Kaman.



citation. The pins for the fifth and tenth missions differ from the first pin in that a gold star is added for the fifth mission, and a silver star for the tenth mission. The pin for the twentieth mission is the same as that for the tenth except that a small ruby inset is added.

Attaining a place on the Scroll of Honor is not a routine accomplishment, for the Scroll was originated with the purpose of giving recognition to those who have performed an unusually outstanding mission. Therefore, participation in a rescue or mercy mission is not, by itself, sufficient qualification.

To determine eligibility for the Scroll of Honor, a review board at Kaman appraises each mission nominated for the Award in terms of certain criteria. First of all, the mission must be a rescue mission or mission of mercy. In addition, the mission must call for an "unusually high degree of skill, courage and judgment" on the part of the pilot and crew while operating under difficult or hazardous conditions. In determining if accomplishment of a given mission qualifies for the Scroll of Honor, the review board takes into consideration many factors, among which are the following: night or restricted visibility en route; difficult or hazardous terrain en route; hovering with rotor blades in close proximity to trees, terrain, buildings, or other obstacles; required doppler approach to hover; extreme altitude and/or temperature where pilot technique and procedures are paramount; unusual weather conditions including high winds or



Tie-Breaker—William R. Murray, vice president—Test Operations/Customer Service, receives a mission report from Beverly Albani, Customer Service Coordinator. Mr. Murray, a veteran helicopter pilot, casts the deciding vote when the Awards Committee deadlocks as to whether or not Scrolls of Honor should be awarded for a mission.

severe wind gusts; performance of mission while under enemy gunfire. Almost without exception, several of these adverse factors must be present in those missions for which a Scroll of Honor will be awarded. The copilot will also be awarded the pilot Scroll if it is determined that he was as necessary to the success of the mission, in the role of pilot, as was the pilot, himself. Otherwise he will receive the crew Scroll, along with the other members of the crew.

Kaman Mission Award

The KAMAN MISSION AWARD is issued in recognition of the humanitarian service performed when any rescue or missions of mercy are accomplished that do not qualify for the Scroll of Honor. Pilots and airborne crew members participating in these rescues or missions of mercy receive a plasticized wallet certificate. This certificate verifies that the named individual "has served meritoriously in a Kaman helicopter participating in a mission of mercy." In addition, he will receive a rescue lapel pin for his first, tenth and twentieth mission citation. Similar to the Scroll of Honor awards, the pins for the fifth and tenth missions differ from the first pin in that a gold star is added for the fifth mission, and a silver star for the tenth; the pin for the twentieth mission is the same as that for the tenth except that a small ruby inset is added.

To date more than 2,000 Scrolls of Honor and 7,000 Mission Awards have been presented to pilots and crewmen of Kaman helicopters.

One-Thousand-Hour Pilot Award

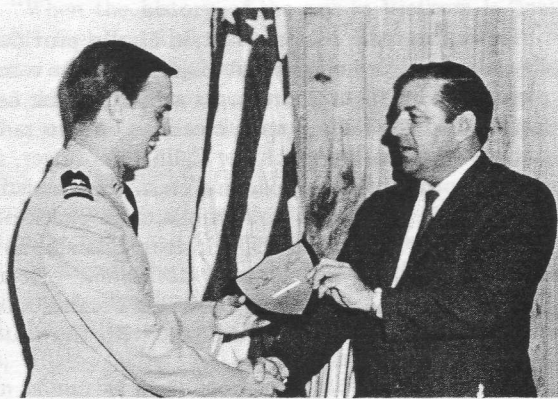
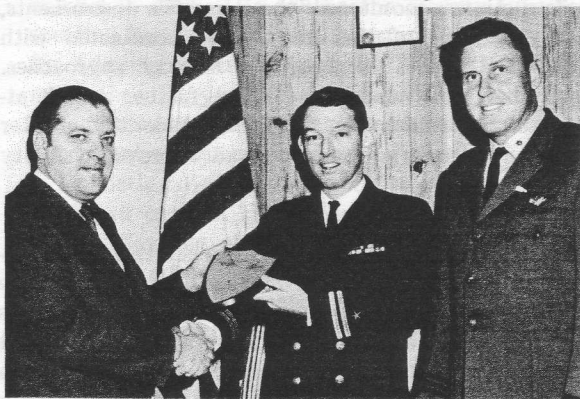
The ONE-THOUSAND-HOUR-PILOT AWARD is presented to pilots who have logged 1,000 hours in helicopters produced by Kaman. Commemorating this milestone in a pilot's professional career, 340 of these awards have been presented to date. In addition, Two-Thousand-Hour Pilot Awards have been presented to the first Air Force pilot and to the first Navy pilot to reach this milestone in Kaman helicopters. This award is made available only to the first pilot of each service to achieve this total. And finally, as announced last year, a Three-Thousand-Hour Pilot Award has been designed for presentation to all pilots reaching this particularly distinctive level during their flying career.



Rescue Record—William H. Weaver, left, who is responsible for management of the Awards Program, reviews rescue data with A. Lee Burton, Service Records group leader, and Pauline Branda. All rescue missions are logged into the record system; key information is fed into a computer with print-outs available for use in the development of future design and operational concepts. With reports in file of more than 3,000 lives saved by Kaman helicopter crews, it is estimated that the actual number is closer to 6,000 as there is no military requirement to report rescues to Kaman.

Only one pilot has earned this award to date. All three of these awards are shield-shaped plaques, suitable for wall-mounting, and bear the name, rank and branch of service of the recipient.

At Kaman Aerospace, we have received many expressions of appreciation from the military services for the recognition we give to aircrews who fly company-produced helicopters. Let it be known, we regard as a privilege this opportunity to acknowledge through our awards program, the courage, and dedication to the saving of lives and reduction of suffering exemplified by the men who fly Kaman's rescue helicopters—those professionals whose "business" is rescue.



Pilot Award—Edward F. Noe, left, KAC service representative, presents a 1,000-hour plaque to Lt G. Clifford Houser, HC-2, NAS Lakehurst, N. J. On right is Cdr James F. Mozley, commanding officer of the squadron. (USN photo by PH2 P. J. Anerine) In right photo, Mr. Noe presents a plaque to Lt William L. Gsand, III, of HC-2. (USN photo by PH2 Perisse) LCdr Harley A. Backstrom, another UH-2 pilot from the squadron, also received one of the KAC plaques recently. Similar awards were made to Lt Carl E. Matyas, SAR Operations Dept., NAS Pensacola, Fla., and Lt Dennis H. Christian, HC-5, NAS Imperial Beach. Latest HH-43 pilots to log 1,000 hours in HH-43's are: Maj Robert R. Reeves, Det 25, 44th ARRSq, Eglin AFB, Fla.; Maj D. E. Longnecker, Det 14, 42nd ARRSq, Nellis AFB, Nev.; Capt James R. Murtha, Det 9, 38th ARRSq, Nakhon Phanom AB, Thailand.

Weather Fails to Stop Det 25 Mission

As noted in the preceding article on the Kaman Awards Program, weather may play an important part in determining if helicopter crewmembers qualify for the Scroll of Honor. The following mission, which occurred a few months ago, represents one of many "bad weather types" for which Scrolls have been awarded.

The mission began for an HH-43 crew from Det 25, 44th ARRSq, Eglin AFB, Fla., shortly after 9:30 p.m. and ended the next morning a few minutes before 7 o'clock. Three over-water sorties, two at night, were flown through thick fog and in below-freezing weather before three survivors were rescued.

The search started after a T-39 disappeared while making a ground controlled radar approach to Eglin AFB. It was presumed the aircraft had crashed in nearby Choctawhatchee Bay. Maj Harry E. Raisor, Capt Robert O. Martin, TSgt Rodney L. Griffith and Sgt Jerry T. Womack responded to the emergency call. The following is a report on the mission:

The weather at take off was 200 feet overcast, visibility one mile with fog, and deteriorating rapidly. Major Raisor, the Aircraft Commander, immediately headed toward the point of last contact, flying near treetop level to maintain visual references in the moonless darkness. As soon as the runway approach lights were left behind at the edge of the Bay, all visual references were lost and the pilots were forced to climb and fly using instrument references. Captain Martin, the copilot, coordinated with Eglin AFB approach control to vector the HH-43B over the water directly to the point of last contact. The fog and low clouds in this area were extremely dense. Major Raisor descended through the fog to gain visual contact with the water in order to begin the search. Sergeant Griffith, a rescue specialist, lay on the cabin floor, his head extending out the open right cabin door in an effort to locate the water. Sergeant Womack, the other rescue specialist, searched on the left side through the copilot's open door.

Throughout the mission Captain Martin provided invaluable assistance which enabled Major Raisor to remain completely on his flight instruments as he flew the helicopter. He handled the radio communications on two radios, continually coordinating with the Eglin AFB tower, approach control, other base agencies, and crash boats assisting in the search. He provided a continuous cross check of the aircraft's performance and flight instruments and advised the pilot of airspeed and altitude deviations. He remained ready to assume control if the pilot became disoriented, and also maintained visual contact with the water whenever possible.

All the air-crewmembers braved a temperature equivalent to less than 30 degrees Fahrenheit, in order to effectively search by flying with all cockpit and cabin doors open. The crew was required to search at an altitude of 50 feet in order to see the water. Forward visibility was less than 1/8-mile and they frequently encountered zero-zero conditions, while flying in and out of the heavy fog patches. As the search progressed the weather deteriorated until all vi-

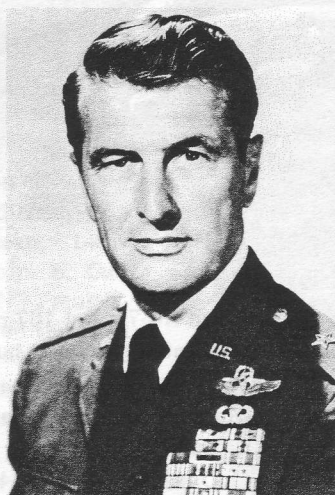
sual references from the cockpit were lost. TSgt Griffith provided the only visual references to the water by continuing to lie prone on the floor with his head outside the open door. He and Sgt Womack continued to search while both pilots concentrated on flying the helicopter. The brilliant glare of the landing and flood lights in the fog blinded the crew, making it extremely difficult for the pilots to see their instruments. Constant use of the lights was impossible. The search was continued over the Bay by instruments and vectors from radar approach control. Major Raisor flew at 50 feet, climbing to 100 feet in turns and descending again to 50 feet to continue the search. After 55 minutes of this extremely difficult search, the weather deteriorated completely, forcing the crew to request radar vectors to the airfield approach lights for a let down and landing to await improved conditions. The ceiling was below tree top level upon the crew's return.

Four hours later Major Raisor's crew renewed their search efforts. Maj Phil C. Hurley was the copilot on this sortie. TSgt Felix H. Havis, a medical technician, was added to the crew to assist in the search and to treat the survivors. Sergeant Griffith and Sergeant Womack remained on the crew. The fog had begun to dissipate sufficiently to effect a search of the wooded areas along the edge of the water, but the exceedingly low ceiling forced them to fly at tree top level. Technical Sergeant Griffith and Sergeant Womack continued to search from their previous positions, with Technical Sergeant Havis also searching out the right cabin door. Major Raisor directed his efforts to fly the aircraft at tree top level, yawing the helicopter's nose to illuminate wider areas with the landing lights and flood lights. Major Hurley continuously observed the flight path for tall trees and obstructions, monitored the aircraft's instruments, searched for signs of the crash, and coordinated with ground search parties combing the runway approaches. The extremely low clouds precluded further search attempts over the water. The search was discontinued after one hour and twenty minutes to await improved visibility and ceilings.

At first light Major Raisor's crew launched their third sortie. They proceeded out the T-39's final approach course and began a search of the down wind bay shore for debris which might have been deposited there by the brisk north wind. Twenty minutes later Technical Sergeant Griffith spotted the T-39 afloat in the bay. Because of the brisk winds and rough seas and the possibility of the rotor wash sinking the aircraft or aggravating the three survivor's injuries, Major Raisor and Hurley elected not to hover over the wreckage to recover them from the wing. The pilots directed a crash boat, searching nearby, to the scene to successfully rescue the survivors. The HH-43 crew remained at the scene to direct another crash boat to the area to recover the downed aircraft.



General Brooks



General Everest

General Everest Assumes ARRS Command

HQ MILITARY AIRLIFT COMMAND, Scott AFB, Ill.—The Aerospace Rescue and Recovery Service (MAC) has a new commander. BrigGen Frank K. Everest, Jr., recently took over as head of the rescue organization after MajGen Allison C. Brooks left to accept a Pentagon post. Announcement of the change was made by Gen Jack J. Catton, commander of the Military Airlift Command.

More Than 8,000 Hours Logged

General Everest, who has flown nearly every aircraft in the Air Force and set world speed records in several experimental jets and rocket planes, was the Assistant Director for Operational Test and Evaluation for Defense Research and Engineering, Office of the Secretary of Defense, Washington, D. C. The 49-year-old command pilot has logged more than 8,000 flying hours in his 29 years of service.

ARRS Commander Since 1965

General Brooks, who was recently promoted to his present rank, has been commander of ARRS since he was a colonel in 1965. He will be the Deputy Director for Inspection Services under the Assistant Secretary of Defense for Administration in Washington. An Air Force pilot for more than 30 years, the 52-year-old ARRS commander has initiated sweeping changes in the structure, tactics and equipment of the command during his tenure.

Dramatic proof of the feasibility of refueling helicopters in the air came in 1967 when two Jolly Green Giant helicopters flew non-stop from New York to Paris, refueling nine times enroute. General Brooks and an airman became the first men to be picked up together by the surface-to-air recovery system in an early test of the technique. The surface-to-air and air-to-air recovery systems now play a role in the Aerospace Rescue and Recovery Service support of NASA manned space flights and Air Weather Service's air sampling missions. In the past five years, the 3rd ARRGp in Southeast Asia wrote new chapters in the annals of combat gallantry. The Group and its units have received four Presidential Unit Citations, three Vietnamese Crosses of Gallantry with Palm and numerous Air Force Outstanding Unit Awards.

ARRS members in Southeast Asia have garnered more than 10,000 individual awards and decorations—including

one Medal of Honor and 20 Air Force Crosses—to make the 3rd ARRGp the most highly decorated unit of its size in Air Force history.

ARRS Saved Nearly 3,000 Lives in SEA

The HH-43 Pedro, HH-3E Jolly Green Giant and HH-53 Buff helicopters, along with the HC-130 Hercules aircraft, have received worldwide recognition while their crews have saved the lives of nearly 3,000 fighting men in Southeast Asia.

The value of the Aerospace Rescue and Recovery Service effort to the men in combat was expressed by Gen John P. McConnell, then Chief of Staff of the Air Force: "Many instances of valor have been recorded in all types of operations in South Vietnam, but nowhere have they been appreciated more than in the rescue of downed pilots from the sea, and the jungle and Viet Cong, and often under heavy enemy fire."

