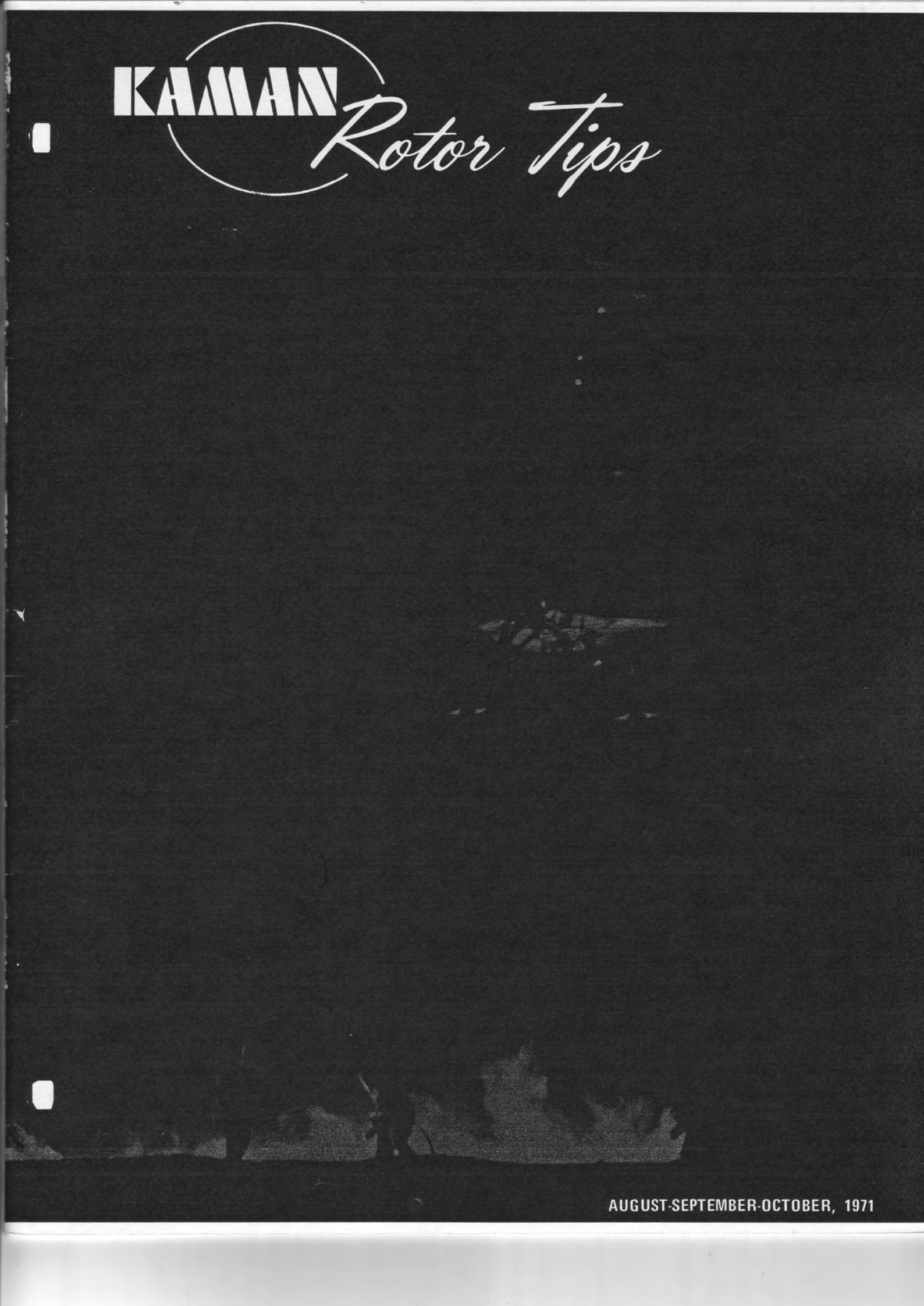
KAMAN Rotor Tips



AUGUST-SEPTEMBER-OCTOBER, 1971

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Rotor Tips

Volume VI Number 12

ON THE COVER

Flames from fiercely-burning aviation fuel cast an eerie glow over the Vietnamese landscape. USAF cameraman Sgt G. M. Boprie captured the scene as an HH-43 and firemen from Det 13, 3rd ARRGp, Phu Cat AB, practiced a simulated night rescue. Story on page 18.

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FEATURES

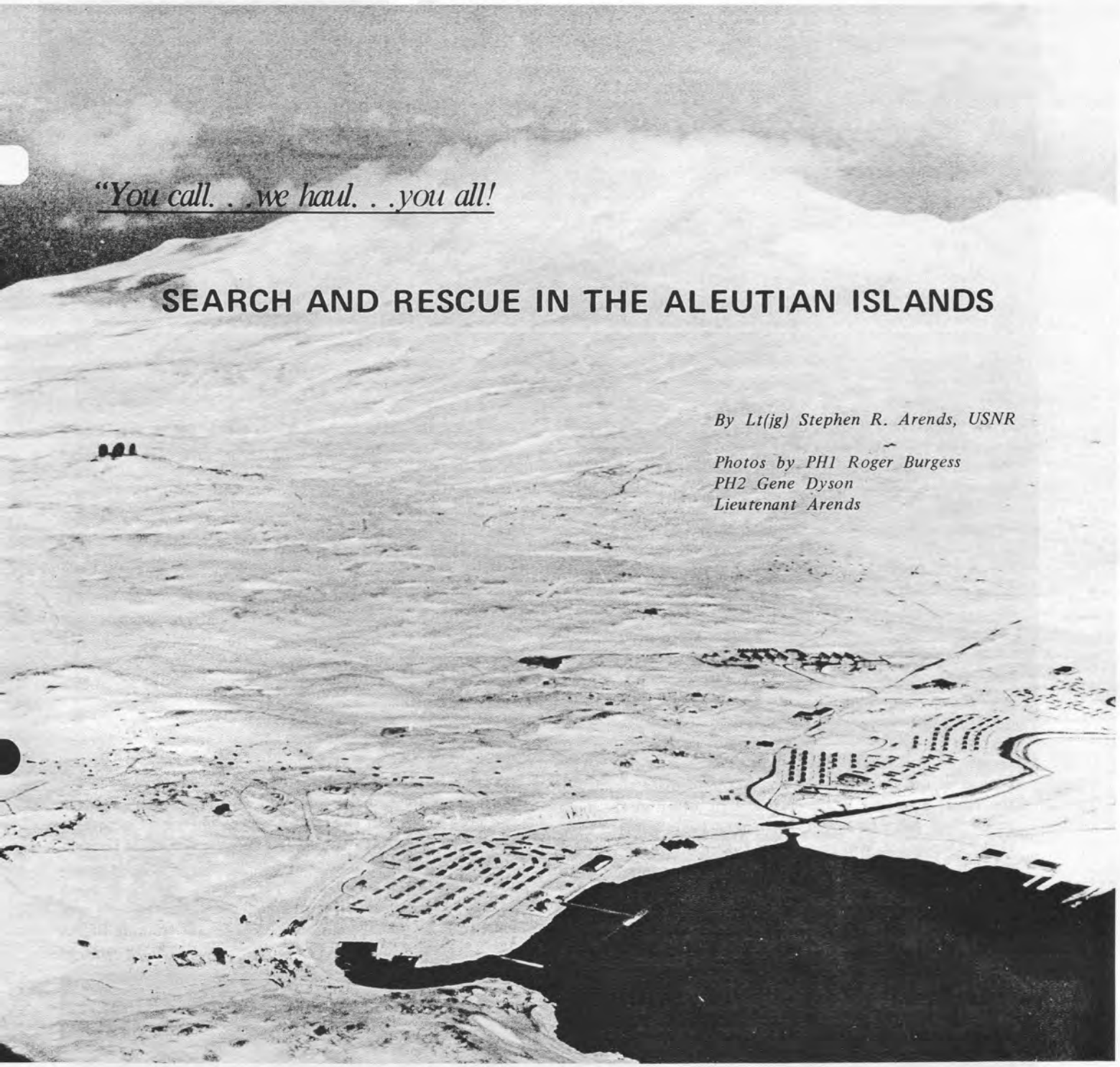
DEPARTMENTS

"You call. . .we haul. . .you all!

SEARCH AND RESCUE IN THE ALEUTIAN ISLANDS

By Lt(jg) Stephen R. Arends, USNR

Photos by PH1 Roger Burgess
PH2 Gene Dyson
Lieutenant Arends



ADAK, ALASKA—The unpredictable weather and the enormous volume of ship and aircraft traffic in the Adak area tend to make the days seem long for the men of the Search and Rescue Unit. The SAR coordinator, Lt Michael A. Williamson, is responsible for the coordination and control of all search and rescue operations in the portion of the Alaska Command territory from halfway along the Aleutian Islands to the coast of Siberia. This area includes over 1,300,000 square miles of the Bering Sea and the North Pacific. The Search and Rescue Unit at Naval Station Adak is located in the center of their SAR sector.

The remote island of Adak is situated approximately 1,200 miles west of Anchorage in a relatively unpopulated part of the world. Adak, which is the fifth largest city in the State of Alaska, has a population of over 5,000 military men and their dependents. There is no civilian community on the island. Other than Adak, only a few other military bases and native Aleut villages are located along the Aleutian Islands. This, however, is only a small portion of the people who depend upon the Adak SAR Unit for help. All ships and aircraft enroute between the United States and the Far East pass Adak via the Great Circle Route. Also, fishing fleets from throughout the world fish the waters along the Aleutian Islands.

The 24-hour per day watch is maintained by QM2 Michael A. Morgan, QM2 M. George O'Brien, and QM3 David Cradit at the SAR Control center. Day or night, any message or distress call from ships, aircraft, or any of the populated islands in the Aleutians must be evaluated by Lieutenant Williamson and the quartermaster on watch.

With the assets available, a decision must be made immediately to best help anyone in distress. An aircraft lost and overdue on a position report will require the assistance

of the Adak DF site. An emergency medical evacuation by helicopter or fixed-wing aircraft may save the life of a person on land or at sea. A sinking ship will need the assistance of the station tugs (YTM's), the fleet tug (ATF), and the Coast Guard Cutter Balsam. These emergencies are common occurrences for Adak SAR Center personnel to handle.

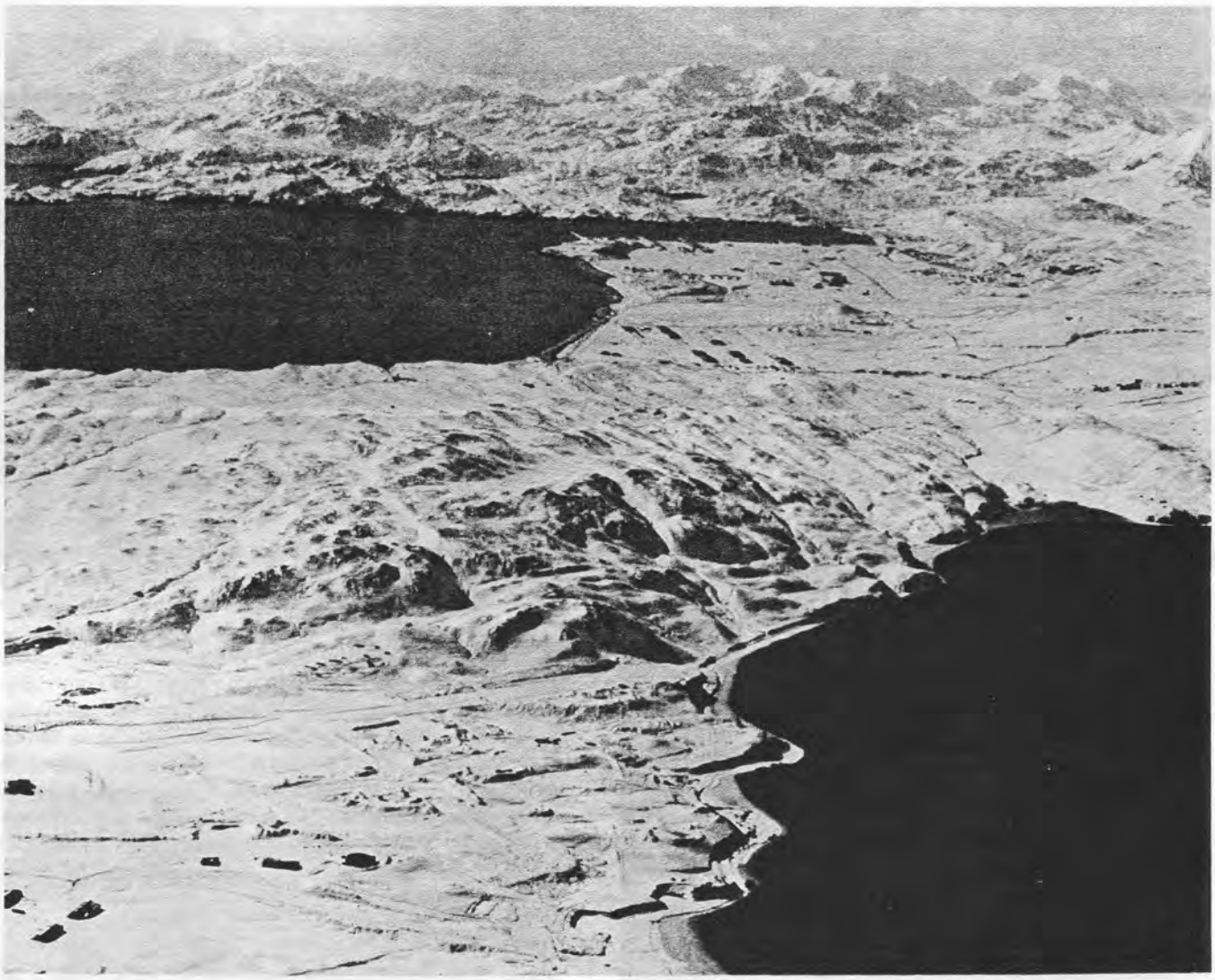
Sportsmen, pilots, and ship's crews know the importance of survival in the unforgiving weather of the Aleutians. Williwaws or gale wind storms and rain or snow every day of the year catch even the most carefully prepared without adequate shelter, food, and dry clothing. The photograph on page six shows what the Adak Sportsman's Club and the SAR pilots have done to protect hunters, fishermen, and hikers on Adak. These emergency shelters have provided a dry, warm night's sleep in the severe weather for several hunters. All sportsmen are required to check out with the Officer of the Day when leaving the immediate vicinity of the Naval Station. When they fail to return at the designated time prior to sunset, SAR must begin another case. Here, Lieutenant Williamson must decide whether to send the UH-2C helicopter or the Marine SAR teams, or both.

Hundreds of people owe their lives to the dedicated men of the SAR Unit. Recently a Russian fisherman had to be evacuated from his ship to Adak, where his leg was amputated to save his life. A native child was also evacuated from the island of Atka by the UH-2 after he suffered a broken arm in a fall. More recently in April, 1971, a seriously ill woman was evacuated from the Communist Estonian fishing vessel Ikhtiolog. Navy doctors performed emergency surgery onboard the Ikhtiolog while enroute to the Adak Naval Hospital. Because of bad weather, high seas, and the woman's serious condition, an air evacuation by helicopter was not possible. The doctors and woman were transferred to the station YTM tug while the UH-2C hovered alongside if needed. The efforts of the Navy doctors, the tug crews, and the helo crews saved this woman's life.

