

# KAMAN

## Rotor Tips

**KAMAN** AEROSPACE  
CORPORATION

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SEASONS  
GREETINGS

NOVEMBER-DECEMBER, 1969

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## Rotor Tips

Volume VI Number 3

### ON THE COVER

Holiday greetings and best wishes for the New Year from Kaman Aerospace Corporation. Cover by E. M. Enders, Service Publications

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# MED EVAC

By SSgt Jim White

"Helicopter people"—those who fly, maintain or manufacture rotary-wing aircraft—can be justly proud of the impressive number of medical evacuations made possible by helicopters operating in Vietnam. The daily life-saving operation in which they play such an important part is described below. A mission account concerned with HH-43's from the 38th ARRSq has been included to illustrate the perils which helicopter crews are often called upon to face during their humanitarian work.

TAN SON NHUT AB, Republic of Vietnam (7AF)—A generation ago, an American soldier wounded on the battlefields of Europe or the islands of the Pacific had a hard time of it. Often, he had to go for days or weeks without proper medical treatment for his injury. A trip to a field hospital usually involved a long, pain-filled, teeth-grinding ride over rough roads in a military ambulance. For the seriously wounded, medical help often came too late. But today, in the Republic of Vietnam, a unique Air Force-Army team can speed the victim of an enemy soldier's bullet from the spot where he was wounded to a fully-equipped hospital within minutes or hours, rather than days or weeks.

An American soldier wounded in Vietnam has more than twice as much chance of surviving his wound than his World War II predecessors had. What makes the difference? Improvement in medical techniques and facilities plays a part. But the major factor is the short length of time it takes the wounded soldier to reach medical help. In this war, ambulances have taken to the air.

Somewhere in the jungle, a shot rings out and a soldier falls. A medical corpsman rushes to his side and begins administering first aid. A radioed call for help goes out. Miles away, at a forward operating base, a "Dustoff" medical evacuation helicopter crew rises off a pad and speeds toward the scene. Arriving, the "Dustoff" crew settles down into a prearranged landing area. As rotor blades continue to whirl, a pair of men jump out, pick up the now stretcher-borne patient, and bring him aboard. The helicopter lifts into the air again, and another corpsman continues the first aid treatment begun by the men on the ground.

Within minutes, the helicopter lands on a pad beside a field hospital. Waiting orderlies rush the patient inside, where doctors clean and dress his wounds and provide his first intensive medical care. If he is seriously hurt, he will stay until his condition is stable enough for him to be moved again.

His next "air ambulance" will be an Air Force C-130 Hercules, outfitted to carry stretchers and carrying a crew of medical technicians and flight nurses. Each day, the Air Force planes visit bases throughout Vietnam, transporting patients to major medical facilities.

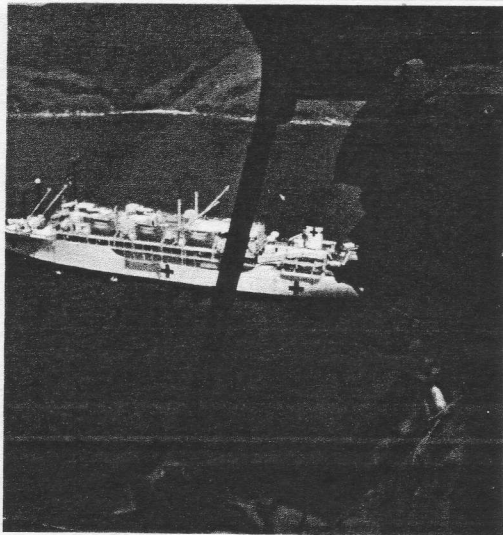


PEDRO AND THE REPOSE—Settling down on the helicopter landing pad at the stern of the U. S. Navy hospital ship Repose is an Air Force HH-43 "Pedro" rescue helicopter from Da Nang AB. The helicopters often carry patients from the mainland to the hospital ship for emergency treatment. (USAF photo by SSgt Paul J. Harrington)

The Hercules sets down on the runway. The blast from its reversed propellers kicking up clouds of dust as it reaches the end of the runway, the aircraft turns and taxis toward a parking area where the wounded man is in an ambulance. The C-130 stops, its propellers slow to a halt, and the ramp swings down from its tail. Attendants bring the patient aboard and fasten his stretcher into place on a set of racks running down the center of the plane. Patients aboard, the plane taxis back out to the runway and takes off. In flight, the medical crew makes its charges as comfortable as possible and keeps a close watch on their condition. Within an hour, the C-130 lands at a major base, where Air Force CH-3 Jolly Green Giant helicopters or military ambulances are waiting to move the patients to a well-equipped, modern hospital for careful diagnosis and specialized treatment.

When the day comes, he transfers—either by ambulance or aircraft—to an Air Force casualty staging flight at Tan Son Nhut, Cam Ranh Bay or Da Nang Air Base. There, he is prepared for a flight by a Military Airlift Command C-141 Starlifter to a U. S. hospital in the western Pacific—or in the United States. In some cases, a man could be back in the U. S. within 48 hours after being wounded.

"The Army's 'Dustoff' helicopters provide immediate treatment of battlefield wounds, and the Air Force's aeromedical evacuation system provides fast transport to major medical facilities for advanced care," points out Col George E. Schafer, 7th Air Force surgeon. "The marriage of the two systems has given the American fighting man in the Republic of Vietnam the best chance of survival of any soldiers ever to fight in a war."



**HOSPITAL SHIP**—Looking over his right shoulder, Air Force Maj Tom W. Brumfield, an HH-43 "Pedro" helicopter pilot, zeroes in on the U. S. Navy hospital ship Repose. Major Brumfield and the other pilots of Det 7, 38th ARRSq, at Da Nang AB often transport patients to the Repose for emergency treatment. (USAF photo by SSgt Paul J. Harrington)

**BIEN HOA (7AF)**—Rescue helicopters from Det 6, 38th ARRSq (MAC), at Bien Hoa AB recently pulled off the daring rescue of three Army soldiers wounded in fighting 22 miles northwest of the air base.

"Two of our choppers were scrambled to an area seven miles west of Lai Khe where the Army troops had been wounded while on night patrol," recalled Capt Harvey B. Bell, copilot on one of the HH-43 helicopters used in the rescue. "When we arrived, Army gunships were shooting up the area trying to keep the enemy forces from reaching the wounded troops," he continued. "It was just like an old western movie as they continually circled 100 to 150 meters from the wounded."

The Air Force rescue helicopters hovered over the area while Army Huey and Cobra gunships raked enemy positions. The Army command chopper marked the area and directed the Air Force crew to attempt the rescue.

"We immediately began taking heavy ground fire," said Bell. "We were forced to back out and had picked up several bullet holes, including two through our rotor blades. So we headed for Lai Khe." At Lai Khe, 15 bullet holes were counted in the chopper so 1st Lt John F. Kolar headed back to Bien Hoa to change the chopper for another. Within an hour, they were back in action.

During all this time the second chopper had remained on scene but had been unable to make the rescue. Running low on fuel by the time Lieutenant Kolar's crew returned, the second chopper had to make a refueling trip

to Lai Khe. A short time later Bell guided his chopper in for another rescue attempt. Hovering 60 feet above the ground, just on top of the trees, TSgt David D. Rhody, a pararescueman (PJ), went down to the ground aboard the jungle penetrator. As he hit the ground, Rhody called for a litter and immediately strapped in the most seriously wounded and had him hoisted to the chopper. Repeating the procedure again while still receiving ground fire, the second man was taken aboard the HH-43.

"We then had to clear out, leaving our PJ and the third man on the ground," Captain Bell said. "The other rescue chopper had returned from Lai Khe and was in place before we left. They managed to get the third man and our PJ out."

It was quite a day for Rhody who ended up flying in all three HH-43's. Back at Bien Hoa, inspection of the three choppers used in the rescue showed 25 bullet holes. Other crew members participating in the rescue were: SSgt Gary D. McGrew, flight engineer aboard Bell and Kolar's chopper; Capt Walter D. Murphy, aircraft commander aboard one of the three HH-43's; Maj Richard W. Lorey, a copilot; Sgt Dale C. Cady, a flight engineer; and Alc Terry M. Wells, a pararescueman.

**PHU CAT (7AF)**—Joint efforts of an HH-43 Pedro rescue helicopter crew here, a medical evacuation C-123 Provider, and the 67th Army Evacuation Hospital, recently saved a wounded soldier's eye.

A shell fragment had lodged in the man's eye. The C-123 brought him from Pleiku AB to Phu Cat where the chopper crew quickly transported him to the Qui Nhon hospital. Treatment there was successful and the soldier retained sight in his eye.

Flying the Pedro were Maj Ernest A. Headberg, Jr., commander, Det 13, 38th ARRSq, and Capt Richard J. Bouckhout.

### 3000-Hour Pilot Award

It has been Kaman Corporation policy, through various award programs, to recognize the professional achievements of rescue crews operating Kaman helicopters. For example, several thousand military personnel and a number of civilians have been presented the Kaman Scroll of Honor, or Kaman Mission Award for the special humanitarian service they performed in accomplishing one or more rescues or mercy missions.

In addition, almost 400 pilots have been presented the Kaman 1,000-Hour Pilot Award. A special 2,000-Hour Award is limited to the first pilot in each branch of the military service to reach this milestone.

Continuing with this program of recognition to those serving our country while flying Kaman helicopters, a 3,000-Hour Pilot Award has been designed and will be available to all who log the required number of pilot hours in aircraft produced by Kaman.

The new pilot-hour award is a shield-shaped plaque like the others; however, two changes have been made. The new award has a brushed-gold rather than a brushed-silver finish, and the helicopters appearing on the other plaques have been replaced by an abstract design symbolizing Kaman's activities in both aircraft and aerospace programs.

We are pleased to announce that the first recipient of the 3,000-Hour Pilot Award is Maj Bert E. Cowden, USAF, commander of Det 6, 41st ARRWg, Kadena AB, Okinawa. Major Cowden also earned the first Kaman 1,000 and 2,000-Hour Pilot Awards—a record of which he and Kaman Corporation can be justifiably proud.

William H. Weaver  
Awards Administrator

**KAMAN ROTOR TIPS**



"Gray Ghost of Vietnamese Coast"  
operated by HC-4 unit

## 'Global' Det Continues RVN Duty

Story and USN photos  
by PH1 Bill Galligan

Circling the 7th Fleet Amphibious Force flagship, USS Mount McKinley (LCC-7), the gray UH-2B SEASPRITE waits for the "green light" to make another landing. This is a usual sight for an unusual group of aviators. The "Gray Ghost of the Vietnamese Coast" belongs to Helicopter Combat Support Squadron Four (HC-4), home based at NAS Lakehurst, N. J. The aircraft is assigned to Detachment 36 aboard the 'Phib Force flagship operating off the coast of South Vietnam.

The men of Det 36 have visited many points around the world while serving with HC-4: from the Mediterranean to the South Pole; the eastern Atlantic to the North Pole; and—as VIP helicopter crewmen for the Commander, 6th Fleet—to the North Atlantic for exercises with member NATO nations. Their present mission is threefold. They are primarily concerned with Sea/Air Rescue (SAR) while operating with the various ships that make up the amphibious ready groups in Vietnam waters; they provide the VIP helo for the Commander, 7th Fleet Amphibious Force; and they also are called on to provide mail and passenger runs from the flagship to helopads in and around the major ports along the coast of South Vietnam.

The detachment usually consists of three officers, all pilots, and up to 10 enlisted men with various professional skills. These men make up the entire flight and maintenance team while the ship is away from the main repair base at NAS Cubi Point, RP. The men have the responsibility of maintaining the helicopter in a flying condition. This includes material checks of the airframe, engine, avionics and safety equipment on the aircraft. Some of the maintenance involves routine upkeep and daily cleaning and greasing; at other times the maintenance work is concerned with special and calendar inspections of the entire aircraft. This may include changing the



DET 36's FAMED UH-2—The Gray Ghost leaves the flight deck of the USS Mount McKinley, flagship of the Commander, 7th Fleet Amphibious Force, while the vessel is anchored in Da Nang Harbor. The LSE (landing signal, enlisted) is Richard T. Simons.



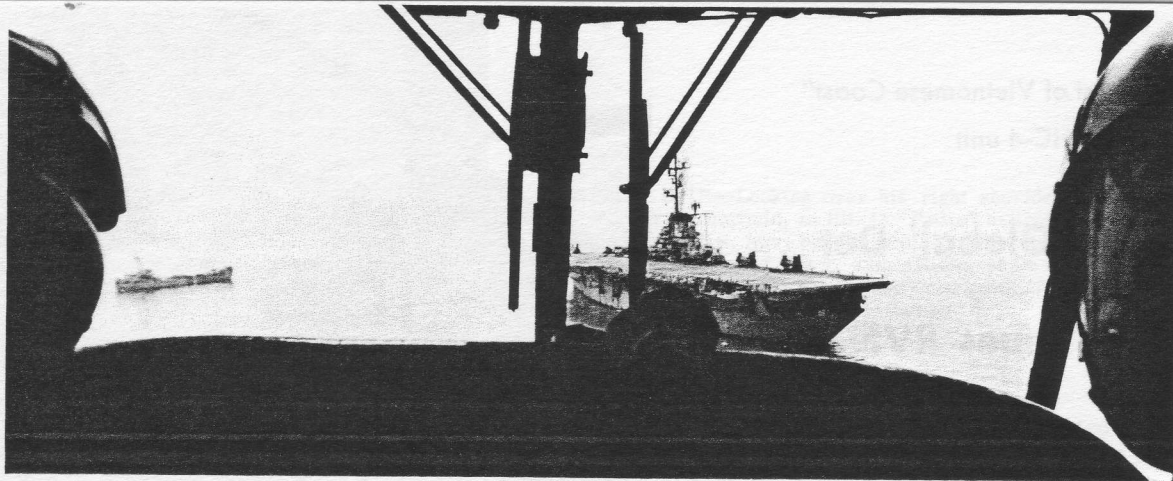
HELPFUL—A crewmember of HC-4's Det 36 assists VAdm John Victor Smith, commander, Amphibious Force Pacific, in donning the life vest required on all over-water flights. The detachment UH-2 is often utilized for "VIP" transportation.

engine, the main rotor head or transmission.

The crewmembers have been trained in first aid and rescue techniques and must be familiar with all available methods of giving aid to persons in need of help. As part of their training they are required to pass the Red Cross Senior Lifesaver test as well as qualifying as plane captain—the enlisted man responsible for seeing that the helicopter is kept in top flying condition. The man will

CARING FOR THE GHOST—Airman Heinz P. Heer, an aviation electronic technician, makes a minor repair to a switch. HC-4 maintenance personnel working on the tail rotor assembly are, left to right, William J. Hanlon, Stephen H. Benton and Joseph W. Edwards.





**BIRD'S EYE VIEW**—The Gray Ghost approaches the USS Valley Forge to take on fuel before returning to the USS Mount McKinley for the final mail run of the day.

spend long, hard hours working and studying before he can take his place in the helo as the aircrewman.

The men of Det 36 come to Vietnam for six-month tours before returning to duty at the squadron's home base at NAS Lakehurst. While attached to the squadron, the men may also serve with any of the other HC-4 detachment operations around the globe. Some units are with the Mediterranean, Atlantic, and Caribbean Fleets and their personnel are given the opportunity to see such ports of call as Naples, Venice, Villefranche, Rota, Athens, Tangiers, San Juan, Bermuda, and so on.

Det 36 is now adding places like Hong Kong, Singapore, Bangkok, Kaohsiung, and Yokosuka to the list of exotic ports they have visited while assigned to HC-4.

"These men enjoy what liberty they get," remarked Lt George M. Catello. "When the ship is on the line they earn that liberty with long hours and hard work."

The men who fly the Gray Ghost come and go—but the helo is still flying from the Amphibious Force Flagship to the many helopads in Vietnam and throughout the Orient.