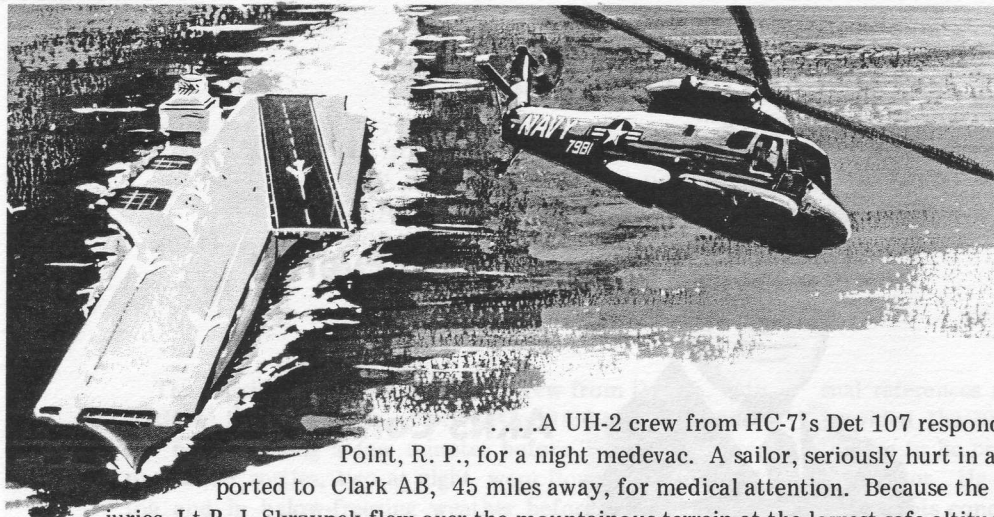
This record of selfless dedication also prompted the former Secretary of the Air Force, Dr. Harold Brown, to remark, "When the history of the war in Vietnam is finally written, I feel that the story of Air Rescue may well become one of the most outstanding dramas in the entire history of the Air Force."

Directed Reorganization Of ARS

General Brooks, whose career includes commanding a P-51 fighter force and flying 65 combat missions in B-17 and P-51 aircraft during World War II, also directed the growth and reorganization of the old Air Rescue Service.

Air Force bases in all parts of the world—the United States, Guam, Okinawa, the Panama Canal Zone and 13 foreign countries—host more than 100 ARRS units. One of these units last year completed the largest single effort in Aerospace Rescue and Recovery Service history, saving the lives of 2,516 Tunisians from floods which covered half of their country.

This worldwide span of control of search, rescue and recovery operations is now divided among three ARRS wings, located in the United States, the Pacific and the Atlantic. Each controls units spread throughout their portions of the world.



SEASPRITE ACTIVITIES

... A UH-2 crew from HC-7's Det 107 responded to a call from the tower at NAS Cubi Point, R. P., for a night medevac. A sailor, seriously hurt in a motorcycle accident, was picked up and transported to Clark AB, 45 miles away, for medical attention. Because the accident victim suffered from severe head injuries, Lt P. J. Skrzypek flew over the mountainous terrain at the lowest safe altitude. Other crew members were Lt(jg) J. W. Behunin, copilot; and AE2 R. T. Conlin, crewman. The quick aerial transfer to a medical facility was credited with being the "biggest factor in the patient's chance for survival." ... One of two pilots who ejected from a crippled F-4B and landed in the sea, was rescued by the same UH-2 crew which evacuated the motorcycle accident victim. With them was AMS3 Patrick L. Clark. Det 107 was deployed aboard the USS Horne at the time of the rescue. The other pilot was plucked from the water by another helicopter.

... In two other HC-7 missions, a UH-2 crew flew to the USS El Dorado, 135 miles from NAS Cubi, to medevac TN Richard Lonas who was suffering from appendicitis. SEASPRITE pilot was Lt Jack B. Drake; copilot, Lt(jg) H. R. Brumage; aircrewmembers, AE2 B. R. Buchan and ATN2 M. E. Finicle. Lieutenant Drake also piloted a UH-2 which medevaced an ill Manila woman from Nichols AB to Cubi. The copilot was Lt(jg) W. C. Vivian and AO3 J. M. Miles and ADJAN James Bowes, aircrewmembers.

... A pilot who ejected from an aircraft which crashed near NAS Chase Field, Texas, was taken to the dispensary in a UH-2 from the station SAR unit and manned by Lt Ronald D. Grooters, pilot; Lt(jg) Malcolm L. Steck, copilot; Lt Curtis L. Hitt (MC), doctor; AE1 Owen J. Lalley and HM2 T. A. Press, crewmen. The other pilot was placed aboard a station ambulance. Later both survivors were medevaced to the NAS Corpus Christi hospital in the UH-2. ... One of two occupants of a T-34 which crashed east of the Magnolia Field landing facility was picked up by a UH-2 crew attached to the SAR unit at NAS Pensacola, Fla. The survivor was placed aboard the SEASPRITE and taken to a waiting ambulance. The backup helicopter picked up the other survivor and delivered him to another ambulance. Lt Carl E. Matyas was UH-2 pilot and Lt(jg) Roy D. Resavage was copilot. Crewmen were ADJ3 Robert J. Posey and AMHAN Richard L. Franklin. Also aboard was LCdr James J. Linville (MC), flight surgeon.

... Two pilots who ejected from their crippled F-4 were rescued from the waters of the Tonkin Gulf by a UH-2C crew deployed aboard the USS America. The uninjured survivors lit a smoke flare to aid the SEASPRITE pilot, Lt Barry F. Sharp, in determining wind direction. Within eight minutes after the pick-up, the aircraft returned to the carrier. Others manning the SEASPRITE were Lt(jg) Howard L. Hosp, copilot; AT3 Ken C. Jones and AEAN Elmer C. Williams, crewmen. All are attached to HC-2's Det 66.

... Searching in gale winds and below freezing temperatures, a UH-2 crew from NS Adak, Alaska located a hunter at the bottom of a ravine. He was suffering from frostbite and unable to walk back to the station. The helo landed nearby but the survivor's large frame and the deep tundra grass prevented crewmen from carrying him to the SEASPRITE. Lt Ronald K. Wilsbach left the area, dumped fuel and then hovered overhead while the survivor was hoisted aboard. He was transported to NAVSTA hospital for treatment. Others manning the SEASPRITE were Lt(jg) Barry D. Weir, copilot; AMS3 William B. Campbell and AE3 Albert J. Hahn, crewmen.

... A UH-2 crew from the station SAR unit launched after a plane crashed in a field 25 miles from NAS Chase Field, Texas. The downed airman lit a flare to mark his position and then walked to the rescue helicopter. The entire mission, from the time the alarm sounded until the pilot was delivered to the dispensary at Chase, took only 37 minutes. Manning the SEASPRITE were Lt(jg) Malcolm L. Steck, pilot; Lt Virgle A. Keith (MC), doctor; HM2 James A. Ford and ATN3 Roy W. Franks, crewmen. ...

HC-1 PERSONNEL HONORED FOR WESTPAC CRUISE

Eighteen officers and enlisted men from HC-1's Det 1 received awards for their performance during a recent seven and one-half month deployment in the Western Pacific aboard the USS Bon Homme Richard. During that period UH-2C crews from the detachment flew nearly 900 missions, logged over 800 flight hours and rescued five shipmates from the ocean.

Navy Commendation Medals were awarded to: Cdr E. E. Dahill, Lt T. E. Payne, Lt W. E. Bentley, Lt(jg) D. J. Danielson, Lt(jg) J. R. Lovell, AMCS M. K. White, ADJC

M. F. Dachtler, AMH1 M. F. Flowers, ADJ2 S. P. Ricchuiti. Lt(jg) R. E. Siman received a Navy Commendation Medal and Navy Achievement Medal; Lt(jg) J. C. Macidull, Navy Commendation Medal and Gold Star in lieu of Second Navy Commendation Medal.

Navy Achievement Medals were awarded to PN3 R. F. Neifert, ATR3 C. E. Ellis, AN M. L. Wheeler, ATR3 D. B. Dever and AE2 J. R. Steier. AZ2 R. R. Gurman and AMS3 B. L. Williams received letters of commendation.

HC-1 Records 1400th Personnel Rescue

HC-1, NAS Imperial Beach, Calif., recently recorded its 1400th personnel rescue when four members of Detachment Six plucked a downed fighter pilot from waters off the coast of California.

The crew members were conducting "plane guard" operations near the USS Oriskany when Lt Harlan W. Woodward, helo pilot, received word that an A-7 had crashed on deck and the pilot had ejected into the ocean. Lieutenant Woodward with his co-pilot, Lt(jg) John E. Culbertson, were dispatched to the area where ATN3 Frank T. Chupko entered the choppy water and removed the pilot from the folds and shrouds of his parachute. Rescue efforts were hampered by the pilot's broken arm and dislocated shoulder. As the two were being hoisted aboard the helicopter, Chupko felt the pilot slipping out of the sling and wrapped his legs around the man's waist. In this position he was unable to assist the hoist operator, AMH3 Frank W. Dudek. Chupko dangled outside of the UH-2C aircraft with the clinging pilot for the two and one-half mile trip back to the carrier deck.

The operation, which was the first actual rescue for the two enlisted men, marks the squadron's 1400th personnel rescue, of which over 225 were accomplished off the coast of Vietnam. For their efforts, all of the crewmembers have been recommended for letters of commendation by the Commanding Officer of the USS Oriskany.

Two nights later the same two crewmen were flying in a helicopter piloted by Lt's Thomas H. Epting, Jr., and Michael T. Bugelski, when another pilot ejected near the ship. The experience gained from the previous rescue was obviously a help to the crewmen during the second mission. Working quickly and efficiently, they plucked the survivor from the water and he was returned to the Oriskany within 13 minutes after his ejection.

HH-2D CREW MAKES RESCUE

By Lt(jg) Steve Kornacki

On April 10, an HH-2D crew from HC-2's Det 60 completed the first at-sea rescue utilizing the new helicopter. The action took place when an A-6A Intruder encountered difficulties during a catapult launch from the attack carrier USS Saratoga during the ship's recent training cruise in the Caribbean. The two-man crew of the A-6A ejected from the aircraft just prior to impacting the water. With-



HH-2D Rescue—"Angel 30" just prior to touchdown on the flight deck of the USS Saratoga after effecting the first HH-2D rescue at sea.



Heartfelt Congratulations—Cdr Joseph B. Howard is congratulated by Kaman Vice President William R. Murray upon HC-1's accomplishment in making its 1400th rescue. On left is Cdr Robert L. Wheeler who assumed command of the squadron from Commander Howard just 60 hours after the rescue was made by a UH-2C deployed aboard the USS Oriskany. Mr. Murray, a former Navy fighter pilot, was at NAS Imperial Beach, Calif., to attend the change-of-command ceremony. HC-1 won the Presidential Unit Citation for "extraordinary heroism" for rescue work during the Korean War and has made 225 rescues, many of them under enemy fire, in Vietnam. (USN photo by PH3 Glenn Pense)

out delay, Lt Howard Miller and Lt Stephen Gillis engaged the rotor system of the "go" helicopter and headed for the downed crew. Upon the helo's arrival at the crash scene, AMSAN Ben Jacovini was lowered into the water by the first crewman, ADJ3 Bill Parker. As the wet crewman, it was Jacovini's responsibility to ensure that the helo's rescue hoist was properly attached to the crash victim. While the pilot held a steady hover, Parker hoisted the pilot of the A-6A into the helo. The pilot appeared to be in fine shape and AMSAN Jacovini was hoisted aboard.

While the pilot of the A-6A was being retrieved, a second helo was launched with Lt James Holt and Lt(jg) Stephen Kornacki at the controls. This helo went to the aid of the bombardier/navigator who was still in the water. The wet crewman, AMH2 Allen Petrosie, and the first crewman, ADJ3 Dick Pruett, rescued the man by utilizing the same procedures as employed by the first HC-2 helo. With both apparently uninjured men safe inside the HC-2 aircraft, they returned to the Saratoga and turned them over to waiting medical personnel for a check-up.

HC-7 CREWS RECEIVE HH-2C TRAINING

Several officers and enlisted men from HC-7, NAS Atsugi, Japan, are now undergoing HH-2C training in HC-5, NAS Imperial Beach, Calif. HC-7 is scheduled to receive the helos soon as replacements for the UH-2A/B. The HH-2C is heavily armored to protect crew and critical aircraft areas and is armed with a chin-mounted minigun and waist-mounted machine guns. HC-7, which operates SEASPRITE helicopters from DLG's deployed near the Vietnamese coast, has rescued several downed Navy pilots.



Proud Moment—Maj Stuart H. Hoag, left, Det 10 commander, accepts MAC safety award from BrigGen Harold F. Knowles. Others attending the flight line ceremony, front row, left to right, Capt Ronald P. Wojack, TSgt Willard S. Richards, Capt David H. Baur, A1c James E. Massey, A1c Jamie L. Drag and A1c Scott W. Oetting. In rear row are Sgt Jack M. Walls, Maj Robert C. Henneman, Col Robert P. Parsons, Sgt Allyn L. Mathieson, SSgt Clyde W. Williams, SSgt Joe L. Pack, and SSgt James E. O'Gorman. (USAF photo)

Det 10, 43rd ARRSq, Laredo AFB, Texas, was recently presented a plaque by the Military Airlift Command for achieving eight years of accident-free flying. Since the detachment's inception in 1963, it has had a clean accident slate both in the air and on the ground. The 15-man detachment flies two HH-43B HUSKIES.

Maj Stuart H. Hoag, detachment commander, attributed the safety record to the "dedication of the personnel and the professionalism with which they go about their jobs."

Milestoners—During the month of March, two HH-43 pilots attached to Det 8, 41st ARRWg, passed important milestones in their flying careers. Maj Welton C. Ritchie, Jr., left, logged his 2,000th hour of HH-43A and B time, while Capt John R. Bland, Jr., chalked up his 1,000th hour in the HUSKIE. Det 8 is based at Yokota AB, Japan. Several thousand miles away and a few weeks earlier, Maj Thomas E. Fallows, commander of Det 22, 42nd ARRSq, Mountain Home AFB, Idaho, logged his 2,000th hour in the HH-43. (USAF photo)



River Rescue—Military crews manning Kaman helicopters make rescues in many parts of the world, but it isn't very often that such a rescue is made "close to home,"—and by Kaman employees. When two young men were stranded on an island in the rain-swollen Housatonic River one Sunday afternoon, an HH-2D was called into action and the two rescues were hoisted to the safety of the helicopter. Manning the SEASPRITE during the highly-publicized rescue were, left to right, Nick Ruggiero, KAC and Kaman Performance photographer; Chief Test Pilot Andy Foster, copilot on the flight; Herb Ross, superintendent of UH-2 production at Bradley Field; and Test Pilot Al Ashley, who was at the controls during the pickup.

HORSING AROUND ALL PART OF THE JOB FOR HELSUPPRON TWO

Lt J. R. Beaird

During the past 22 years HC-2 has rescued more than 1620 people from places which range from a snow-covered mountain on a Greek island to the jungles of North Vietnam to the waters of almost every sea around the world. However, until March 28, 1970, HC-2 had never rescued a horse!

On the evening of March 27, Mr. William Clarkson and his son Stephen went horseback riding. Coming to a narrow ridge, which separated two large mudpits, the riders dismounted and proceeded to walk their horses across the dike. Suddenly a flock of geese sprang into flight, spooking Stephen's horse which fell down the 15-foot embankment and buried itself up to its belly in mud.