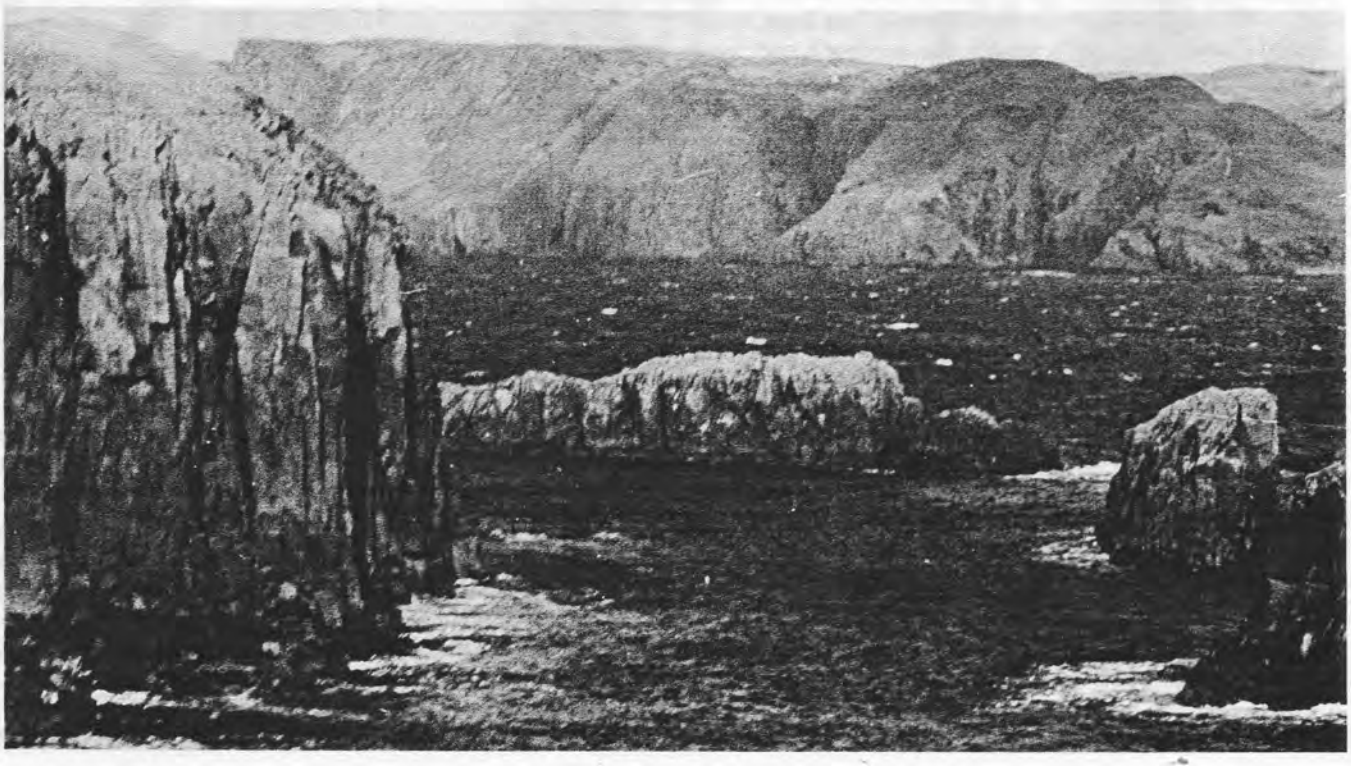
The success of these rescues doesn't just happen. Training exercises are performed daily to ensure that every rescue is safe and expedient. Time is of major importance since exposure and frostbite can cause permanent damage and even death. In the sea a person's chance of survival is limited to only 10 to 15 minutes because the water temperature the year-round stays at 38° F. All helicopter pilots and rescue aircrewmen must periodically qualify in open sea rescue. This involves donning the regular diver's wet suits that all pilots and crewmen wear for training flights

(continued on page 6)

ADAK SEASPRITE—UH-2A, since replaced by a twin-engine UH-2C, on the helo pad with 3,900-foot Mount Moffett in the background. Despite the rugged terrain and usually poor flying conditions, the Adak SEASPRITES have a seven year accident-free record. (USN photo)



SAR SEARCH AREAS—The Adak land, sea and air SAR teams must contend with picturesque but inhospitable terrain. Often search areas may be obscured by fog, drizzle, or snow. The Naval station complex and airfield are shown in the upper center of the top USN photo. The Naval communications station complex is in the lower left corner and the Adak mountain range is in the background. In bottom USN photo, by Photographer Burgess, the coastline of Adak is shown as it meets the Bering Sea. Year-'round water temperature is a frigid 38° F.



SURVIVAL—Pilots and aircrewmen practice water survival in the Bering Sea. Lt(jg) S. R. Arends, left, is wearing a two-piece divers wet suit that is normally worn under a Navy Nomax flight suit. Crewman on right is wearing regular Navy Mark V "Poopy Suit." Tests conducted at Adak proved the two-piece wet suit superior to the Poopy Suit both in and out of the water. In top right photo, pilots and aircrewmen are spending a "cool" hour training in Sweepers Cove, Adak. (USN photos by Photographer Dyson) In next photo, Lt M. C. "Skip" Davis (MC), a flight surgeon, shows how a medical body bag can be used to keep a survivor warm. Lt Michael A. Williamson plays the part of the "survivor." (USN photo)

(continued from page 4)

and then performing certain maneuvers in the frigid waters of the Bering Sea. The photographs show how the rescue aircrewmen use a medical "body bag" to help save a man's life. Since exposure to the wind and water can drop a person's body temperature to a dangerously low level, an enclosed "body bag" will contain the survivor's own body heat. Periodic training exercises are also coordinated with the USCG Cutter Confidence from Kodiak, Alaska. Shipboard operations as well as extended search patterns are flown from the ship while underway.

Besides actual search and rescue missions, the helicopter pilots perform a variety of missions with the Kaman UH-2C. Utility would best describe these daily missions of the helo crews. Navigation buoys and obstruction lights must be periodically inspected. When the foul weather prevents landing craft from reaching the lights by sea, the maintenance crews are flown in by helicopter. Survival shelters are transported across the impassable tundra and mountains by the UH-2C. The approach lights for the runways of Adak extend out to sea. When high seas prevent the boats from reaching the pilings, the maintenance crews are lowered by personnel hoist from the helicopter to service the lights. Fire fighting training exercises are conducted with the dry powder airlift unit beneath the UH-2C. Santa Claus arrives each year by helicopter for the childrens' Christmas party. A wide variety of objects—including an injured caribou—has been carried in the helicopter cargo

SHELTER—A UH-2C hoists one of the 12 survival shelters that have been placed throughout the island to protect sportsmen and others from the severe Adak weather. (USN photo by Photographer Burgess)

net. And now, with the new twin-engine UH-2C, the pilots can transport heavier cargo than was previously possible with the UH-2A/B.

The fact that the Adak UH-2's have had an accident-free record since 1964 is a credit to the Kaman helicopter, the pilots who fly them, and the maintenance crews who keep the SEASPRITES flying. Severe turbulence, mountain flying, and icing conditions the year round demand the most from the aircraft and men.

RESCUE TEAM—Adak SAR pilots and maintenance men, left to right, are AT1 Jerry Abbott, ADJC Leonel Mendoza, AMH3 James Sheppard, ADR1 Spencer Nichols, ADR3 Floyd Murray, AT3 Gary Lee, AMSAN David Kissler, AE3 Ron Clark, AE3 Larry Rollo, ADR3 Kerry Baxter, Lt(jg) Rod Faino, LCdr Richard L. Greenwood, LCdr Kenneth L. Sterling, Lt(jg) Walt J. Cummings, Lt Michael A. Williamson, Lt(jg) Stephen R. Arends, Lt Andy P. Masslofsky, Lt Neil W. Boynton. Not shown, Lt William H. Lowry, Lt(jg) Mark Alexander and Lt(jg) George A. Wildridge. In left photo, taken of Search and Rescue personnel in the SAR center, are Lieutenant Lowry, QM2 Michael A. Morgan, Lieutenant Williamson, and QM2 M. George O'Brien. (USN photos)

(continued on page 26)

Det 12 HH-43F Utilized By USAF Chief Of Staff

Air Force Chief of Staff Gen John D. Ryan was taken on a 20-minute aerial tour of George AFB, Calif.,in an HH-43F from Det 12, 42nd ARRSq. At the time of the General's visit several weeks ago, the helicopter was the only operational F-model HH-43 in the United States.

Accompanying General Ryan on the tour was Col Earl J. Archer, commander 479 Tactical Fighter Wing at George. Maj James L. Wissert, Det 12 commander, was pilot on the flight and SSgt Robert E. Crites was helicopter mechanic.

GENERAL RYAN VISIT—The chief of staff arrives at Det 12 for his aerial tour of George AFB. Left to right are Colonel Archer, General Ryan, Major Wissert, Sergeant Crites and Sergeant Conner. In second photo, General Ryan is briefed by Major Wissert prior to takeoff. (USAF photos)

TSgt Herbert L. Conner was delegated to assist General Ryan. The preplanned flight was over the many facilities at George AFB. It was designed to cover as much area as possible in the limited amount of time allocated for the tour.

FIFTH INTERNATIONAL HELICOPTER RESCUE MEETING

ALPHA CREW—Hospitality in a form known to all countries was extended by the English hosts on arrival day. Members of the Det 1, RAF Alconbury, England, crew are, left to right, Major Henderson, Captain Stocklow and Sergeants Duhe and Mitchell.

BRAVO CREW—Members of the other 40th ARRWg team, left to right, Captain Comrie, Sergeants Clubb and Withers, Major Robertson. Three of the Bravo crew are from TUSLOG Det 84, Incirlik AB, Turkey. Sergeant Clubb is from Det 2, RAF Upper Heyford, England.

The Royal Navy came in first and the Royal Air Force was second in the Fifth International Helicopter Competition held in June at Royal Air Force, West Raynam, United Kingdom. Tieing for third place were rescue teams from the U. S. Air Force and Royal Danish Navy.

Helicopters from seven nations participated in the annual event which is aimed at encouraging friendly competition, and the communication of rescue techniques.

Representing the U. S. Air Force were two HH-43 crews from the 40th ARRWg, Ramstein AB, Germany. "Alpha" crew, from Det 1, RAF Alconbury, England, consisted of Maj Robert S. Henderson, Capt John E. Stocklow, TSgt Patrick W. Mitchell and Sgt Dantes J. Duhe. Members of the "Bravo" crew were Maj Gary E. Robertson, Capt Andrew B. Comrie and SSgt James A. Withers, from TUSLOG Det 84, Incirlik AB, Turkey, and SSgt Frank I. Clubb, Det 2, RAF Upper Heyford, England.

LtCol Herbert A. Lee, Hq ARRWg, was team captain and Maj Joseph McMonigle represented Hq, USAF. Each participant was allowed to enter two helicopters and two crews. *(Story continued on page 23)*

COMPETITION RESULTS

Position	*Nation/Service*	*Helicopters*	*Score (out of 6000)*
1st	*Royal Navy*	*Wessex (H-34)*	*5168*
2nd	*Royal Air Force*	*Whirwind (H-19)*	*4998*
3rd	*U. S. Air Force*	*Kaman (HH-43B)*	*4930*
3rd	*Royal Danish Navy*	*Alouette III*	*4930*
5th	*Royal Netherland Air Force*	*Alouette III*	*4800*
6th	*Royal Danish Air Force*	*Sikorsky (S-61A)*	*4630*
7th	*Royal Belgian Air Force*	*Sikorsky (H-34)*	*4475*
8th	*Federal German Air Force*	*Bell (UH-1D)*	*4329*
9th	*Federal German Navy*	*Sikorsky (H-34)*	*4325*
10th	*Royal Norwegian Air Force*	*Bell (UH-1B)*	*3858*
11th	*Royal Netherland Navy*	*Bell (UH-1D)*	*3227*

RESCUERS—Participants listen intently during initial briefing at Fifth International Helicopter Rescue Meeting.

"BYE, BYE BIRDIE"

By Lt(jg) G. I. Peterson
HC-4 Public Affairs Offic

THE OLD AND THE NEW—"Scooter 62," the last UH-2A employed by HC-4, is pictured at left while operating off the USS Austin in the Mediterranean in April, 1971. The helicopter was retired in May. At right, "Scooter 70," an HH-2D from HC-4, makes the first landing of the "D" model SEASPRITE aboard the USS Springfield on March 10, 1971, approximately 20 miles south of Rota, Spain. (USN photos)

Helicopter Combat Support Squadron four (HC-4) recently bid goodbye to its last UH-2A aircraft after eight years of faithful service. Lt R. L. Trotter, USNR, and his crew returned "Scooter 62" to the barn at NAS Lakehurst on May 7 after a six-month deployment aboard the USS Austin (LPD-4). The Navy's requirements for a high-speed and long-range helicopter were recognized by Kaman Aerospace Corporation in the late 50's and considered in the design of the "A/B" model. Following the Fleet Indoctrination Program in 1960-1961, the "A/B" models of the SEASPRITE went on to become the Navy's principal search and rescue helicopter for nearly a decade.

HC-4's mission of helicopter support for combatant helicopter facility ships of the U. S. Atlantic Fleet requires that individual detachments be nearly self-sufficient entities when deployed. HC-4 has provided detachments for ships in almost every ocean, sea and gulf in the world. In addition to the search and rescue tasks, utility requirements included every variety of helicopter support: plane guard duty for carrier aircraft operations, aerial and oceanographic reconnaissance, mail and personnel transfer, gunfire spotting, radar calibration and cargo transfer.

The UH-2A/B filled a critical requirement for a dependable helicopter capable of satisfying a wide range of demanding flight operations. The squadron's receipt of the 1970 Chief of Naval Operations Aviation Safety Award was achieved by flying the "A/B" for over 5,200 accident-free hours in a one-year period. Close to 17,000 accident-free landings were logged in the same interim.

Recently HC-4 transitioned from the single-engine A/B to the new twin-engine HH-2D. The latest member of the SEASPRITE community retains the reknowned capability for speed and smoothness and has added safety features. The greater horsepower available to the pilot enables single engine flight in the event of an engine failure. HH-2D crewmen enjoy the comparative luxury of automatic blade tracking, doppler radar navigation and automatic stabilization equipment (ASE), plus the obvious advantages of twin-engine reliability. The aircraft is powered by two General Electric T-58 turboshaft engines. It is capable of flying at speeds up to 150 knots and has an endurance of more than three hours flight time. The maximum gross weight limitation of 12,500 pounds enable it to carry two tons of cargo. Cabin space allows four passengers to be seated comfortably.

The UH-2A/B's tour with the fleet is drawing to a close although at the present time (May), other Navy units are continuing to utilize the aircraft in the performance of their missions. But for HC-4 "Scootermen," the UH-2A/B has been sent on its way with thanks for a job well done.