Det 4, EARRC (MAC), operations

## The Ten Days Following Camille

*By Capt Ronald W. Bashant, Operations Officer*

At 0945Z hours on Sunday, 17 August, 1969, Det 4, EARRC, Keesler AFB, Miss., was notified by the Base Command Post that the area had been placed in a state of Hercon 1 ("12 hours before the arrival of 50 knot or greater winds related to a tropical cyclone"). During that late morning and early afternoon, the detachment commander and NCOIC contacted unit personnel. Thorough storm briefings and understanding of planned locations of personnel and families during and following the storm were accomplished. A final inspection was made of the two hangared and secured unit HH-43B rescue helicopters late Sunday afternoon. Already gale winds and rain were hitting the area.

At 2335 hours local the center of Hurricane Camille hit the Mississippi Gulf Coast at the approximate location of Pass Christian, a city 20 miles east of Keesler AFB. Winds of 200 miles per hour and tides of 20+ feet accompanied the storm. By daybreak, 18 August, winds had diminished to 40 knots and personnel living in unit barracks and nearby private homes could make their way to the detachment alert facility. Nearly all roads were impassable. There had been no electrical power, water, or telephone in the area (and for 50 miles west) since early the night before. All bridges leading to the Mississippi Gulf Coast were closed by hurricane damage. Complete devastation covered the Biloxi, Gulfport, and Bay St Louis area. Highway 90, the primary artery, was closed to all traffic due to road and seawall damage.

All 12 detachment personnel and their dependents survived Camille without injury. One family was left homeless with the destruction of their mobile home. They had been in an on-base shelter during the storm. Another family's home lost a large portion of its roof and sustained major interior water damage. Two other homes of detachment personnel received relatively minor damage. Most all families and the detachment itself operated during the week following the hurricane without running water, electricity, lights or telephone. Despite numerous personal hardships, Det 4 aircrews began flying life-saving missions into the disaster area minutes after the command post was notified of the unit alert status. During the 10 days following hurricane Camille, 122 sorties totaling 55.8 hours were flown around the clock by unit aircrews in the two assigned HH-43B aircraft. Type missions flown included:

1. **DAMAGE ASSESSMENT**—Observers were General Maddox, commander ATC; U. S. Senator Eastman, Mississippi; Major General Moore, commander Keesler Technical Training Center; American Red Cross officials; U. S. Presidential and Congressional aides; national, state, and local Civil Defense and disaster control personnel.

2. **MEDICAL EVACUATION**—Keesler AFB Command Post notified Det 4 that the Bay of St Louis Home for the Aged required immediate evacuation. Without electrical power or water the severely damaged home was without

*Continued on page 22*

**KAMAN ROTOR TIPS**



# Timely Tips

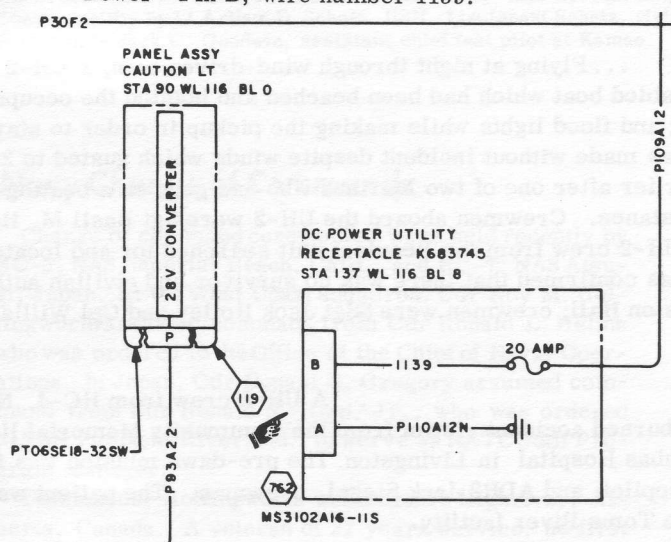
## DC Power Utility Receptacle (UH-2C)

A future Change to Figure 3, NAVAIR 01-260HCA-2-8.1, will reflect the following information:

Wires on the dc power utility receptacle, P/N K683745, located at station 137, water line 116, butt line 8, are routed as follows (see accompanying schematic):

Ground--Pin A, wire number P110A12N.

Power--Pin B, wire number 1139.



J. J. McMahon, Service Engineer

## Flight Control Rigging — Shimming (UH-2)

When using the cyclic Rig Fixture Set to rig or check the lateral controls before or after incorporation of Airframe Change 93, check the part number on the fixture to determine whether or not shimming is required. The following chart should prove helpful in determining shim requirements. This information will appear in a future change of the MIM, NAVWEPS 01-260HCA-2-2.1, Flight Controls. (AFC 93 authorizes increasing lateral cyclic and directional control on the UH-2A/B. Authorization to rework the -201 Rigging Fixture Set to eliminate the shimming requirement was made in Support Equipment Change 567. Sets which have been reworked carry the -301 designation.)

Part Number	Aircraft Application	Shims Required?
* K604802-201	UH-2A/UH-2B	No
** -201	UH-2A/UH-2B	Yes
** -301	UH-2A/UH-2B/UH-2C	No

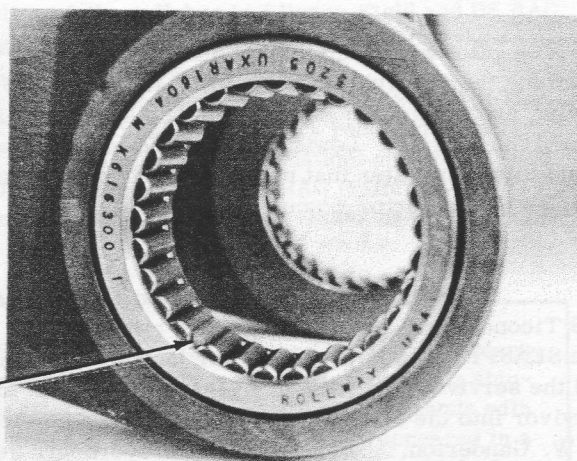
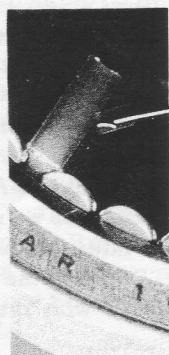
\* Before incorporation of AFC 93.

\*\*After incorporation of AFC 93.

W. J. Wagemaker, Service Engineer

## Tail Rotor Flapping Bearings (UH-2)

The Teflon keeper in the tail rotor blade flapping bearings (see arrow in Photos) helps to retain the rollers in place when the grip has no pin installed. After a flapping bearing has been installed and the aircraft flown for a while, it is possible for the Teflon to compress slightly. If this occurs, the next time a rocking pin is removed or a blade is changed, one or more of the 29 rollers may fall out of the bearing race. This is not an indication of a faulty bearing; the rollers should be cleaned, lubed, and re-installed into the race (also insure that the Teflon keeper is in place).



W. J. Wagemaker, Service Engineer



## SEASPRITE ACTIVITIES

... Four members of the Spanish Air Force were rescued by a UH-2 SEASPRITE crew after their plane crashed into the sea approximately 30 miles from the USS Shangri-La. The helo, from HC-2's Det 38 deployed aboard the carrier, was flying plane guard when the accident occurred. The rescuees were hoisted to the helicopter by UH-2 crewman AME2 Jerry O. Osburn. The second crewman, ADJ3 Serge E. Lebreton, went into the water to assist and also recovered the body of a fifth man. LCdr Thomas E. Gillen was pilot of the UH-2 and Lt(jg) James R. Beaird was copilot. Another UH-2 from HC-4's Det 48 aboard the USS Galveston also launched to assist in the rescue if needed.

... Flying at night through wind-driven rain, a UH-2 crew from the SAR unit at MCAS Beaufort, S. C., located a disabled boat which had been beached and hoisted the occupant to the helo. Capt Stephen Benckenstein, USMC, used landing and flood lights while making the pickup in order to stay clear of tall trees to one side of the SEASPRITE. The rescue was made without incident despite winds which gusted to 20 knots and the intermittent rain. The helicopter had launched earlier after one of two Marines who had gone on a boating trip returned to the Parris Island boat dock and requested assistance. Crewmen aboard the UH-2 were Sgt Basil M. Heth and Cpl William W. Brown, III. ... In another mission, a UH-2 crew from the Beaufort unit searched for and located a light civilian plane which had been reported missing. It was confirmed that there was no survivor and civilian authorities were notified. Pilot of the SEASPRITE was Capt Hurston Hall; crewmen were SSgt Jack Holley and Cpl William Brown.

... A UH-2 crew from HC-4, NAS Lakehurst, N. J., was called on to transport a critically-burned accident victim from the Community Memorial Hospital in Toms River to a burn speciality clinic at St. Barnabas Hospital in Livingston. The pre-dawn mission was flown by Lt Tom Ribolla, HC-4 ready pilot; Lt(jg) Larry Foss, copilot; and ADR2 Jack Stegal, crewman. The patient was accompanied by Shelby Baron, a registered nurse from the Toms River facility.

... Five minutes after the man overboard alarm sounded aboard the USS Independence, a sailor had been plucked from the sea by a UH-2 crew and returned to the carrier. Members of the SEASPRITE crew were Lt Peter R. Moore, pilot; Lt Wayne F. Stiles, copilot; AE2 Samuel J. Weibel and PR3 Earl W. Cooper, crewmen. All are from HC-2's Det 62 aboard the Independence. After the rescue they received a "well done" from the captain of the carrier for the expeditious manner in which the rescue was carried out.

... A pilot who ejected from his crippled A-4C was rescued from the sea soon afterward by a UH-2 crew flying plane guard for the USS John F. Kennedy. Manning the SEASPRITE were Lt(jg) Ronald L. Sitts, pilot; Lt(jg) William D. Sokel, copilot; and crewmen ADJ3 Donald K. Asada and AE1 Donald L. Lewis. All are attached to HC-2's Det 67 deployed aboard the carrier. Lewis was lowered to the water and aided the survivor who was entangled in his shroud lines. Lieutenant Sitts said after that he believed the detachment's emphasis on aircrew training was a "major factor" in making this, as well as prior rescues, uneventful.

... An aviation ordnanceman who was pushed overboard by an aircraft being positioned on the flight deck of the USS Ticonderoga, was rescued a few minutes later by a UH-2C crew from HC-1's Det 14 deployed aboard the carrier. The SEASPRITE was preparing for launch when the "man overboard" sounded. Lt(jg) Benny K. Life took off in the helo and the survivor was located a minute later. AN Michael R. Landt leaped into the water from the UH-2 and aided the survivor into the sling. Both men were then hoisted aboard. Other crewmembers were Lt(jg) C. W. Davis and AMCS V. W. Ganderton. ... In a second man-overboard rescue, a UH-2C crew from Det 14 plucked a sailor from the water and returned him to the carrier within five minutes from the time he fell from the deck. Lt D. L. Morgan was SEASPRITE pilot and Lt(jg) P. K. Newkirk was copilot. Crewmen were ADJ2 David R. Tracht and AMS3 Bruce A. Ekhoft. ... UH-2C crews from Det 14 also made two other rescues recently. In what was described as a "story-book" rescue, Lieutenant Life and his crew plucked the pilot of an F-8J from the sea; and three weeks later, an A-4C pilot was rescued by another Det 14 crew again headed by Lieutenant Life. Others aboard the SEASPRITE during the first rescue were Lt(jg) D. L. Walker, ADJ1 Ernest L. Skeen and ADJ3 John B. Burnett. Manning the UH-2C with Lieutenant Life on the second rescue were Lieutenant Walker, Petty Officer Tracht and AMS3 Kenneth W. Burton.





**HH-2C AT NAVAL TEST CENTER**—The Kaman HH-2C search and rescue Navy gunship is now undergoing testing at NATC, Patuxent River, Md., before its introduction into the Fleet. Starting with a "growth" UH-2C SEASPRITE, the twin-engine helicopter has been fitted with a 7.62mm minigun in a chin-mounted turret, waist-mounted machine guns, and armor. The growth features include an up-rated main transmission, dual wheels and four bladed tail rotor which permit operations at 12,800 pounds gross weight. The Navy has ordered six UH-2C's retrofitted to HH-2C's. The first gunship, above, was flown to the Test Center from Kaman's Bloomfield, Conn., facility by Lt Arthur D. Schatz, USN. Lieutenant Schatz, right, is a WEPTASK pilot from the Service Test Division at Patuxent. With him is Jack C. Goodwin, assistant chief test pilot at Kaman.

## Navy Change of Commands

Change of command ceremonies were held recently by HC-5, NAS Imperial Beach, Calif., and HC-7, NAS Atsugi, Japan. At the West Coast squadron, Cdr Roy M. Hollingworth assumed command from Cdr Ronald L. Helms who was ordered to the Office of the Chief of Naval Operations. In Japan, Cdr Donald G. Gregory assumed command from Cdr Ronald N. Hipp, Jr., who was ordered to NAS Patuxent River, Md., to serve as NATC Staff Program Manager.

Commander Hollingworth was born in Highriver, Alberta, Canada. A veteran of 22 years service, he first served as an aviation crewman at NAAS Barin Field and then attended numerous service schools. In 1953, he was selected for the Seaman-to-Admiral Program, and reported to Officer Indoctrination School at Newport, R.I., He received flight training at NAS Pensacola, Fla., and multi-engine indoctrination at Hutchinson, Kan. After serving in various capacities with VW-12, NAS Barbers Point, Oahu, Hawaii, Commander Hollingworth was designated an airborne early warning aircraft commander (instructor). Later he was stationed at NAAS Saufley Field, Pensacola.

After helicopter transition training at NAF Ellyson Field, Pensacola, Commander Hollingworth joined the "Black Knights" of HS-4. When his tour of duty with the squadron was completed, he attended the Naval War College at Newport and then reported to Headquarters Alaskan Command for duty as deputy secretary of the joint staff.

In 1967, Commander Hollingworth received transition training in the UH-1 helicopter gunship at Fort Benning, Ga., then reported to the HA(L) 3 Navy "Seawolves" in Vietnam. While serving at Dong Tam in the Mekong Delta as O-in-C of Det 6, he participated in many ground and air actions against the enemy. He reported to HC-5 as executive officer in August, 1968.

Commander Hollingworth has received numerous decorations and ribbons including the Bronze Star with Combat "V", Air Medal with six Gold Stars, Purple Heart, Vietnam Service Medal with one Silver Star, and the Vietnamese Air Gallantry Medal.

Commander Gregory was born in Rhineland, Mo., and attended Northwest Missouri State College. In 1951 he joined the U. S. Naval Reserve as an aviation cadet and received his wings and commission in 1953. After reporting to VF-101 at Cecil Field, Fla., he took part in the USS Midway's "Around the World" cruise. Following the cruise he was an instrument flight instructor at NAS Jacksonville with FAWTULANT Det A.

When released to inactive duty in 1956, Commander Gregory studied aeronautical engineering at the University of Kansas and also flew with VF-886 at NAS Olathe, Kan. In 1958 he returned to active duty and was augmented into the U. S. Navy while serving with VT-25 at NAAS Chase Field, Texas. Later he reported for duty as a "plank owner" on the USS Constellation at the Brooklyn Navy Yard. He served as air-launched-missile officer and aviation ordnance officer until 1963 when he received orders to Ellyson Field for helicopter training. Upon completion of the syllabus at Ellyson Field and HS RAG training, he reported for a two-year tour of duty with HS-9 at NAS Quonset Point, R. I.

After attending the Naval Post Graduate School at Monterey, Calif., Commander Gregory received a Bachelor of Arts degree in International Relations and Government. Later he completed helicopter RAG training with HC-5. He reported to HC-7 in October, 1968, as executive officer.

USS Forrestal... ADJ2 John Thoen and AN Mark Kennedy became TV personalities during a ship-wide effort by Det 59 to familiarize all hands with helicopter rescue techniques. They appeared in a broadcast by the ship's television in which they demonstrated the correct procedures for entering and staying in a rescue sling. During a man overboard drill AMS2 Patrick Simons got his feet wet and rescued the ship's dummy "Oscar." He was ably assisted and directed by ATAN Jonas Johnson.