All efforts that might free the horse by using man power failed. Early the next morning Fire Chief Edward Shuhart of Levittown, Pa., after exhausting all other means to effect a rescue, called NAS Lakehurst and asked for assistance. The distress call was passed to Cdr J. F. Mozley, commanding officer of HC-2. He immediately launched a helicopter and crew to the scene. When the aircraft arrived 20 minutes later, the pilot, LCdr Hartley A. Backstrom, landed and directed his three crewmen, ATN3 Kenneth C. Rueff, AMS3 Richard Davis and AN Kurt M. Carlsen to place a large sling around the horse, while a local veterinarian gave the horse a tranquilizer shot. Next, with the help of his copilot, Lt(jg) Stephen Kornacki, Lieutenant Commander Backstrom lifted his HH-2D helicopter into a hover over the horse and the sling was connected. Then very gently, he lifted the 1200-pound horse free of the mud and moved her 800 feet to solid ground.

In addition to this being the first time a horse was rescued by HC-2, it was also the first rescue by the squadron using its new HH-2D model helicopter, which was delivered to the squadron in early 1970.



Flight Manuals Conference—Participants in the H-2 NATOPS Flight Manuals Conference held recently at Kaman Aerospace Corporation, Bloomfield, Conn. Seated, left to right, are: LCdr W. Bailes, NAVAIRSAFCEN, NAS Norfolk, Va.; Cdr Roy Highberg, NAVAIRSYCOMHQ, Washington, D. C.; LCdr Laron Stoker, HC-5, NAS Imperial Beach, Calif.; Conference Chairman, Cdr Roy Hollingworth, HC-5 commanding officer; Cdr William Sturgeon, COMNAVAIRPAC, San Diego, Calif.; Cdr Raymond McCullough, LCdr Thomas Gillen, HC-2, NAS Lakehurst, N. J.; LCdr Leon (Bud) Smith, HC-4, NAS Lakehurst. William Zins, Director of Customer Service, KAC.

Standing, George Wood, Robert Chapdelaine, Service Publications, Fred Smith, Test Operations, William Batesole, Engineering, KAC; Cdr Paul Hine, NAVAIRTESTCEN, NAS Patuxent River, Md.; Lt Michael A. Graham, HC-4; Al Ashley, Flight Test, David Uitti, Engineering, KAC; Daniel Cardono, DCASO Engineering, KAC; Lt Thomas Hoivik, Lt Arthur Schatz, NAVAIRTESTCEN, NAS Patuxent River; Nick Ruggiero, Lee Starbird, General Electric; Jack Goodwin, Flight Test, KAC.

Others who attended were, Cdr J. Fred Mozley, HC-2 commanding officer; Cdr Lowell Perry, HC-4 commanding officer; John Snoderly, George Unger, NAVAIRSYCOMHQ, Washington; Lt John Ricco, CNO/NAVACDOCACT, Washington; William Murray, vice president/Test Operations and Customer Service; Arved Plaks, Aerodynamics, KAC.



SGT. MICHAEL E. FISH

AF CROSS GOES TO PARARESCUEMAN

SERGEANT'S BRAVERY HELPS SAVE PATROL, HELICOPTER CREWMEN

TAN SON NHUT AB, Vietnam—Heroic efforts to rescue an Army patrol and downed helicopter crew have earned Sgt. Michael E. Fish the nation's second highest award for bravery.

Sergeant Fish was presented the Air Force Cross by Air Force Secretary Robert C. Seamans, Jr. during the secretary's visit here.

Cited for voluntarily risking his life for more than 15 hours, Sergeant Fish saved an Army UH-1 helicopter crewmember and also helped rescue others pinned down by deadly enemy fire.

The helicopter crew was shot down Feb. 18, 1969, while attempting to rescue a small Army patrol from an area near a North Vietnamese Army camp in a canyon 28 miles west of Tuy Hoa AB.

The Army asked for help and Air Force rescuers of the 38th Aerospace Rescue and Recovery Squadron's Det. 11 at Tuy Hoa answered the call. An aircrew from the detachment, including Sergeant Fish, flew into the hostile area in their HH-43 Pedro helicopter. They were accompanied by Army helicopter gunships to suppress enemy ground fire.

GUNSHIPS STRAFE AREA

Despite strafing by the gunships, heavy cross-fire from enemy automatic weapons entrenched in the mountainside opened up as the Pedro crew neared the crash site. Rescue attempts normally would be postponed until the enemy fire could be suppressed, but the condition of several of the survivors was described as "grave." The unarmed Pedro crew went in for the rescue.

As the rescue helicopter hovered a few feet above the thick jungle canopy, Sergeant Fish and another rescue specialist were lowered on a jungle penetrator through intense enemy fire.

Despite continuing enemy groundfire, three injured crewmembers were given emergency medical care and lifted to the hovering Pedro.

An Army UH-1 helicopter with a hoist then came to a hover over the crash site, and Sergeant Fish and others on the ground secured another patrol member to the hoist for evacuation.

Sergeant Fish found the pilot of the crashed helicopter seriously injured and pinned in the tangled wreckage. As Ser-

geant Fish worked to free him, the Army gunships had to leave the area to be refueled.

As the gunships departed, Sergeant Fish worked silently trying to free the pilots so as not to give away their position to the enemy. The pilot was given medical care and a sedative by Sergeant Fish.

More Army gunships arrived later and stilled four enemy soldiers stealing toward the crash site through a clearing about 100 yards from the survivors.

These gunships continued pounding the enemy positions as the patrol team fired at the enemy and Sergeant Fish tried to free the pilot. His efforts were hampered by a damaged metal saw, however and his hatchet and other hand tools were ineffective against the tangled wreckage.

HELICOPTERS LEAVE

At nightfall the helicopter crews had to give up their efforts, despite chances the enemy would attack the survivors during the night. Sergeant Fish and his assistant were instructed to leave the scene on a helicopter, but Sergeant Fish refused. Sergeant Fish told his assistant to inform the crew that he would remain at the site to give medical aid and try to free the pilot.

The young sergeant worked through the night caring for the pilot, who was intermittently in shock, and radioing instructions to flareships circling above.

"We heard enemy movement throughout the night, but they did not attack," one of the survivors reported later. "As it turned out, the enemy was setting up an ambush for the helicopters coming to help us in the morning," he said.

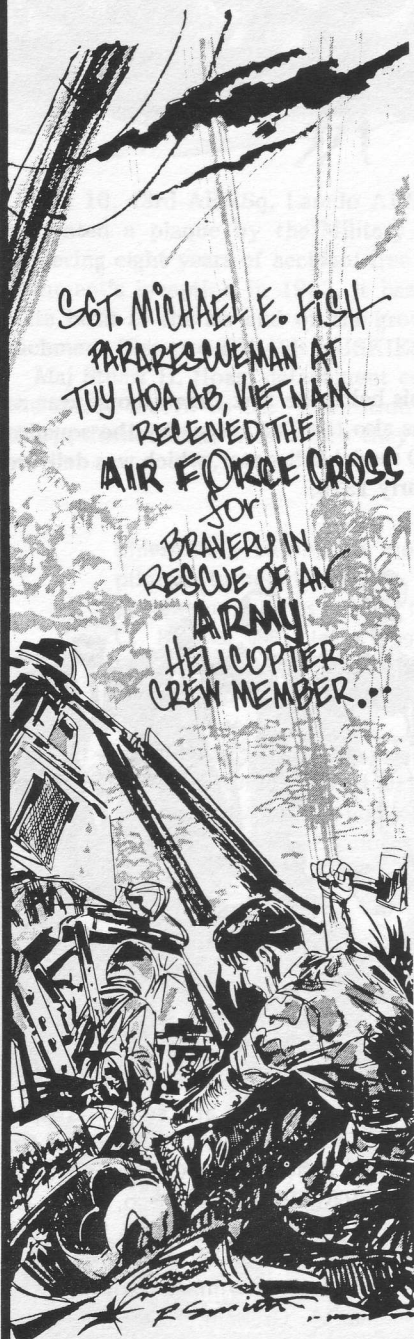
RESCUERS RETURN

As the enemy soldiers anticipated, the rescuers returned in the morning. The Pedro helicopter again hovered above the canopy, and another pararescue specialist and flight engineer with special rescue tools started down the penetrator.

With the rescuers suspended in midair and the Pedro hovering vulnerably, the enemy opened the heaviest cross-fire of the rescue attempt.

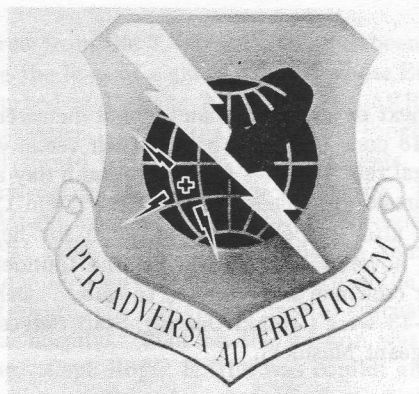
Army gunships fired back and the enemy weapons positions were silenced for a few minutes. This was long enough for Sergeant Fish and the others to free the pilot, and help hoist him to the waiting Pedro.

An Army UH-1 then hoisted Sergeant Fish and the remaining members of the ground party out of the area and flew them to safety.



SGT. MICHAEL E. FISH
PARARESCUEMAN AT
TUY HOA AB, VIETNAM
RECEIVED THE
AIR FORCE CROSS
FOR
BRAVERY IN
RESCUE OF AN
ARMY
HELICOPTER
CREW MEMBER...

3rd ARRGp Honored by South Vietnamese



3rd ARRGp Emblem—Symbolic of the group and its mission, the emblem shows a blue globe which represents the worldwide capability of the group for search, rescue and recovery operations. A red cross on the globe depicts a location of distressed personnel or required rescue operations. A white lightning bolt denotes adversity (hostile forces or elements) which must be overcome to effect successful search and rescue operations. A green arrow piercing the lightning bolt signifies the response of the group's forces to all emergencies. A scroll immediately beneath the emblem states the motto: "PER ADVERSA AD EREPTIONEM—Through Adversity to the Rescue."

TAN SON NHUT AB—The Vietnamese Unit citation streamer of the Cross of Gallantry with Palm was awarded to the 3rd Aerospace Rescue and Recovery Group in recent ceremonies. MajGen Thn Van Minh, commander, Republic of Vietnam Air Force, attached the streamer to the guidon of the 3rd ARRGp and presented medals to the commander and vice commander of the unit before a formation of VNAF airmen in front of VNAF Headquarters.

The members of the 3rd ARRGp, responsible for search and rescue in an area covering more than a million square miles in Southeast Asia, were cited for saving 317 Vietnamese, during the period of Jan. 8, 1966, through July 28, 1969. The citation was signed by Gen Cao Van Vien, Chief, Joint Staff, Republic of Vietnam Armed Forces.

The citation emphasized that the rescuemen had performed thousands of flights evacuating wounded soldiers, including more than 1,900 in February, 1968. It also praised 18 missions flown to save VNAF crewmembers and aircraft involved in four crashes.

Mission Described

A rescue performed on an aircraft which crashed May 5, 1968, while on a flare dropping mission some 500 meters from Tan Son Nhut AB, was also described: "The aircraft was in flames and in danger of explosion because of the

flares but, with traditional bravery of the HH-43 Pedro crewmembers of the 3rd ARRGp, they rescued all the crewmembers of the downed plane who were still in the cockpit," the citation read.

Air Force rescuemen in SEA fly the HH-3 "Jolly Green," HH-43 "Pedro," and the HH-53 "Buff" helicopters. A specially equipped version of the C-130 Hercules aircraft serves as an aerial command post and refueling tanker for the helicopters during rescue missions.

Highly Decorated Unit

One of the most highly decorated units in Air Force History, the 3rd ARRGp was recently awarded its second Presidential Unit Citation for "...extraordinary heroism in combat from July 1, 1967, to Jan. 31, 1969."

Col Malcolm C. Frazee, who has held numerous rescue assignments since 1945, commands the 3rd ARRGp. Col Frederick V. Sohle, Jr., with 10 years of Air Rescue experience, is vice commander. Col Hollon H. Bridges, former commander of the unit, who now serves as deputy director for operations of the 60th Military Airlift Wing at Travis AFB, Calif., was cited for his leadership and inspiration during the period of the award. Although he couldn't attend the ceremony, he also was awarded the Cross of Gallantry with Palm.

Navy Men Evacuated By Det 8

Two members of a Navy patrol were evacuated during a night mission flown over mountainous territory by an HH-43 crew from Det 8, 38th ARRSq, Cam Ranh Bay AB. Both men, suffering from heat exhaustion, were hoisted from a jungle area near a 150-foot cliff. As Capt Peter F. Dineen held the Pedro in a high hover to avoid a large signal fire and holdovers in the area, TSgt Gilbert L. Devoe was lowered on the jungle penetrator. Sergeant Devoe, a para-rescue technician, secured the rescuees to the seat and then, after they were safely aboard, was hoisted to the helicopter. Other members of the Pedro crew were 1stLt Harold I. Visnick, copilot; A1c Thomas W. Hooker, crew chief; and SSgt Lester W. Clements, firefighter.

Det 1 Evacuates RVN Soldiers

Two South Vietnamese soldiers requiring evacuation were picked up by an HH-43B crew from Det 1, 38th ARRSq, Phan Rang AB, and taken to a medical facility. The forest penetrator was used to recover the first soldier from the jungle-covered valley and then, as he was being taken to the hospital, a second request for aid was received. Capt Wayne R. Crowther piloted the HH-43 back to the valley

and the second evacuee was taken aboard. Other members of the helicopter crew were Capt Thomas E. Rodgers, pilot; SSgt James A. Taylor, flight engineer; and SSgt Henry L. Jones, III, medical technician.

In another Det 1 mission, an airman who suffered a seizure while at the USAF beach six miles from Phan Rang was evacuated to the hospital by an HH-43 crew consisting of Maj Ronald K. Dalrymple, pilot; Captain Rodgers, copilot; Sgt Gary L. Hartley, flight mechanic; and Sgt Enrique Arias, medical technician.

Two Received By Det 9 Crew

The two survivors of an F-4 crash were rescued by an HH-43 Pedro from Det 9, 38th ARRSq, Nakhon Phanom AB, Thailand. To make the pickup, Capt Oliver E. Schmoeker landed near the crash site and rescuees were taken aboard. Before taking off, however, medical aid was given to two villagers who had been injured by flying debris from the downed F-4. Other members of the Pedro crew were Maj Harold L. Edwards, copilot; Michael F. Dean, para-rescueman; SSgt's Donald E. Sherman and Jerry Price, firefighters.

Det 8 Rescues 13 In Two Days

For Det 8, 38th ARRSq, March 22 and 23rd were "tug-boat days." During a 24-hour period three civilian tugs ended up on coral reefs a few miles from Cam Ranh Bay AB and HH-43 crews from the detachment went to their aid. Nine tugboat men were saved the first day, and four more crewmen were rescued the following day.

The alert Pedro launched after the "Madison" went aground in heavy surf, rescued one crewman who was stranded on shore and plucked another from the pitching deck of the tug. The ocean-going tug "Elsie B" then arrived and Pedro returned to base. A short time later, however, word was received that the Elsie B and the Madison were both aground and in danger of breaking up.

The Det 8 alert crew again scrambled and headed for the scene. A few minutes later another detachment HH-43 followed. Three survivors were rescued from the canted deck of the Elsie B by one Pedro and four more were picked up by the second HH-43. Five other crewmen were also saved by a medevac helicopter which arrived in the area to assist the Pedros. Manning the HH-43's were (1) Capt Peter F. Dineen, Capt Michael P. Bolline, SSgt Thomas W. Seibert and Sgt Larry C. Meyers. (2) Capt James L. McAfee, Capt Munro G. Dearing, SSgt Thomas F. Brownlee and Sgt Kenneth J. Musnicki.