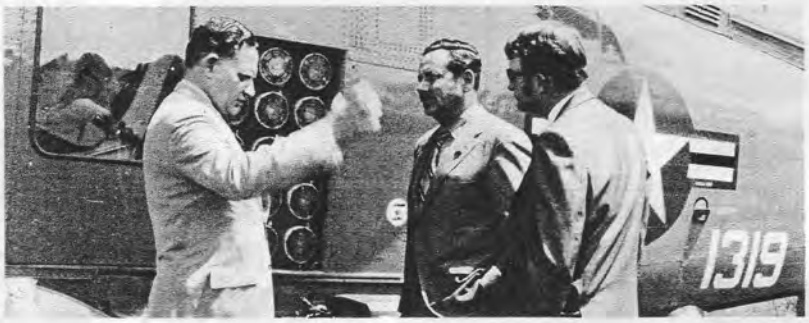
END OF AN ERA—HC-4 carried on an old Navy tradition of piping retiring shipmates over the side after the squadron's last UH-2A returned to NAS Lakehurst, N. J. Cdr E. W. Hille, right, HC-4's commanding officer at the time, and Cdr J. M. Lang, then executive officer, joined eight sideboys and a chief boatswain in rendering departing honors to the veteran UH-2A. Commander Lang is now the squadron's commanding officer. (USN photo)

SH-2D IS INTRODUCED IN WASHINGTON. . .

AHS AND THE PENTAGON—Display shown above was the central attraction at the Kaman Aerospace exhibit during the American Helicopter Society's annual meeting a few months ago in Washington, D. C. The model, complete with an SH-2D on the fantail, is of the USS California, DLGN-36. At left, an SH-2D is shown at the Pentagon Heliport during a recent display. John W. Warner, under secretary of the Navy, was among the many dignitaries who examined the helicopter and discussed various aspects of the LAMPS (Light Airborne Multi-Purpose System) mission with KAC officials, engineers and pilots.

ADMIRALS INSPECT—RAdm Thomas Davies, center, deputy CNM for development, listens intently as Bruce Goodale, right, LAMPS program manager, discusses one of the SH-2D's many features. On left is Jack Anderson, president of Kaman Aerospace. In background is Brooke Nihart, managing editor of the *Armed Forces Journal.* In right photo, RAdm Vincent Healey, foreground, inspects the LAMPS helicopter. Admiral Healey is in charge of Undersea and Strategic Warfare for CNO.

VERSATILITY SHOWN—In top left photograph, receiving SH-2D briefing is VAdm Harold Shear, director of ASW programs for CNO. Top right photo, RAdm D. C. Davis, middle, Aviation Plans and Requirements, and Cdr Ronald Helms, right, his helicopter coordinator, discuss LAMPS helicopter with KAC Vice President William R. Murray. In bottom left photo, Fred Silverio, KAC LAMPS avionics manager, describes the SH-2D sensor operator's station to Admiral Davies. In last photo, Jack Anderson's arm flashes downward as he emphasizes SH-2D's capabilities. Listening are RAdm D. K. Weitzenfeld, middle, Ass't. Commander for Material Acquisition, in NAVAIR, and LCdr G. C. Skezas, LAMPS coordinator in Rotary Wing Office.



AND DISCUSSED IN CONNECTICUT. . . .

LAMPS PROGRAM REVIEW—Navy visitors, above, listen intently during LAMPS Program Review in June at Kaman Aerospace. At left, Capt Spencer Robbins, LAMPS project manager, discusses the MAD gear on the SH-2D with KAC Vice President William Murray.

(Photo by Teledyne Ryan Aeronautical)

WHILE THE NAVY EVALUATES. . .

Modification of 20 HH-2D SEASPRITES into SH-2D LAMPS helicopters is well underway at Kaman production facilities at Windsor Locks, Conn. Authorized under a Navy contract reported on in the March-April issue of Rotor Tips, the work on the first ten is being done when single-turbine UH-2A SEASPRITES are re-manufactured into the uprated HH-2D twin-turbine helicopters. The SH-2D's will be flight tested and operationally evaluated by the Navy prior to their delivery to the Fleet for shipboard operations.

Under another program, further evaluation of the LAMPS theory of ASW (Anti-Submarine Warfare) and ASMD (Anti-Ship Missile Defense) is being conducted by the Naval Air Development Center, Warminster, Pa. Two HH-2D's configured for the ASW mission and assigned for trial to HC-4, NAS Lakehurst, have been operating from the USS Belknap (DLG 26). Two other HH-2D's configured for ASMD and assigned to HC-5, NAS Imperial Beach, Calif., have been operating from the USS Fox (DLG 33) and USS Cleveland (LPD 7).

As with the East Coast squadron, many of HC-5's most experienced men have already been assigned to the LAMPS program and others are being assigned on a daily basis. Day-and-night, at-sea flight tests from the Fox and the Cleveland have been conducted for the last five months. Assisting in the tests are NADC personnel, a technical representative from Kaman Aerospace Corporation and representatives from several electronic companies.

Shown in the photographs are an ASMD-configured HH-2D operating from the USS Fox, HC-5 personnel who are conducting the at-sea trials, and other men from the squadron who are involved in the LAMPS program in a support capacity (missing are personnel temporarily on duty aboard the Cleveland).

The experience gained in operating the four specially-equipped helicopters under actual at-sea conditions is already proving to be extremely valuable to the LAMPS program, and it is probable that follow-on quantities of SH-2D's will incorporate some changes to equipment based on the present testing.

(USN photos)

HC-5 LAMPS TEAM—In photo above, men directly involved with the present developmental detachment. Front row, left to right, AMS2 Bruce W. McKinney, AMS3 George Lattuca, ATN3 Duncan R. Ross, and ATR2 Lawrence A. Dick. Rear row, AVCM Ramond M. Ernest, Lt Robert H. Clark, Lt(jg) Jim G. Marsh, LCdr LeRon L. Stoker, OIC of Fox Det; Lt Scott C. Milner and ATC James R. Wilson.

Bottom photo, squadron personnel presently attached to the LAMPS program. Front row, Ross, AMH3 Harry W. Unquanqst, AMHAN Stephen A. Fowler, AMH3 Douglas R. Colwell, Latucca, and AA Owen R. Lunn. Second row, McKinney, AA Andrew W. Bleick, AO3 Thomas B. White, AT2 James C. Denton, AMH3 Barry J. West, and YN3 Robert E. Cochran. Third row, AKC James N. Barnett, Ernest, ATN3 Earl G. Hummel, PN1 Ivan J. Fuqua, Dick, AE1 David W. Reid, AE2 Monte O. Nichols, ADJ1 James S. Moore, Wilson, ATCS Stanley C. Graham.

IN THE SH2D—Left to right, LCdr Gander, Lt Wright and LCdr Cosby familiarize themselves with SH-2D sensor operation.

ATO/SENSOR CLASS—First table, from left, LCdr Gander, AWC Kerner, AW1 Watkins, AWAN Rutledge. Second table, AW2 Noder, AW1 Adams, AWC Lane, Lt Wright, AW1 Klopp, AW1 Sparks, AW1 Player. Third table, P. J. Russell, KAC chief production pilot, and J. Tomaszewski, KAC DCASO.

AND PERSONNEL TRAIN. . .

Twenty-one Navy officers and enlisted specialists recently completed LAMPS—connected training courses at Kaman's Bloomfield, Conn., facility. Airborne tactical officers (ATO's) and aviation anti-submarine warfare operators (AW's) received two weeks of instruction in the use of avionics equipment aboard the SH-2D. A three-week course on organizational maintenance was given the others who are aviation electronics technicians (AT's) or aviation anti-submarine warfare technicians (AX's).

Both groups received classroom work interposed with visits to the avionics laboratory, and to helicopters in the hangar or on the line. Flights over water were also made to give the pilots and AW's practical experience in the use of the sensor and other SH-2D equipment.

Receiving instruction were LCdr M. A. Cosby, LCdr J. H. Mosser, AWAN R. E. Rutledge, AWC L. C. Kerner, AW1 W. R. Sparks, AW1 C. W. Watkins, NAVAIRTESTCEN, NAS Patuxent River, Md.; Lt John T. Wright, HC-4, NAS Lakehurst, N. J.; LCdr J. P. Gander, and AW1(AC) J. R. Klopp, VX-1, NAS Key West, Fla.; LCdr R. M. Saurey, AW1 J. J. Adams, AWC R. E. Blinsinger, AW1 W. H. Player, FAETULANT, NAS Norfolk, Va.; Lt G. D. Bunch, Lt R. D. Delozier, AWC A. E. Lane, AW2 J. F. Noder, FAETUPAC, NAS North Island, Calif.; AXC Robert M. McCurdy, AT1 Randy Puckett, AT2 Michael Selander, and AT2 Jack Back, HC-5, NAS Imperial Beach, Calif.

Six more classes of a similar nature are scheduled to be held at Kaman during the next few months.

ORGANIZATIONAL MAINTENANCE CLASS—AT2 Selander, AT1 Puckett, AXC McCurdy, AT2 Back and R. F. Goguen, KAC production. Instructors, standing are J. J. Sherlock, T. R. Provost and L. A. Bentley.

ON THE LINE—Orientation lecture is given by Instructor H. M. Demulling, right.

IN THE LAB—Instructor D. E. Bonsall describes MAD control unit.

GRADUATION—AT2 Back receives a diploma from Instructor J. A. Peluso.

SEASPRITE ACTIVITIES

NAF HELPS NEIGHBORS—Left photo, Italian Air Forceman 1st Av. Alfredo Di Santo carries tiny meningitis victim from a UH-2C after a night flight to the Island of Ischia. (USN photo by Lt Fred L. Aeilts) In second photograph, Kaman Scrolls of Honor are presented to another rescue crew from the NAF SAR unit. The SEASPRITE braved gusting winds and torrential rains to medevac a critically-ill, pregnant Italian woman from the Island of Ponza. Left to right are Lieutenant Cuddeback, Lt Clarence L. Cook and ADR1 James Bailey. The presentation was made by Capt R. E. Blalack, NAF commanding officer. Others aboard the rescue helicopter during the mission were HMC J. W. MacIntyre and 1st Av. Di Santo. (USN photo by PH1 J. N. Roberts)

NAF NAPLES, ITALY—Lt Brian A. Cuddeback and his NAF helicopter crew joined forces with the Italian Air Force one night several weeks ago to aid a seriously-ill Italian child on the Island of Ischia. Lieutenant Cuddeback launched in a UH-2C shortly after 11 p.m. Copilot on the flight was LCdr C. H. Tall, III, and aircrewmen were CMC A. W. Peace, ADR3 L. A. Lee and 1st Av. Alfredo Di Santo, A. S. The latter is a member of the Italian Air Force.

Six-year-old Marco Pantalano, suffering from acute meningitis, was picked up at Porto d'Ischia shortly afterward along with his physician. The UH-2C landed back at the naval air facility 45 minutes after the first takeoff and the child and doctor were transferred to a waiting ambulance.

It was the 8th helicopter mercy mission completed so far this year by American Navy pilots at NAF Naples.

VIP FLIGHTS—A SEASPRITE, complete with a four-star admiral's markings, is shown near famous Mount Vesuvius. The 3,891-foot volcano blew its top in A. D. 79 and destroyed Pompeii. To save valuable time, military officials and other dignitaries often utilize the UH-2C for flights over the heavily-trafficked Naples area, as well as to more distant places. (USN photo by PH1 J. N. Roberts)

New C. O. For HC-4

Cdr James M. Lang is the new commanding officer of HC-4, NAS Lakehurst, N. J. He relieved Cdr Edward W. Hille who had received orders to the USS Inchon as air officer after a year as the squadron's C. O.

Commander Lang was personnel officer for Commander Naval Air Force U. S. Pacific Fleet immediately prior to reporting to HC-4 as executive officer in June, 1970. His successor as squadron executive officer is Cdr Charles E. Myers who came to HC-4 following duty under instruction at the Armed Forces Staff College, Norfolk, Va.

Oceana Unit Rescues Two

Shortly before 5 p.m. the SAR unit at NAS Oceana, Va., was notified that an F-4 had plunged into the sea 88 miles off shore.

At 5:40 an HH-2D crew from the unit was overhead and the two survivors were being hoisted to safety. A few minutes later the SEASPRITE was on its way back toward completion of the 176-mile, overwater flight.

Lt(jg) John S. Mastin, pilot of the rescue helicopter, said that on the way to the scene TACAN and DME went out.

"We flew a general heading and were relayed vectors from a Coast Guard C-130 orbiting the scene. We arrived on scene about 1740 and made an uneventful pickup and return to home base," Lieutenant Mastin said.

Copilot on the flight was Lt Robert H. Pasco. Crewmen were ADJ2 Lavern M. Krieg and ATN2 Richard L. Holmes.

Nominated For Harmon Trophy

Lt Lonnie D. Lorren, a former HC-2 pilot now stationed at NAS Ellyson Field, Pensacola, Fla., has been nominated for the Harmon International Aviation Trophy by the Commander, Naval Air Forces, Atlantic Fleet.

While serving with HC-2's Det 66 aboard the USS America, Lieutenant Lorren was the pilot of a UH-2C which rescued two F-4 pilots from the Caribbean after a night search. His "professional airmanship" overcame difficulties encountered during the pickups when the "black boxes" malfunctioned. Other members of the SEASPRITE crew were Lt(jg) Marc E. Liebman, ABH2 Dennis Wisniewski and ADR1 Manuel Pintor. All have been awarded Kaman Scrolls of Honor.

Lieutenant Lorren's nomination for the Harmon Trophy will be competing with others from all over the world.

HC-4 OFFICER AWARDED DFC

Lt(jg) Gordon I. Peterson, Jr., who authored the 'Bye Bye Birdie' story on page nine, was recently awarded the Distinguished Flying Cross for heroism while under fire in Southeast Asia. Now attached to HC-4 at NAS Lakehurst, N. J., the Lieutenant was serving with Helicopter Attack (Light) Squadron Three at the time of the SEA incident.

Lieutenant Peterson was aircraft commander of a helicopter fire support team assigned to assist a South Vietnamese Provincial Reconnaissance Unit. Contact on the ground was so heavy and at such close quarters that only the extremely accurate fire of the helicopter gunships' door guns prevented the Viet Cong from exacting greater casualties.

On two occasions, because of the heavy fighting, ground personnel advised the gunships to stand clear. Nevertheless, Lieutenant Peterson continued to place strikes on the enemy despite intense enemy fire. His efforts were, according to the citation, "responsible for the limiting of friendly casualties."

A U. S. Naval Academy graduate, Lieutenant Peterson's other decorations include 23 Strike-Flight Air Medals, the Navy Commendation Medal with Combat "V", the Vietnamese Cross of Gallantry and several service medals and unit commendations.

H-2C/D CONFERENCE—A Periodic Maintenance Requirement (PMR) conference was held recently at the Kaman facility in Bloomfield, Conn. It was one of several Navy-Kaman meetings held in conjunction with the twin-engine SEASPRITES being produced by the company. PMR attendees are, left to right, Charles Robert, KAC technical writer, Service Publications; AEC Nathaniel Gidron, HC-5, NAS Imperial Beach, Calif.; Robert Chapdelaine, supervisor, Service Publications; Bruce Fadden, production controller, and Richard C. Carlton, aerospace engineering technician, NARF, NAS Quonset Point, R. I.; AEC Glen D. Wichman, HC-2, AMCS R. H. Carlson, HC-4, ADJ1 J. M. Whittle, HC-4, and AMH1 Donald Krause, HC-2, NAS Lakehurst, N. J.; George Wood, group leader, Service Publications; ADRC Bruce D. Browne, AMHC Charles W. Stecz, Jr., HC-5, NAS Imperial Beach, Calif.; Gerald Legault, assistant supervisor, Service Engineering; John B. Midash and Clyde R. Sharrock, conference chairman, NAILSC, NAS Patuxent River, Md.