From HC-2's "The Whirlybird"

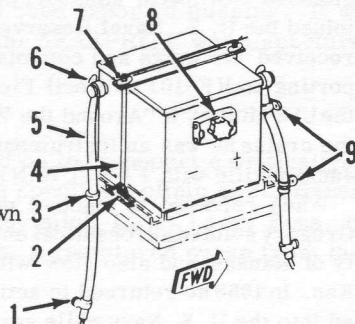
# Q's AND A's

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

**Q.** (Applies HH-43) HOW OFTEN SHOULD THE BATTERY VENT TUBES BE INSPECTED?

**A.** According to T. O. 1H-43(H)B-6, the battery vent tubes (shown in the accompanying illustration) should be inspected at each post flight inspection period. These tubes must be kept free of kinks, corrosion, and obstructions in order to provide an escape route for battery-generated flammable hydrogen gas.

1. Hose clamp
2. Tie down
3. Grommet
4. Tie down
5. Tubing
6. Hose clamp
7. Battery hold-down
8. Connector
9. Support clamp

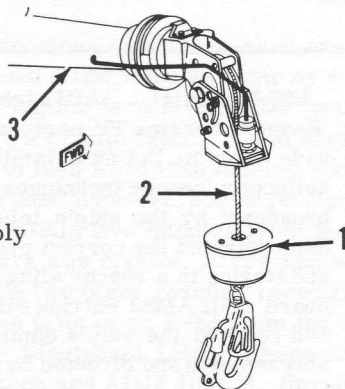


J. J. McMahon, Service Engineer

**Q.** (Applies UH-2) WHAT IS THE PART NUMBER FOR THE REMOVABLE RESCUE HOIST BUMPER ASSEMBLY AND THE RESCUE CABLE ASSEMBLIES?

**A.** The removable rescue hoist bumper assembly is identified as P/N WA3314, FSN RM1680-854-1022BH2X. The cable assemblies are identified as (Refer to the illustration):

- 100-foot cable assembly-P/N WA2485, FSN RM1680-074-2111BH2X.
- 200-foot cable assembly-P/N WA3028, FSN RZ1680-986-9407BH2X.

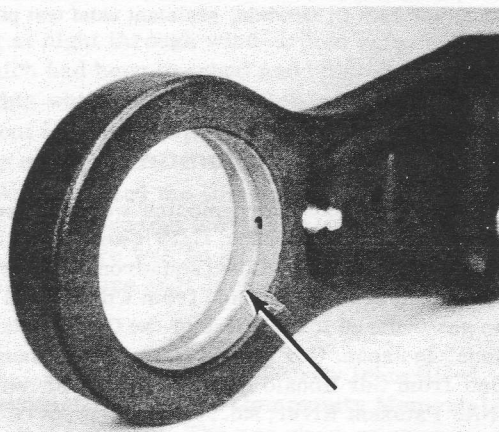


1. Bumper Assembly
2. Cable Assembly
3. Boom Assembly

W. J. Wagemaker, Service Engineer

**Q.** (Applies UH-2) HOW OFTEN SHOULD THE MAIN ROTOR BLADE LOCKING ARMS, P/N K611012-103, BE LUBRICATED?

**A.** The -103 locking arm (FSN RH1615-103-0547BH7X) which is a result of a recent Kaman design change, should be lubricated daily. The locking arm, see Photo, is located on the underside of the blade. It has a lube fitting and a groove (arrow) to aid in distribution of the lubricant. UH-2 main rotor blade locking arms will receive this lube capability during Kaman repair of rotorblades. The change will provide lubricant at the locking arm to bushing interface and thereby facilitate removal of the nut and bushing assembly from the locking arm. This information will be incorporated into the applicable handbooks by a future change.

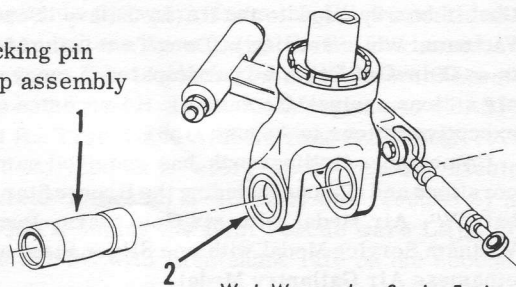


W. J. Wagemaker, Service Engineer

**Q.** (Applies UH-2) WHAT IS THE PART NUMBER FOR TAIL ROTOR BLADE ROCKING PINS?

**A.** Two tail rotor blade rocking pins are currently in use. (Refer to the illustration.) Before Airframe Change No. 140, pin P/N K616205-15 (FSN RM1560-051-3106 BH6X) is used. AFC No. 140 introduced a new rocking pin, P/N K616301-11 (FSN RM1615-879-6222UH6X), to be used with the improved tail rotor blade flapping bearings, P/N K616300-1. Although the two pins are physically interchangeable, it is advisable to use the pins with their respective tail rotor blades. Use pin P/N K616301-11 with tail rotor blades P/N K614001-207 or K614701-1 which have the improved flapping bearings installed. Use pin P/N K616205-15 with other dash numbered tail rotor blades, all of which have the older flapping bearings, P/N K101095-11, installed.

1. Rocking pin
2. Grip assembly

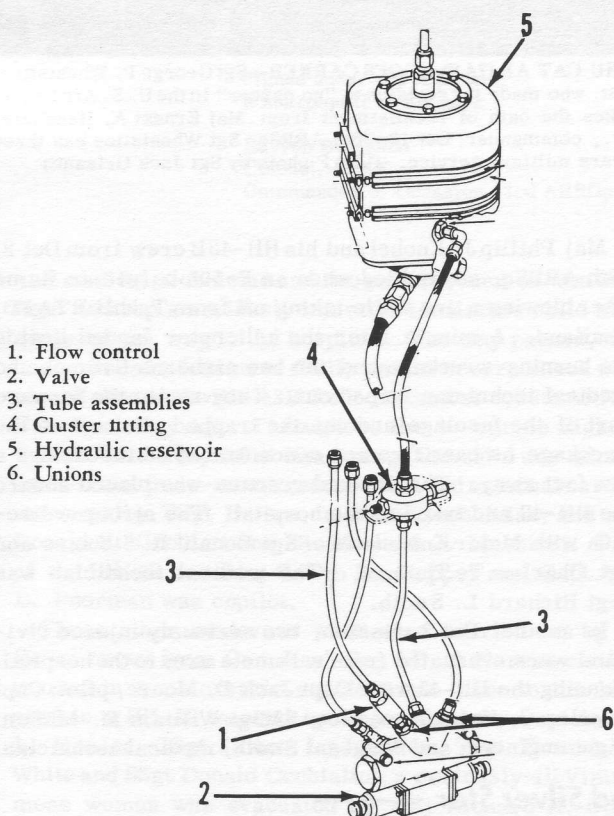


W. J. Wagemaker, Service Engineer



**Q.** (Applies UH-2) WHAT IS THE PART NUMBER FOR THE FLOW CONTROL REGULATOR LOCATED AT THE LOWER END OF HYDRAULIC TUBE, P/N K682711-51?

**A.** The valve (item 1 in the illustration), is identified as 24A6-3.5, FSN RM1650-981-3862BH2X. It functions as a flow regulator which prevents pressure surges in the hydraulic line from affecting the rescue hoist system control valve. In the event the 24A6-3.5 valve is not readily available, the following valve may be used as a substitute: P/N 9500-15, FSN RM6685-803-2660BH2X. This information will be incorporated into the applicable handbooks by a future change.



R. J. Trella, Service Engineer

**Q.** (Applies UH-2) SHOULD THE OPEN SEA RESCUE BOOM (FISHPOLE) BE USED EVERY TIME THE RESCUE HOIST IS USED?

**A.** If the fishpole boom is installed on the aircraft, the pilot may elect not to extend the boom but the hoist cable must be threaded through the eye of the fishpole. Both Flight Manuals, NAVAIR 01-260HCA-1 and NAVAIR 01-260HCB-1 state the following:

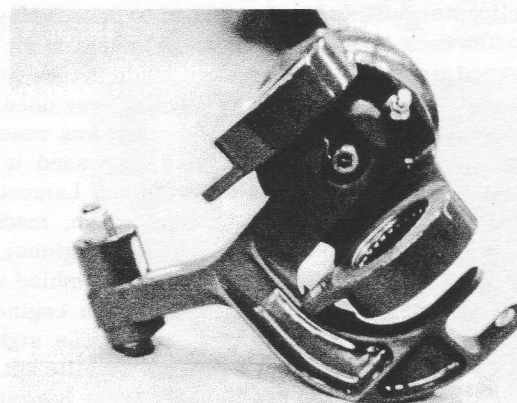
**NOTE**

If the fishpole is installed, the hoist cable shall be threaded through the fishpole eye for all hoisting operations. This is to avoid the possibility of cable fouling in the fishpole eye mechanism.

W. J. Wagemaker, Service Engineer

**Q.** (Applies UH-2) WHY SHOULD THE LUBE FITTING ON THE TAIL ROTOR BLADE GRIP BE INSTALLED BEFORE ATTACHING THE PITCH ARM ASSEMBLY TO THE GRIP?

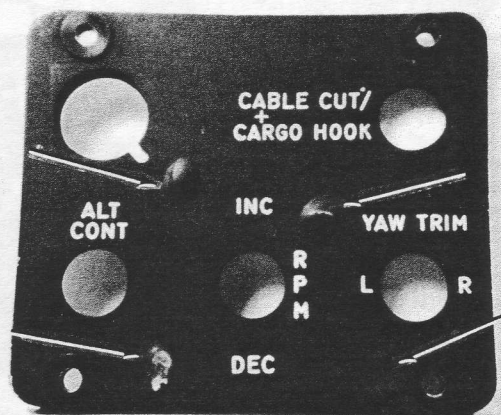
**A.** As can be seen in the Photo of a correct installation, the lube fitting has been positioned on one side of the blade grip while the pitch arm protrudes from the other side. If the lube fitting had not been installed before the pitch arm assembly was attached to the blade grip, it would have been possible to install the arm 180° out-of-phase and, consequently, cover the lube fitting hole. If the pitch arm is out-of-phase, the tail rotor blade may be installed backward onto the helo (such a mistake has already occurred). Remember, if the lube fitting has not been installed and the lube fitting hole is not evident, the pitch arm is incorrectly installed.



W. J. Wagemaker, Service Engineer

**Q.** (Applies UH-2A/B) WHAT PRACTICE SHOULD ALWAYS BE FOLLOWED BEFORE AN ELECTRICAL COMPONENT IS REMOVED?

**A.** Good shop practices dictate that all power should be off before removing an electrical component. The accompanying Photo is an example of what can occur if these established practices are circumvented. The arrows point to the visible evidence; the four blisters occurred because of the following: While a crew was performing a POWER ON electrical checkout on an aircraft, a mechanic disconnected the harness leading to the copilot's collective stick. Almost immediately, another man noticed smoke emanating from the pilot's collective stick panel. Although electrical power was quickly turned off, it was too late!



J. J. McMahon, Service Engineer

# Southeast Asia

Six men who bailed out of a crippled aircraft at night were rescued by an HH-43 crew from Det 3, 38th ARRSq, Ubon Airfield, Thailand. Flying in light rain lit by occasional flashes of lightning, Pedro approached the bailout area. A few minutes later one survivor was located. Capt Allen E. Spalt landed and the rest of the crew disembarked to carry the injured survivor up an embankment to the helicopter. The HH-43 returned to base, refueled and then flew back through the darkness to search for the other downed airmen. Landings were made in tree-studded rice paddies, or the forest penetrator was used, to pick up five more survivors. Another man was rescued by one of two HH-53's which had also responded to the emergency. With Captain Spalt were Capt Lamont K. Churchill, copilot; SSgt Avo R. Vanbeuzekom, medical technician; and A1c Roger A. Klaes, flight engineer.

In a second Det 3 mission, an HH-43 scrambled with the fire suppression kit when a C-47 lost an engine on takeoff. Seconds later the downed "bird" was sighted afloat in the Mun River so Capt Ernest L. Neville set the FSK on the shore and the two firemen, Sgts Booker T. McCoy and David R. Oakes, alighted. The helicopter then hovered over the flowing river while Sergeant Vanbeuzekom lowered the forest penetrator to rescue one survivor who was seriously injured and being supported by two other men. He was taken to the hospital and then the HH-43 returned and picked up three more injured men. Four others had been taken to shore in sampans. The survivors were aided at the scene by the firemen from the HH-43. Copilot on the mission was Captain Churchill.



PHU CAT AB (7AF)—GOES CAREER—Sgt George P. Wheatstine, left, who made the decision to "go career" in the U. S. Air Force, takes the oath of reenlistment from Maj Ernest A. Headberg, Jr., commander, Det 13, 38th ARRSq. Sgt Wheatstine has three years military service. (USAF photo by Sgt Jack Grisanti)

Maj Phillip J. Knobel and his HH-43B crew from Det 2, 38th ARRSq, scrambled when an F-105 burst into flame after blowing a tire while taking off from Takhli RTAFB, Thailand. A minute later the helicopter landed beside the burning wreckage and the two airborne firemen and medical technician leaped out. They ran to the forward part of the fuselage and cut the trapped pilot out of the wreckage as base firemen concentrated on the flames a few feet away. The injured rescuee was placed aboard the HH-43 and taken to the hospital. The airborne firemen with Major Knobel were SSgt Donald R. Stebbins and Sgt Charles T. Thomas. The medical technician was SSgt Richard L. Smith.

In another Det 2 mission, two seriously injured civilians were evacuated from a remote area to the hospital. Manning the HH-43 were Capt Jack C. Moore, pilot; Capt Charles C. Holman, copilot; SMSgt William M. Mintun, flight engineer; and Sergeant Smith, medical technician.

## Det 9 'PJ' Awarded Silver Star



PLEIKU AB (7AF)—CITED FOR GALLANTRY—Sgt Leif E. Arvidson, a pararescueman with Det 9, 38th ARRSq here, receives the Silver Star from MajGen James

F. Kirkendall, deputy chief of staff for operations, 7th Air Force. Maj Harold G. Pierce, center, an A-1 Skyraider pilot, also received the Silver Star. The medal is the United States' third highest decoration for valor.

The citation that accompanied the "PJ's" award read in part, "Sergeant Arvidson skillfully accomplished the combat extraction of eight critically injured survivors from a helicopter crash during a day-night operation in rugged, jungle covered, mountainous terrain in a hostile area. . . . His calm and professional performance of duties in the face of intense hostile fire was of primary importance in the successful accomplishment of the mission."

Sergeant Arvidson spent more than nine hours on the ground, subject to hostile fire, during the rescue operation. He has flown more than 130 combat rescue missions as a PJ aboard the HH-43 Pedro rescue helicopter, and he has assisted in the recovery of 18 American military personnel—12 downed aircrew members, and six members of an Army Long Range Reconnaissance Patrol. (USAF photo by Sgt Terry Hand)



## Purple Heart For Pedro

The following citation accompanied the Purple Heart presented to "Pedro 51" for injuries suffered during an enemy rocket attack....

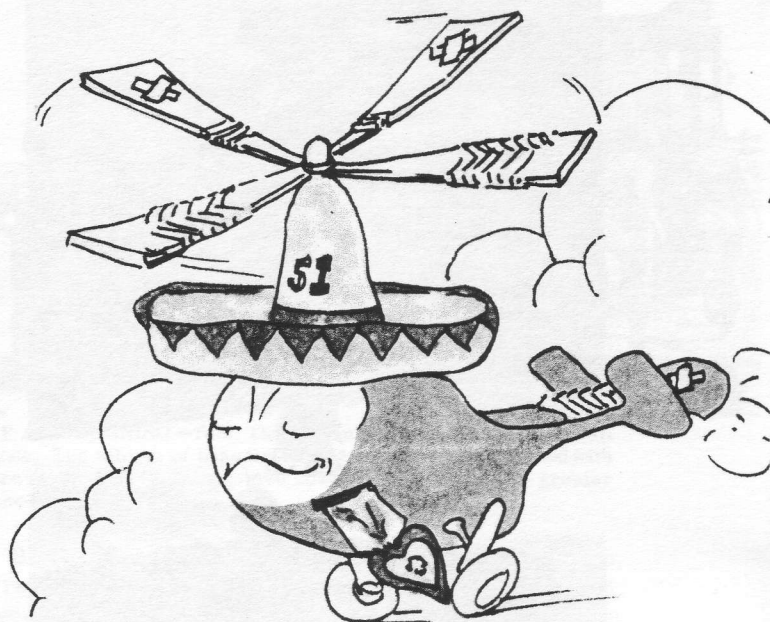
HH-43 Local Base Rescue helicopter Pedro 51, under protective cover and husbandry of Det 8, 38th ARRSq, Cam Ranh Bay AB, RVN, distinguished itself while taking damage, abrasions and big dents as a result of hostile, dirty action on 7 August 1969. On that date, Pedro 51 unwillingly but bravely came into contact with a sizeable enemy force which did sorely try to do him in. Damage was sustained about the tail pipe, engine, rotors and right pilot's door which did indeed inflict serious wounds on his newly painted little body and grievously scare the..... out of the glassy-eyed crew nearby in a protected area. Competent medical care and big patches notwithstanding, Pedro 51 displayed unusual and rare fortitude by returning to active duty in direct opposition to the example of his fallen brothers. His willingness to sustain damage, from whatever source happens to be available, typifies the dedication and devotion to duty of all LBR forces in Southeast Asia.