The next day, four civilian tugboat men were rescued by an HH-43 crew from Det 8 after their vessel went aground on a coral reef 15 miles from Cam Ranh Bay and threatened to break up. Pedro located the "Win Quett" a few minutes after responding to the call for help. Captain McAfee hovered the HH-43 over the foundering tug and the four crewmen were hoisted to safety. Others manning the HH-43 were Captain Dearing, Staff Sergeant Brownlee and Sergeant Musnicki.

Det 11 Aids At C-47 Crash

Seconds after a C-47 ran off the runway at Tuy Hoa AB, an HH-43 crew was at the scene and had deployed the FSK. Although the transport had nosed over, there was no fire. A seriously injured Vietnamese woman passenger was taken to the hospital in the helicopter as the rescue specialists, SSgt Earl E. Hoal and Sgt Louis L. Toups, remained behind to help remove the C-47 pilot who had a back injury. Capt Charles E. Mayes, Pedro pilot, returned to the crash site and the injured man was placed aboard the HH-43 for evacuation. Other members of the Pedro crew were Capt John H. Williams, copilot, and MSgt Derald D. Parks, pararescuer. All are from Det 11, 38th ARRSq, at Tuy Hoa.



ARRS Det 11—Airmen and others in the Tuy Hoa AB area rest easier with the knowledge that these men are standing by, ready to help if needed. Behind the group is "Pedro," one of the HH-43's used during Det 11's rescue and medical evacuation work. The detachment is a part of the 38th ARRSq, 3rd ARRGp. Front row, left to right, are SSgt Denis F. Wells, SSgt Osby Hunter, Sgt Louis E. Toups, SSgt Frank M. Carter, Sgt James W. Nelson, rescue specialists; Maj Donald L. Evitt, Capt Arthur H. Hollender, Capt John H. Williams, pilots; Maj Morgan A. Downing, det commander, pilot. Second row, TSgt Richard N. Stone, SSgt Cole E. Panning, Sgt Ian T. Burr, Sgt Richard E. Evans, pararescuemen; SSgt Michael Klickovich, flight engineer; TSgt Leonard J. Hess, line chief; Sgt Phillip A. Royce, flight engineer; SMSgt Billy L. Hammack, first sergeant. Third row, Sgt Thomas B. McKittrick, SSgt John Dougherty, Sgt Lawrence E. Woods, Sgt Willie E. Brown, and Sgt Neil E. Swanson, maintenance. (USAF photo)

Det 7 Crews Fly Variety of Missions

An HH-43 crew from Det 7, 38th ARRSq, has been credited with saving the lives of eight Navy men whose EC-121 crashed and burned at DaNang AB where the ARRS detachment is stationed. As ground equipment fought the fire, which had spread to buildings and revetments, Pedro carried five survivors to the base medical facility. Meanwhile, SSgt Reginald Ramseur, Sgt Carroll H. Bledsoe, firefighters; and SSgt Jules C. Smith, pararescueman, remained at the crash site pulling survivors and bodies from the burning debris. Afterward, the HH-43 was used to evacuate the survivors to the hospital. Pilot on the mission was Capt James A. Tassie. Capt Roger E. Hill was copilot and the other crewmember was SSgt Joseph L. Coburn, flight engineer.

In a second Det 7 mission, Capt David A. Voigt and his crew flew through marginal weather to rescue a pilot who ejected from his battle damaged F-100 over the South China Sea. The survivor was rescued despite poor visibility and six-foot waves. After the downed airman was hoisted aboard by Sgt Randy L. Luke, the flight engineer, he was given first aid by SSgt Luther E. Davis, pararescueman.

During the pickup Maj John A. Tyson, the copilot, maintained constant vigilance on aircraft performance and instruments as well as giving continual altitude and heading directions to Captain Voigt. A second survivor was plucked from the water by another helicopter which arrived on the scene. Soon after the downed pilots were rescued, the weather dropped to a "ragged" 400 foot ceiling. Others aboard the HH-43 were Sergeants Ramseur and Bledsoe.

HH-43 Pedro crews from Det 7 also participated in several other missions recently. Most of them involved medical evacuations. The following are brief descriptions of these missions:

Flying over enemy territory, Captain Voigt and his crew evacuated an Air Force sergeant suffering from multiple skull fractures. The "professional competence, aerial skill and devotion to duty displayed by Captain Voigt, Maj Loran M. Nichols, Sergeant Coburn and Sgt Gary T. Osborne" was credited with saving the patient's life. A seriously wounded crewmember was removed from a battle-

damaged HH-53 and taken to the hospital in an HH-43 flown by Capt Roger Hill. On the way first aid was given by MSgt Anthony R. Gargano and Sergeant Coburn. Major Nichols was copilot.

A critically wounded Marine pilot was taken from his aircraft as soon as it landed and placed aboard a Det 7 HH-43. Enroute to the hospital first aid was given by Sgt Edward K. Rendle and SSgt Ernest L. Long. HH-43 pilots were Captain Tassie and Captain Voigt.

A Det 7 Pedro met a battle-damaged H-3 as it landed and a minute later took aboard a wounded H-3 crewmember. While enroute to the hospital he was treated by SSgt Michael K. Vanbrunt and Sergeant Coburn. Pilots were Captain Hill and Major Nichols.

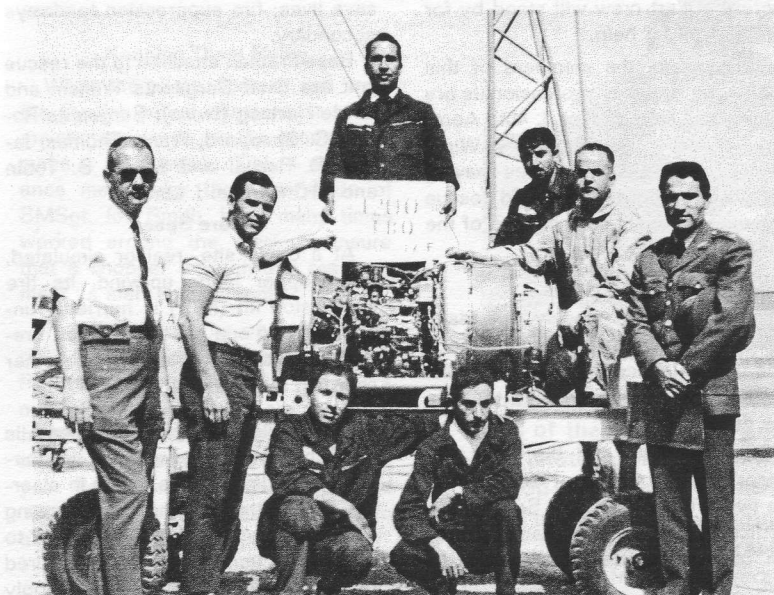
Flying at night over hostile territory, a Det 7 HH-43 evacuated a seriously ill Marine and his attending doctor. The Pedro crew consisted of Captain Voigt, Captain Hill, TSgt Gordon L. Ball and Sergeant Davis. A seriously-wounded O-2 crewmember was taken to the hospital in an HH-43 manned by Captain Tassie, Captain Hill, Sergeant Coburn and Sergeant Smith. Enroute first aid was given to the patient by Sergeants Smith and Coburn.

An airman suffering from multiple knife wounds was taken to the hospital in an HH-43 piloted by Captain Voigt and Major Nichols. Sgt Gary L. Hartly and Sgt Robert Reisig were crewmen. On the flight, Sergeant Reisig administered continual first aid.

A critically wounded Army soldier was taken to the hospital by Captain Voigt, Major Tyson, SSgt Ernest L. Long and Sgt Johnny L. Riddle.

A Det 7 HH-43 rigged for medevac was standing by as a battle-damaged TA-4 landed. The critically wounded front pilot was removed from the aircraft, treated and then placed aboard the Pedro. Three doctors accompanied the wounded man on the flight to the hospital. The attending physicians said later that had it not been for the "rapid and professional response of the Pedro, the airman would not have lived." Manning the HH-43 were Captain Voigt, Major Nichols, Sergeant Coburn and SSgt Curtis W. Phythian.

IIAF T53 REACHES 1200-HOUR MARK



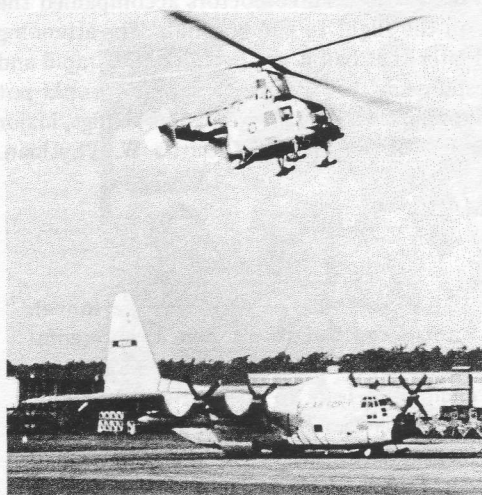
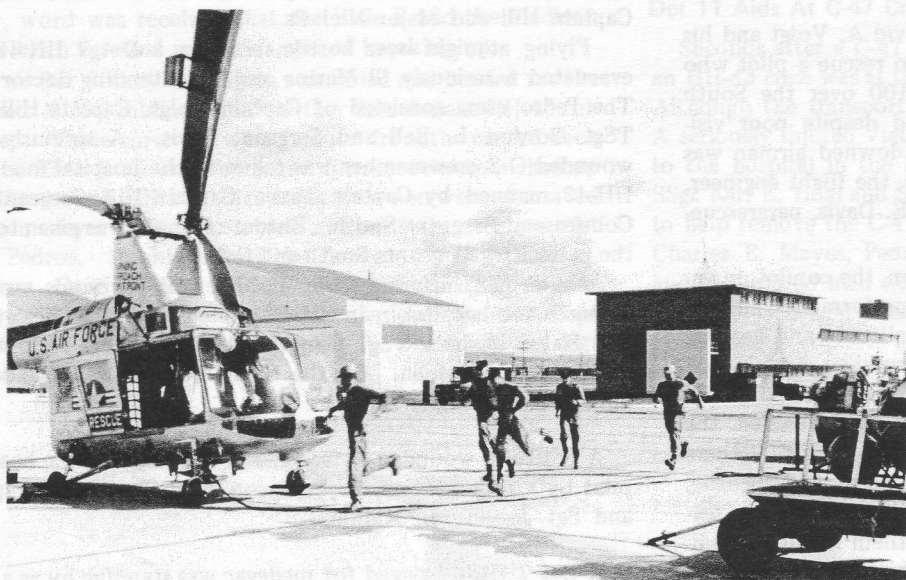
Iranian Imperial Air Force personnel, Kaman and Lycoming service representatives are shown with the first T53-L-11A engine in Iran to reach the 1200-hour TBO mark. The engine was removed from one of the HH-43's in the Iranian Air Force. Left to right are Donald P. Alexander, KAC senior service representative; Charles Young, Lycoming service representative; A1c Panahi, T/Sgt Alavi, A1/c Ali Mohammadi, A1/c Fatahi, W/O Zinali, and Lt D. J. Djalali, IIAF. Lieutenant Djalali attended a six-month study of maintenance procedures and factory production methods at Kaman a few years ago.



Hellfighters in Choppers

By MSgt Mike Switzer

Photos By MSgt Mike Switzer
and TSgt Tom Kerns



Scramble—In top photo, an alert rescue crew scrambles for their HH-43B HUSKIE after a call from the base crash station. They will be airborne, with fire-fighting equipment, in minutes, flying a precautionary orbit near a possible crash scene. In second photo, an HH-43 is shown with an HC-130 also used by Rescue. The 40th ARRWg has local base rescue units on 13 USAF bases.

(USAF photos)

A Ramstein tower operator is notified of an inbound fighter aircraft with problems. Immediately he alerts Rescue.

In minutes, the throaty throb of an HH-43B helicopter announces that the local base rescue (LBR) men are on the job. After escorting the fighter in for a landing, the chopper (if there is no incident) circles back to its pad. There the alert crew will stand by for the next call for help.

At Ramstein, the members of this small, elite group of professionals are assigned to Detachment 4, 40th Aerospace Rescue and Recovery Wing. Twelve other USAF bases having heavy air traffic are provided rescue coverage by other detachments of the 40th ARRWg.

Professionals

Each crew is a closely-knit team. Perhaps this could be considered a little unusual since three of its normal six men are not assigned to the rescue detachment.

The two pilots and the flight engineer are professional rescuers; the two firemen (26th CE Sq) and the medical technician (26th Tac Hospital) are base personnel attached to the unit.

The medics, already qualified as first aid specialists, receive instruction in night and day helicopter rescue techniques. In some respects their job could be compared to that of the ARRS pararescueman usually employed on long-range aircraft.

Medics attached to Det. 4 include Staff Sergeants John M. McCook and Orley D. Cookson and Sergeants Michael T. Brownfield and Richard M. Pankow.

Skill, Speed

From the "pros" these medical specialists learn the ins and outs of land and water air medical evacuations. Terms like sea baskets, horse collar hoists, stokes litters and lift seats rapidly take on meaning.

The firemen acquire skills in attacking a crashed aircraft for removal of trapped and injured men as well as for suppressing resulting fires.

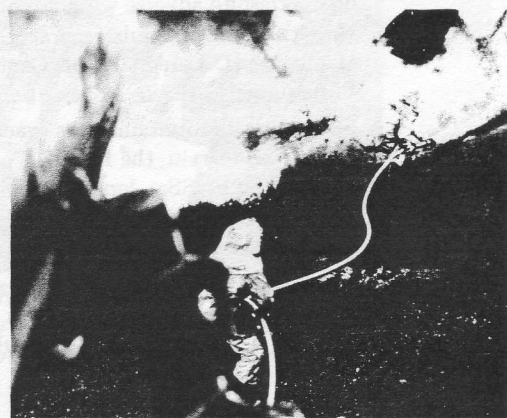
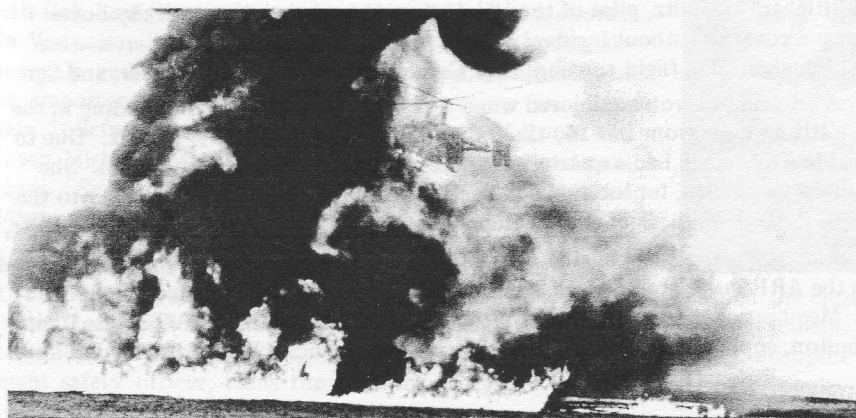
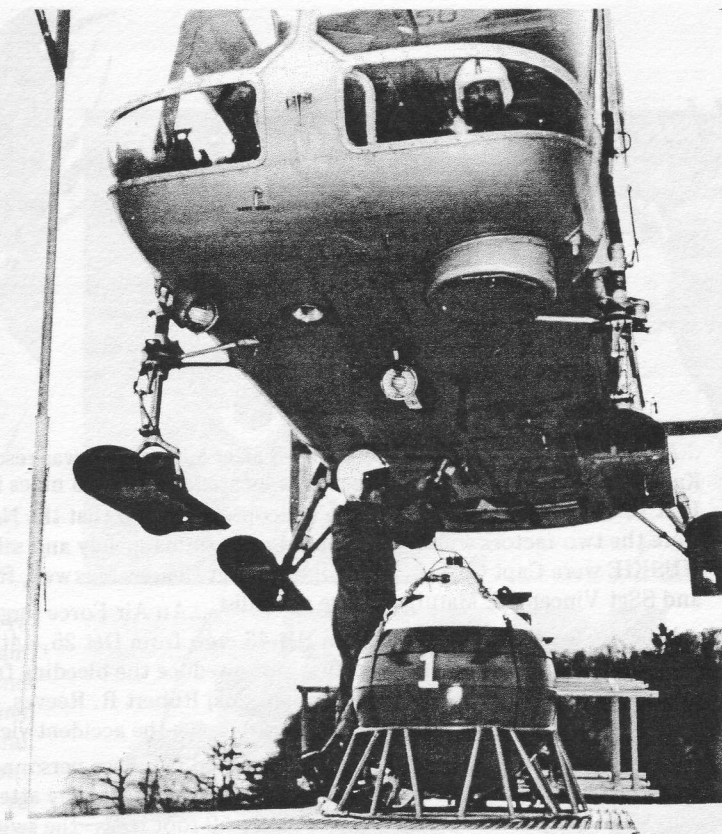
In an aircraft accident, with highly flammable fuels and often armament on board, there is no time to waste. The first 60 seconds of a crash fire are crucial as regards the recovery of the men inside. And the mission is to save lives; fire suppression is always secondary.