HUSKIE HAPPENINGS

PROFESSIONALS—SMSgt Joe H. Smith, Jr.,* left, kneeling, and Det 4 maintenance personnel. Left to right, Sgt Ervin L. Brogsdale, helicopter mechanic; SSgt Marshall B. Whitaker, flight mechanic; MSgt Lowell C. Cobb, Jr., quality control; TSgt Jan Gale, instructor flight mechanic; SSgt Donald G. Carter, inventory management specialist; Sgt Robert D. Pike, helicopter mechanic. Standing, SSgt Allen Curtis, Jr., helicopter mechanic; TSgt Larry E. Quick, flight mechanic; SSgt Matthew J. DeLuca,helicopter mechanic; Sgt Terrance B. Schock, helicopter mechanic; SSgt Alta J. Holcomb, jet engine mechanic; SSgt Leroy W. King, flight mechanic; and SSgt William G. Wilson, phase dock chief. Not shown are two other members of the maintenance team: Sgt Robert L. Ragin, flight mechanic, on duty at Zwiebrucken AB, Germany, and SSgt Combs, administrative specialist, who was processing for retirement. (USAF photo) *Now CMSgt Smith.

SMSgt Joe H. Smith, Jr., maintenance superintendent of Det 4, 40th ARRWg, Ramstein, Germany, is proud of the accomplishments of his men and the professional attitude they show toward their work. As a tribute to the "professional maintenance technicians" of Det 4, Sergeant Smith furnished Rotor Tips with the following description of an "outstanding" task performed during a three-day period (May 10-12) by maintenance personnel.

HH-43B helicopter 62-4546 underwent a number (9) nine phase package with transmission assembly, LH & RH shaft assembly time changes. The maintenance with a quality control inspection was accomplished in the minimum amount of time with a highly satisfactory rating.

* Ground operational and leak checks were performed without any maintenance discrepancies.

* Hover check was performed for rudder displacement and again no adjustment was required for neutral rudder pedal displacement.

* The blades were tracked in by tracking actuator without utilization of tracking flag.

* The helicopter was flown and functionally checked without a maintenance discrepancy. It was released for further flights.

Det 14 Helps Save Snake-bite Victim

An emergency airlift of an anti-venom serum by Det 14, 44th ARRSq, MacDill AFB, Fla., recently saved the life of a 12-year-old girl who had been bitten by a Coral snake. She had been taken to a hospital in Fort Myers, and Tampa's General Hospital was the nearest medical facility with the necessary serum.

The Hillsboro County Sheriff's Office made the airlift request of Det 14. An HH-43 helicopter crew was airborne within 20 minutes and flew to Tampa's Peter O'Knight Airport to pick up the serum. Maj John J. Geubtner, aircraft commander, said that they then flew to Fort Myers' Page Airport in an hour and 15 minutes. Immediately upon landing, they were met by Florida State Highway Patrolmen, who rushed the serum to the Fort Myers Hospital.

Both the Fort Myers Hospital Administration and the Florida State Highway Patrol reported that the patient's life was definitely saved by the expeditious delivery of the anti-venom serum.

Other members of the helicopter crew credited with the save are SSgt Phillip E. White, flight mechanic; and SSgt L. W. Forehand, firefighter.

40th Rescue Wing Receives USAF Flight Safety Plaque

By TSgt David E. Smith

RAMSTEIN AB, Germany—The 40th Aerospace Rescue and Recovery Wing (ARRS/MAC), with squadrons and detachments throughout Europe, has been selected to receive the United States Air Force Flight Safety Plaque for 1970. This is the second consecutive year the Wing has won the award.

The nomination for the award reads in part: "The 40th ARRWg distinguished itself by amassing in excess of 15,000 accident-free flying hours and extending its safety record to an unparalleled sixth year and 99,000 hours of flight accident-free operation. No major or minor accidents were experienced.

"This is truly an exceptional achievement considering the mission, number of different types of aircraft involved, command and control systems required, and extremes of temperature and terrain encountered throughout an area of responsibility which encompasses approximately one-third of the earth."

"I've been extremely pleased," said Col Hiram Griffin, commander of the Wing, "at the many awards our Wing and subordinate units have received recently. I would like once again to thank all Wing personnel for the fine work you have done in the past and are doing now. You are the ones who have made this award possible, from the support personnel on the ground to the flight crews in the air. Once a unit is on top, it has to work even harder to keep that position. I'm confident with the caliber of men and women we have, we will stay on top.

"Our safety motto for this year," concluded Colonel Griffin, " 'Prevent One in '71' should achieve our safety goals." *(continued on page 22)*

Det 15 Aids Accident Victims

Det 15, 42nd ARRSq at Luke AFB, Ariz., flew another MAST (Military Assistance for Safety in Traffic) mission recently. The mission was the emergency medical evacuation of an 18-year-old girl with a possible broken back.

The detachment was notified that the girl had fallen while horseback riding in the foothills of the Superstition Mountains. A doctor with the riding party diagnosed her injury as a probable broken back. The accident scene could not be reached by ground vehicles, and because of the suspected back injury, the girl could not be brought out on horseback.

Det 15 was notified by the Luke AFB Command Post, in response to a request for help from the sheriff's department. An HH-43 helicopter was launched and proceeded to a point northeast of Apache Junction where a member of the sheriff's posse was picked up. He directed the crew to the accident victim. The helicopter landed on a level spot in the foothills, and took the girl and her father to the Good Samaritan Hospital in Phoenix.

HH-43 crewmembers from Det 15 were Maj Ralph Gaede, Capt David Buckholz, TSgt William Thomas, SSgt George Livingston and Sgt John Visnesky.

Det 7 Saves Two From River

Two men, stranded on a sandbar in the raging Haw River, were rescued by an HH-43 crew from Det 7, 44th ARRSq, Seymour-Johnson AFB, N. C. The rescuees, along with a third man, were on a fishing trip when their canoe capsized in the rough water.

A civil rescue squad from Raleigh had located the two on a small sand bar in the river and the third man's body had been recovered. Attempts were made by a helicopter from Fort Bragg, and by boat, to recover the stranded men. The Army helicopter was unable to land and was not hoist equipped; the boat overturned in the swift water.

The two rescuees were in imminent danger of being swept from the sand bar when the HUSKIE arrived overhead. Both were hoisted to the safety of the helicopter and then taken to shore. Members of the HH-43 rescue crew were Capt James Harris, Capt Donald Crowder, SSgt Eugene Prichard and Sgt Floyd Cherry, Jr.

Varied Missions For Det 8

Two sergeants, one seriously injured, the other in critical condition after an automobile accident in Luxembourg, were medevaced to the USAF hospital at Bitburg AB by an HH-43 crew from Det 8, 40th ARRWg, at that base.

Due to the low ceilings which obscured nearby hills along the route, Capt Michael C. Kiefl followed the highway to Luxembourg and landed at the International Airport 20 minutes after launch. Two of the HH-43 crewmembers, TSgt Richard C. Seaman and TSgt Gerald R. Logan, were left at the airport to return via ground transportation. The two patients, accompanied by Maj John Patrick (MC), a doctor, were placed aboard the HUSKIE and it headed for Bitburg.

Major Patrick, who performed six hours of surgery on one sergeant immediately after the flight, attributed the speedy airlift as a definite factor in saving the patient's life.

In another Det 8 mission, two HH-43's from the unit responded after an F-4 declared an emergency. "Pedro 31," the Spangdahlem alert aircraft, was on a local training flight when the message was received. The HH-43 piloted by Maj Robert L. Gardner, immediately returned to base and picked up the fire suppression kit. As Pedro 31 began orbiting for the F-4 intercept, the tower advised that radar contact had been lost with the aircraft eight miles from Spangdahlem. Major Gardner headed for the area.

Meanwhile, Pedro 15 at Bitburg scrambled without an FSK and headed for the same area. Due to the fog and low overcast, navigation was accomplished with the aid of approach control.

Pedro 31 had located the crash site and landed in an open field. A few minutes later Pedro 15 also arrived. The latter picked up one survivor and returned him to Bitburg. The second F-4 crewmember, who did not survive the crash, was returned to base in Pedro 15.

Other members of the Pedro 31 crew were TSgt Herman Dozier, medical technician; SSgt Herbert L. Stovall and Sgt Calvin Hardy, firefighters. With Maj William J. Deming in Pedro 15 were Capt (now Major) Thomas D. Precious, co-pilot; SSgt Charlie B. Comer and Sgt Charles W. Murray, Jr., firefighters; and SSgt James G. Graff, medical technician.

(HUSKIE HAPPENINGS continued on page 22)

RAGING INFERNO OF JP-4

PEDRO FIREMEN COOL IT!

USAF Photos By Sgt G. M. Boprie

PHU CAT AB, RVN (7AF)—Imagine a raging inferno caused by 500 gallons of burning aviation fuel. Then visualize cutting a path through the flames, to rescue trapped aircrew members. Time is an important factor!

Rescuing crewmembers from burning aircraft is the job of the men of Det 13, 38th ARRSq. It's a big job for the men who man the HH-43 "Pedro" helicopters. Rescue crews are on 24-hour alert. In addition to their crash rescue mission they also perform local base rescues.

A gas turbine T-53 engine provides the "go power" for fast Pedro rescues. The majority of the missions involve standby for inflight emergencies. "Three or four scrambles a day is average," according to Capt Joseph Coffman Jr., an HH-43 pilot.

The rescue crews maintain 100% operational response around the clock and regularly practice their techniques. A fire pit on the south end of the runway is filled with 500 gallons of aviation fuel and ignited. The chopper crew responds to the simulated emergency as though it were an actual crash. When the horn sounds at the detachment area, five men race to a waiting chopper. Two are pilots, two are firemen and one is a medical technician.

The helicopter hovers over the pad while a fire suppression kit is hooked to the underside of the aircraft. At the "crashsite," the helicopter crew sets the firemen and fire suppression kit on the ground and hovers nearby, directing rotor wash on the firemen. This blows the flames away and directs cool air on the crash scene.

The firemen spray the fire with nearly 700 gallons of flame smothering foam. "This is enough," said one of the firemen, "to lay down a 10 by 30-foot path to a downed aircrew."

The firemen rush into the base of the flames, safe inside their protective suits. The chopper continues to direct the rotor wash on the savage flames, blowing the inferno away for the firefighters. Soon the foam has smothered the base of the fire and the sky darkens as another practice exercise comes to a smoking finish at this central highlands air base.

NIGHT FIRE PRACTICE—In top photo, flames serve as a backdrop for "pit supervisor" as he uses gestures to indicate where he wants firefighters positioned. Night practice fires such as this are held periodically to keep HH-43 crews from Det 13 at top profficiency. In second photograph, a Pedro pilot uses the rotor wash to blow flames back from the firemen working below.

READY AND WAITING—An HH-43 Pedro rescue helicopter and crash fireman's asbestos suit and boots await Det 13 crew members scrambling in response to simulated alert. The pilot, Capt Joseph Coffman Jr., leads his copilot, two firemen and a medical technician to the waiting chopper.

FSK DELIVERY—After picking up the fire suppression kit, the HH-43 hovers near the just-ignited practice fire pit.

HAPPY SIGHT—A survivor's-eye view of a fireman coming to his rescue.

TEAMWORK—Airborne firemen from the 12th Civil Engineering Squadron, aided by the Pedro hovering overhead, hose a path through the flames. The helicopter-delivered FSK, barely visible at lower left, supplies the protective foam used on the fire. The rotor wash from the HH-43 aids firemen in clearing a path and also supplies them with cooling air.

IN CLOSE—The firefighters in their protective asbestos suits move in close to the base of the fire to lay down the fire-snuffing foam. *(Photos continued on next page)*

IT'S ALL OVER—Practice exercise completed, firemen gather up hose as the HH-43 hovers overhead preparing to pick up the FSK. Photos below typify a mission's end. Sgt Michael W. Back signals to the pilot that the droop stops on the rotor blades are in preparitory to shutdown. The sergeant, a crew chief with Det 13, is another member of the rescue team. In right photo, a Pedro crew after disembarkation. Left to right are, Sgt Stephen K. Kane, SSgt Robert E. Morris, Sergeant Back, Captain Coffman and Capt Edward W. Gmyrek.

Medevac Made By Det 14 Despite Obstacles

Flying at dusk over hostile territory and with limited navigational aids, an HH-43 crew from Det 14, 38th ARRSq, Tan Son Nhut AB, successfully medevaced a seriously injured Vietnamese sailor from an isolated fire support base.

The mission began for Capt Cole E. Walker and his crew after a call for assistance was received by the detachment. The sailor was in need of immediate medevac. Surface transportation was impossible due to an absence of roads in the area and evacuation by river gun boat could not be effected until the following day due to approaching darkness.

After takeoff, Pedro headed for the fire base, located in a hostile area on the Plain of Reeds 32 miles from Saigon and five miles from the Cambodian border. The Plain, an area of swamp lands expanding westward from Saigon into Cambodia, is noted for its lack of roads and hamlets. The flight path crossed a major north-south infiltration route into the Saigon area.

Due to a lack of radar coverage and the fact the Saigon ADF was off the air, navigation across this terrain was accomplished by dead reckoning and "pilotage." Navigation was further complicated by the absence of landmarks—the setting sun reflecting off a low haze layer made visibility in the direction of flight extremely limited—and by the knowledge that a slight degree of error would put the aircraft into Cambodian airspace. The border shape varied to within 25 miles of Saigon at one point just north of the flight path. In spite of all these factors, the crew navigated the aircraft to the Tuyen Nhon village without incident.

When Pedro arrived at the fire base, an attempt was made to make radio contact with the ground via a Navy FM freq. No radio contact was established, but on the second orbit of the camp visual contact was established with American personnel inside the wire. By visual signs, the Pedro was directed to land on a rutted abandoned dirt strip outside the perimeter and near the only path through a mine field. A low recon was initiated into the last known wind to check a suitable final approach route. Due to the location of the base mine field and the high gusty winds, an over-water approach was made from across the river to the strip.

The landing was made with a minimum of hovering due to the high winds, and the amount of sand and dirt kicked up from the rotors. Efforts were made to keep the ground time at the forward base to a minimum, so the medic and the flight mechanic were dispatched into the camp to locate and litter-load the injured Vietnamese. On the return flight, the Saigon radio beacon was back on the air and the crew utilized it for navigation. The Vietnamese was turned over to an ambulance crew at the 3rd Field Hospital helipad, Saigon. He was listed in fair condition.

With Captain Walker on the flight were Maj Louis C. Lewis, copilot; Sgt Albert P. Hoffend, medical technician; and Sgt Charles D. Smith, helicopter mechanic.

Life Saved By Det 7 Night Flight

An HH-43 Pedro crew from Det 7, 38th ARRSq, DaNang AB, was credited with a non-combat save after a night medevac during which a seriously-ill airman was airlifted from a USAF dispensary to an Army hospital.

Pedro took off shortly after the call was received, picked up the patient five minutes later and landed at the hospital five minutes after that. Manning the HH-43 on the flight were Capt Kenneth R. Bissett, Jr., pilot; 1stLt John N. Drexler, copilot; TSgt William N. Brooks, helicopter mechanic; and A1c Donald J. Pecoraro, pararescueman.

In another Det 7 mission, an HH-43 crew on a training flight quickly responded when a real emergency arose.

Capt Alvin J. Machtmes immediately headed for the distress area after receiving a radio call from Marble Mountain control tower that two swimmers in the vicinity were in danger of drowning. Pedro was approximately half-a-mile from the scene when the call was received. The swimmers were sighted almost immediately in moderate surf almost one-quarter mile from shore. The rescue seat was used to hoist both men aboard and they were taken to the beach. Det 7 was credited with two non-combat saves.