Signed under my hand with  
a sharp quill in my back

Rayvon Burleson  
Colonel, USAF  
Commander of Occasion, 3rd ARRGp

A medical technician and two pararescuemen won their fight to keep a seriously injured Vietnamese child alive while on the way to the hospital. The tiny patient, who had suffered a fractured skull, was in severe shock when placed aboard the HH-43B Pedro from Det 8, 38th ARRSq, Cam Ranh Bay AB. Throughout the 40-minute flight to the 8th Field Hospital at Nha Trang, the child was administered mouth-to-mouth resuscitation and external cardiac massage by TSgt Deleon, medical technician; and A1c Donald H. Goodlett and A1c Kenneth J. Musnicki. Pilot of the HH-43 was Maj Calvin W. Capper and Capt John L. Poorman was copilot.

Three other medevacs were also carried out by the Pedro crews from Cam Ranh Bay AB. A Korean civilian injured in a motorcycle accident was taken to the hospital in a HH-43 manned by Major Capper, Capt James L. McAfee, TSgt James L. Johnson, TSgt Thomas M. White and SSgt Donald Occhialini; a seriously-ill Vietnamese woman was evacuated by Maj Richard H. Coan, Capt Horace P. Holland, Jr., Sgt Clint Berg and Airman Goodlett; another Vietnamese woman was taken, at night, to the 8th Field Hospital by Major Capper, Capt Samuel E. Chapin, Jr., TSgt James L. Johnson and TSgt Lawrence Wellington.



**TUY HOA AB (7AF)—EMERGENCY RESCUE GEAR**--USAF Sgt Scott G. Orloski puts on heavily insulated fire-fighting gear during a practice exercise before take-off in an HH-43 Pedro. The helicopter is assigned to Det 11, 38th ARRSq at Tuy Hoa. In center background is the large fire suppression kit which is suspended below the HH-43. It is used to suppress aircraft fires so that trapped crewmembers can be rescued. (USAF photo by A1c John Larson)

**2,500th "SAVE"**—Shown are the Rescuemen from Det 10, 38th ARRSq, Binh Thuy AB, who made the 2,500th "save" in Southeast Asia several weeks ago (see August-September-October Rotor Tips). Front row, left to right, are Capt Jack D. Cusano, TSgt Dudley R. Peckinpaugh, and Capt John L. Debevec. They manned one of the two HH-43 Pedros used during the evacuation of three U. S. Navy men wounded in a mortar explosion. In the rear row is the crew of the other helicopter: Sgt Kenneth P. Johnson, SSgt Michael F. Dean, Capt Cecil A. Jessee and Maj Ralph L. Gaede.

Major Gaede, detachment commander, was recently presented the Silver Star—the United States' third highest award for heroism—for another Pedro mission last January. The major was pilot of an HH-43 which rescued a downed airman while under heavy enemy fire. Others aboard the battle-damaged helicopter received the Distinguished Flying Cross. They are Captain Cusano, SSgt Gerald H. Jones and A1c Richard C. Stiefken. (USAF photo)



**PICKUP AND GO**—An HH-43 Pedro rescue helicopter crew from Det 1, 38th ARRSq (MAC), Phan Rang AB, is given the signal to hover by a flight engineer. After gaining enough altitude, the helicopter will head for the flight line with a fire suppression kit slung below. The helicopter is responding to a "sick bird" alert, in which an aircraft with battle damage or a mechanical malfunction may have difficulty landing on the runway. (USAF photo by Sgt Donald B. Dirksing)

**PHAN RANG AB (7AF)**—"If an aircraft crashes on the runway, our job is to get the people aboard out alive." This statement by Maj John C. Acton, Jr., commander, Det 1, 38th ARRSq, here, summarizes one of the unit's most important missions: 'sick bird' scramble.

"A sick bird is an aircraft with battle damage or mechanical malfunctions that can cause it to crash on the runway," Major Acton explained. "Of the several base units scrambled to action when a sick bird is to land, our responsibility is the most crucial."

As Sergeant Christy points out in the article above, the ARRS helicopter rescue crews work closely with ground equipment manned by personnel from the base fire departments. The airborne firemen forming part of the HH-43 crew are also from the fire departments and assigned to the rescue detachments on a temporary basis. In recognition of the valuable service performed by the firemen, an account of their activities appears below. While both articles are concerned with units in Vietnam, the helicopter-ground equipment teams function basically the same at USAF bases in many parts of the world. (USAF photos by A1c Timothy Nowak)

**BINH THUY (7AF)**—Saving close to a million dollars in just 33 days is quite an accomplishment for anyone, but for the 54 firemen stationed at Binh Thuy AB it was just a matter of performing their duty. Recently such an amount was saved by using their fire-fighting abilities to extinguish two flaming airplanes, valued at \$1,010,719, on the Binh Thuy flight line. Damage to the planes was held to a minimum.

Working an average of 84 hours a week, each of the firemen stands by around the clock, ready at a moment's notice to go where his services are needed. Two shifts alternate every 24 hours. Six of the men are assigned to Det 10, 38th ARRSq, where they fly fire-suppression missions in HH-43's. Each of these men has earned Air Medals.

## HH-43's On Alert

### To Aid 'Sick Birds'

By Sgt Douglas L. Christy

One of the unit's two HH-43 Pedro rescue helicopters with its five crewmen, and a fire suppression kit (FSK) slung below, is then called to action. The FSK combines chemicals, water and air, and can dispense 1,000 gallons of expanded, fire-suppressing foam. Meanwhile, fire trucks, crash vehicles and an ambulance take their emergency stations along the runway.

"Such scrambles occur on an average of four times daily," Major Acton added, "but fortunately, tragedies are rare." If the aircraft does crash, however, the highly-trained crew of pilot, copilot, medical corpsman and two firefighters is ready.

"As the crippled aircraft begins its landing, we follow it down the runway. We are thus prepared to land behind the aircraft in case it bursts into flames," the major said. After setting the FSK near the burning aircraft and letting out the firemen and corpsman, the helicopter hovers over the wreckage to suppress the flames with the downwash from its whirling blades.

One of the firemen, SSgt Kenneth A. Myers, explained the job of removing the crewmen. "We use the foam from the FSK and the chopper's rotorwash to clear a path to the aircraft so we can get the people out quickly and take them to a medic."

While the helicopter crew is doing its job, fire trucks spray the aircraft with more foam to put out the fire. "Although our FSK has only limited foam," Sergeant Myers explained, "it is enough to give the trucks time to get to the scene and for us to remove the aircraft crew."

If the ambulance cannot get close enough to get the victims out and take them to the hospital, the helicopter is equipped to evacuate them immediately. "Most crippled aircraft land safely," Major Acton concluded, "but we must be ready for any eventuality—and that's our motto: 'That Others May Live.'"

When they are not busy putting out flames, the base firemen keep busy with daily equipment maintenance and various training programs. They receive monthly training to keep current on all types of aircraft and to maintain their proficiency.

"It is essential that we know all the various weapons systems, aircraft ordnance and the time factors for extinguishing the flames before explosions occur," said MSgt William D. Collins, base fire chief. "Each of the men is given an explosion safety test every 60 days."

Crash drills are frequently held so that firemen can effect rescues and simulate putting out engine fires. Pre-fire plans are established for every building on base and drills are often held at these places for familiarization of the area.





**PRACTICE DRILL**—Airborne firefighters perform simulated aircraft crash drills as part of their training program. Six Binh Thuy firemen are assigned to fly fire suppression missions with Det 10, 38th ARRSq.

"The fact that we have a 100% passing rate in our OJT program indicates that our men receive adequate training," remarks Collins.

Besides its responsibility on Binh Thuy, the fire department also assists the nearby Can Tho Army Air Field and the Naval Support Activity when they request aid. Many times during mortar attacks the firemen must brave the incoming rounds in order to combat blazes set off by the explosives. "We have a command post set up in a bunker so we can keep abreast of damage or fires during the attack," says the fire chief. "Following the attacks we must immediately examine all aircraft for possible fuel leaks caused by the penetrating shrapnel."

Collins claims that his firemen are probably the most highly decorated ones in Vietnam. Nearly all of his men have received some sort of commendation. In one month, 14 of the firemen received the Bronze Star with the "V" device—for valor—for risking their lives while fighting the flames of an A-1 aircraft that had crash landed with a full load of bombs. Another example of bravery became evident when a F-100 touched down short of the runway and sheared off its landing gears. It was carrying two 750-pound bombs and burst into flames as it skidded down the runway. The pilot tried to leap through the fire but fell to the ground, his clothing in flames. A fireman entered the flames and threw an aluminized asbestos coat over the pilot, smothering the flames and saving his life. The fire was extinguished just 11 minutes after touchdown. Airmen's Medals were awarded for this action.

Commenting on his personnel, Collins states, "These guys are the best I have ever worked with. It is evident by their awards that they are doing a great job. They really earn their pay checks."



**OFF AND RUNNING**—Binh Thuy firemen scramble when the call comes. The efforts of base firemen such as these, combined with those of the HH-43 crews, give downed airmen a much greater chance for survival.

**BINH THUY AB (7AF)**—USAF Capt Philip H. Kammann, a rescue pilot with Det 10, 38th ARRSq, at Binh Thuy AB, recently made his 22nd combat save while flying his last combat rescue mission in the Republic of Vietnam. He was slated for transfer to Det 21, CARRC, Ellington AFB, Texas, the next day.

The captain and his crew were on stand-by alert when the emergency call came from the Navy tactical operations center requesting the medical evacuation of a wounded sailor. The sailor was aboard a landing ship, tank (LST) and had suffered severe multiple shrapnel wounds when an enemy B-40 rocket landed and exploded on the LST's deck. There were no medical personnel aboard the ship to administer medical attention and the sailor was reported in poor condition. Captain Kammann, flying an HH-43, met the ship on the Bassac River about 15 miles south of Binh Thuy.

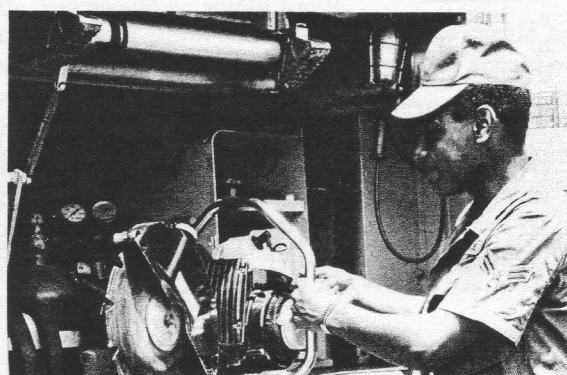
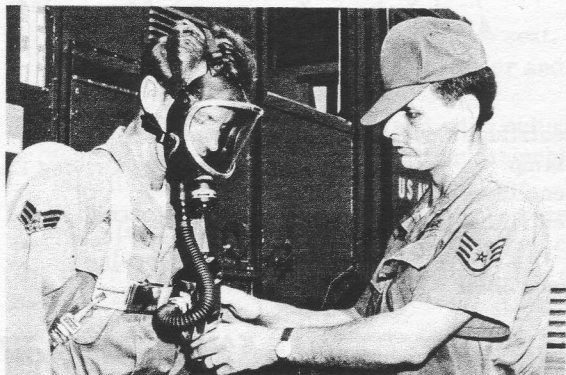
"We were not able to land because there was equipment on the ship's deck," explained the captain, "so we hovered above the ship as it sailed down river away from the hostile area."

The HH-43 was required to hover over or near the ship for more than 30 minutes in order to make the pickup. Holding the rescue helicopter in position despite a 90° right crosswind was difficult and tiring. The copilot, Capt John L. Debevec, relieved Captain Kammann at the controls during part of the operation.

The pararescueman, SSgt Michael F. Dean, was lowered to the deck where he administered first aid to the sailor. A litter was then lowered and the patient was strapped in and hoisted to the HH-43 by Sgt Kenneth P. Johnson, the flight engineer. After picking up the PJ, the rescue helicopter delivered the sailor to the 29th Field Evacuation Hospital near Binh Thuy.

(other SEA activities on page 25)

**EQUIPMENT CHECK**—Sgt Donald C. Steggal, left, dons self-contained breathing apparatus used in smoke filled areas. SSgt Merrill K. Clark is helping adjust it. In the next photo, Alc Walter J. Robinson prepares to test a portable saw used by firemen to gain entrance to burning buildings or downed aircraft. Such saws are also used to cut trees down so helicopters can land. Both the breathing apparatus and saw are checked daily.



# Fuel Filter Maintenance

APPLIES UH-2C and UH-2A/B with AFC 113 INSTALLED.

by Herman Zubkoff  
Service Engineer

The bypass (fuel filter warning) light performs a valuable service because it alerts the pilot to a potential contamination problem and provides him with enough time to take action. Here is how it works: Foreign materials within the fuel system are trapped by the fuel filter. When approximately 33% of the filter area becomes clogged, the resultant pressure drop across the filter causes the warning light to be energized, informing the pilot that contaminants are in the system. If the foreign material build-up is such that it continues to further clog the filter element, prior to termination of the flight, the relief valve will open when about 60% of the element filtering area is clogged. This allows fuel to bypass the filter and flow to the engines (even though contaminated) so the pilot can continue to effect a safe landing. The elapsed time between warning light ON and actual bypass, cannot be accurately determined because it depends upon the nature and degree of contamination. It is therefore recommended that, when the light is energized, a flight be terminated as soon as

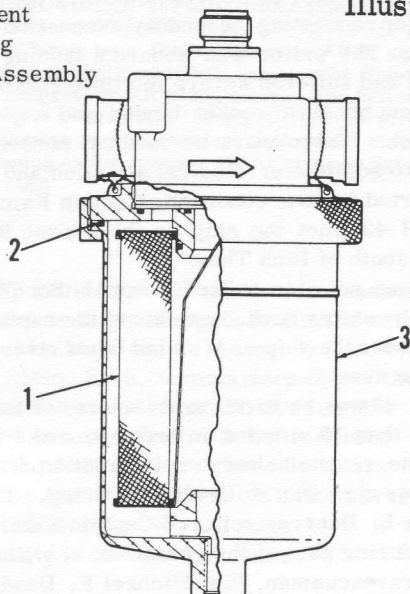
practicable to reduce the possibility of fuel control malfunction due to fuel contamination.

Occasionally, under max engine power demands, the warning light may flicker. This occurs because the sudden increased fuel flow causes a momentary excessive pressure drop across the filter element. Continuous flickering of the light (during normal cruise) is an indication of a defective filter element or a malfunctioning filter assembly. This condition requires corrective action such as replacement of the element or assembly.

In the event the warning light remains ON, the inspection and maintenance actions presented here should be accomplished in the order listed. While experience has shown that only on rare occasions will it be necessary to proceed beyond the centrifugal purifier step, additional steps have been included for use if necessary. Where the procedures are lengthy, as in the fuel cell cleaning, the specific handbook containing the information is referenced.