Base firemen attached to the rescue unit are Staff Sergeants William and Lewie Hartzog (twins); Sergeants Robert C. Sheppard, Frantz Thomas, James R. Rachal and Monte B. Tobin and A1C Michael J. Lind.

More Speed

At a crash site, real or simulated, the chopper lands up-wind. Its fire suppression kit (FSK) is hurriedly unhooked, and one asbestos-suited fireman sprays foam ahead of the other charging into the inferno.

Meanwhile, the pilot overhead is directing the downwash of the aircraft's whirling blades to aid in clearing a path through the fire. Knowing exactly where crash exits are, how to disarm ejection seats, remove injured persons, and cut off power supply



sources is indispensable. The FSK's 80 gallons of water, combined with foaming agents, give approximately 690 gallons of foam, enough for 55 seconds of protection. Speed is of the essence.

Keeping Them Flying

While the pilots, firemen and medics fly the actual missions, it is the maintenance men on the ground that make it all possible. Det. 4 maintenance men under the supervision of SMSgt. Joe Smith, have many times worked around the clock to insure that a chopper was always ready to meet its alert commitment.

There seems to be an endless variety of human distress calls to which Rescue responds, a child is lost; a natural disaster strikes; aircrew men, hunters or skiers are missing . . . they all spell "scramble" to rescue. Last year Ramstein rescuemen scrambled 199 times in response to possible aircraft emergencies.

When needed, they are there: "That Others May Live."



Practice And The Real Thing—When not engaged in actual rescue work, members of the 40th ARRWg regularly practice to maintain their proficiency. In top left photo, an HH-43 crew uses the "hoist-basket" technique to make a pickup. In top right photo, a crewman hooks a fire suppression kit to a hovering HUSKIE before the crew engages in the fire-rescue drill shown in the next two photos. In bottom photographs, a survivor is carried to an HH-43 after a successful evacuation from an aircraft accident. Treatment is given on the way to the hospital. (USAF photos)

Huskie Happenings



...A Navy pilot who ejected from his F-8 after a flameout, was rescued by an HH-43B from Det 6, 41st ARRWg (MAC), Kadena AB, Okinawa. The survivor was located in a raft 25 miles from Naha AB and hoisted aboard without incident. Maj Bert E. Cowden, pilot of the rescue helicopter, stressed that the Navy pilot's "proper use of emergency radios and smoke were the two factors which contributed most to his speedy and safe recovery and return to Naha." Others manning the HUSKIE were Capt Gary Dietze, copilot; TSgt Charles Maxwell, flight engineer; Sgt Charles G. Block, medical technician; and SSgt Vincent K. Matulja, rescue specialist. ...An Air Force sergeant, seriously injured in a gunnery range explosion, was evacuated to the hospital by an HH-43 crew from Det 25, 44th ARRSq (MAC), Eglin AFB, Fla. Sgt Terry L. Goodson, medical technician, administered first aid to reduce the bleeding from the sergeant's artery. Other members of the rescue crew were Capt William L. Schaefer, pilot; Maj Robert R. Reeves, copilot, and Sgt Richard L. Potter, crewman. The prompt action of the ARRS men was credited with saving the accident victim's life. ...An HH-43 crew from Det 22, 42nd ARRSq (MAC), Mountain Home AFB, Idaho, evacuated two base personnel marooned on a small island below a dam in the Boise River. The survivors, whose canoe had been swamped as they attempted to run the rapids, were at the bottom of a 1500-foot canyon and surrounded by 30 to 50-foot trees—the swiftly running waters prevented swimming or rescue by boat. Despite adverse wind conditions, Maj Richard H. Heitz, pilot of the HH-43, was able to maintain a steady hover which allowed the hoist operator to make the recoveries without incident. Other members of the helicopter crew were Maj James H. Jones, copilot; Capt James E. Haughn (MC), flight surgeon; SSgt Gerald R. Boone, flight engineer; and Sgt Christopher L. Boyd, medical technician. ...A 74-year-old woman, injured when thrown from her horse while riding in the Superstition Mountains, was evacuated by a HH-43 crew from Det 16, 42nd ARRSq (MAC), Williams AFB, Ariz. Due to the rugged terrain, the HUSKIE crew landed in a dry creek bed a quarter of a mile away from the accident victim. She was treated by SSgt Jerry L. Copeland, medical technician, for internal and back injuries and then carried by litter to the helicopter. Others aboard were Maj Bruce M. Purvine, pilot; Sgt Jerry K. Rabenau, flight mechanic; and SSgt John Keller, Jr., firefighter. ...A pilot who ejected from his F-105 after it lost engine power two miles from Osan AB, Korea, was picked up seconds later by an HH-43B crew from the ARRS unit at the base. The slightly-injured pilot was treated by the para-rescue technician and then taken to Osan. Members of the rescue crew, all from Det 9, 41st ARRWg (MAC), were Capt William A. DeVries, pilot; Maj John R. Moulton, copilot; Sgt Douglas E. Wilson, SSgt's Raymond W. Murphy and John L. McGee, Jr., crewmen....

DET 7 HH-43's LOG 4,000 ACCIDENT-FREE HOURS

By Capt George V. Clements

Det 7, 41st ARRWg (MAC), recently flew its 4000th accident-free flying hour here at Misawa AFB, Japan. The HH-43B (PEDRO) was piloted by Maj Keaver Holley, Det 7

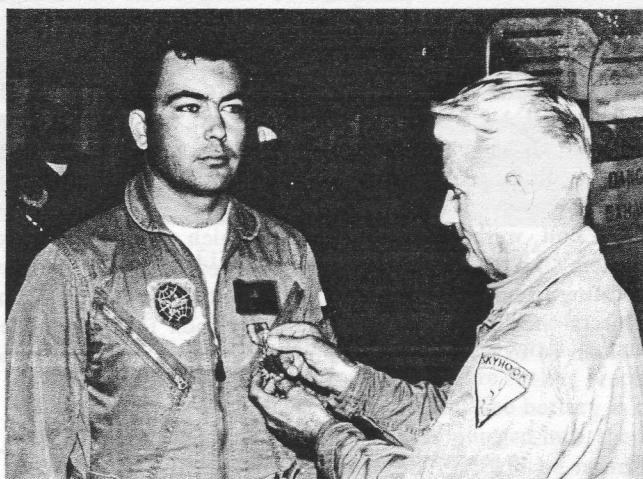
commander, and Col Vernon J. Henderson, 475th TFW Commander.

The two PEDROS arrived at Misawa in June 1963 to replace the older HH-19 helicopters which were being phased out of the rescue service. Major Holley, the fourth commander since the PEDRO's arrival, credits these seven years of accident free flying to the dedicated pilots and maintenance men, "both past and present," of Det 7. Thanks must also go to the wing maintenance support personnel who help keep PEDRO flying.

PEDRO is equipped to rescue downed pilots over land or sea. "The pilot's friend" also can carry the 1200 pound Fire Suppression Kit (FSK) that enables the rescue crew to extract crewmembers from burning aircraft. The rescue crew—consisting of a pilot, copilot, flight engineer, medical technician, and two firefighters—practice their rescue techniques daily so "THAT OTHERS MAY LIVE".

After Touchdown—Shown with "4,000-hour HH-43" are, left to right, CMSgt William Chastian, maintenance superintendent; Maj Keaver Holley, Det 7 commander; and Col Vernon Henderson, 475th TFW commander. (USAF photo)





Three airescuemen now in the United States recently received medals for their actions while serving in Vietnam.

In top photos, MajGen Allison Brooks, ARRS commander, presents Oak Leaf Clusters to the Air Medal to two men from Det 22, 42nd ARRSq, Mountain Home AFB, Idaho. The recipients were Capt Albert E. Tollefsen, left photograph, and TSgt Jimmy L. Ramsey. Captain Tollefsen received the 7th Oak Leaf Cluster and Sergeant Ramsey the 4th Oak Leaf Cluster for missions they flew while stationed in Vietnam. The medals were awarded for outstanding airmanship and courage in the successful accomplishment of an important mission while under heavy enemy fire. Captain Tollefsen has been awarded seven Scrolls of Honor and seven Mission Awards by Kaman Aerospace for past missions. Sergeant Ramsey has received two Scrolls and one Mission Award. (USAF photos)



In bottom photo, LtCol Archie R. Taylor, commander of Det 15, 42nd ARRSq, Luke AFB, Ariz., presents SSgt Jessie C. Spruiell the first through eighth Oak Leaf Cluster to the Air Medal. Maj E. E. "Henry" Wallace, the detachment safety officer, reads the citations. Sergeant Spruiell

earned the clusters for his meritorious service while assigned in Vietnam. He flew almost 480 combat hours as a rescue helicopter flight engineer while in Southeast Asia. (USAF photo by Sgt Jim Williams)

PARARESCUEMAN RECEIVES SILVER STAR

HQ ARRS, Scott AFB, Ill.—A 22-year-old pararescueman of the Aerospace Rescue and Recovery Service who risked his life in Vietnam to save an American pilot received the nation's third highest award for gallantry recently. Air Force Sergeant Paul E. Fatka flew here from Pease AFB, N. H., to be presented the Silver Star by MajGen Allison C. Brooks, commander of ARRS.

While in Vietnam, Fatka was assigned to Det 11, 38th ARRSq at Tuy Hoa AB. He was a member of an HH-43 Pedro helicopter crew which responded to an alert after an F-100 pilot was forced to eject from his fighter. The pilot had landed in a bowl-shaped mountain valley near Tuy Hoa known to contain hostile forces. Fatka's Pedro arrived 30 minutes after the alert to find the densely jungled area already the scene of a search by Army helicopters; however, none of the Army aircraft were equipped with a rescue hoist. In the dense jungle, they could not land to pick up the pilot if they found him.

The first problem for Fatka's crew was to find the pilot. "The pilot, in his haste to conceal himself from the enemy, had not turned off the parachute beacon which broadcasts automatically when a pilot ejects," the dark-haired, well-tanned pararescueman recalled. "It interfered with communications to the ground."

The Pedro crew asked the pilot to fire a flare to mark his position. Two smoke flares were sighted, then a pen gun flare. Guessing that the enemy might have popped the smoke flares, the Pedro crew went after the pen gun flare. The fighter pilot later denied having fired any flare for fear the enemy might locate him. The jungle overgrowth was too dense for the Pedro crew to see the pilot. Fatka volunteered to ride the 150 feet on the rescue cable to the ground and search for the pilot.

"I was on the ground about 20 minutes looking for him," Fatka said. "I didn't have a machete, so I had to pick my way through the undergrowth carrying a medical kit and other equipment."

The valley was interlaced with caves used by the enemy. Fatka found several during his search and thought the pilot might have crawled into one to hide. "I found him sitting under a tree," the pararescueman said. "He had a sprained ankle—which swelled up like a balloon the next day—but was in good condition."

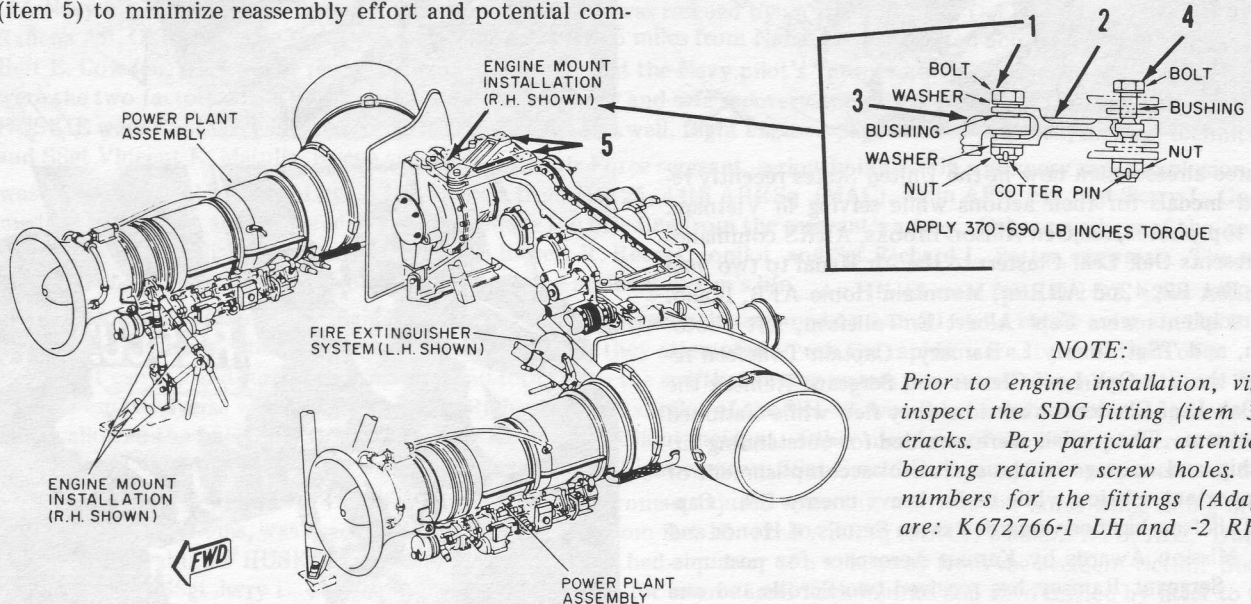
The hovering Pedro again lowered the rescue hoist cable. Fatka placed the pilot on the seat and watched him reeled up to safety. The cable returned, this time for the pararescueman, and Fatka was soon back in his helicopter returning to Tuy Hoa.