Other members of the HH-43 crew were Maj Stanley O. Schaetzle, copilot; Sgt John W. Bryant and SSgt Louis J. Maloney, crewmen.

Ubon RTAFB, Thailand—A Kaman HH-43B HUSKIE hovers close to the ground while on a training flight. Ubon's Det 3, 38th ARRSq, is constantly on alert status so that it can live up to its motto, "That Others May Live." (USAF photo by SSgt Randy Kersey)

NOT EVERYONE CAN BE A "TWIRLY BIRD"

The Twirly Bird Club is an exclusive organization of pilots who pioneered rotary wing flight. To qualify as a Twirly Bird, a pilot must have soloed a helicopter more than 20 years prior to the year he applies. For example: pilots who soloed in 1950, or previous to that time, are now eligible to apply for membership. Next year, pilots who soloed in 1951, or previous to that time, may apply, and so on.

Membership in the Twirly Birds was formerly limited to pilots who soloed a helicopter before V-J day (14 August, 1945). Approximately 70 percent of the 180 total membership soloed prior to that historical date.

Pictured below is the Twirly Bird sign displayed in the Kaman Aerospace exhibit booth at the American Helicopter Society National Forum in Washington, D. C., a few months ago. The Twirly Birds held their annual meeting during the AHS forum, at which time, Peter J. Russell, Kaman chief production test pilot, was officially enrolled as a member. In second photo, he receives a Twirly Bird "Patch" from William E. Zins, KAC director of Customer Service and secretary/treasurer of the Twirly Birds. Watching is another pioneer helicopter pilot and Twirly Bird, William R. Murray, KAC vice president of Test Operations and Customer Service.

'SMOOTH AS SILK' MEDEVAC DUE TO PLANNING

Advance planning involving numerous phone calls, a West German helicopter and a USAF pilot forestalled possible language and other difficulties which might have hampered a recent medevac made by a 40th ARRWg detachment.

An HH-43 crew from Det 5, stationed at Hahn AB, was designated to airlift a seriously-injured sergeant from a German hospital at Mayen to the USAF hospital at Weisbaden more than 50 miles away. The evacuee was suffering intracranial bleeding after an auto accident.

Using an interpreter, the detachment made several phone calls and established a landing zone in a soccer field. More phone calls provided for a rendezvous with a West German helicopter which would guide the American crew into the landing area. Capt Ronald J. Bryant, the fighter pilot, joined the HH-43 crew as an interpreter since all information indicated no English would be spoken at the landing zone—there was a high potential for confusion.

Anticipation of the probable difficulties paved the way for a speedy and efficient medevac....the rendezvous was effected enroute....the soccer field was immediately found....the pickup was made without incident.

DEPARTED Hahn 1010L
ARRIVED Mayen 1035L
DEPARTED Mayen 1040L
ARRIVED Wiesbaden 1120L
DISTANCE FLOWN 106 NM

Capt John W. Christianson was pilot on the mission. Other members of the crew were SSgt Robert T. Anderson, helicopter mechanic; Sgt Kenneth F. Chin, medical technician; and Capt Eugene E. Kercher (MC), flight surgeon.

* * *

40th ARRWg Awards-continued from page 17

Since the beginning of the year, in addition to the USAF Flight Safety Plaque, the 40th ARRWg:

*Was awarded the Air Force Outstanding Unit Award for the third time in the past eight years. Gen Joseph R. Holzapple, commander-in-chief, United States Air Force in Europe, made the presentation.

* Flew more than 100,000 accident-free hours since Febuary of 1965—the first unit in ARRS to do so. At the same time, units of the Wing logged six straight years of accident-free flying.

*Was awarded the MAC Flight Safety Achievement Award for flying more than 15,000 accident-free hours during 1970 in support of world-wide DOD and NASA aerospace operations.

*Received the ARRS PRIDE Unit of the Year Award for "demonstrating outstanding progress" in implementing and sustaining the 40th's PRIDE (Zero Defects) program.

*Was presented the Unit PRIDE Award for Detachment 7 having achieved the highest MSET score (95.5 percent) among ARRS units during the Period July through December, 1970.

The last three awards were presented by BrigGen Frank K. Everest, Jr., ARRS commander, during a commanders' conference.

HUSKIE HAPPENINGS-continued from page 17

A third mission flown by a Det 8 crew illustrates the frustrating problems sometimes encountered by a helicopter crew intent on reaching a survivor as quickly as possible. Manning the HH-43 were Captain Kiefl, the pilot; Major Dalrymple, copilot; Sergeant Seaman, helicopter mechanic; Sergeant Ashby, medical technician; and Maj Michael Adams (MC), a doctor.

The HH-43 scrambled after word was received that an RF-4 crew had ejected approximately 45 miles from the base. The helicopter, Pedro 06, was unable to maintain terrain and cloud clearance, so climbed through the overcast about 10 NM out of Bitburg. Two F-4's flying over the scene escorted the helicopter to the crash area. There was a hole in the overcast about 10 NM from the crash site and the HH-43 was led to that.

After penetration, Pedro 06 homed in on an RF-4 which was using terrain-following radar to fly over the crash site. Four West German rescue helicopters which had launched from about 10 NM away were just arriving on the scene when Pedro 06 landed. The crash was alongside a hill and the HH-43 landed in an open field on top of the hill and dispatched the crew to the wreckage. Neither pilot was in the area and different reports received indicated they were at various police stations in the local area.

Pedro 06 took off and landed near several towns to try and locate the survivors, but was unsuccessful. Neither downed pilot ever attempted radio contact on guard channel, but called the Command Post via phone instead. The rescue helicopter was unable to contact any controlling agency, because it was forced to remain beneath the overcast, so as not to lose the location of the site, and the surrounding hills made line-of-sight communications impossible. After a fruitless search, Pedro 06 decided to refuel prior to renewed search. All airfields in the area were below minimums so the helicopter returned to Bitburg.

It was learned at that time that a German Army helicopter had picked up the pilots after the German rescue center was given their exact location via telephone call from German authorities. The major problem, in addition to not having a TACAN on board the HH-43, was the inability to communicate with controlling agencies without a cover aircraft overhead that could relay. Both F-4's had to depart the area due to lack of fuel.

DET 8 PERSONNEL—Front row, left to right, Capt M. F. Schmidt, Sgt J. P. Cox, Sgt R. Reed, MSgt J. H. Kilgore, SSgt G. J. Reedom, SSgt G. D. Garrett, A1c C. J. Phillips, SSgt F. M. Fisher, A1c L. D. Woods and Sgt R. W. Murphy. Second row, Maj H. E. Raisor, detachment commander, SMSgt F. L. Kroupa, Capt W. T. Lyon, Capt P. F. Dineen, Sgt J. D. Farrow, Amn R. G. Self, SSgt R. L. Schmidt, A1c H. G. Garrett, TSgt J. P. Gerfy, Sgt C. W. Clossen,Capt R. F. Raggio, Sgt S. M. LaFleur, Sgt J. R. Ostler, Sgt J. S. Thompson. (USAF photo)

Det 8, 43rd ARRSq (MAC), opened its doors for "Business" on March 3, 1971, at Bergstrom AFB, near Austin, Texas. Although the detachment's primary mission is to give local base rescue (LBR) coverage to Bergstrom's three squadrons of RF-4's, the unit has already chalked up six "saves" involving three badly burned children, two persons seriously-injured in falls, and an automobile accident victim. Details will be given in the next issue of Rotor Tips. The new "Pedro" detachment provides rescue coverage with two HH-43B HUSKIES, both of which recently returned from Southeast Asia.

APPRECIATION—Major Raisor, left, presents "Pedro" figure to Maj Charles Pinson, commander of Det 12, 43rd ARRSq, Randolph AFB, Texas. Pedro, the call sign of the HH-43, has been heard on the air thousands of times—especially in Southeast Asia—as ARRS crews rescued downed airmen or evacuated wounded and accident victims.
The Det 8 commander made the presentation in recognition of the aid Det 12 had given to the Bergstrom unit during the initial months of operation at the base.
"I truly appreciate the outstanding assistance Major Pinson and his personnel have given us the last few months," Major Raisor said. "It is this type of cooperation between sister units that makes ARRS a close knit service."

Det 8 is staffed by five officers and 10 enlisted men. In addition to these assigned personnel, the detachment is supported by five firemen and five medics supplied by the base.

Carrying its five-man crew, the HH-43 can deliver a 1,000-pound fire suppression kit to a crash scene within minutes. The kit, attached to a cargo hook under the cabin, is automatically released at touchdown near the crash. As the rescue team exits the HUSKIE, the pilot maneuvers the helicopter in a hover over the flames. Its powerful rotor downwash fans back the flames to open a path for the team's entry and exit from the downed aircraft. Foam from the fire suppression kit is used to keep the path open and prevent flashback flames. The rotor's downwash also supplies life-giving fresh air to the rescue team and crash victims. The detachment's twin rotor HH-43's are 25 feet long and 12 feet, seven inches high. Its rotor diameter of 47 feet helps to whip up the helicopter to a regulated top speed of 105 knots per hours.

Det 8 is one of 120 ARRS units on nearly 100 bases around the world. Since ARRS's orgin in March 1946, it has saved the lives of more than 22,000 persons in combat, accidents or civil disasters.

Helicopter Rescue Meeting — continued from page 8

During the competition, chopper crews were judged on their performance in three separate events, each taking a day to complete. The events were hoisting and winching (precisely lowering a simulated cargo); a 100-meter foot race scramble combined with a simulated rescue over water; and a navigational problem that took the contestants over a land-water closed course.

Each event was worth 1,000 points, with the judges subtracting points for excessive time and distance "off the mark" during each phase of the competition. At the end of the meet, judges determined the winners of each event: first-, second- and third-place crews and the top overall team.

First In ARRS History

DET 10 MEDIC CAPABLE, EFFICIENT. . .AND PRETTY

A LADY JOINS THE TEAM—At left, A1c Marilyn L. Pierce, first woman flight crew member in the history of the Aerospace Rescue and Recovery Service, is lowered on a Kaman-designed forest penetrator rescue seat during a practice mission. In photo above, Maj Isamu S. Momii goes over the details of the next practice mission with the other members of his HH-43F crew: Capt Theodore McKnight, SSgt Leslie C. Terbeest, Airman Pierce and Sgt Joe L. Jackson. On next page, responding to a scramble signal, the team races for the HUSKIE. A few minutes later, the accident "victim" finds himself in good hands as Airman Pierce administers first aid after loading him into a Stokes litter. In a few minutes he will be in the "hospital." (USAF photos)

LORING AFB, Maine—When you really need one, there is probably no prettier sight on earth than a medic being lowered to you on the hoist cable of a rescue helicopter. That goes double if you happen to be near Loring AFB, because that medic could well be A1c Marilyn L. Pierce, the first woman flight crew member of an air rescue team in the history of the Air Force.

Just 19 years old, the petite, auburn-haired West Covina, Calif., native wanted to be an administrative specialist when she enlisted in the Air Force so she could get experience as a secretary. Instead, she was assigned to Sheppard AFB, Texas, for training as an aerospace medical specialist after she completed basic training at Lackland AFB, Texas. From Sheppard she went on for further instruction at Brooks AFB, Texas. Following that she was assigned to duty in the Flight Surgeon's Office here.

When Det 10, 44th ARRSq, was being formed on base earlier this year, a call went out to the Flight Surgeon's Office for personnel to volunteer as medics for the rescue service team. Marilyn volunteered along with three men from the office.

"I thought it would be exciting and challenging work," she said, explaining her reason for volunteering. "I guess I was looking for a little adventure too."

There is nothing in the regulations which says a woman cannot be a member of an Air Rescue flight crew, but it had never been done before, so officers of Det 10 sought approval from their headquarters at Eglin AFB, Fla. The reply was that she be given a chance to prove herself. Following the approval, Marilyn and the other volunteers entered a period of exhausting and exacting training and instruction. They had to become familiar with the rescue aircraft assigned to the unit—the HH-43F HUSKIE helicopter—learn radio procedures, operation of the hoist and other rescue and emergency equipment and various survival techniques.

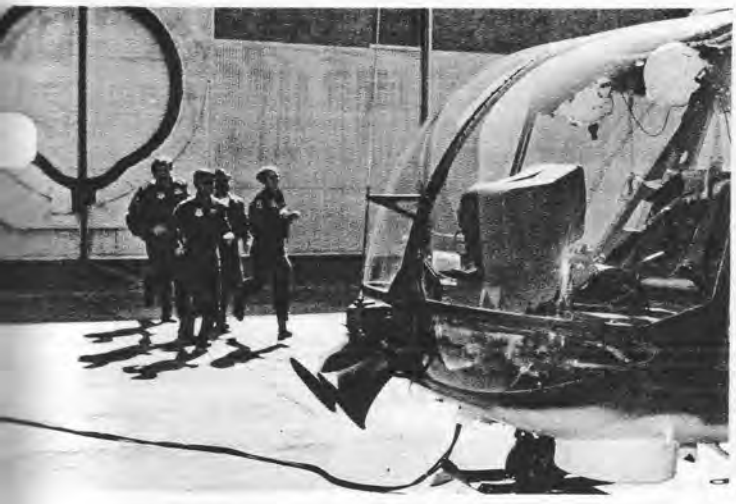
"Marilyn is a quick learner," said Capt Robert J. Hawley, aircraft commander. "She did very well in the training course, and gave the men some real competition."

All of the inspectors who visited the team during the training period were impressed with Marilyn's skill and determination, and at the close of the course she was selected as a regular member of the flight crew. Now she divides her time between her duties in the Flight Surgeon's Office and missions with the team.

On routine flights she sometimes sits in the left-hand cockpit seat. Her job is to watch for other aircraft in the area and warn the pilot of their approach. During practice emergency flights she goes into action in the rear of the chopper. When there is a fire connected with the crash or emergency the firefighters who form part of the crew go in first to bring out the survivors. In that case she operates the hoist if necessary, assists the firemen in deplaning, and takes over the care of any wounded or injured personnel as soon as they have been brought out.

When a crash or emergency does not involve fire, and if the 'copter is unable to land because of rough terrain or dense ground cover, Marilyn is the first one out of the aircraft, riding down to the scene on the hoist cable.

She determines the steps to be taken for the care of any wounded or injured personnel, administers on-the-spot first aid, and directs the crew in the hovering aircraft to lower one of the several rescue lifting devices to retrieve the injured party. If he is badly injured, she might load him into a Stokes litter, a kind of airborne stretcher, or into a rescue basket. For less severly injured people the familiar "horse



collar" rescue harness is available, and the Loring team also has the only forest penetrator or rescue seat outside Southeast Asia in its stock of equipment. Once the victim is safely in the aircraft, Marilyn rides back up on the hoist and continues treating him on the ride to the hospital. All of this may sound like a lot of hard work, which is exactly what it is, but Marilyn does it quickly and efficiently.

"She knows her procedures thoroughly," says Maj George L. Schmidt, commander of the detachment, "and she doesn't get rattled when things are tight in an emergency-type situation."

She describes herself as being cool in emergencies because her hospital training has conditioned her to handle situations which might make other women squeamish. "Oh, I might get a little upset after it's all over," she admitted, "but during the crisis I generally stay calm and do my job."

Her office duties and work on the rescue team take up a lot of her time, but when she does have any to spare she likes to relax with interpretive modern dance, sewing, knitting and swimming. Marriage is still in the distant future for her. She says there are too many things she wants to do before she finally settles down. Secretarial work was her goal before she came in the service, but now she has discovered a new love—medicine. After her present enlistment is finished she wants to go to school to become a registered nurse, then return to the Air Force as a flight nurse. She is definitely a girl on the go.