1. Element
2. O-ring
3. Can Assembly

Illustration 1



STEP 1: AIRFRAME FUEL FILTERS--LH and RH ENGINES (Refer to Illustration 1)

## Removal

- a. Remove lockwire.
- b. Remove drain line fitting from bottom of can assembly.
- c. Remove can assembly.
- d. Remove filter element.
- e. Clean can assembly with solvent, P-D-680.
- f. Dry the can assembly with clean rag or compressed air.

## Installation

- a. Install new element.
- b. Install new O-ring.
- c. Reinstall can assembly.
- d. Hand-tighten can and lockwire.

Be sure the element is installed properly in the can assembly. If the element is inverted, the can assembly cannot be attached to the housing. If the filter elements are heavily coated with foreign materials, it is necessary to inspect and clean the fuel cells. These procedures are contained in NAVAIR 01-260HCA-2-4.

STEP 2: CENTRIFUGAL FUEL PURIFIERS--LH and RH ENGINES (Refer to Illustration 2)

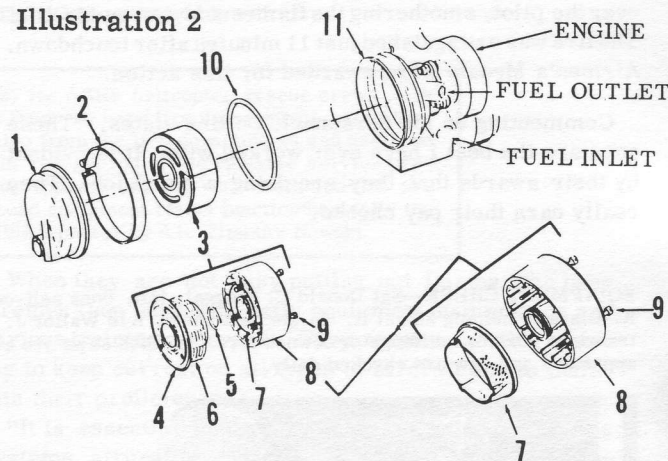
## Removal

- a. Drain.
- b. Remove clamp (2) and cover (1) together with the centrifuge assembly (3).
- c. Remove and discard O-ring (10).
- d. Loosen screws (9) and separate the centrifuge; discard O-ring (5).
- e. Inspect fallout screen (7) without removing it from the centrifuge housing (8).

If no foreign particles are evident, reassemble the purifier; no further inspection or maintenance is required. If foreign particles are found, continue with Step f. (If the fallout screen is heavily compacted, replace.)

- f. Soak both halves of the centrifuge assembly (3), including the fallout screen (7), in clean engine fuel (JP-4 or JP-5).

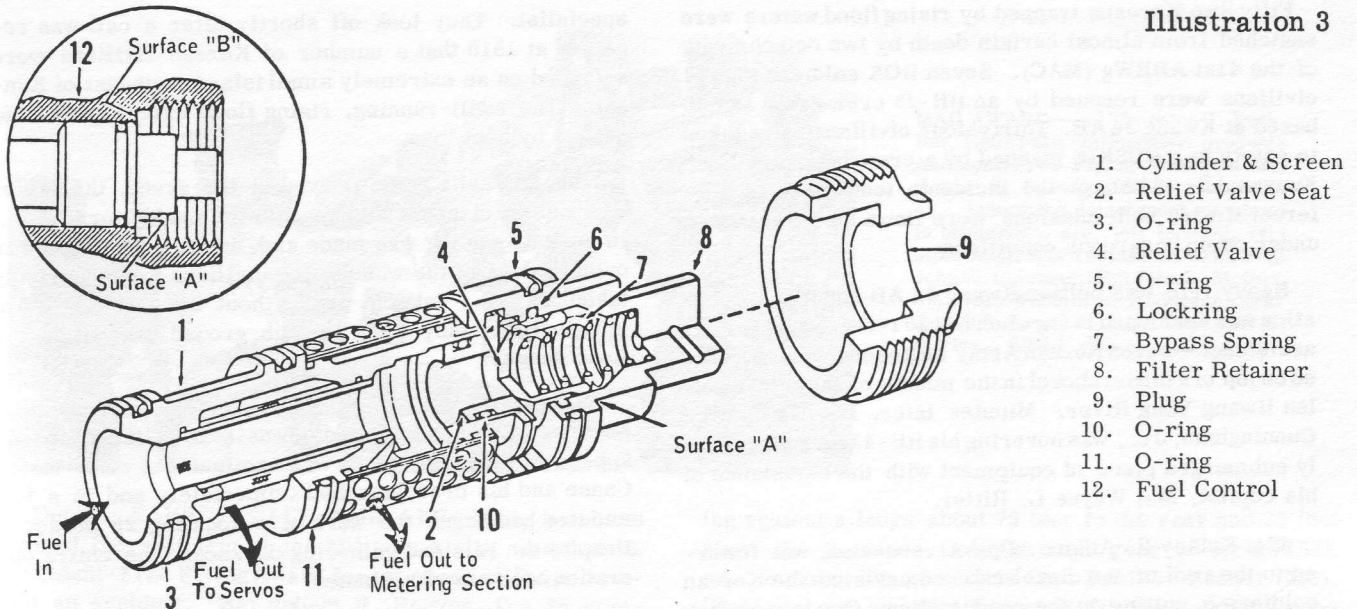
Illustration 2



- |                          |                           |
|--------------------------|---------------------------|
| 1. Centrifuge Cover      | 7. Fallout Screen         |
| 2. Clamp                 | 8. Centrifuge Driving End |
| 3. Centrifuge            | 9. Screw                  |
| 4. Centrifuge Driven End | 10. O-ring Seal           |
| 5. O-ring Seal           | 11. Drive Housing         |
| 6. Inner Shell           |                           |



Illustration 3



#### Installation

- Assemble the centrifuge assembly (3), making sure the aligning dimples in the fallout screen match the holes in the centrifuge driving end (8). Use a new O-ring (5) and lubricate with engine fuel.
- Install screws (9) and torque to 15-20 Pound-inches.
- Install the centrifuge assembly (3) on the splined shaft.
- Lubricate the pilot in the cover (1) with engine fuel and align the pilot in the hole in the centrifuge while placing the cover (1) in position.
- Install the clamp (2) and torque to 30-35 Pound-inches.
- If the purifier was contaminated, accomplish the fuel control filter inspection (Step 3).

#### STEP 3: FUEL CONTROL FILTER (Refer to Illustration 3)

##### Removal

- Remove lockwire and unscrew plug. Pull the filter straight out of the housing.
- Check for O-ring fragments in the fuel control cavity.
- Slide cylinder and screen assembly from filter retainer.

Inspect the filter. If no particles are visible, reinstall; no further action is necessary. If particles are found, clean or replace the filter.

- Remove the relief valve seat from cylinder and screen assembly.
- Remove O-rings (3, 5, 10, and 11).
- Clean filter element in accordance with NAVWEPS 02B-105AHB-2.

##### Installation

- Lubricate new O-rings (3, 5, 10, and 11) with petrolatum, VV-P-236; lubricate threads of plug with engine fuel.
- Install O-ring (10) onto the relief valve seat.
- Assemble the relief valve seat in cylinder and screen assembly.
- Depress the relief valve seat and slide cylinder and screen assembly in position in the filter assembly.
- Install O-rings (3, 5, and 11) on the filter.
- Relubricate O-rings 3, 5, and 11 with petrolatum and insert filter assembly straight into the fuel control. The filter is seated when surface A is flush with surface B.

- Install plug and tighten to 100-120 Pound-inches; lockwire.

If the fuel control filter was contaminated, accomplish static filter inspection (Step 4).

#### STEP 4: STATIC FUEL FILTER

##### Removal

- Remove lockwire.
- Remove and discard O-ring.
- If installed, remove Teflon spacer from bowl assembly.

Inspect the filter. If no particles are visible, reinstall; no further action is necessary. If particles are found, clean or replace the filter.

- Drain and then dry the element with filtered, compressed air; apply air pressure from inside to outside.

##### Installation

- If removed, install Teflon spacer on element.
- Position element, spacer side up and install filter bowl over the spacer end to insure that the spacer is properly positioned within the bowl.
- Lubricate O-rings and threads with engine fuel.
- Install O-ring in filter element; install O-ring in filter head.
- Assemble bowl to filter head.
- Torque bowl to 75 Pound-inches and lockwire.

Visible particles on the static filter element indicates contaminated fuel has bypassed the fuel control filter and reached the engine fuel system. Because of this, check the following:

- Perform a normal start--there should be no abnormal indications.
- Perform accel/decel check--the response should be smooth; T-5 should be within limits.
- Perform max power hover--the response should be smooth; no abnormal Ng or Nf fluctuation; T-5 should be within limits.

If, after performing these actions, the engine performance is satisfactory, and a re-check of the airframe filters shows them to be clean, the aircraft is flight-ready.

If engine performance is unsatisfactory, the trouble shooting (and corrective actions) detailed in NAVWEPS 02B-105AHB-2 must be followed.

# HH-43 Crews Aid Flood Victims

Fifty-two Koreans trapped by rising flood waters were snatched from almost certain death by two detachments of the 41st ARRWg (MAC). Seven ROK soldiers and 11 civilians were rescued by an HH-43 crew from Det 10 based at Kwang Ju AB. Thirty-four civilians were taken to safety in a HUSKIE manned by a crew from Det 11 at Kunsan AB. Although the incidents took place at different times, both missions were flown in the rain and under other hazardous conditions.

Heavy rain was pelting Kwang Ju AB and the installation was enveloped in fog when Det 10 received the call for assistance—seven Korean Army engineers were stranded on top of a diesel shovel in the middle of the rain-swollen Hwang Yong River. Minutes later, Maj William F. Cunningham, Jr., was hovering his HH-43 over the nearly submerged piece of equipment with the assistance of his copilot, Maj Wayne L. Ritter.

SSgt Kelsey R. Adams, a pararescueman, was lowered to the roof of the diesel cab and assisted the Korean soldiers in putting on the rescue sling. One by one they were raised and helped into the chopper by TSgt Larry K. Henderson, the flight engineer. Four men were taken to safety first and then the other three, along with Sergeant Adams. Serving as guide and interpreter on the flight was LtCol Hesun S. John, safety officer for the ROKAF 1st Fighter Wing at Kwang Ju.

A few hours after returning to base, the same crew responded to a second call and rescued 11 Korean civilian workers trapped on a sandbar. When the HUSKIE arrived, the civilians were attempting to construct a raft and fighting erosion of their tiny island by throwing dirt onto the rapidly disappearing edges of the sandbar. Major Cunningham positioned the helicopter with the right wheels over the island and the left ones over the water. Several of the Koreans climbed aboard and were taken to safety. Then the rest were evacuated in a similar manner.

The thirty-four civilians were rescued by a Det 11 HH-43 crew consisting of Maj Franklin L. Chase, pilot; Capt Edward C. Dillmann, copilot; TSgt Merle G. Draper, helicopter mechanic; and AlC John C. Ratliff, rescue

specialist. They took off shortly after a call was received at 1910 that a number of Korean civilians were stranded on an extremely small island southeast of Kunsan. The swift-running, rising flood waters prevented rescue by boat.

When the helicopter arrived at the scene, the island was rapidly disappearing beneath the muddy torrent. An immediate landing was made and, as the water closed in over the tops of the wheels, the civilians were hurriedly taken aboard. Takeoff was without incident and a few minutes later they were on high ground away from the flood danger.

Soon afterward, the HUSKIE crew was advised that more people were stranded downstream. Darkness was approaching and the water was continuing to rise. Major Chase and his crew launched immediately and in a few minutes had begun the work of evacuating 28 persons. Despite the rain and gathering darkness, the entire operation took only 20 minutes.

## Det 9 Crew Honored By ROKAF

An HH-43B crew from Det 9, 41st ARRWg, Osan AB, Korea, was honored recently by the Tactical Air Command, ROKAF, for a hazardous night mission flown several months ago. MGen Yoon, commander, presented plaques to Maj Alex P. Lupenski, pilot; LtCol Archie R. Taylor, copilot; SSgt Thomas Bradley, and Sgt Charles L. Colbert, pararescuemen; and SSgt Herbert Conner, helicopter mechanic; for their efforts in searching for, and locating, a downed ROKAF helicopter.

When notified at 2230 of the crash, the Det 9 crew took off and began a search over water (temperature 40°F), beach and inland areas. During this time, conditions of "extreme vertigo" were caused by the intermittent fog banks and haze layers, and many times it became necessary for the copilot to take the controls. The wreckage was discovered on the Kooni Range, 14 miles from Osan AB, and an unsuccessful search was begun for survivors. Two subsequent searches a few hours later revealed that the four ROKAF crewmembers had not survived the crash.

## Log 2000 Hours



**ALL "B" TIME**—Two pilots from the Eastern Aerospace Rescue and Recovery Center at Robins AFB, Ga., jointly logged their 2,000th flight hour in the HH-43B on a recent flight. Maj Dennis M. Chase, left, and Capt John C. Flournoy are shown congratulating one another after passing their respective milestones. They believe the flight to be "one of a kind" since all of their time is with the "B." Neither has logged any time in the HH-43A or F models. Major Chase, chief of the center's aircrew standardization, and Captain Flournoy, assistant chief, also have attained unblemished flight safety records in the twin-rotor jet chopper.

Major Chase has been flying the HH-43B continuously since 1960, and Captain Flournoy since 1963. Major Chase has served with ARRS at Portland, Ore.; Misawa, Japan; Ubon, Thailand; and at Robins. Captain Flournoy has served ARRS at Spangdahlem, Germany; Moody AFB, Ga.; Thule, Greenland; and at Robins. (USAF photo)



## Det 25 Honored By Military Airlift Command



**MAC AWARD**—Col Thornton C. Peck, left, Eglin base commander, presents Accident-Free Flying Award to Maj Robert R. Reeves, Det 25 commander. Among the detachment members in background are, left to right, (visible only), A1c Thomas M. Gam, SSgt John W. Coleman, SSgt John L. McGee, Jr., A1c William B. Anderson, SSgt James B. Reed, Jr., and Capt Phil C. Hurley. (USAF photo)

Det 25, EARRC, (MAC), Eglin AFB, Fla., has been named the recipient of the Military Airlift Command's Accident-Free Flying Award for two years of flying without an accident. Maj Robert R. Reeves, Det 25 commander, accepted the award for the detachment from Col Thornton C. Peck, base commander.

During the presentation, Colonel Peck told the men, "It is indeed a privilege and an honor to present this coveted award to you. I know that each of you takes great pride in this plaque, and rightly so, for it was your contributions that made it possible. You have overcome the many hazards involved in your mission and saved numerous lives because of your great mission dedication. Such accomplishment, without an accident, is a tribute to your spirit of teamwork and military excellence."

Major Reeves explained that "the significance of the award is pinpointed by the number and nature of the rescue missions. During this period, unit personnel flew over 1,000 emergency missions under hazardous conditions of weather, terrain and rapidly changing situations. In numerous cases, the aircrews had to commit themselves to calculated risks so that lives of injured people could be saved."

He continued, "This is the backbone of the Rescue mission, 'To aid, comfort and recover people in distress'. To do so without accident or incident for two years in a highly-active area reflects much credit upon the personnel of Detachment 25."

### Hazardous Rescues Made By Arizona Dets

Two WARRC detachments based in Arizona recently participated in hazardous mountain rescues in different parts of the state. An HH-43 crew from Det 17, Davis-Monthan AFB, evacuated a youth who was critically injured in a swimming accident and another HUSKIE crew, from Det 16, Williams AFB, rescued a young man from a rocky ledge and took him to the hospital.

Capt Clarence L. Hansell and his crew answered a call for assistance after a 17-year-old military dependent dove from a canyon wall into a mountain stream in the Catalina Mountains, 15 miles from the base. He suffered severe neck and arm injuries and was paralyzed from the waist down.