UH-2C; HH-2 Upper Aft Engine Mount

by H. Zubkoff, Service Engineer

A future change will provide clarification of NAVAIR 01-260HCA-2-4 instructions relative to disconnecting the upper aft engine mount for engine removal. (The area being discussed is shown in the accompanying illustration.) When removing an engine or combining gearbox, remove the bolt, washer and nut (item 1) which connects the link, (item 2) P/N K672765-1, to the speed decenter gearbox fitting (item 3). Avoid removal of bolt (item 4) which connects the link to the combining gearbox fork assemblies (item 5) to minimize reassembly effort and potential com-

ponent damage. On re-installation, torque the bolt to 370 pound-inches. If the cotter pin hole is not aligned, turn the nut farther in the tightening direction to align the hole, but do not exceed 744 pound-inches. If cotter pin hole alignment cannot be obtained between 370-744 pound-inches torque, remove the nut, add an AN960-816L washer (under the nut) and repeat the above procedure. The torque procedures and torque values discussed here apply to both bolts (items 1 and 4).



NOTE:

Prior to engine installation, visually inspect the SDG fitting (item 3) for cracks. Pay particular attention to bearing retainer screw holes. Part numbers for the fittings (Adapters) are: K672766-1 LH and -2 RH.

UH-2C; HH-2 TRANSMISSION OIL TANK

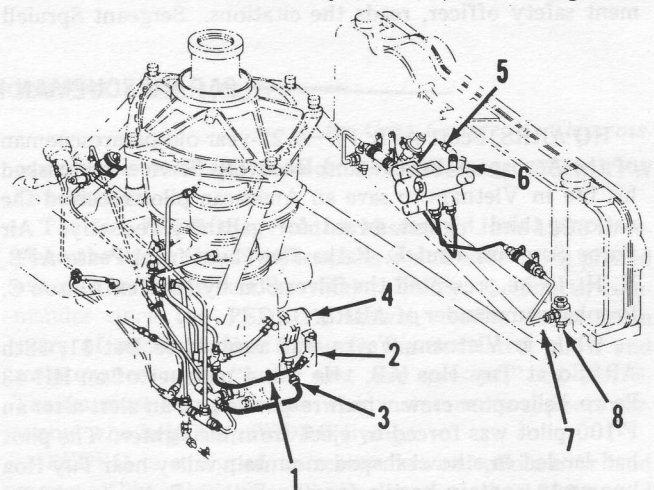
by R. Trella, Service Engineer

If the transmission oil tank level appears low after an aircraft has been shut down for a period of time, it may be due to seepage by a faulty oil pump or filter check valve rather than normal consumption or lossage. In such cases, if oil is added to restore the normal level in the tank, this, plus the oil that inadvertently drained into the gearbox sump will create an excessive oil condition in the system. At time of next aircraft turn-up, the scavenge portion of the pump will return the sump oil to the tank and overflow will result.

To determine which oil pump is at fault (main or combining gearbox) check for excessive oil in each gearbox by disconnecting the respective scavenge oil lines at their lowest points and measuring the drained oil. Since both gearboxes are of the dry sump type, only a small amount of residual oil should be evident. Excessive drainage (approximately equaling the amount missing from the oil tank) will identify the gearbox with the faulty oil pump or filter check valve.

The following checks (with accompanying illustration) can be used to isolate the internal leakage cause:

1. Main transmission oil filter check: Disconnect line (item 1) at the filter assembly (item 2). A large quantity of oil indicates a faulty check valve.
2. Main transmission oil pump check: Disconnect line (3) at pump (4). A large amount of oil indicates a faulty oil pump.



3. Combining gearbox filter check: Disconnect line (5) at pump (6). A large amount of oil discharge indicates faulty filter check valve.

4. Combining gearbox oil pump check: Disconnect line (7) at the chip detector housing (8). A large quantity of oil indicates a faulty oil pump.

For procedures necessary to replace faulty components located by the preceding checks, refer to the applicable handbooks.

Timely Tips

ASE AMPLIFIER INTERCHANGEABILITY

(UH/HH)

The following list reflects the latest information concerning automatic stabilization equipment amplifier applicability. (In addition to the part number, a stencil should appear on all UH-2C, HH-2C and HH-2D ASE amplifiers indicating aircraft model applicability.)

UH-2A/UH-2B ONLY

9616-10-04; FSN 2RH6615-955-0784BH7 X

UH-2C ONLY

K687703-1; FSN RH6615-880-1239BH7 X

HH-2C/HH-2D;

K687703-3; FSN RH6615-461-1630BH7 X

Be sure aircraft applicability is checked prior to installing an ASE amplifier.

J. J. McMahon, Service Engineer

AUXILIARY FUEL TANK SOLENOID VENT VALVE

(UH-2)

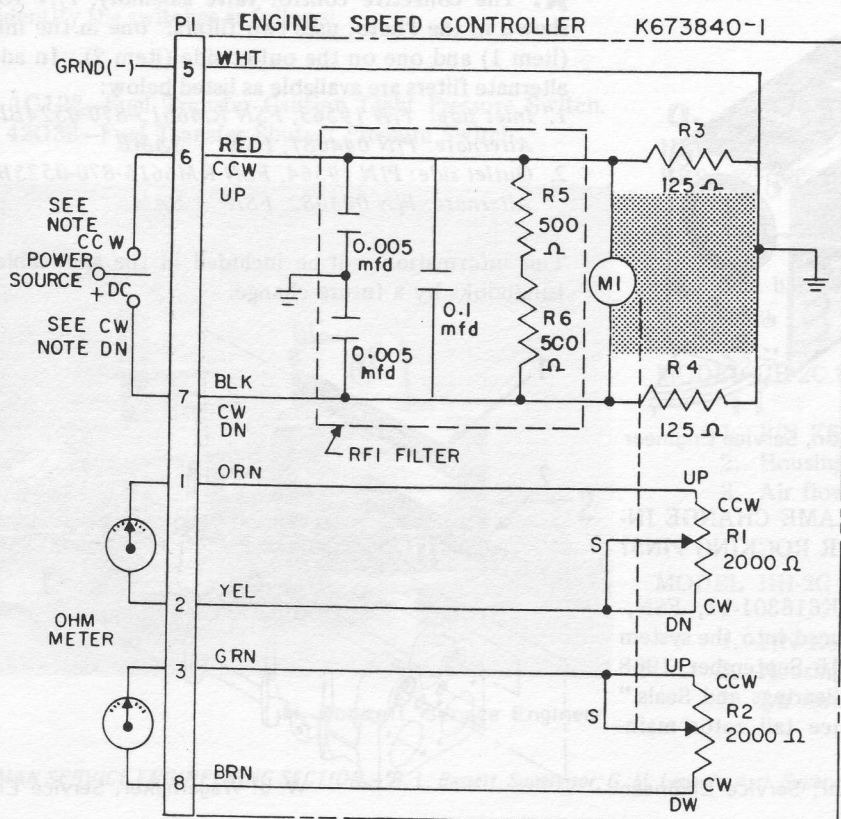
In the event of a "no aux tank fuel transfer" gripe, a quick check for solenoid vent valve operation can be made by opening and closing the pressure fueling precheck panel door several times. Be sure that the battery is connected or that external 24 VDC is plugged into the DC receptacle. A definite audible "clunk" will be heard and felt at the vent valve as it cycles between open and closed. The vent valves should also be checked for air flow each time pressure fueling is accomplished (similar to the check required for the internal tank vents), except that the aux tank vents can only be checked after the pressure fueling pre-check has been completed and after actual pressure fueling begins. The Pressure Fueling Servicing instructions in NAVAIR 01-260HCA-2-1, will be amended to specifically include the aux tank vent valve check after pressure fueling begins.

H. Zubkoff, Service Engineer

NAVAIR 01-260HCA-2-6 HANDBOOK CHANGE

(H-2)

A future change to NAVAIR 01-260HCA-2-6, INSTRUMENTS, will delete a portion of the schematic shown in Figure 4-19E (Page 140J; Changed 1 September 1969). The schematic will be changed as shown in the accompanying illustration (note shaded area).



NOTE:

WITH RESPECT TO RPM CW MOTION DECREASES RPM AND CCW MOTION INCREASES RPM.

CAUTION

IF POWER IS APPLIED TO THE MOTOR IN A STALLED CONDITION FOR ONE MINUTE AT LEAST A FIVE MINUTE INTERVAL IS REQUIRED TO COOL OFF THE MOTOR AND RESISTERS BEFORE PROCEEDING WITH FURTHER TESTS.

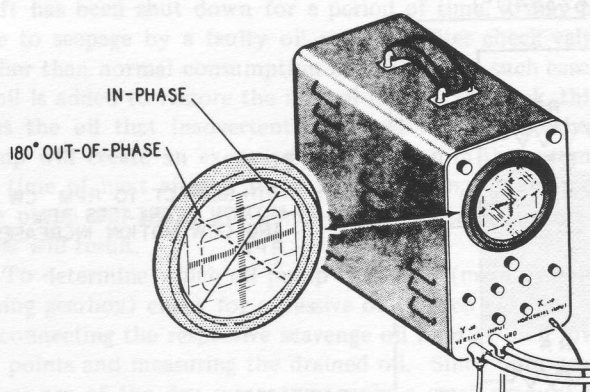
J. J. McMahon, Service Engineer

Q's AND A's

If you have a question regarding Kaman Aircraft maintenance, send it along to Rotor Tips. The Service Department's analysts will be glad to answer it.

Q. (Applies UH-2) SHOULD AN IN-PHASE CONDITION BE SIMULATED ON THE OSCILLOSCOPE PRIOR TO TESTING A DIRECTIONAL TRIM STRUT?

A. Yes, because proper checkout of the trim strut assembly is dependent on properly reading an in-phase indication. The in-phase/out-of-phase condition shown in Figure 4-35 of NAVAIR 01-260HCA-2-5 is a typical indication. (The accompanying illustration reproduces a portion of Figure 4-35.) It is entirely possible that the actual in-phase condition shown on a given oscilloscope will be opposite from what is depicted. In order to preclude the possibility of an unnecessary rejection of a trim control strut assembly, simulate an in-phase condition as follows: apply an identical signal to both the X and Y inputs of the scope to be used. The resultant indication of the scope will be in-phase. This information will be included in applicable manuals by a future change. For information concerning permanent mounting of the K604621 rod and strut fixture, refer to the January-February issue of Kaman Rotor Tips.



J. J. McMahon, Service Engineer

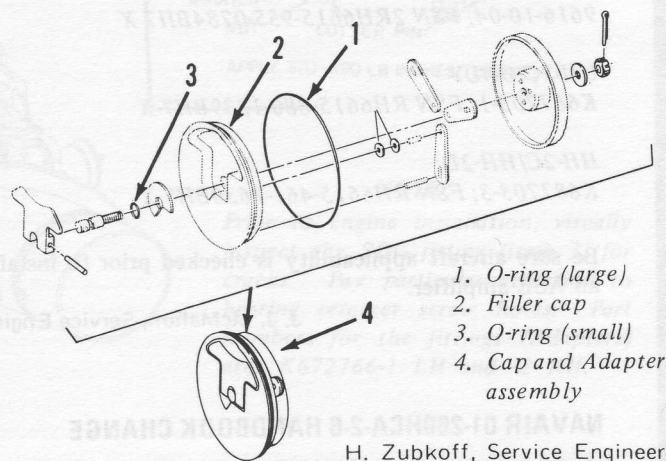
Q. (Applies UH-2) WHICH AIRFRAME CHANGE INTRODUCED THE NEW TAIL ROTOR ROCKING PINS?

A. Tail rotor rocking pins, P/N K616301-11, FSN, RM1615-879-6222UH6X, were introduced into the system by H-2 Airframe Change 136, dated 15 September, 1968 and titled: "Tail Rotor; Improved Bearings and Seals." Compliance with the AFC will reduce tail rotor maintenance time.

W. J. Wagemaker, Service Engineer

Q. (Applies UH-2; HH-2) A LEAKING AUXILIARY FUEL TANK FILLER CAP CAN BE REPAIRED BY INSTALLING A NEW O-RING: HOWEVER, THE IDENTITY CANNOT BE FOUND IN THE AIRFRAME IPB BECAUSE IT IS A GFE COMPONENT. WHAT IS THE O-RING PART NUMBER?

A. There are two O-rings. The large visible O-ring (item 1 in the accompanying illustration) is P/N MS29513-339, FSN 9Z 5330-251-9371. Fuel leakage around the edge of the filler cap (item 2) can be corrected by replacing this O-ring. There is also a small O-ring, P/N MS29513-12, FSN 9Z 5330-248-3836 (item 3), which cannot be seen without disassembling the cap. This O-ring is positioned under the handle pin-cone. Leakage around the handle can be corrected by replacing this O-ring.



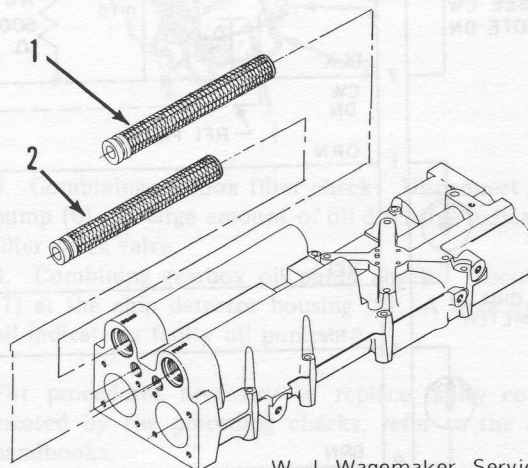
H. Zubkoff, Service Engineer

Q. (Applies UH-2) WHAT ARE THE PART NUMBERS FOR THE FILTERS USED IN THE COLLECTIVE CONTROL VALVE ASSEMBLY?

A. The collective control valve assembly, P/N 18100-1, shown in the Photo, uses two filters: one in the inlet side (item 1) and one on the outlet side (item 2). In addition, alternate filters are available as listed below:

1. Inlet side: P/N 19563, FSN RM6615-870-0524BH1X
Alternate: P/N 044081, FSN SAME
2. Outlet side: P/N 19564, FSN RM6615-870-0525BH1X
Alternate: P/N 044082, FSN SAME

This information will be included in the applicable handbooks by a future change.



W. J. Wagemaker, Service Engineer

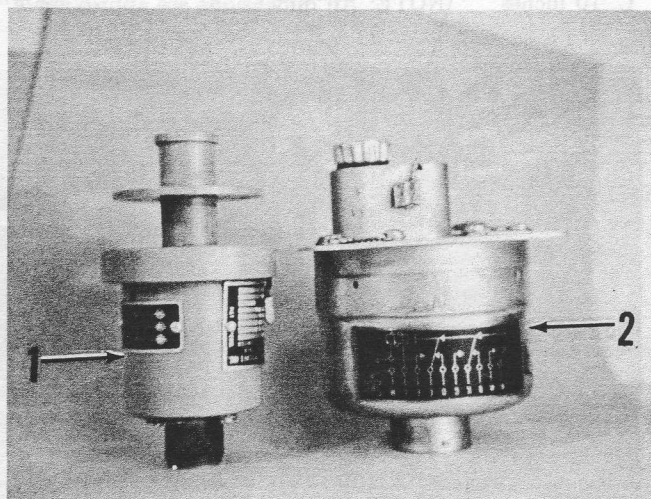
The callouts assigned to the fuel switches discussed in this column of the March-April issue of KRT were transposed. The information presented here is correct.