Major Schmidt comments, "When Marilyn first applied for the job we had the natural doubts as to whether she could handle it, but through her hard work and determination she has proven herself capable and efficient. She is a fine person and has done an outstanding job."

HC-1 Detachment Completes 2nd Combat Tour

HC-1's Det 7 returned home to NAS Imperial Beach, Calif., in June after a seven and one-half month Western Pacific cruise aboard the USS Hancock.

Flying UH-2C SEASPRITES, the mission of the detachment was a never-ending cycle of maintaining a constant vigil close to the carrier during flight operations, ready to pull a downed pilot from the water or pick up a "man overboard."

Aside from their duties as "Lifeguard" for the Hancock, the versatile, all-weather unit was tasked to provide a variety of services to other ships. These duties ranged from "Holy Helo Hops" for the transport of the Chaplains, to transfer of mail and cargo throughout the task force. During the long cruise, Det 7 celebrated its second anniversary, while enroute to Sydney, Australia. Capt T. L. Johnson, commanding officer of the Hancock, was guest of honor and made an "Honorary SEASPRITE helicopter Pilot" by members of the detachment.

During the past two years, Det 7 has made 13 personnel rescues, and carried 33,194 pounds of mail, 49,929 pounds of cargo, and 1,405 passengers aboard its SEASPRITES. LCdr Milt York is now officer-in-charge of the detachment which has two combat tours to its credit.

1000 HOURS—Lt Christopher M. Reddington, left, and Lt Steven S. Hoxie, both from HC-2, NAS Lakehurst, N. J., display plaques they received from Kaman Aerospace after logging 1000 hours in the H-2 SEASPRITE. The presentations were made by Cdr D. J. Hoyes, commanding officer of HC-2, and Ed Noe, Kaman service representative.

Six other pilots including an Iranian lieutenant, also received plaques from the company after flying 1000 hours in either the H-2 SEASPRITE or HH-43 HUSKIE. Recipients were: H-2 — Lt Robert H. Clark and Lt Robert K. Doane, HC-5, NAS Imperial Beach, Calif., LCdr Lawrence B. Kaufman, HC-2; HH-43 — 1/Lt Abolhassan Vahedi, IIAF; Capt Richard E. Porter, Det 2, 40th ARRWg, RAF Upper Heyforth, England; Capt Benjamin P. Lorge, Det 15, 40th ARRWg, Zarogoza AB, Spain.

(ADAK-continued from page 7)

SAR CENTER—Where it all begins. Quartermasters O'Brien, left, and Cradit are shown handling one of the many requests for assistance which the center receives. In response, a UH-2C from the Adak Unit begins turning up in one of the frequent snow showers. Seconds later, the crew may be conducting a search over the vast tundra. Often the sudden appearance of the helicopter sends herds of caribou in a terrified dash for safety. Shown after returning from a SAR mission are Lieutenants Arends and Williamson...On the opposite page are some of the other units which share in the Adak SAR effort. (USN photographs by Dyson, Burgess and Arends)

ALL IS NOT SAR—H-2 crews perform many tasks. One of the most enjoyable is delivering a bewhiskered gent named Santa Claus to the children's Christmas party.(USN photo by Dyson)

SAR TRAINING—The USCG Cutter "Confidence," home-ported at the Naval Station, Kodiak, Alaska, is shown in the Bering Sea during a joint training exercise with a UH-2 crew from the Adak unit. In second photograph, the SEASPRITE comes in for a landing aboard the cutter. Note the grid to prevent the helicopter from sliding on the deck. Adak pilots often encounter just the opposite to the calm sea and clear weather indicated by the photographs. (USN photos by Dyson)

LIFE SAVER—As an Adak UH-2C flies overhead, ready to assist if needed, a seriously-ill woman is evacuated from the Communist Estonian fishing vessel Ikhtiolog. (See page 4.) At left is the crew of the USS Sikis, one of three tug crews at the Naval Station who aid in the SAR effort. Left to right are EMFN T. Phillips, EN3 R. Trimble, SN Dan Wulff, BM3 R. Hess, and QM1 F. C. McElravy, captain of the vessel. (USN photos by Arends and Dyson)

The motto of the Adak Search and Rescue Unit sums up its operation: "You call...we haul...you all!" Whatever the mission, the dedicated men of the Adak SAR Center are there whenever needed. The UH-2C helicopters, P-3B/C patrol aircraft, YTM's, the deployed ATF, USCG Cutter Balsam, and Marine ground SAR teams all work together to save both life and property in the Aleutian Islands of Alaska–geographically and weatherwise, one of the most hostile environments in the world.

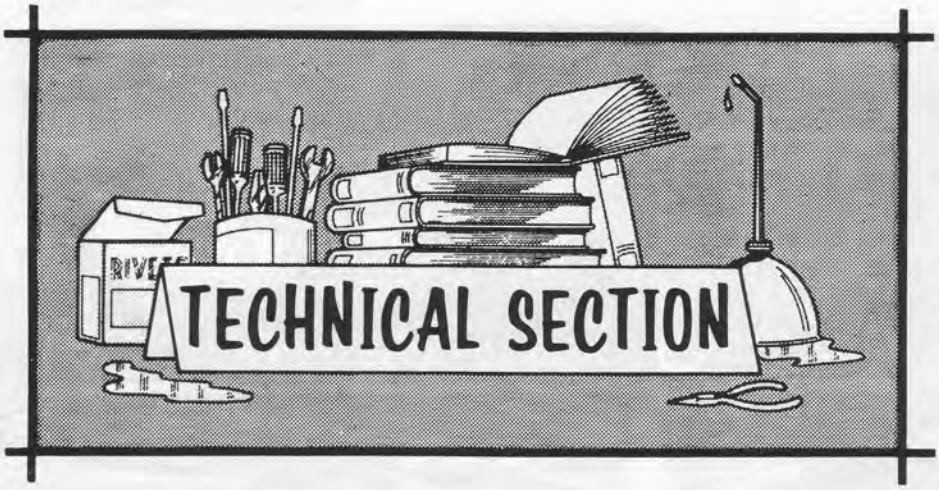


Table of Contents

SLIDING DOOR TRACK IDENTIFICATION

H-2

By H. Zubkoff, Service Engineer

Each upper and lower track assembly for the pilot/rescue, copilot, and cargo doors consists of two separate tracks defined as the forward (upper) track and aft (lower) track. The tracks are local manufactured items and are made from aluminum extrusions illustrated in NAVAIR 01-260HCA-3, dated 1 Oct 70, Figure 10-3, Sheets 5 and 7. The following part number summary will assist in identifying the respective tracks in the event replacement is required. This information will be incorporated into applicable manuals by future Changes.

1. Copilot Door
   Upper Track Assy. (W. L. 110.0) — Fig. 3, Index 45 & 46
   FWD (upper) K631047-179 } M/F KSD 3544-1
   AFT (lower) K631047-181 }
   Lower Track Assy. (W. L. 60.0) Fig. 3, Index 53 & 54
   FWD (upper) K631060-31, M/F KSD 3543-1
   AFD (lower) K631060-29, M/F KSD 3543-3

2. Pilot/Rescue Door
   Upper Track Assy. (W. L. 110.0) Fig. 3, Index 46
   FWD (upper) K631047-357 } M/F KSD 3544-1
   AFT (lower) K631047-363 }
   Lower Track Assy. (W. L. 60.0) Fig. 60 Index 8 (-141)
   FWD (upper) K631027-141, M/F KSD 3543-1
   AFT (lower) K631027-79, M/F KSD 3543-3

(Note: -79 not called out)

3. Cargo Door
   Upper Track Assy. (W. L. 110.0) Fig. 3, Index 43 & 44
   FWD (upper) K631047-253 } M/F KSD 3544-1
   AFT (lower) K631047-95 }
   Lower Track Assy. (W. L. 60.0) Fig. 60, Index 3 & 4
   FWD (upper) K631027-73, M/F KSD 3543-1
   AFT (lower) K631027-77, M/F KSD 3543-3

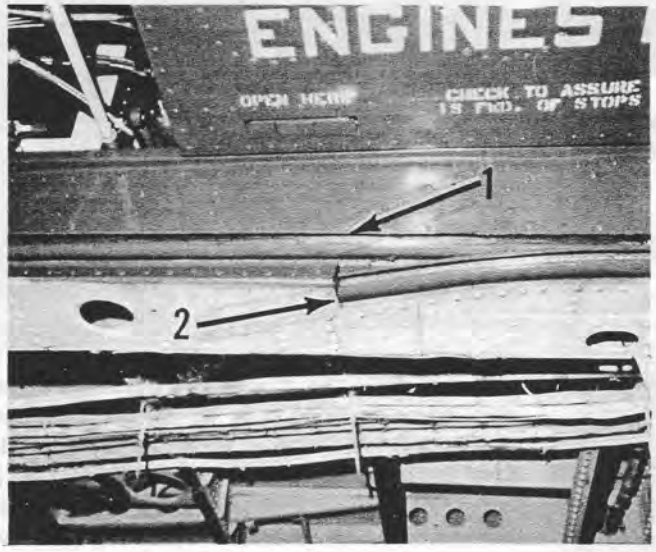


Photo A

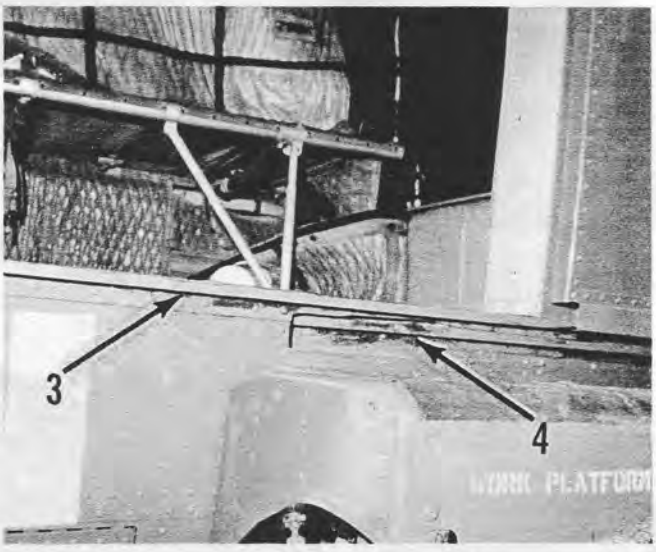


Photo B

Photo A shows the Upper Track Assembly (Cargo door). Item 1 is the Forward (upper) track, P/N K631047-253. Item 2 is the Aft (lower) track, P/N K631047-95.

Photo B shows the Lower Track Assembly (Cargo Door). Item 3 is the Forward (upper) track, P/N K631027-73. Item 4 is the Aft (lower) track, P/N K631027-77.

TIMELY TIPS

MAIN ROTOR DAMPER FIELD CHECK

H-2

When a pilot complains of a lateral one-per-rev in flight and excessive helicopter ground wallow during run-up (between 20 and 30 percent rotor speed), the trouble can usually be traced to a defective rotor damper. If a defective damper is suspected, check for correct fluid level, leakage, a loose rodend, or some other obvious visual discrepancy.

The method of determining damping characteristics by noting the time it takes for the blade to swing from full lead to full lag has been found to be unreliable because no actual damping load is generated. For example: some blades swing through in 10 seconds and others take up to two minutes, yet the dampers on both of these blades may check out perfectly on functional test rigs and no flight discrepancies are noted.

One method which has been used with some success is performed by grasping the blade tip and rapidly moving the blade chordwise, back and forth, with the rotor brake locked. This method generates damping loads more closely approximating those encountered during operation. Move the blade approximately one foot in one second, or faster, to generate a noticeable damping action. Similar action on all four rotor blades, will provide a "feel" for the relative damping characteristics of the installed dampers. Note that this test serves only to compare the dampers, it does not attempt to qualify them as good or bad; therefore, it should be used only as a troubleshooting aid rather than an inspection criterion.

If one damper feels appreciably stiffer (or "softer") than the others, it should be replaced and the helicopter flown to check for improvement. The removed damper should be functionally tested to determine whether it is actually defective.

This information represents the latest available and supersedes the information presented in prior Kaman Rotor Tips and Rotor Tips booklets.

W. Wagemaker, Service Engineer

CONTRIBUTIONS

ADRC Bruce Browne of HC-5, NAS Imperial Beach, Calif., suggested the Timely Tip on intermediate gearbox oil leakage and the question on page 33 regarding fibre-insert locknuts. In both cases he supplied helpful background information. Such contributions are always welcomed by Kaman Service engineers and representatives.

ENGINE FUEL CONTROLS

UH-2

Recent engine trouble shooting problems on H-2's in the fleet have revealed the following: Fuel controls, P/N 580000-7, -8, and -9, which are configured for the T58-8F engine are erroneously being installed on T58-8B engines. GE advises that these controls have an up-speeded schedule, higher fuel flow, and a higher max NF which are not compatible with the -8B engine. Prior to engine installation, check the fuel control part number; if found to be one of the preceding, replace with an authorized -8B control as listed in the engine IPB, NAVAIR 02-105AHB-4.

H. Zubkoff, Service Engineer

ASE DIRECTIONAL TRIM STRUT LIMITATIONS

H-2

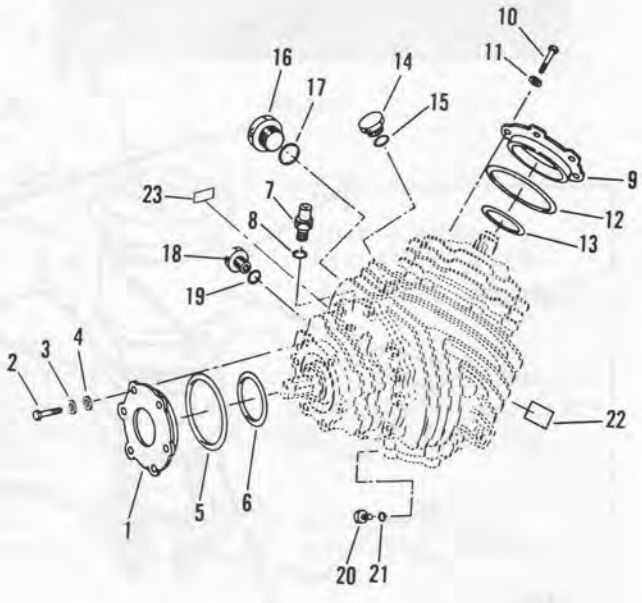
The K654012-9 ASE directional trim strut can be used on both single engine and twin engine aircraft; all other trim struts have a limited use. The limitation is stencilled on each strut in ½-inch letters. On all K654702 trim struts, the following appears: "USE ON TWIN ENGINE ONLY." On K654012 trim struts (with the exception of the -9) the following appears: "USE ON SINGLE ENGINE ONLY." For further information, refer to NAVAIR 01-260HCA-4-1 and NAVAIR 01-260HCB-4-3.

W. Wagemaker, Service Engineer

INTERMEDIATE GEARBOX OIL LEAKAGE

H-2

A Class II Change, recently processed at Kaman, authorizes substitution of MS9388-238 O-rings for the 239-17107 packings shown as items 5 and 12 in the accompanying illustration and Figure 22 of NAVAIR 01-260HCB-4-6. The change will eliminate static oil leakage from the retainers, items 1 and 9. Substitutions are authorized on an attrition basis and Detachments may install the new parts at their discretion. This information will be included in applicable manuals by a future change.