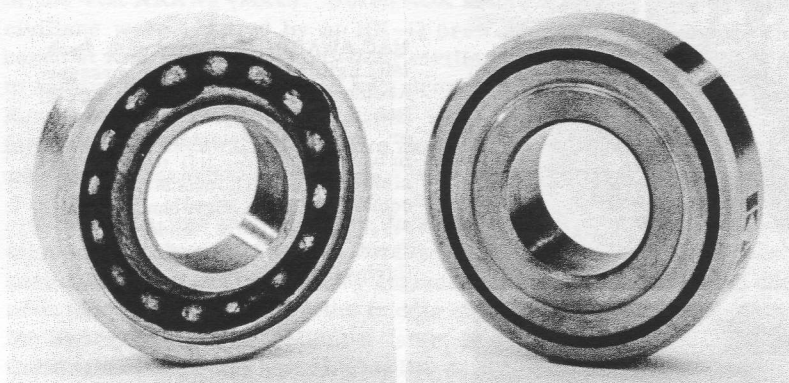
It was impossible for the Det 17 HH-43 to land in the stream bed due to the steep rock walls, trees, and cacti. In order to expedite the mission and minimize hovering in a restricted area, Captain Hansell made a hover land-

ing against a ledge about 75 feet to the rear and 25 feet above the evacuee. Only the right gear of the HUSKIE was touching the ground as Capt Paul W. Becker (MC), flight surgeon; and SSgt Eugene R. Veltre, medical technician; leaped from the helicopter with a stokes litter and climbed down into the stream bed. As they secured the youth in the litter, Captain Hansell maneuvered into a hover 50 feet over the evacuee. Maintaining a position in the confined area was extremely difficult due to the gusty winds, high temperature, and density altitude. Crew members aided the pilot by calling out blade clearances and obstacles. The blade tips were within 10 feet of the canyon walls on the left, 15 feet from tall trees in the front and only a few feet from a giant cactus on the side of the gorge at the right. Smooth hovering was paramount to prevent the litter from oscillating and striking boulders on the way up. The hoist pickup was made without incident, however, and then the medical personnel climbed to a more suitable spot and were taken aboard.

Afterward, officials said that the youth's life was undoubtedly saved by the helicopter crew. Others participating in the hazardous mission were SSgt Harvey A. Meltzer, flight engineer; and SSgt Ray Eisenhuth, helicopter mechanic.

Det 16's mission began with a call from the Pinal County sheriff's office—a man had been seriously injured in a mountain-climbing accident. HH-43 pilot Capt James E. McLain and his crew took off and headed for the Superstition Mountains 20 miles away. At the site they found two young men, one uninjured, on a small rock shelf half way up a 1,000-foot sloping cliff. Hovering overhead for a hoist pickup was impossible due to the rock overhang so Maj Matthew P. Murphy (MC), a flight surgeon; and SSgt Jerry L. Copeland, medical technician; were lowered to a point 200 feet below the men. A stokes litter and medical equipment were also lowered. The medical team climbed to the ledge and, after treating the injured rescuee, placed him in the litter, and lowered it down the side of the cliff to a point where a hoist pickup could be made.

A total of seven hoist operations were required to recover the civilians, crew and equipment. Hovering was made more difficult than normal by the closeness of the cliff—less than 10 feet away—gusty wind conditions, and the 102° temperature. As the HUSKIE headed for the hospital, the flight surgeon examined the patient. Indications were that he was suffering from serious internal injuries and possible spinal injuries. Flight engineer on the mission was A1c John L. Pinheiro.



**NEW DESIGN**—KAcARB Products' M-series bearing, right, is designed to replace the grease-lubricated ball bearing, left, in aerospace and industrial applications where minimum friction is not a prime requirement, and where longer life and reduced maintenance requirements are desirable.

A revolutionary approach to bearing design that promises greatly extended bearing life in aircraft and industrial applications requiring oscillating motion was announced recently by KAcARB Products Division of Kaman Aerospace Corporation.

KAcARB's new design, called M-series, is self-lubricating, can be built to many size envelopes, and accepts radial, axial and moment loading.

Using ceramic-coated titanium rubbing against a specially compacted carbon outer race as the bearing surface, KAcARB's M-series is designed as a replacement for ball bearings that now are widely used in aircraft applications such as cranks and pivots in control system linkages. In these applications, bearings are often subjected to vibrations that cause ball bearings to fret and brinell and, as a result, seize. Additionally, temperature and corrosive environments degrade the lubricant of conventional bearings, further reducing their service life.

The new KAcARB bearings are now being evaluated in helicopter flight tests for the U. S. Navy. KAcARB M-series have greater radial and thrust load capabilities than conventional grease-lubricated bearings, and offer substantially improved bearing life under adverse operating conditions including moisture, corrosive atmosphere, high temperatures and contaminated conditions.

On endurance tests conducted by KAcARB Products, ball bearings failed at between 75 and 200 hours. On identical tests, KAcARB M-series bearings operated for 2500 hours with very little wear and their operational integrity intact. During the 2500 hours, the M-series bearings were subjected to 43 million cycles, a test approximating the life and cycle experience of a typical

helicopter rotor system. In the case of fixed-wing aircraft, the test indicates that the KAcARB bearing life will be equal to the life of the airframe.

KAcARB presently manufactures a full line of ceramic-carbon bearings for helicopter control systems. Present production includes self-aligning bearings used in UH-1, UH-2, AH-1, HH-43 and AB204 helicopters. In these demanding applications, KAcARB bearings reduced maintenance time, and up to a 10 to 1 improvement in bearing life has been demonstrated.

### Det 12 Activated on Guam

HICKAM AFB, HAWAII—The 41st Aerospace Rescue and Recovery Wing headquartered here has announced the activation of a new rescue unit at Andersen AFB, Guam. The new unit, designated Det 12 of the 41st ARRWg, is equipped with HH-43 HUSKIE jet-powered helicopters and will perform crash rescue and fire suppression duties at Andersen AFB. The HUSKIES will also be available to perform humanitarian rescues in the Guam area, complementing the long-ranged service already provided by the Guam-based HC-130's of the 41st Wing's 79th ARRSq.

Det 12, which is commanded by LtCol Byron A. Lawrence, joins 21 similar "local base rescue" detachments under the command of the 41st ARRWg and its subordinate units. These helicopter units, located throughout the Pacific, Korea and Southeast Asia, have a proud history of humanitarian and combat rescue. The HH-43 they fly has been used to save more than 1,500 lives thus far in Southeast Asia, a record unequalled by any other type of aircraft.

### KAMAN SERVICE REPRESENTATIVES

EDWARD F. NOE  
NAS Lakehurst, N. J.

JACK L. KING  
NAF Naples, Italy

WILLIAM C. BARR  
MICHAEL T. FIASCHETTI  
USS Wright

HORACE F. FIELD  
GERARD A. BOUTIN  
DONALD R. DELANEY  
ROBERT C. BELISLE  
NAS Atsugi, Japan  
NAS Cubi Point, P. I.

NORMAN M. MEYERS  
NADC Johnsville, Pa.  
NATC Patuxent River, Md.

HOMER C. HELM  
NARF North Island, Calif.

DONALD P. ALEXANDER  
Iran

RICHARD A. REYNOLDS  
BILL L. MAGNAN  
Home Office

DONALD T. LOCKRIDGE  
WILLIAM G. WELLS  
LLOYD R. GARDNER  
NAS Imperial Beach, Calif.  
NAS Miramar, Calif.  
NS Adak, Alaska

CUSTOMER OPERATIONS SECTION — ROBERT L. BASSETT, Supervisor



## UH-2 Crewman Never Stopped Trying

AMH3 Major Sampson never reached his last objective. . . . but it wasn't for lack of trying!

Sampson was in a UH-2 from HC-2's Det 67 deployed aboard the USS John F. Kennedy when the mission began. After losing power, an A-1E plunged into the water a short distance from the giant carrier. As "wet crewman," it was Sampson's job to go into the water to help any of the four survivors who might be in need of assistance.

As Lt(jg) James S. Holt and his copilot, Lt Ronald L. Sitts, held the SEASPRITE in a hover over the spot where the aircraft had disappeared, ADJ3 Frank A. Richards lowered the wet crewman into the water. Sampson immediately began swimming through the choppy two-foot waves toward two of the survivors 75 feet away. After reaching them, he placed one on the rescue seat which had been lowered nearby. As the man was hoisted from the water, Sampson started checking on the rescuee's companion, who had drifted 100 feet away, and the other survivors. One was obviously "beat" so the wet crewman "grabbed him and put him on the seat."

By this time Sampson had done quite a bit of swimming and was beginning to get very tired, but he immediately headed for the fourth survivor when he saw him bobbing up and down in the waves some distance away. Then the UH-2 crewman felt a sharp pain in his side and leg—a cramp! He kept on going, but every time he moved, the pain became more intense. Finally, determined to reach the other man who might need help, he tried swimming with only one leg. It was a losing battle. He could no longer fight his way through the waves. Frantically Sampson looked for the survivor and then, to his relief, saw that he need no longer be concerned. The man was already on the rescue seat and being hoisted to the helicopter. Tired, badly winded and still plagued by the cramp, Sampson thankfully stopped swimming and floated. A minute or two later he was picked up by a boat from a destroyer which had arrived at the scene.

## HH-43 Crews Rescue Five In Germany

In a well-coordinated effort, two HH-43B's from Det 4, 40th ARRWg, Ramstein AB, Germany, rescued five crewmen who bailed out of an aircraft shortly before it made an emergency landing at the base. An HH-43 piloted by Maj Carol D. Hayden covered the landing and then began searching for the downed crewmen who had all landed in

a heavily wooded area. Others aboard the rescue helicopter, designated "Pedro 41," were Col Henry L. Tamenga, copilot; MSgt Don E. McFarland, flight engineer; and Maj John E. Blatman, flight surgeon. Two survivors were located, one on the ground and the other suspended 25 feet overhead in the trees. At the same time another survivor was sighted by the crew of the other HH-43, "Pedro 42," which had also responded to the emergency. Aboard this helicopter were Maj Clifford E. Brandon, pilot; Maj Robert H. Busch, copilot; Sgt Thomas Densham, firefighter; and Sgt Jon M. McCook, medic.

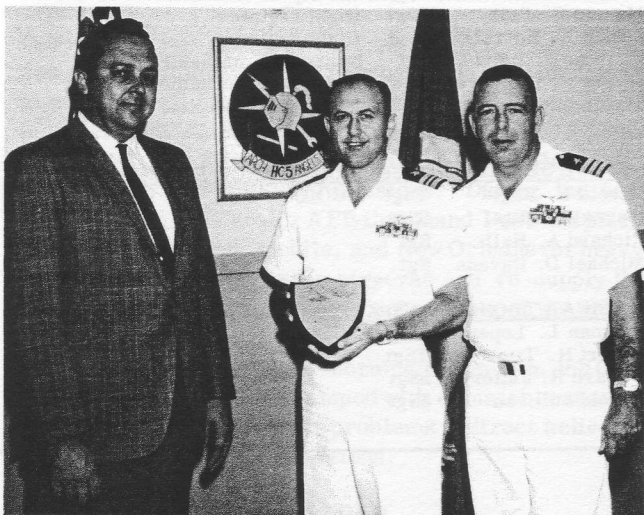
As Pedro 42 hovered at 100 feet, the medic was lowered through an opening in the tree tops to the ground. It then moved off so Pedro 41 could lower the flight surgeon. As this was being done, an attempt was made by Pedro 42 to pick up the crewman in the trees via hoist but the 100-foot cable was too short. Meanwhile, Pedro 41 hoisted two survivors aboard and then returned to base to refuel. Pedro 42 continued the rescue operation and picked up the rest of the downed airmen, as well as the flight surgeon and medic. The crewman in the tree had been aided to the ground by area residents.

## Alp Medevac Made By HH-43 Crew

Operating at 8,100 feet over the rugged Italian Alps, an HH-43B crew from Det 10, 40th ARRWg, Aviano AB, evacuated a mountain climber who had been seriously injured in a 500-foot fall from the chimney-like side of Pra Maggiore Mountain. After delivering the accident victim to the hospital, the same crew returned to the site and took aboard a second climber who, it was found, had failed to survive the fall.

To make both pickups, Capt Wendell B. Wood flew through patches of light rain and then hovered over a horseshoe-shaped clearing bounded by 2,000-foot cliffs. On the first flight, he held the HUSKIE with the auxiliary gear resting on the ground while a mountain rescue team placed the injured man aboard. As the survivor was being delivered to the hospital, the second climber was located and carried to a clearing by the ground party. Capt William D. Henderson (MC), a flight surgeon; and SSgt James R. Micklon, medical technician; were lowered by hoist to assist. It was found, however, that the man had died. Capt George R. Andrews was copilot, and SSgt Thomas C. Moore, flight engineer, on the mission.

## 1000-Hour Pilot Awards



LCdr Ron L. Stoker, center, HC-5, NAS Imperial Beach, Calif., was recently presented a 1,000-hour plaque after logging that number of hours in a UH-2 SEASPRITE. The presentation was made by William G. Wells, Kaman senior service representative, left. On the right is Cdr Roy M. Hollingworth, commanding officer of HC-5. Other pilots who were also honored recently by the Kaman Aerospace Corporation after logging 1,000 hours in helicopters produced by the company are: HH-43 HUSKIE—Capt Donald D. Sams, 3638th Flying Training Squadron, Sheppard AFB, Texas. UH-2 SEASPRITE—Lt Timothy B. Melecosky, HC-7, NAS Atsugi, Japan; Lt Daniel Estreich, HC-2 Det 62, USS Independence; Lt John R. Richards, HC-1, and Lt David L. Fenner, HC-5, NAS Imperial Beach. (USN photo by AN Richard Behr)

*"Air crews and ground personnel from the detachment did an outstanding job. . . . they worked almost 24 hours a day. . . . maintenance personnel had kept the HH-43's in such fine shape that only routine care was necessary during the emergency. . . .*

*Maj. Delmar G. Worsech, USAF  
Commander, Det 4, EARRC (MAC)  
Keesler AFB, Miss.*

*Continued from page 6*

sufficient facilities to support the aged. Capt Curtis K. Bayer, aircraft commander; SSgt Harril E. Barber, helicopter technician; SSgt Howard R. Jeffery, medical technician; were dispatched. Picking up two litter patients on the first run, Captain Bayer coordinated over the area SAR frequency with a Coast Guard CH-3 and a Marine H-34 for assistance in the evacuation of the 27 patients. The crew returned to the scene after delivering the first two patients to an awaiting ambulance and medical personnel at Keesler AFB. Another pickup was made and an additional two litter patients evacuated by Captain Bayer and his crew.

The Det 4 duty NCO received a call from the Keesler AFB Command Post at 2218 hours local that a 12-year-old boy had been severely burned when a lantern exploded in his home in North Biloxi across the closed Biloxi Back Bay Bridge. He required immediate evacuation to hospital facilities. Capt Ronald W. Bashant, aircraft commander; Capt Curtis K. Bayer, pilot; Sgt Richard A. Hall, rescue specialist; scrambled in Pedro 01, a Kaman HH-43B Rescue Helicopter. The landing site was a ball field illuminated by vehicle lights. Pre-departure and continual mission coordination was made by Maj Delmar G. Worsech who was in constant communications with the Command Post. The burned patient, his mother, and an attending physician were evacuated from the emergency staging area at D'Iberville High School to an awaiting ambulance at Keesler AFB. The patient suffered third degree burns over 40% of his body. One non-combat save. Weather during the night mission was deteriorating with rain and poor visibility.

**3. PUBLIC ADDRESS ANNOUNCEMENTS**-Using the HH-43B rescue helicopter public address system, missions were flown to isolated devastated areas announcing locations of food, water, and medical attention.

**4. OFFICE OF INFORMATION SUPPORT-ATC** and TAC information teams; local, regional, and national newspaper, television, and radio teams were briefed on personal experiences, devastated areas, unit missions and participation. Teams were flown for view of areas, photos, and on actual rescue missions.

**5. GULFPORT HARBOR SURVEY**-Corps of Engineer personnel and Gulfport Harbor officials surveyed area harbors. They made damage assessments and evaluations to determine the harbors' ability to provide a supply line to meet the massive relief needs of the Hurricane Camille disaster area.