Q. (Applies UH-2) PRESSURE SWITCHES P/N 42G38 AND 1G122 ARE BOTH REFERRED TO AS "FUEL TRANSFER PRESSURE SWITCH" BY THE MIM. WHAT IS THE DIFFERENCE?

A. The difference between the two switches can best be illustrated by describing the function each performs when installed in the fuel system. For example: Switch P/N 42G38 (item 2 in accompanying Photo) could be identified as "sump tank, high level fuel transfer shutoff pressure switch." Switch, P/N 1G122 (item 1), could be identified as the "fuel transfer caution light pressure switch." The 42G38 switch reacts to pressure within the fuel cell gravity filler neck. It is mounted inside the aft cabin on the right-hand side of the fuselage just above the forward fuel cell gravity filler neck. The switch is a safety feature and will function in the event the forward tank fuel/defuel valve fails to close when the sump tank is filled during normal fuel transfer. In the event pressure should buildup within the filler neck, the switch will de-energize the aft tank transfer pumps and the aux tank compressor in order to prevent overfilling and rupturing the sump tank. The switch will automatically activate the fuel transfer system again when the sump tank fuel level drops approximately 2-3 inches below the filler neck level.

The 1G122 switch is installed on a bracket in the forward right-hand sump of the aft fuel cell (it is accessible by removing the sump external access panel on the bottom of the fuselage). This switch will activate the fuel transfer caution light on the overhead fuse and circuit breaker panel. It will function in the event the transfer fuel pressure from either the aux or aft tanks decreases to the point where fuel transfer is inadequate. The MIM will be changed to identify the switches as follows:

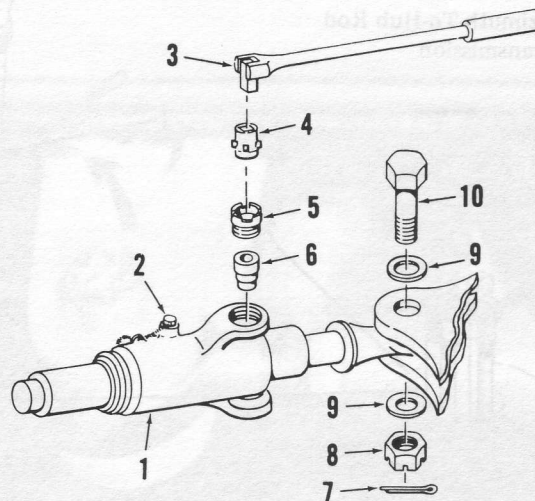
1. 1G122—Fuel Transfer Caution Light Pressure Switch.
2. 42G38—Fuel Transfer Shutoff Pressure Switch.



H. Zubkoff, Service Engineer

Q. (Applies UH-2) WHAT IS THE PROPER TORQUE FOR THE MAIN ROTOR BLADE DAMPER BARREL PIN PLUG, P/N K612006-13 (FSN RM1560-895-9853 BH6X)?

A. The proper torque for the aluminum barrel pin plug (item 5 in the illustration), is 50-100 pound-inches. The removal adapter (item 4), engages lugs or ears on the plug and, if excess torque is applied, the resultant damage could make removal of the plug difficult.



- | | |
|---|--------------------|
| 1. Main rotor damper assembly | 5. Barrel pin plug |
| 2. Filler port | 6. Barrel pin |
| 3. Standard 1/2 inch drive wrench | 7. Cotter pin |
| 4. Damper installation and removal adapter assembly (P/N K604726-1) | 8. Nut |
| | 9. Washer |
| | 10. Bolt |

W. J. Wagemaker, Service Engineer

Q. (Applies UH-2C; HH-2) THE UH-2C AND HH-2 HELICOPTERS USE DIFFERENT OIL COOLER BLOWERS. WHAT ARE THE DIFFERENCES?

A. The basic differences between oil cooler blowers are as follows:

MODEL UH-2C Oil Cooler Blower Assembly

1. P/N K677012-1
2. Housing diameter: Approximately 11-1/2 inches
3. Air flow: 4000 CFM at 6500 RPM

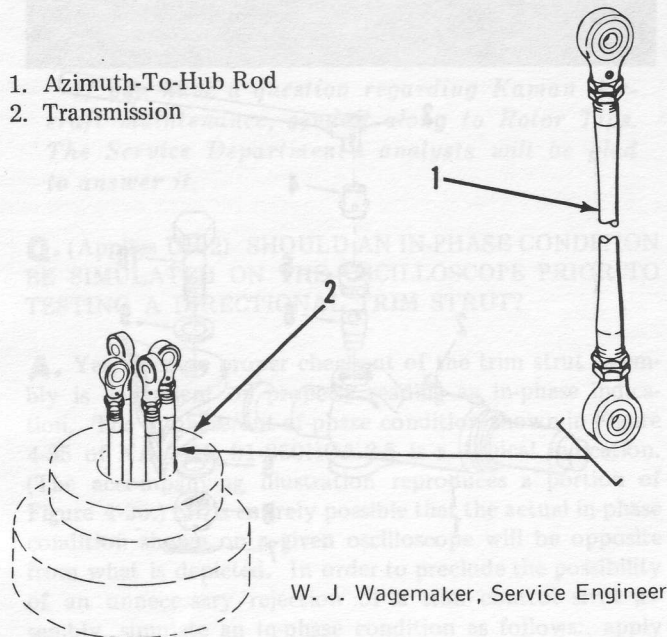
MODEL HH-2C and HH-2D Oil Cooler Blower Assembly

1. P/N K677707-1
2. Housing diameter: Approximately 13-1/4 inches
3. Air flow: 6000 CFM at 6500 RPM

R. Trella, Service Engineer

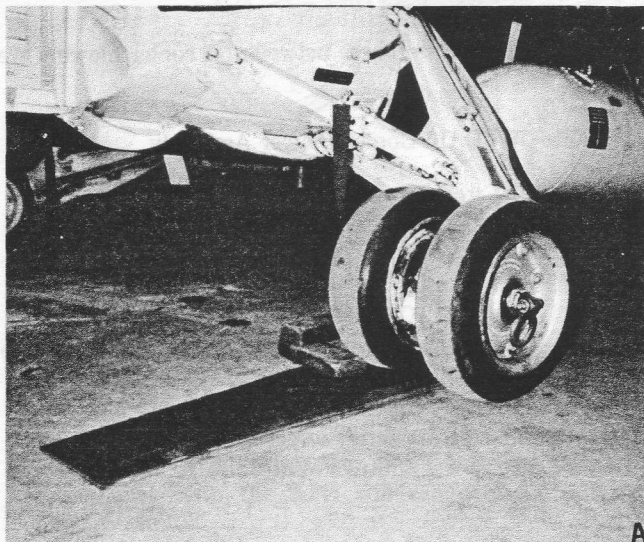
AZIMUTH-TO-HUB ROD INSPECTION CRITERIA (UH-2)

Pending incorporation into the applicable handbooks, the following inspection criteria is applicable (location shown in illustration): Maximum bend over entire length not to exceed 0.87-inch. No sharp bends or kinks permitted; no mechanical straightening permitted. Dents up to 0.005-inch deep may be blended out; damage beyond limits specified necessitates rod replacement. This information will be incorporated into applicable handbooks by a future change.



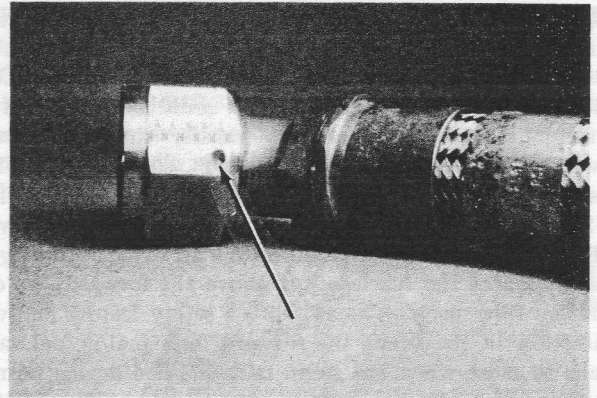
HH-2C WHEEL RAMP (EMERGENCY PROCEDURE (HH-2C))

When the main gear on the HH-2C requires servicing, and the jack normally used is not available, the gear can be serviced as follows: Photo A shows an HH-2C gear on the flat end of a plywood ramp, with one chocked tire supporting the helicopter. The other wheel, because it clears the deck, Photo B, can readily be serviced. (The ramp may be used for the inboard or the outboard wheel.) Although the ramp may be fabricated from any metal or hard wood, the one shown here was built-up with two thicknesses of plywood to the dimensions shown on the illustration.

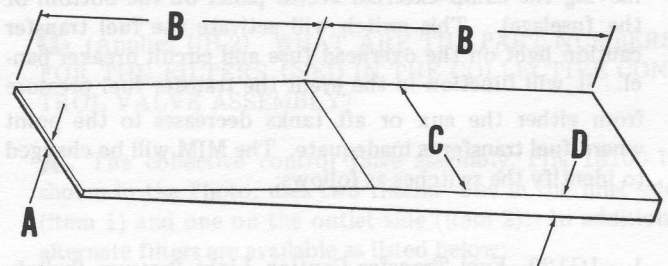


TITEFLEX HOSE ASSEMBLY (HH-43; UH-2; HH-2)

The arrow in the accompanying Photo points to a hole in a B-nut. A roll pin, pressed into this hole, prevents the nut from sliding away from the end of the hose assembly when the hose is not connected. If the roll-pin loosens and falls out of the nut it is not cause for concern; merely use "as is" until a replacement pin can be installed.

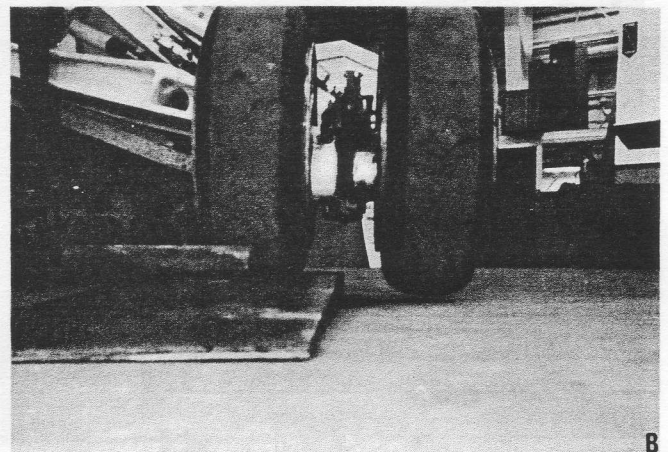


H. Zubkoff, Service Engineer



- A. 1/4 inch
- B. 24 inches
- C. 10 inches
- D. 1-3/4 inches

NOTE: All dimensions are approximate.



J. Legault, Assistant Supervisor
Service Engineering

H-2 Nose Door Curtain/AFC115

by Herman Zubkoff,
Service Engineer

During a recent inspection, the interference shown in Photo A was discovered. (Photo B shows the same area from a different angle, with the screw removed; note the damage.) The area of concern is the nose door curtain installation. The resultant inspection indicates the error was made during incorporation of H-2 Airframe Change 115. Illustration 1 depicts a portion of Figure 16, page 19 of AFC 115. As can be seen, screws of three different sizes are used. They are installed as follows: Two AN

526-1032R11; one - 1032R10; four - 1032R9; and one - 1032R11. These screws must be installed in that order because of the varying thicknesses of material. Furthermore, the - 1032R9 screw (indicated by arrow) is directly in-line with the directional control crank and under no circumstances should a screw other than an R9 be used. Because the crank is moveable, an interference might not be detected until the flight controls (foot pedals) are moved.

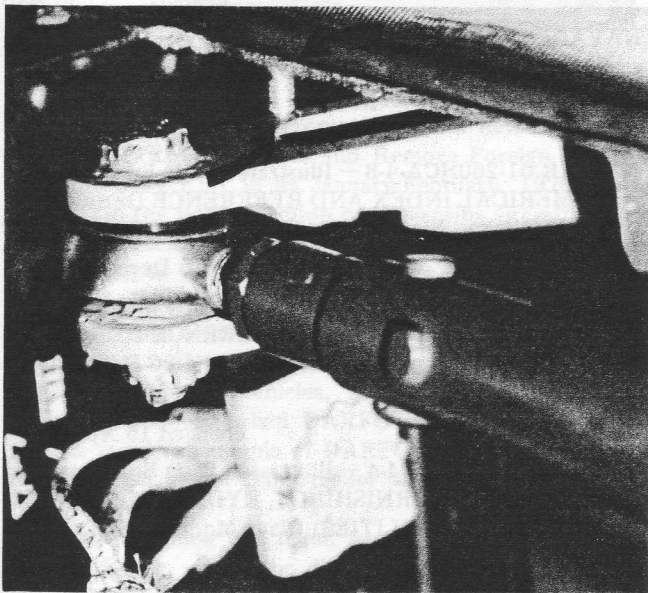


PHOTO A

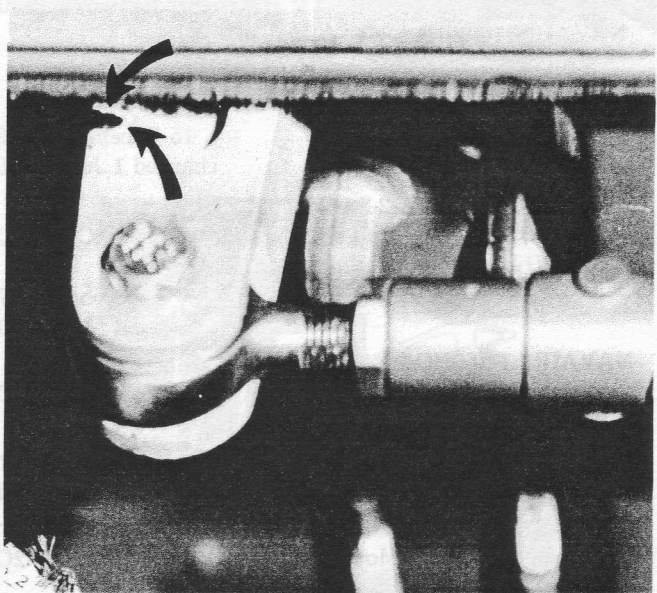
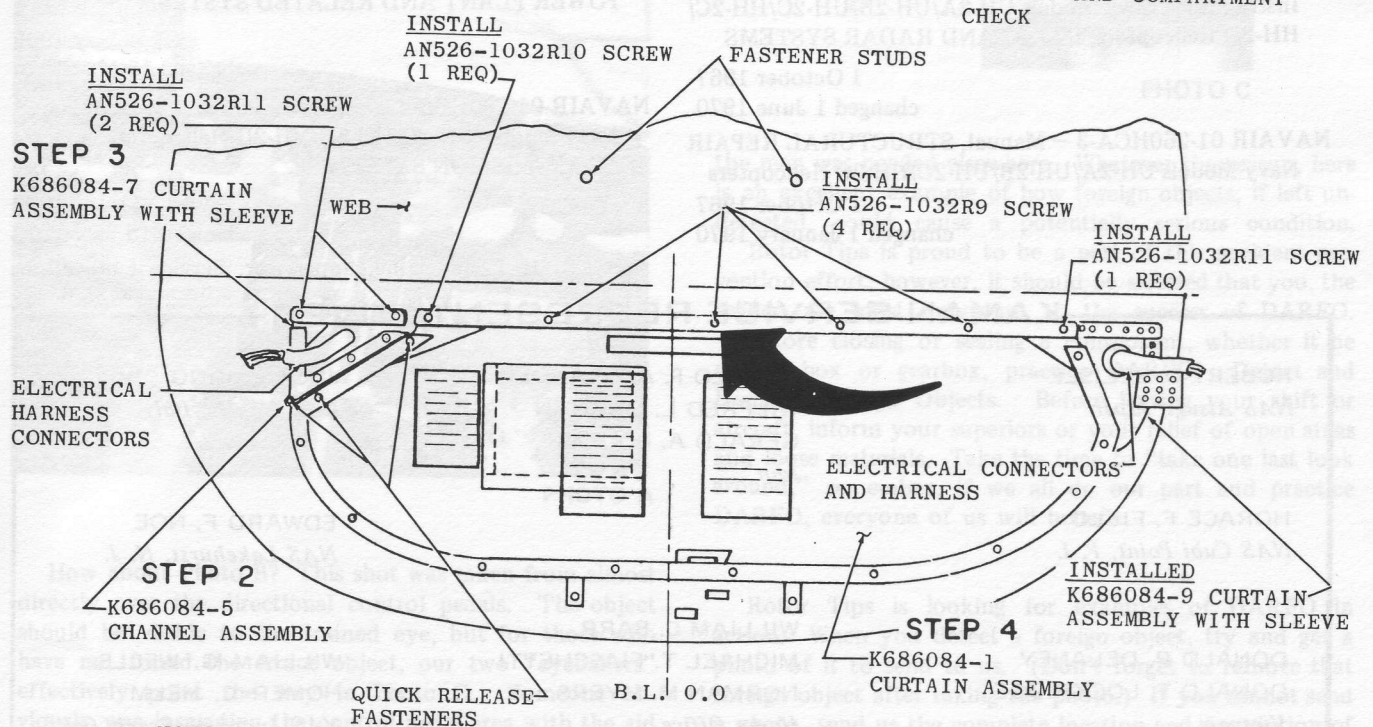