R. Trella, Service Engineer

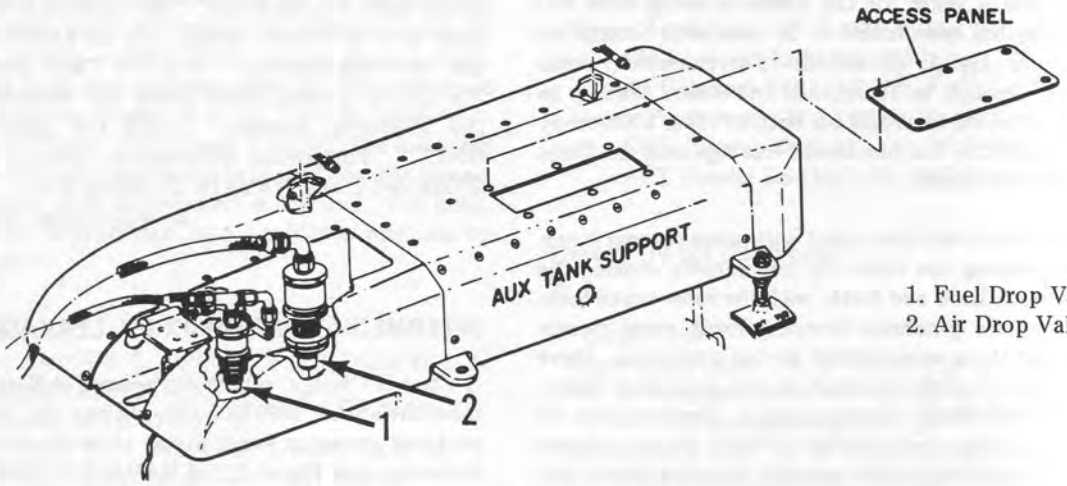
AUXILIARY FUEL TANK, FUEL AND AIR DROP VALVES

H. Zubkoff, Service Engineer

Two drop valves, one for air, P/N 6DC100-1, and one for fuel, P/N 10DC100-1, are used on each aux tank installation as shown in Illustration 1. Because the valves are spring-loaded to the closed (extended) position, they automatically close when an aux tank is jettisoned or removed from the aircraft. Photo A shows a valve with the piston (item 1) fully extended to the closed position. Notice the amount of piston showing above and below the groove (item 2).

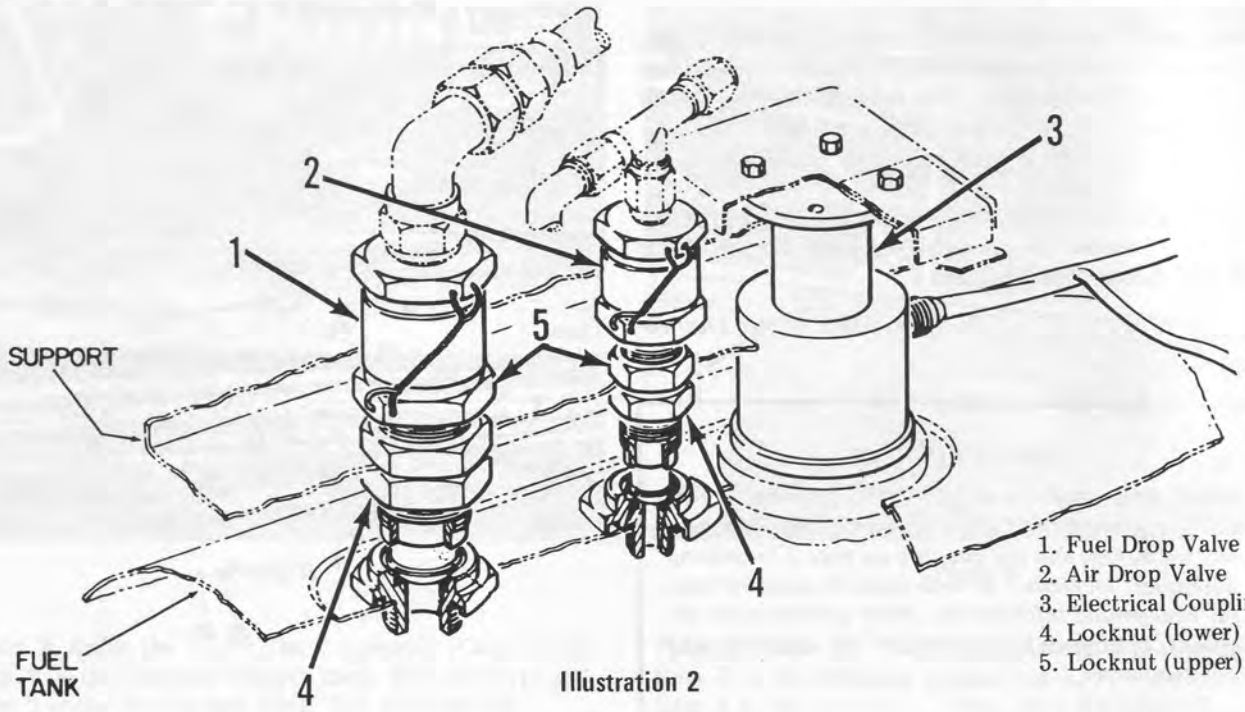
The valves function alike in that the ball-end (item 3, Photo A) must seat against a receptacle located in the top of the aux tank as the tank is raised into position. Applying pressure against the ball-end will force the piston up into the valve body. When the groove is even with the end of the valve body, the valve is fully open. Therefore, with the aux tank installed and the ball-end seated properly, the groove should just be visible or out of sight, otherwise the system will not function properly.

Illustration 2 shows a cutaway view of the valves installed on the aux tank support. Locknuts 4 and 5 are used to lower or raise a valve to achieve correct positioning of the ball-end in the receptacle and the groove in the valve body.



1. Fuel Drop Valve
2. Air Drop Valve

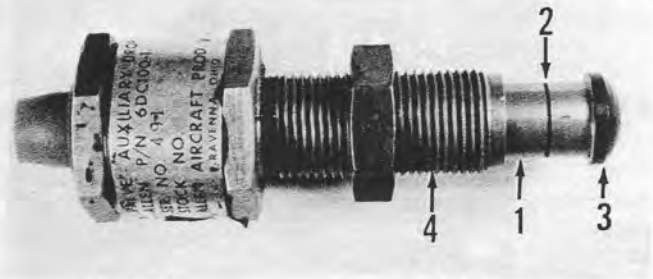
Illustration 1



1. Fuel Drop Valve
2. Air Drop Valve
3. Electrical Coupling
4. Locknut (lower)
5. Locknut (upper)

Illustration 2

TECHNICAL SECTION



1. Piston
2. Groove
3. Ball-end
4. Valve Body

Photo A

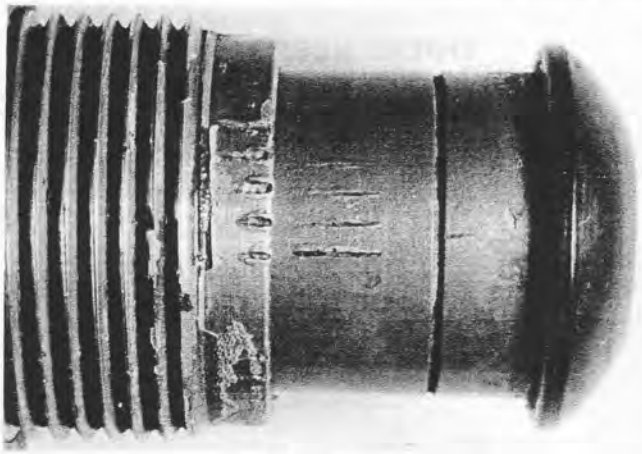


Photo B

Prior to aux tank installation, inspect the ball-end for nicks or scoring. The ball-end has a special, hard-coat finish and if found damaged, the valve must be replaced. Check the piston for freedom of movement. Push the piston completely up into the valve body by hand. If no binding exists, the piston will return to the extended position as soon as the pressure is removed. In the event binding does exist, remove the valve from the support and check the piston for gouges or burrs. Light scratches or burrs may be blended out; deep penetration necessitates valve replacement. In cases where the cause of binding is not apparent, wipe the piston clean and apply a light coating of general purpose lubricating oil or jet fuel. Work the piston in and out of the valve body several times while rotating it to distribute the lubricating agent. If binding persists, replace the valve.

The valve piston shown in Photo B is an example of what NOT to do. After an aux tank had been installed, fuel leakage occurred at the point of contact between the ball-end and the aux tank receptacle. The mech correctly determined that the cause was improper seating due to piston hand-up or binding within the valve body. Instead of removing and cleaning the valve, a pair of water pump pliers was employed in an attempt to pull the piston out of the valve and down into the receptacle! The sought after tight seal was never attained—instead, the valve had to be replaced.

A change to Kaman Drawing K686703 provides mechanics with a reminder to check the fuel and air drop valves prior to installing the aux tank. The stencil, shown in Photo C replaces the previously authorized "AUX TANK SUPPORT" stencil. Fleet Activities may apply the stencil (1/4-inch letters) at their descretion. For further information concerning the drop valves and the aux tank, refer to NAVAIR 01-260HCA-2-4.

Photo C

KAMAN SERVICE REPRESENTATIVES

WILLIAM G. WELLS
NAS Cubi Point, P. I.

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CUSTOMER OPERATIONS SECTION – ROBERT L. BASSETT, Supervisor

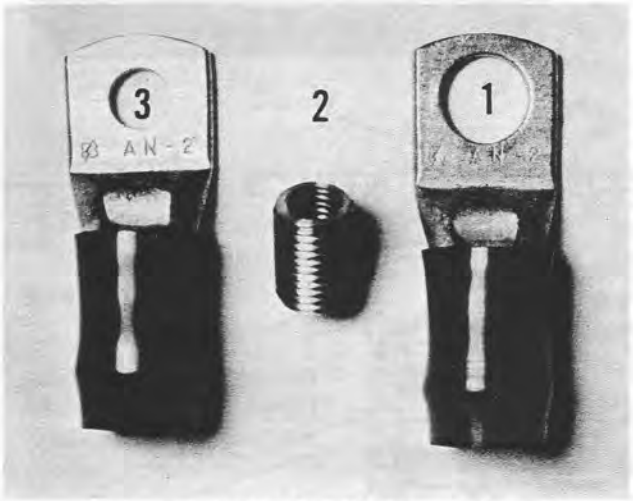
QUESTIONS & ANSWERS

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 H-2) THE POSITIVE (DC OUTPUT) TERMINAL ON THE H-2's CONVERTER IS LARGER THAN THE NEGATIVE TERMINAL. WHY?

A. The difference in size is a precautionary measure to "Murphy-proof" installation of the aircraft leads to the converter. The negative and positive leads must be connected to their respective terminals in order for the system to function properly. The terminals of the basic converter, P/N W1352-1, are the same size, but the addition of a Kaman bushing, P/N K683139-11, makes the positive terminal larger (5/16-inch).

Photo A shows the bushing and the two solderless wire terminals. Notice one terminal, index 1, has an oversize hole; this terminal identifies the positive aircraft lead. Photo B allows comparision of the two terminals with the bushing installed. Illustrations 1 and 2 detail bushing installation onto the terminal. A new converter manufactured to the MS17976-1 Specification will, on an attrition basis, replace the converter now in use. The new converter does not have the oversize terminal, therefore, when installing a new converter, the bushing must be removed from the old converter and re-used.



1. Terminal, P/N MS25036-27 (5/16-inch ID)
2. Bushing, P/N K683139-11
3. Terminal, P/N MS25036-26

Photo A

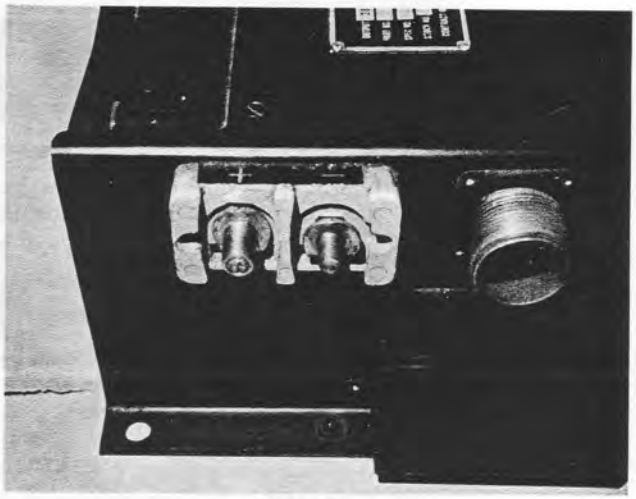


Photo B

Illustration 1

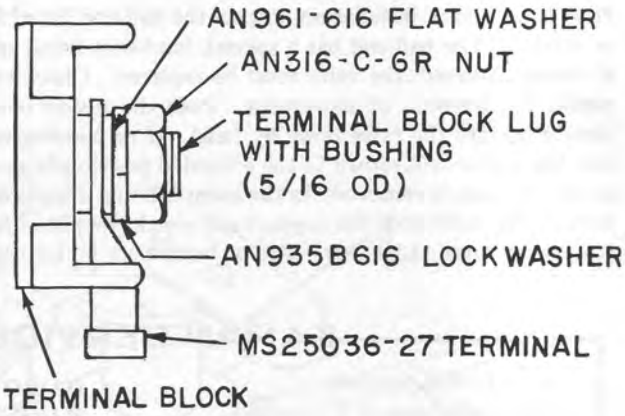


Illustration 2

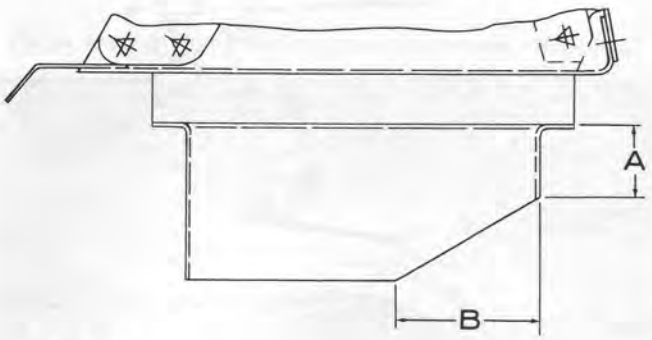
To remove the bushing, it is necessary to break the stakes as follows: run-on two 5/16X24 nuts; use one (outer) as a lock nut while sharply turning the other (inner) nut to break the stake. Remove the nuts before removing the bushing from the terminal. At no time should the terminal end be cut off to facilitate bushing removal.

W. Perry, Avionics Specialist

TECHNICAL SECTION

Q. IS THERE A METHOD OR COMPONENT WHICH CAN BE USED TO PREVENT MISMATCHING OF THE AC EXTERNAL POWER CABLE PLUG TO THE UH-2 AIRCRAFT RECEPTACLE?

A. Yes. A shield, P/N K631105-173 (shown installed in Photo A), can be locally fabricated by modifying an MS17845-1 guard. (The guard is described in Avionics Change 428.) The modification is necessary to provide clearance in order to close the external power receptacle access door. The MS guard can be reworked by cutting the lower edges to the dimensions shown in Illustration 1. When the guard has been cut and the edges smoothed, it should be identified as a K631105-173 shield. To install the shield, remove the four screws on the receptacle (arrows in the Photo), align the shield over the screw holes and reinstall the screws.