**6. MEDICAL PERSONNEL AND SUPPLIES**-Numerous flights were flown transporting doctors, medical technicians, and critical medical supplies to the towns of Clermont Harbor, Waveland, Bay of St Louis, Pass Christian, De Lisle, Gulfport and Biloxi. Tetanus, typhoid, insulin, and oxygen were airlifted to meet needs of severely injured personnel and prevent a feared tetanus and typhoid epidemic in Waveland and Bay of St Louis areas.

**7. RE-SUPPLY**-Representing 50% of the total effort of the detachment's operation during the 10 days following Hurricane Camille, re-supply of C-rations, baby food, milk, water, disinfectant, DDT, and clothes to inaccessible devastated areas was a primary mission. Fifteen thousand pounds of supplies were airlifted in 50 sorties throughout the area in the unit's two HH-43B rescue helicopters. The detachment's three aircrews flew missions while the detachment's maintenance and administrative personnel off loaded in-coming trucks of supplies and assisted in loading the ferrying helicopters.

**8. EMERGENCY TRANSPORTATION**-Shortly after daybreak Monday, 18 August, 1969, the Base Command Post received a call that a radio technician team required immediate transportation from West Biloxi to a radio transmitter site near Ocean Springs, Miss., in order for them to attempt to set up an emergency radio station. The entire devastated area had no local communications. Pedro 01 was scrambled with the crew of Capt Ronald W. Bashant, aircraft commander; Maj Delmar G. Worsech, pilot; Sgt Thomas R. Beltz, helicopter technician. The two radio technicians and the emergency radio equipment were picked up in an open area near a beach front hotel in West Biloxi and taken to a clear area in a stream bed near the transmitter.

Despite the heavy mission load, the critical nature of the overall emergency, extremely hazardous flying conditions, landing zones, and operating areas and facilities

*Continued on page 23*

*Personnel who participated in Det 4's all-out effort after the hurricane struck:*

#### PILOTS

Delmar G. Worsech	Maj	detachment commander (aircraft commander, HH-43B)
Curtis K. Bayer	Capt	maintenance officer (aircraft commander, HH-43B)
Ronald W. Bashant	Capt	operations officer (aircraft commander, HH-43B)

#### MAINTENANCE

Harold L. Neely	MSgt	maintenance superintendent
Harril E. Barber	SSgt	helicopter technician
Marvin E. Bell	SSgt	flight engineer
Jessie L. Herrell	SSgt	flight engineer
Thomas R. Beltz	Sgt	helicopter mechanic
James P. Hollnagel	A1c	helicopter mechanic
Steven C. Inabinett	A1c	helicopter mechanic
Charles Hudson	SSgt	administrative NCOIC

#### RESCUE SPECIALIST-3380th CIVIL ENGINEERING SQUADRON

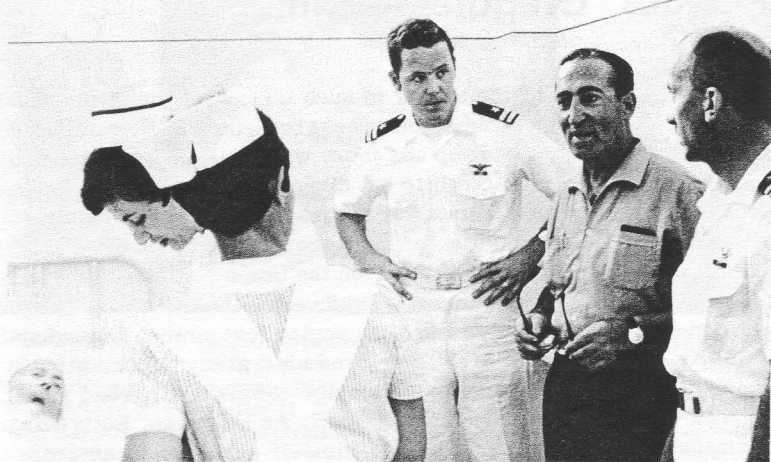
Harold E. Eagle	TSgt	NCOIC
Wayne A. Pitts	SSgt	
Richard A. Hall	Sgt	
Michael D. Havens	Sgt	

#### MEDICAL TECHNICIANS-KEESLER MEDICAL CENTER

Norman L. Lopez	MSgt	NCOIC
Hubert H. Tims	TSgt	
Howard R. Jeffery	SSgt	
Harold Sullivan	SSgt	



## 6th Fleet UH-2 Helps Greek 'Neighbor'



**GRATEFUL**—Nikolas Feloutzis, holding glasses, is shown with the two UH-2 pilots who saved his father's life. On the left is Lt Richard J. Carroll; LCdr Harley A. Backstrom is on the right. Aircrewman during the mercy flight was AMS2 David Durham. Christos Feloutzis, 86, is at the extreme left in the photograph. (USN photo)

**WITH THE U. S. SIXTH FLEET**—Two U. S. Navy helicopter pilots, who belong to a group called "Angels of the Fleet," may become known as the "Angels of the Dodecanese 12 islands" in the southern section of the Aegean Sea because of an emergency flight they made recently.

A week after the flight, 86-year-old Christos Feloutzis from the tiny Greek island of Kaso, was able to thank the pilots who saved his life. First reported as suffering a heart attack, Feloutzis' illness was later determined to be a massive stomach hemorrhage. Feloutzis' words were translated for LCdr Harley A. Backstrom, and Lt Richard J. Carroll by Nikolas Feloutzis, the patient's son who accompanied them to the hospital. He had also made the flight back from Kaso, begun after an appeal had been made to Capt Warren H. O'Neil, commanding officer of the USS Saratoga.

Twice in three days, merchant ships were diverted from their courses to try to make proper medical facilities available to Feloutzis. However, his condition became so grave that hospitalization and treatment were obviously necessary if he were to live. The Saratoga was at Rhodes, about 85 miles from Kaso, when the harbor master made his appeal to the aircraft carrier's captain. Two SEASPRITES from Helicopter Combat Support Squadron Two's Det 60 aboard the carrier were dispatched, each "flying shotgun" on the other as an emergency back-up rescue plane.

The SEASPRITES are built by Kaman Aerospace Corporation to make emergency rescues and flown exclusively by the SAR (Search and Rescue) squadron, home-based

at Lakehurst, N. J. They are flown when planes are being launched and landed so that they may go immediately to assist pilots whose malfunctioning aircraft may force them into the sea. Because of their capability, the helicopters are frequently involved in emergency situations in addition to their primary mission, as happened in the circumstance of Feloutzis. The helicopter pilots flew to the Rhodes airport and picked up a doctor, identified only as Dr. Kypriotis.

With the doctor's assistance, the men were directed to a concrete pier, marked with a circle and large red "X" painted that day, at the fishing village of Fri, where they picked up the patient and his son. They returned to Rhodes in the early afternoon and Feloutzis was rushed to the hospital. With blood transfusions and other treatment, the octogenarian has continued to improve daily and his doctor expects him to fully recover and return to his home on Kaso.

AMS2 David Durham was the aircrewman accompanying the rescue helicopter. Lt William L. Grand and Lt (jg) Howard F. Miller were pilots for the backup helicopter. They were accompanied by aircrewmen AN Mark A. Clawson and AT3 Pete E. Peterson.

During the pilots' visit to the hospital, they delivered their wishes and those of Captain O'Neil, inscribed on a photograph of the Saratoga, for a speedy recovery. Nikolas Feloutzis is the captain of a merchant ship and has made numerous calls in U. S. ports. He translated his father's thanks and expressed his own in eloquent English—to the "Angels of the Dodecanese."

*Continued from page 22*

ties, the unit incurred no personal injuries or damage to unit aircraft throughout the operation. In addition to the actual missions in which this unit participated, Det 4, EARRC, was directly responsible for countless other successfully accomplished missions. During the night of the storm, the Keesler AFB Command Post had placed requests to Houston, Mobile, and New Orleans for heavy-lift helicopters to assist in air-evac and re-supply that would surely be required after the passing of the storm.

As they began arriving the morning of the 18th, the Command Post became too swamped with disaster control and numerous other large scale problems to direct helicopter aircrews on individual missions.

The Operations Section of the Keesler AFB Command Post asked Det 4 to be a central coordinating agency through which mission requirements could be sent and assignments to aircrews be made. An overall helicopter coordination center was established in the Det 4 Operation Section for Air Force, Coast Guard, Marine and Navy helicopters assigned to assist Keesler's Command Post. A unit controller was placed on duty 24 hours a day to coordinate command post requests. More than 100 persons were air evacuated and tons of supplies airlifted as a direct result of coordination by Det 4. Crew briefings including procedures, hazards, disaster areas, supply points, hospitals, and landing zones in the area were given daily by Det 4 Operation to assist incoming crews.

## HC-4 Crew Rescues 'Gregale' Victims

For UH-2 pilot Lt John "Dave" Whelan and his crew it was quite a mission: Flying through heavy winds and rain, they rescued 15 persons from a Greek tanker. . . . a UH-2 aircrewman found himself stranded on the disabled vessel but made his way to safety with the aid of a "human chain". . . . the helicopter was engulfed by spray from a giant wave which struck the side of the stricken vessel. . . . the chopper's jet engine kept operating as more survivor's were rescued but lost power, due to salt water ingestion, just as the UH-2 reached shore. . . . the SEASPRITE pilot skillfully guided the helicopter over numerous obstacles to land in the only suitable place on the rock-strewn shore—passengers and crew uninjured, damage to the helicopter, "minimal."

The mission began for the UH-2 crew, all from HC-4's Det 48 aboard the USS Galveston, when they responded to an urgent call for help—a Greek ship, the "Angel Gabriel," was aground and breaking up in a "gregale," a sudden storm peculiar to the area around Malta. One seaman aboard the tanker had already perished as the heavy seas, driven by winds gusting to 90 knots, swept the decks of the hapless vessel.

When the helicopter arrived at St Thomas Point, Malta, where the 22,000-ton tanker had been driven aground, they found rescue efforts underway but badly hampered by the heavy surf. As Lieutenant Whelan hovered the UH-2 over the ship, AMS2 Robert Sutton was lowered to assist a young woman and baby into the rescue sling. He then began aiding other survivors and ended up staying on the Angel Gabriel when the helicopter was disabled. ADJ2 John E. Meeker assisted the rescuees into the helicopter.

Lieutenant Whelan was holding the SEASPRITE in a hover 100 feet above the water. At the time, the position seemed high enough to stay out of the salt spray generated from the waves and it put the UH-2 approximately 40 to 50 feet above the deck. One group had been taken to the beach about 500 yards away and the helicopter was again hoisting survivors when a giant wave slammed into the tanker and sent showers of heavy spray shooting into the air, completely covering the UH-2. Quickly checking the instruments, Lieutenant Whelan saw the gas generator RPM dip momentarily as the helicopter's jet engine ingested the salt water, then it "steadied out." Well

aware of the danger of such ingestion, the pilot considered breaking off the rescue but—the ship below appeared to be breaking up and there were still people aboard. He decided to continue but directed the copilot, Lt Paul M. Petrucka, to monitor the instruments very closely.

After hoisting eight survivors aboard, the UH-2 headed for the drop-off point on the beach. Flying at 50 knots and an approximate altitude of 200 feet, the helo had just reached shore when the engine lost power. Immediately Lieutenant Whelan entered emergency autorotation and began guiding the helicopter toward a dirt road running parallel to a nearby seawall. As he did so, Petty Officer Meeker spread-eagled himself across the survivors to protect them during the forced landing.

As the UH-2 lined up with the road, it dropped suddenly and the tail wheel hit a small concrete block building. The wheel sheared off and sailed into the air above the helo. The helicopter, less than a dozen feet above the ground, continued onward. Lieutenant Whelan managed to avoid a small rock hill and then "slid" the chopper to his right about 15 feet and landed in the only clear space in the area.

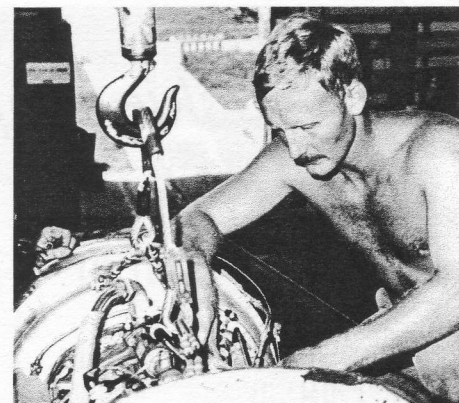
"A second sooner and we wouldn't have made the road. Two or three seconds sooner and we wouldn't have made the beach," Lieutenant Petrucka said. "I was so pumped up with adrenalin, I didn't even feel the tail hit. It was a good landing though. The passengers hardly knew anything was wrong. They just got out and walked away."

The mishap ended the SEASPRITE crew's participation in the rescue. The few remaining men on the ship, along with Petty Officer Sutton, were taken off by a highline backed up by a human chain of police, British military and civilian volunteers. Four enlisted members of the helicopter detachment stayed with the UH-2 overnight, readying it for flight again. After the engine was serviced, Lieutenant Whelan flew the helicopter back aboard the Galveston. Mattresses were placed on the deck to compensate for the missing tail wheel.

Afterward, Lieutenant Whelan had high praise for his crew's "very professional" reaction to the emergency. He said the rescue operation was "in many ways like one of our training flights. . . . and the training really paid off this time!"







**MEN BEHIND THE MISSION**—Helicopter mechanics from the 38th ARRSq play a vital role in keeping HH-43's rescue ready so "That Others May Live." In first photo, Alc John D. Selfridge, right, Det 10, Binh Thuy AB, receives a plaque and wrist watch from Col Wayne Howard, commander, 632nd Combat Support Group, for being selected as Binh Thuy's "Airman of the Month." Middle photo, TSgt Richard N. Stone, Det 11, Tuy Hoa AB, inspects windshield on an HH-43 Pedro. Last photo, Sgt Jack R. Champion, Det 8, Cam Ranh Bay AB, works on the turbine engine of another 38th ARRSq HH-43. (USAF photos by 1. Charles H. House 2. Sgt Eddie W. Carroll 3. Alc Bob Mulica)

Continued from page 15

**PHU CAT AB (7AF)**—Two HH-43 Pedro crews from Det 13, 38th ARRSq, recently joined a massive rescue effort 10 miles northeast of Pleiku and picked up five injured men. An Army UH-1 Huey had been shot down by ground fire. When an OH-6 Cayuse light observation craft attempted to rescue the Huey crew, it also crashed in the immediate area.

Two Pedros scrambled from Phu Cat. While they were enroute, Cobra Gunships and A-1 Skyraiders worked over the crash site to suppress hostile fire.

"When we arrived in the area, we were told that there had been a lot of enemy activity," related Capt Richard J. Bouckhout, pilot of the first rescue helicopter. "Enemy troops were within 50 meters of the friendly troops and miniguns had to be used to suppress the hostile fire.

We went in and hovered at about 30 feet in a ridgeline area of mountainous terrain. Our bird picked up two of the most seriously injured men."

As Captain Bouckhout's aircraft moved out, the second HH-43 arrived. The pilot, Maj Dwight C. Hageman, and his crew hoisted out three more survivors, all of whom were injured.

"We were lucky," said the major. "Before we arrived there had been heavy enemy fire in the area, but we didn't get shot at once. As we lifted, the enemy began to fire once more."

Other Det 13 men involved in the rescue were: Cpts Francis P. Gallagher, and James E. Miller; SSgts Robert A. Twigg, Kenneth C. Meyer, and Larry H. Knefelkamp; and Alc Kenneth A. Murphy.