PHOTO B

STEP 1

CLEANUP AND COMPARTMENT
CHECK



NOTE
NOSE DOORS ARE
REMOVED FOR
CLARITY ONLY

ILLUSTRATION 1

CURRENT CHANGES

This list reflects the latest changes to the handbooks. Consult applicable "A" page for changes issued prior to those listed below.

	Issue Date		Issue Date
H-2 Airframe Change 148 — Power Plant, INSTALLATION OF REMOTE TOPPING CONTROLS IN CABIN	26 March 1970	NAVAIR 01-260HCA-N2 — Manual, CROSS SERVICING SCHEDULE Navy Models UH-2A/UH-2B/UH-2C Helicopters	1 October 1967 changed 15 December 1969
H-2 Airframe Change 155 — Power Plant and Related Systems, CROSS FEED FIRE EXTINGUISHER	27 April 1970	NAVAIR 01-260HCA-4-2 — Illustrated Parts Breakdown, Navy Models UH-2A/UH-2B Helicopters, DRIVE SYSTEMS	15 January 1967 changed 1 June 1970
NAVAIR 01-260HCA-1 — NATOPS FLIGHT MANUAL, Navy Models UH-2A/UH-2B Helicopters	15 March 1968 changed 1 March 1970	NAVAIR 01-260HCA-4-7 — Illustrated Parts Breakdown, SPECIAL TOOLS AND EQUIPMENT, Navy Models UH-2A/UH-2B Helicopters	15 December 1969
NAVAIR 01-260HCA-2-1 — Manual Maintenance Instructions, Navy Models UH-2A/UH-2B/UH-2C/HH-2C/HH-2D Helicopters, GENERAL INFORMATION	15 December 1969 changed 1 June 1970	NAVAIR 01-260HCA-4-8 — Illustrated Parts Breakdown NUMERICAL INDEX AND REFERENCE DESIGNATION INDEX, Navy Models UH-2A/UH-2B Helicopters	15 December 1969
NAVAIR 01-260HCA-2-2 — Manual, Maintenance Instructions, Navy Models UH-2A/UH-2B/UH-2C/HH-2C/HH-2D Helicopters, AIRFRAME	1 October 1967 changed 1 May 1970	NAVAIR 01-260HCB-4-1 — Illustrated Parts Breakdown, NUMERICAL INDEX AND REFERENCE DESIGNATION INDEX, Navy Models UH-2C/HH-2C Helicopters	15 November 1969 changed 15 April 1970
NAVAIR 01-260HCA-2-5.1 — Manual, Maintenance Instructions, Navy Models UH-2A/UH-2B/UH-2C/HH-2C/HH-2D Helicopters, INSTRUMENTS	1 October 1967 changed 1 June 1970	NAVAIR 01-260HCB-4-4 — Illustrated Parts Breakdown, EQUIPMENT (FURNISHINGS, HYDRAULICS, INSTRUMENTS, UTILITIES), Navy Models UH-2C/HH-2C Helicopters	1 May 1969 changed 15 April 1970
NAVAIR 01-260HCA-2-6 — Manual, Maintenance Instructions, Navy Models UH-2A/UH-2B/UH-2C/HH-2C/HH-2D Helicopters, ELECTRICAL SYSTEM	1 October 1967 changed 1 May 1970	NAVAIR 01-260HCB-4-5 — Illustrated Parts Breakdown, Navy Models UH-2C/HH-2C/HH-2D Helicopters, POWER PLANT AND RELATED SYSTEMS	1 May 1969 changed 15 May 1970
NAVAIR 01-260HCA-2-7 — Manual, Maintenance Instructions, Navy Models UH-2A/UH-2B/UH-2C/HH-2C/HH-2D Helicopters, RADIO AND RADAR SYSTEMS	1 October 1967 changed 1 June 1970	NAVAIR 01-260HCB-4-6 — Illustrated Parts Breakdown, Navy Models UH-2C/HH-2C/HH-2D Helicopters, TRANSMISSION SYSTEM	1 June 1967 changed 15 May 1970
NAVAIR 01-260HCA-3 — Manual, STRUCTURAL REPAIR Navy Models UH-2A/UH-2B/UH-2C/HH-2C Helicopters	1 October 1967 changed 1 January 1970		

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CUSTOMER OPERATIONS SECTION — ROBERT L. BASSETT, Supervisor



Along with the cry "Prevent FOD," a new cry is now heard — DARFO — Detect and Remove Foreign Objects! Introduced by KRT in its January-February, 1970, issue, DARFO is the positive action of preventing aircraft and/or personnel accidents. FOD is usually associated with engines and in reality is after the fact — the damage has occurred, therefore, "Foreign Object Damage." DARFO is associated with accident prevention in general, not specific damage to a component. Damage to engines, aircraft components, machines, vehicles, and to personnel will be drastically reduced when DARFO is practiced regularly.

This month's example of DARFO in action was sent in by a Kaman Rotor Tips reader who prefers to remain anonymous.

Photo A, which was taken from the pilot's seat of an HH-43 Huskie, shows the directional control pedals with the directional pedal adjusting rod in the center. The alert reader peered into the cabin and saw something that shouldn't be there — DO YOU???

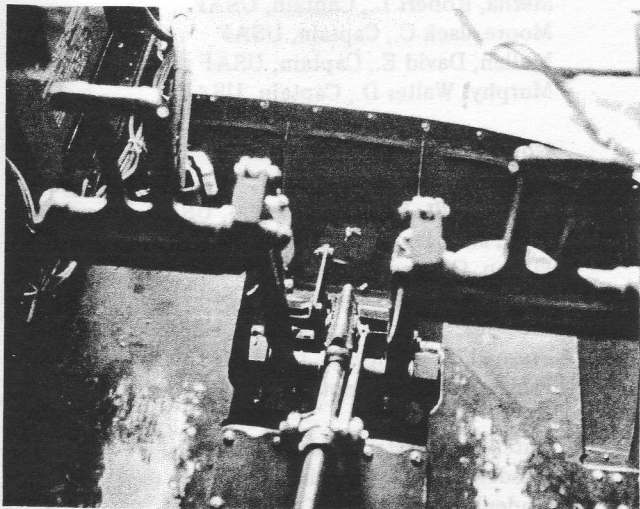


PHOTO A

How about Photo B? This shot was taken from almost directly over the directional control pedals. The object should be visible to the trained eye, but for those who have not found the errant object, our two "eyeballers" effectively point the way in Photo C. Someone obviously was inspecting the control pedal area with the aid of an inspection mirror. Again, how this item could be forgotten is anyone's guess; perhaps it was time for lunch or the end of the shift or perhaps an emergency arose and

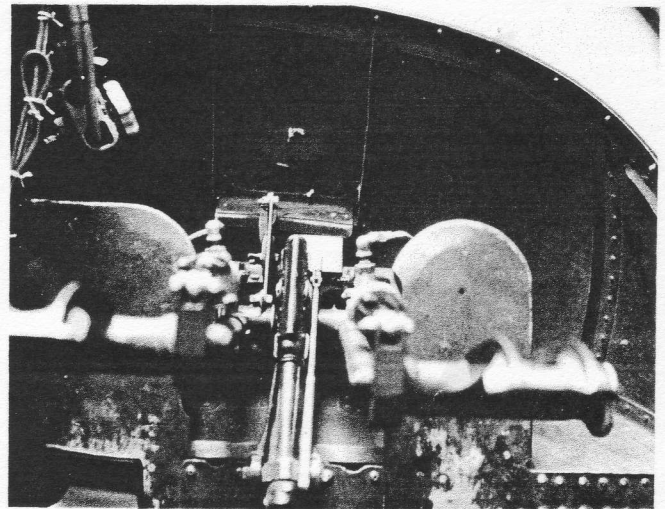


PHOTO B

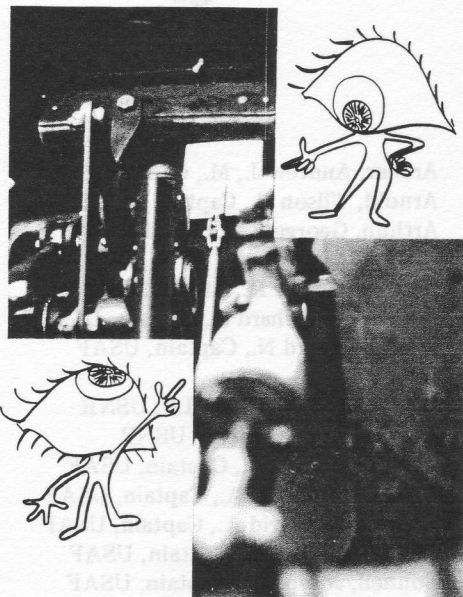


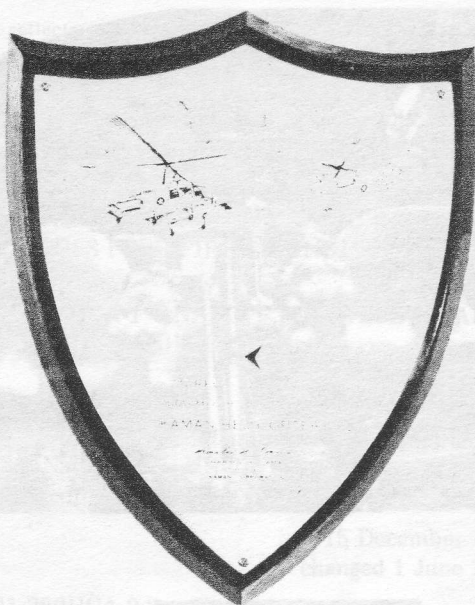
PHOTO C

the man was needed elsewhere. Whatever the reason, here is an excellent example of how foreign objects, if left undetected, could cause a potentially serious condition.

Rotor Tips is proud to be a part of this accident prevention effort; however, it should be stressed that you, the reader, are most important to the success of DARFO.

Before closing or sealing a component, whether it be a fuse box or gearbox, practice DARFO! Detect and Remove Foreign Objects. Before leaving your shift or aircraft, inform your superiors or your relief of open areas and loose materials. Take the time to "take one last look around," remember, if we all do our part and practice DARFO, everyone of us will benefit.

Rotor Tips is looking for examples of DARFO in action. When you detect a foreign object, try and get a photo of it to send to us. (Don't forget to remove that foreign object after taking the photo.) If you cannot send a photo, send us the complete location and description of your find (also, your impression of how it got there) — we will try to simulate the condition here at Kaman. We will credit the sender with the find if he desires.



1966

Archer, Andrew J., M., Captain, USAF
Arnold, Wilson T., Captain, USAF
Arthun, George B., Lt., USNR

Beason, Tyrone D., Lt., USNR
Bouckout, Richard J., Captain, USAF
Buck, Leonard N., Captain, USAF

Campbell, Richard W., Lt., USNR
Carroll, Paul G., Lt(jg), USNR
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Cochenour, David A., Captain, USAF
Collom, Robert C., Captain, USAF
Connell, Joseph T., Captain, USAF
Conner, Laurence W., Captain, USAF
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Deming, William J., Captain, USAF
Denham, John H., Captain, USAF
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Evans, Larry C., Captain, USAF

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Flournoy, John C., Captain, USAF
Franzel, Kenneth C., Captain, USAF

Gardner, Robert L., Captain, USAF
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Gurley, Sydney E., Captain, USAF

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Hallett, Lucius, Captain, USAF
Hills, Leonard L., Captain, USAF
Hoffman, Paul M., Lt., USNR
Hogan, Walter S., Captain, USAF
Holmes, David G., Lt., USN

Ingraham, Ronald L., Major, USAF

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Johnson, Michael A., Lt., USNR
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Kneen, John B., Captain, USAF
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Koelling, Glen A., Lt(jg), USNR

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Leech, Joseph V., Captain, USAF
LeFevre, Ramon M., Captain, USAF
Liebernecht, Von M., Captain, USAF
Lockhart, Floyd R., Captain, USAF
Logan, H. Edmond, Lt., USN
Luttinger, Jerome R., Captain, USAF

McCallum, James A., Lt., USN
McCulloch, David H., Lt., USN
McDougal, Robert D., Major, USAF
Merna, Robert L., Captain, USAF
Moore, Jack C., Captain, USAF
Mullen, David E., Captain, USAF
Murphy, Walter D., Captain, USAF

Nohr, Ralph J., Lt., USNR

Pattschmidt, Louis S., Captain, USAF
Peak, Jack D., Captain, USAF
Pinson, Charles R., Captain, USAF
Potter, Dale L., Captain, USAF
Precious, Thomas D., Captain, USAF
Presnell, Lawrence D., Lt., USN
Prince, Philip S., Captain, USAF

Ratcliffe, Chester R., Jr., LtCol, USAF
Reeder, Dan L., Captain, USAF
Rodenberg, James C., Captain, USAF

Salmans, Larry D., Captain, USAF
Schnee, Frank W., Captain, USAF
Solberg, Harold A., Captain, USAF
Strickler, James W., Lt, USN

Tyree, Dale E., Captain, USAF

SHOWN IS THE PLAQUE AWARDED TO PILOTS WHO HAVE LOGGED 1000 OR MORE HOURS IN HELICOPTERS PRODUCED BY KAMAN AEROSPACE CORPORATION. A PARTIAL LISTING, IN ALPHABETICAL ORDER, OF THE MORE THAN 350 RECIPIENTS IS ALSO PRESENTED.