A=¾-inch
B=1.5 inches

Illustration 1

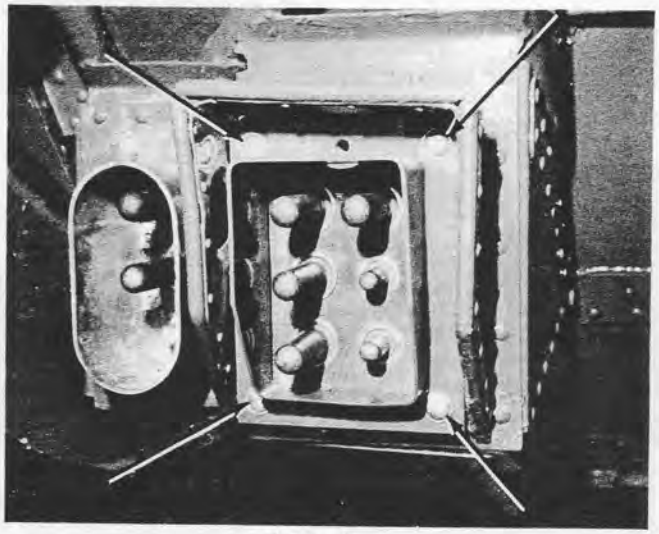


Photo A

J. McMahon, Service Engineer

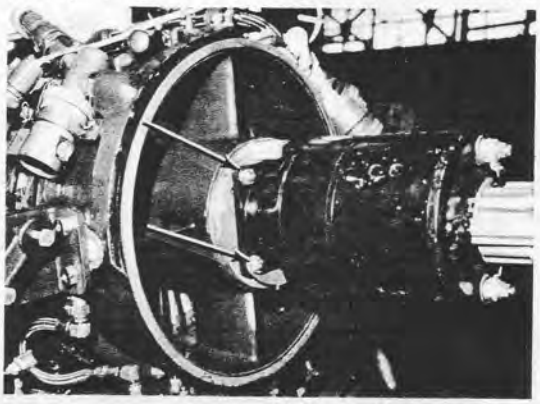
Q. (Applies H-2) WILL THE RESCUE HOIST UP AND DOWN LIMIT SWITCHES OPERATE IF THE HOIST IS OPERATED IN THE MANUAL MODE?

A. No. When the crewman operates the rescue hoist in the manual mode (no electrical power—hydraulic force only), the limit switches are bypassed. For this reason, it is possible to lose the cable if it is allowed to unreel completely. Conversely, damage to the hoist boom can result if the hook contacts the boom when reeling in the cable. The last 15 feet of cable on the drum are colored red to warn the operator against unreeling completely; however, when reeling in, the operator must use caution to prevent boom damage.

W. Wagemaker, Service Engineer

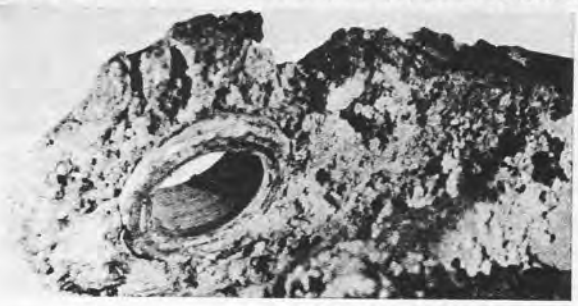
Q. (Applies H-2) MAY FIBRE-INSERT LOCKNUTS BE USED TO SECURE THE ENGINE STARTER TO THE ENGINE?

A. Yes, providing they are not re-used. Locknuts with steel inserts may be re-used as long as holding power is evident; *Fibre insert locknuts must be discarded upon removal.* NAVAIR 01-260HCB-4-5, Figure 2, index No. 11, presently calls out an MS20364-426 locknut; this is a typographical error—it should read -428. The -428 callout does not differentiate between steel and fibre inserts, consequently, either type may be received. A future change to the IPB will call out a -428C steel locknut. (An MS21042-4 locknut has recently been authorized to supersede the -428C when supply has been exhausted.) The arrows in the accompanying Photo point to two of the four locknuts.



H. Zubkoff, Service Engineer

Q. (Applies H-2) WHAT IS THIS AND WHAT HAPPENED TO IT? TURN TO PAGE 34 FOR THE ANSWER.



KAMAN SERVICE ENGINEERING SECTION – R. L. Bassett, Supervisor; G. M. Legault, Asst. Supervisor

CORROSION

A. The Photo on page 33 shows a portion of the K652172-3 collective counterbalance crank assembly with an unbelievable degree of corrosion. The crank, shown in Photo A, was removed from an aircraft which was returned to Kaman for induction into the PAR/MOD program. The crank and weights, item 1 in the accompanying Illustration, are attached to the copilot's side of the collective stick system to provide a counterbalancing force. Photo B shows another example of corrosion found on the same bird. The item, Index 2, is the collective torque tube crank assembly, P/N K652006-101.

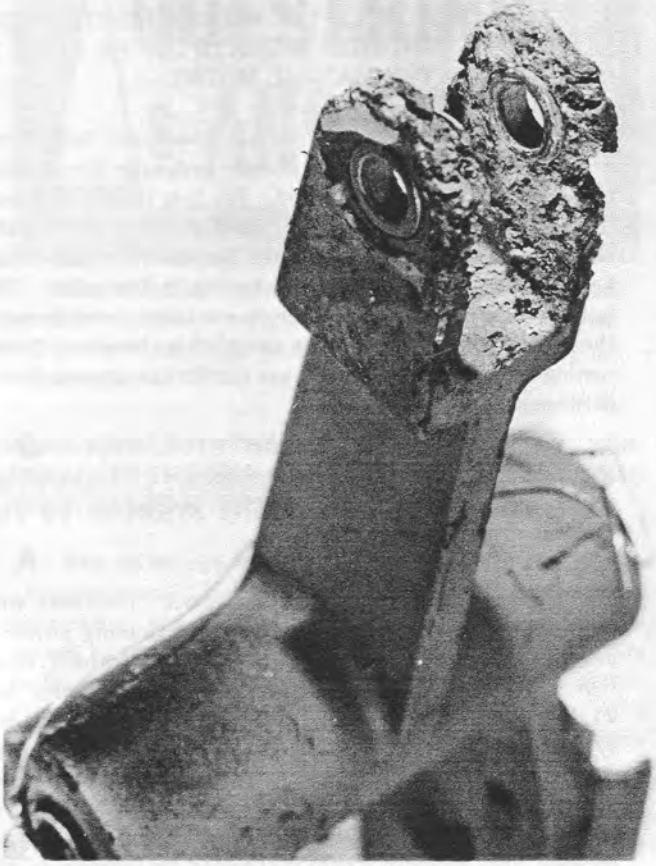


Photo A

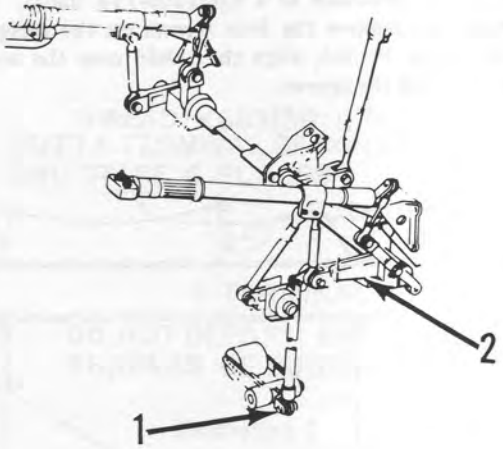
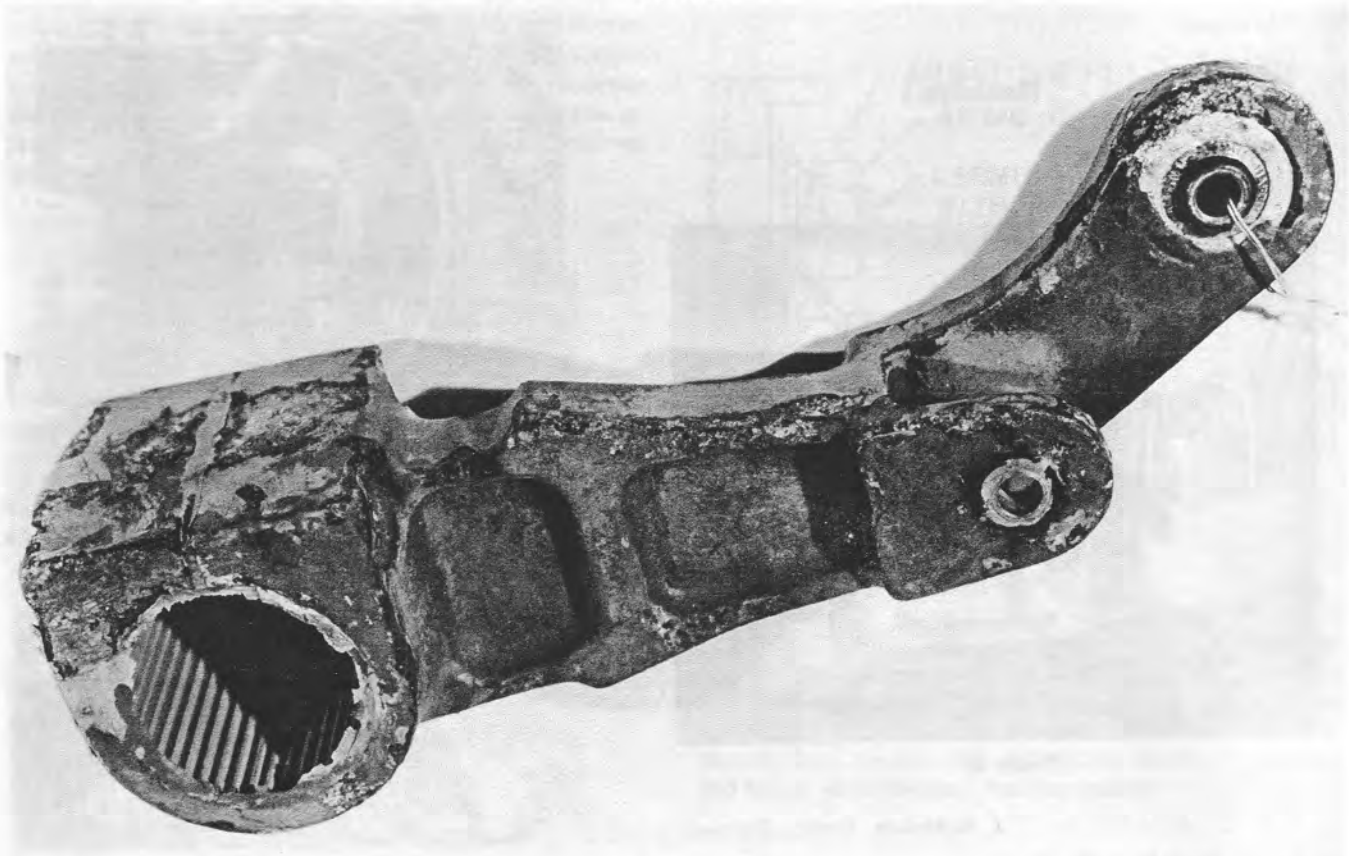


Photo B

W. Wagemaker, Service Engineer



DARFO! Detect And Remove Foreign Objects before FOD (Foreign Object Damage) can occur.

An H-2 returned to Kaman for induction into the PAR/MOD program and, routinely, the fuel cells were opened.

Photo A shows what the first glance discovered. What is it?

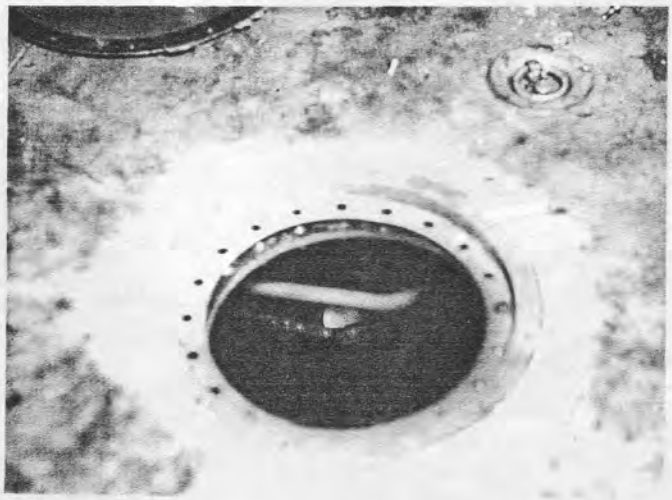


Photo B. Close-up of the Foreign Object. What is it?

Photo C. Same fuel cell but looking into it from a different angle reveals another Foreign Object. It may look like an electrical plug but it is not. In fact, it is used with the object shown in Photos A and B. What is it?

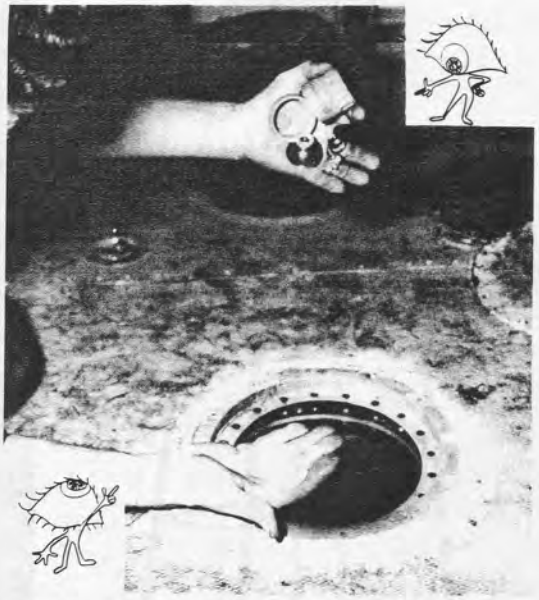


Photo D clears up one point—exactly what the Foreign Objects are: Parts from a flashlight! Now the really BIG QUESTION, "How did these Foreign Objects go unnoticed when each cell is supposed to be inspected PRIOR to being sealed?"

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 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. 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.

DET 7 ... in action

SSgt Boles Capt O'Grodnick Capt Harris SSgt Ghrist

At Wendell, N. C., Bert Vernon was painting the inside of a water tank 140-feet above the ground when the scaffolding collapsed. He plunged 40 feet to the bottom of the tank where he lay semi-conscious with a fractured spine, cracked ribs and other injuries. Rescuers considered cutting a hole in the side of the tank but the interior was filled with fumes which could easily ignite. The only possible way to get the injured man out was the way he had gotten in—an 18-inch hole at the top of the tank.

Seymour-Johnson AFB was contacted and an HH-43 crew from Det 7, 44th ARRSq (MAC), responded to the request for assistance. SSgt Roy A. Ghrist, medical technician, made the long climb to the top of the tank and, with the help of a steeplejack, strapped the injured man into a small orthopedic litter provided by the local rescue squad. Struggling in the semi-darkness and fume-filled air, the two rescuers managed to get the litter into position near the comparatively tiny opening.

Capt Thomas M. O'Grodnick, aided by copilot Capt James D. Harris, hovered the HH-43 ten feet above the tank roof and the flight engineer, SSgt Joseph E. Boles, lowered the rescue cable into the small hole. Then, as Sergeant Ghrist maneuvered the litter from below, the flight engineer hoisted it through the 18-inch opening and to the helicopter. A minute later, Captain O'Grodnick landed the HUSKIE in a vacant lot where a doctor and ambulance were waiting.