## Current Changes

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

	Issue Date		Issue Date
H-2 Airframe Change 85 - Amend 1, Electrical System, INCORPORATION OF 3-PHASE CIRCUIT BREAKERS IN UH-2C AIRCRAFT	27 June 1969	NAVAIR 01-260HCA-4-5 - Illustrated Parts Breakdown, Navy Models UH-2A/UH-2B Helicopters, FURNISHINGS	15 January 1967
H-2 Airframe Change 145 - FLOTATION BAG, GIRT IMPROVEMENT	26 August 1969		changed 15 May 1969
NAVAIR 01-260HCA-2-2.1 - Manual, Maintenance Instructions, Navy Models UH-2A/UH-2B/UH-2C Helicopters, FLIGHT CONTROLS	15 June 1969	NAVAIR 01-260HCA-4-6 - Illustrated Parts Breakdown, Navy Models UH-2A/UH-2B Helicopters, AIRFRAME	15 October 1962
NAVAIR 01-260HCA-2-3 - Manual, Maintenance Instructions, Navy Models UH-2A/UH-2B/UH-2C Helicopters, EQUIPMENT (FURNISHINGS, HYDRAULICS, UTILITIES)	1 August 1969		changed 15 May 1969
NAVAIR 01-260HCA-2-7 - Manual, Maintenance Instructions, Navy Models UH-2A/UH-2B/UH-2C Helicopters, RADIO AND RADAR SYSTEMS	1 October 1967	NAVAIR 01-260HCB-1 - NATOPS FLIGHT MANUAL, Navy Model UH-2C Helicopters	15 September 1969
	changed 15 July 1969	NAVAIR 01-260HCB-4-1 - Illustrated Parts Breakdown, Navy Model UH-2C Helicopters, NUMERICAL INDEX AND REFERENCE DESIGNATION INDEX	1 May 1969
NAVAIR 01-260HCA-2-8 - Manual, Maintenance Instructions, Navy Models UH-2A/UH-2B Helicopters, WIRING DATA	1 October 1967		changed 15 July 1969
	changed 15 June 1969	NAVAIR 01-260HCB-4-2 - Illustrated Parts Breakdown, Navy Model UH-2C Helicopters, AIRFRAME	1 June 1967
NAVAIR 01-260HCA-2-8.1 - Manual, Maintenance Instructions, Navy Model UH-2C Helicopters, WIRING DATA	1 October 1967		changed 15 July 1969
	changed 15 June 1969	NAVAIR 01-260HCB-4-4 - Illustrated Parts Breakdown, Navy Model UH-2C Helicopters, EQUIPMENT (FURNISHINGS, HYDRAULICS, INSTRUMENTS, UTILITIES)	1 May 1969
NAVAIR 01-260HCA-4-4 - Illustrated Parts Breakdown, Navy Models UH-2A/UH-2B Helicopters, RADIO AND ELECTRICAL	15 January 1967		changed 15 July 1969
	changed 15 May 1969	NAVAIR 01-260HCB-4-8 - Illustrated Parts Breakdown, Navy Model UH-2C Helicopters, RADIO AND ELECTRICAL	1 June 1967
			changed 15 July 1969

R. H. Chapdelaine, Supervisor, Service Publications



# Huskie Happenings



.... Prompt action by an HH-43 crew from Det 17, WARRC (MAC), Davis-Monthan AFB, Ariz., was credited with saving the life of a civilian who was critically injured when the bulldozer he was driving toppled over. From the accident site to medical facilities the road twists and turns down a mountainside for 40 miles. Due to his condition the injured man would have died if evacuated by ground vehicle. He had suffered a compound fracture of one leg, a simple fracture of the other, a broken hip and arm, deep lacerations and had lost a considerable amount of blood. Despite turbulent winds over the mountains, Capt Raymond M. Hanson made the flight and landing without incident. The evacuee was placed aboard and 20 minutes later was at a medical facility. Others aboard the HUSKIE were Capt Paul W. Becker (MD), flight surgeon; A1c Terence M. Riley, medical technician; and SSgt Harvey A. Meltzer, flight engineer...

... The survivor of a mid-air plane collision 110 miles from Vance AFB, Okla., was located and rescued by an HH-43 crew from Det 14, CARRC (MAC), stationed at the base. The HUSKIE was over the crash site an hour after scrambling but none of the search aircraft had located any survivors. The rescue helicopter began a systematic search of the surrounding area and 15 minutes later the crew spotted a parachute in a rock canyon six miles from the crash site. The survivor, who had suffered abrasions and back injuries, was picked up without incident and taken to the base hospital. Manning the HH-43 were Capt G. R. Overton, pilot; Capt Larry Young, copilot; A1c James P. Cox, flight engineer; and SSgt Gerald O. Steif, medical technician...

... A seriously-ill sailor was evacuated from a U. S. Navy submarine 40 miles off-shore in the Yellow Sea by an HH-43 crew from Det 9, 41st ARRWg, Osan AB, Korea. The pickup was made without incident despite a slight haze on the surface which blended with the horizon. The submarine also had to change course just as preparations were being made to hoist the patient aboard the HUSKIE. Pilot of the rescue helicopter was Maj Alex Lupenski and the copilot was Maj Elmer O'Banion. Also aboard were Capt Jon Olenick (MC), a doctor; and Sgt Charles Colbert, pararescueman. Cover was flown by an HC-130 from Tachikawa and another HH-43, from Det 11, 41st ARRWg, Kunsan AB, piloted by Maj Earle D. Williams, Jr., and Maj George L. Kekuna.

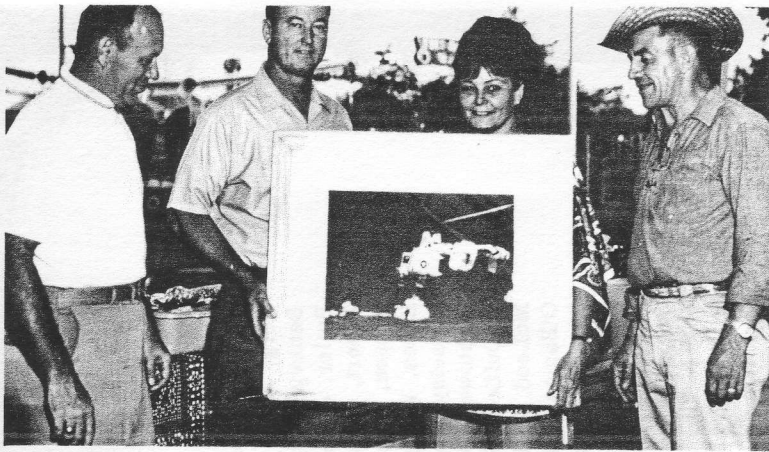
... Two of three youths who had fallen into the rapidly running Potomac River were rescued shortly after 9 p.m. by an HH-43 crew from Det 6, EARRC (MAC), Andrews AFB, Md. The pair, half submerged in the water, were plucked from rocks in the middle of the river by the helicopter and taken to the hospital. Maj Walter Malkiewics was the pilot of the HH-43 and LtCol Robert Bennett, the copilot. Other members of the crew were Sgt Alfredo Chiriboga and SSgt Edward Martinez. The third youth was rescued from a small island by a ground rescue squad.

... An HH-43 crew from Det 25, EARRC (MAC), Eglin AFB, Fla., interrupted a training flight to provide cover for a T-28 which reported engine failure. The pilot of the training plane landed safely at the base's auxiliary field #8 but the aircraft burst into flames. Maj Robert R. Reeves landed the HUSKIE and the two rescue specialists, SSgts John C. McGee and Roy J. Taylor, leaped from the helicopter and quickly extinguished the fire. The survivor was then taken to the hospital for examination. Other members of the HH-43 crew were Capt James A. Tassie and Sgt James L. Dickey. Major Reeves said afterward "the good judgement and instant response of SSgt McGee and SSgt Taylor was the significant factor in this saving of valuable equipment."

... A civilian whose camper broke down in a stream bed 20 miles from Williams AFB, Ariz., was evacuated by an HH-43 crew from Det 16, WARRC (MAC), stationed at the base. Capt Lew E. Phillips and his crew went to the aid of the civilian after it was learned the man, who had a heart condition, was unable to walk through the desert and was short of water. The HUSKIE made the evacuation without incident. Other members of the crew were Sgt John L. Jones, flight engineer; SSgt Jerry L. Copeland and A1c Andrew L. Kappas, medical technicians.

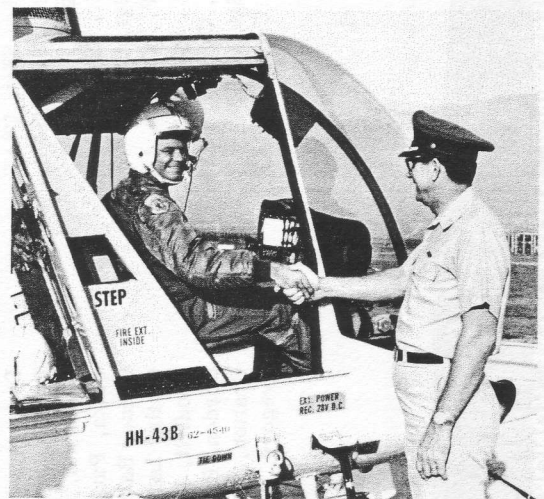
.... A small boy and a teenager, both Ryukyans, were evacuated by an HH-43 crew from Det 6, 41st ARRWg, Kadena AB, Okinawa. Capt Robert M. Garlow flew to the island of Izena Shima to medevac a two-year-old suffering from a severe breathing problem and then, on the way back, was diverted to the Marine northern jungle training area to pick up a 14-year-old boy. He had been bitten by a snake and was in critical condition. Maj Peter S. Giacobazzi (MC), FMO; administered anti-venom serum during the flight to a medical facility. Others aboard the HUSKIE were Maj Bert E. Cowden, copilot; SSgt Dwight L. Berry, flight engineer; and Sgt Charles G. Block, medical technician.





**AXPOW's PRESENTED PICTURE**—The American Ex Prisoners of War (AXPOW) Inc., Chapter 1, of Wichita Falls, Texas, was presented a picture of an HH-43 HUSKIE in a fire-rescue scene recently by the 3638th Flying Training Squadron, Sheppard AFB, Texas. AXPOW, which has "adopted" the squadron, was host at a picnic recently for the 3638th. Shown during the presentation made at the time are, left to right, LtCol William J. Fitzgerald, squadron commander; Maj Clifton E. Ward, a squadron flight commander; Mrs. Frances Ward; and Mr. Charles W. Hartney, commander of AXPOW.

**ONLY A FEW**—Two more pilots, both from the 40th ARRWg, recently joined the comparatively few Air Force officers who have logged more than 2,000 hours in the HH-43 HUSKIE. In top right photo is Maj Herbert A. Lee, Hq 40th ARRWg, Ramstein AB, Germany. He is standing behind the sign of Ramstein AB Det 4, one of the 13 local base rescue detachments of the 40th. In right photo, Col Hiram Griffin, commander of the Wing, congratulates Capt Darvan E. Cook, Det 10, Aviano AB, Italy, just after Captain Cook logged his 2,000th hour in the HUSKIE. (USAF photos)



**SAFETY AWARD FOR DET 6**—In a flight line ceremony at Kadena AB, Okinawa, BrigGen Allison Brooks, right, ARRS commander, presents a "three-years accident-free flying plaque" to Maj Bert E. Cowden, commander of Det 6, 41st ARRWg, stationed at the base. (USAF photo)



**MEETING THE HUSKIE**—Winners of the vice commandant's award for the recent Air Force Reserve Officer Training Corps summer encampment at Myrtle Beach AFB, S. C., are familiarized with the HH-43B. They were introduced to the helicopter by LtCol Bruce C. Bowden, commander, Det 8, EARRC (MAC), and Capt Fernand M. Espiau, rescue crew commander. Left to right are, George Jarrel, Mississippi State; Captain Espiau; Richard Dehmel, Cornell University; Charles Hale, East Texas State; George Gorman, Princeton University; and Colonel Bowden. (USAF photo by Sgt Jud David)



# SCROLL OF HONOR

Additional awards made in 1968

Berg, J. L., Lt(jg), USNR  
 Bettevy, Rodney J., SSgt, USAF  
 Butler, James F., SSgt, USAF  
 Egbert, James P. F., Captain, USAF  
 Hanson, Raymond M., Captain, USAF  
 Hayes, William T., Jr., LtCol, USAF  
 Henseley, Gerald, Captain, USAF  
 Hightower, David B., Major, USAF  
 McDuffie, Johnnie, TSgt, USAF  
 McLeod, Richard A., Captain, USAF  
 O'Banion, Elmer L., Major, USAF  
 Pennise, Clinton J., AMSAN, USN  
 Sim, D. N., LCdr, USN  
 Swartz, Paul L., ADJ3, USN  
 Turner, J. L., Lt(jg), USNR  
 Veltre, Eugene R., TSgt, USAF  
 Wilson, James R., Lt, USN  
 Worzech, Delmar, Major, USAF  
 Wright, Douglas G., Lt(jg), USNR  
 Young, Sherman L., SSgt, USAF  
 Zimbus, George N., Sgt, USAF

1969

Adams, Kelsey R., SSgt, USAF  
 Arvidson, Lief, Sgt, USAF  
 Austin, William F., Captain, USAF  
 Barnes, Floyd M., Sgt, USAF  
 Becker, Paul W., Captain, USAF  
 Bell, Bruce J., Sgt, USAF  
 Bell, Harvey B., Captain, USAF

Benckenstein, Stephen, Captain, USMC  
 Berdeaux, Donald R., Captain, USAF  
 Berry, Dwight L., SSgt, USAF  
 Boone, Gerald R., SSgt, USAF  
 Briggs, Stanley, LCdr, USN  
 Brown, William W., Cpl, USMC  
 Cady, Dell C., Sgt, USAF  
 Capper, Joseph R., Sgt, USAF  
 Clark, William F., Captain, USAF  
 Coleman, Edward L., Captain, USAF  
 Collom, Robert C., Major, USAF  
 Conner, Lonnie G., Sgt, USAF  
 Conover, Laurence W., Captain, USAF  
 Cooper, J. H., ADJ3, USN  
 Copeland, Jerry L., SSgt, USAF  
 Cowden, Bert E., Major, USAF  
 Cunningham, William F., Jr., Major, USAF  
 Cusano, Jack D., Captain, USAF  
 Dean, Michael F., SSgt, USAF  
 Debevec, John L., Captain, USAF  
 Dempsey, Kenneth D., Alc, USAF  
 Dreibelbis, Ryland R., Major, USAF  
 Eisenhuth, Ray, SSgt, USAF  
 Fatka, Paul E., Alc, USAF  
 Gaede, Ralph L., Major, USAF  
 Gettle, Larry B., ADJ3, USN  
 Goodlett, Donald H., Alc, USAF  
 Gordon, Robert C., Major, USAF  
 Gratton, Thomas P., TSgt, USAF  
 Gregory, William H., Lt, USN

Hansell, Clarence L., Captain, USAF  
 Hazzard, John H., SSgt, USAF  
 Henderson, Larry K., TSgt, USAF  
 Herr, Joseph T., Captain, USAF  
 Heth, B. M., Sgt, USMC  
 Holloway, Howard J., SSgt, USAF  
 Ikemoto, Norman, Captain, USAF  
 Irvin, Troy G., Captain, USAF  
 Jeffcoat, Wilbur L., Jr., Alc, USAF  
 Jessee, Cecil A., Captain, USAF  
 John, Hesun S., LtCol, ROKAF  
 Johnson, Johnny R., Captain, USAF  
 Johnson, Kenneth P., Sgt, USAF  
 Jones, Gerald H., SSgt, USAF  
 Kammann, Philip H., Captain, USAF  
 Kazmerchak, Robert J., Major, USAF  
 Kohlstrand, Norman C., Sgt, USAF  
 Kolar, John F., 1stLt, USAF  
 Lauzon, John P., Captain, USAF  
 Lewis, D. L., AE1, USN  
 Long, Ernest L., Sgt, USAF  
 Lorey, Richard W., Major, USAF  
 Luby, John E., Jr., Captain, USMC  
 Marks, William E., Captain, USAF  
 Martin, Raphael C., SSgt, USAF  
 Maxwell, Charles E., TSgt, USAF  
 May, Arthur A., Captain, USAF  
 McCann, Arthur R., SSgt, USMC  
 McGrew, Gary D., SSgt, USAF  
 McIntyre, Leonard J., Captain, USAF

THE PERSONNEL ABOVE WERE HONORED FOR THEIR SKILL, COURAGE AND JUDGEMENT DISPLAYED WHILE PARTICIPATING IN RESCUE OR MERCY MISSIONS PERFORMED UNDER ADVERSE OR HAZARDOUS CONDITIONS WHILE FLYING IN KAMAN HELICOPTERS.

KAMAN AIRCRAFT CORPORATION