

KAMAN

Rotor Tips



MAY - JUNE - JULY, 1969

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ON THE COVER

Day or night . . . fair weather or foul, SEASPRITE crews are "ready to launch" when assistance is needed. Portrayed is a UH-2C making a night rescue similar to the many which have been reported in Rotor Tips. Cover by E. M. Enders, Service Publications.

FEATURES

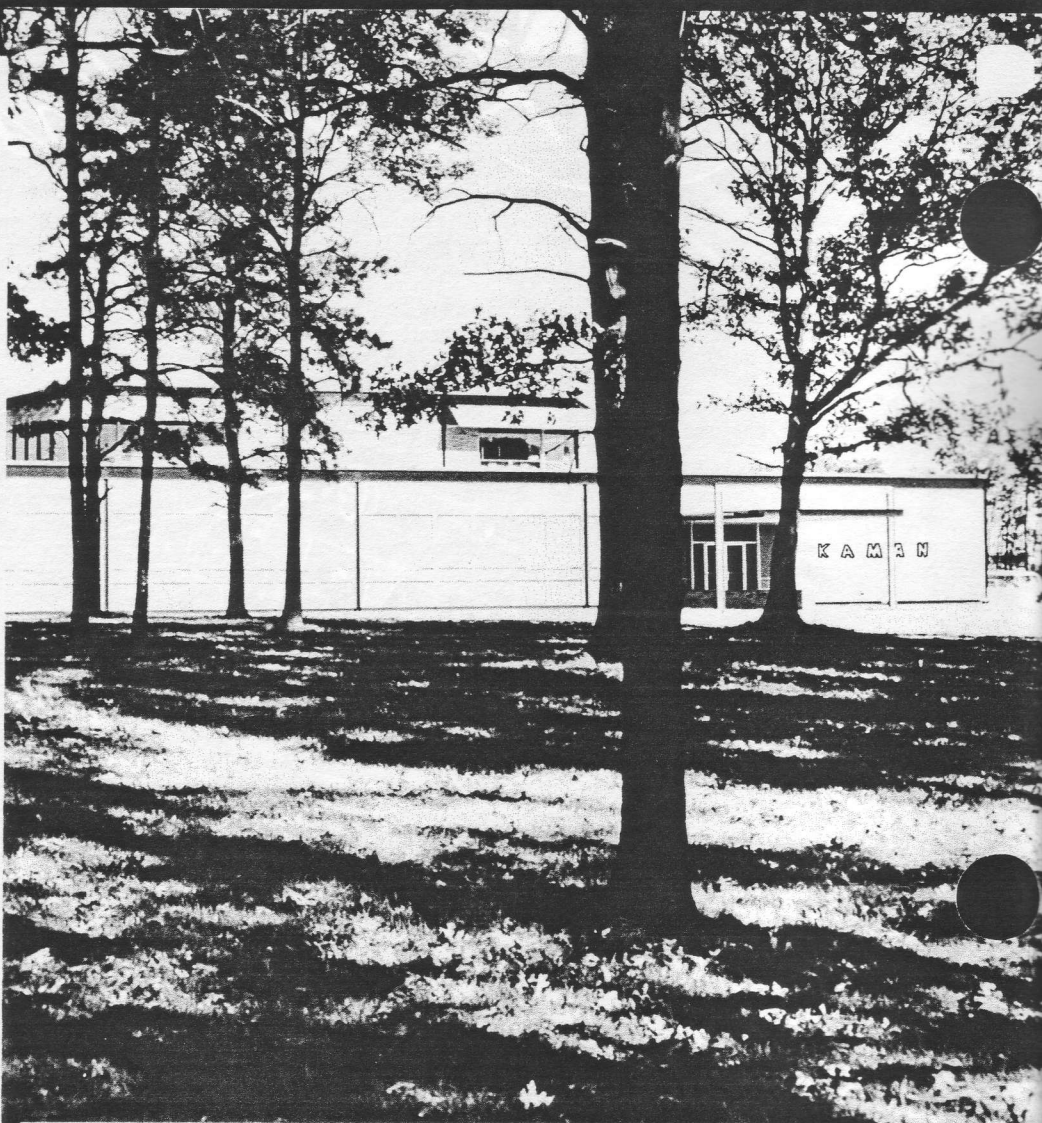
Det 66 Aboard the USS America	3
Saver Seat	14
Det 11 LBR Unit of the Year	14
Report From Thule	16
Det 9 "Cocked and Ready"	17
Kaman Service Representatives	17
UH-2 Routing K683776 Relay Panel Wires	18
Det 7 "Heart of a Thousand Men"	21

DEPARTMENTS

Timely Tips	7
SEASPRITE Activities	8
Q's And A's	10
Southeast Asia	12
HUSKIE Happenings	22

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KAMAN AEROSPACE CORPORATION FOUNDED

All of Kaman's aerospace activities—including the aircraft division—have been brought together into a subsidiary of Kaman Corporation. Called Kaman Aerospace Corporation, the new subsidiary takes in all the company's operations in helicopters, aerospace component subcontracting, automation machinery and bearings. Jack G. Anderson, formerly executive vice president of the Kaman Aircraft Division, is president of Kaman Aerospace and Robert D. Moses is executive vice president.

Another newly formed subsidiary of Kaman Corporation is the Kamtec Corporation. Kamtec brings together AirKaman's general aviation services and Kaman Science's operations in the fields of nuclear energy, systems analysis and management, computer "time sharing," oceanography and other scientific-technological areas. Stewart A. Bliss is president of Kamtec Corporation.

Announcement of the incorporation of the two wholly-owned subsidiaries was made by Charles H. Kaman, chairman of the board of directors and president of the Kaman Corporation.

HELICOPTER COMBAT SUPPORT SQUADRON 2

DET 66

Story by JOC Dale L. Kite, USN
USS America

Photos by PH2 Paul B. Broeker, USN
and Chief Kite (Official USN photos)

While this article is about HC-2's Det 66 aboard the USS America, the activities portrayed generally represent those of all helicopter detachments supporting U. S. Navy aircraft carrier operations.

USS America (CVA-66), At sea, Dec. 14—Forty-seven Lakehurst Navymen recently completed an around-the-world sea voyage and, during the process, rescued nine men from the Tonkin Gulf off the coast of North Vietnam.

If that sounds a little like an adventure story, it is. It is also a story of Navymen with specialized training just doing their job. The men are members of Helicopter Combat Support Squadron Two (HC-2), homebased at the Lakehurst, N. J., Naval Air Station. Saving lives is their job. It is that job which has earned them the nickname "Fleet Angels." The Angels of HC-2 are assigned to each attack aircraft carrier in the Atlantic Fleet. They fly jet-powered UH-2 SEASPRITES in plane guard position any time the carriers launch and land aircraft—ready to go to the aid of any victim of a malfunctioning or damaged aircraft. It was their assignment that took the Lakehurst men around the world and through an eight-month deployment to the Far East.

Assigned in small groups called detachments, when they go aboard a ship they take the ship's hull number as their own. Thus, they became Detachment 66 with USS America (CVA-66), one of the Navy's newest and largest aircraft carriers. Most often referred to as HC-2 Det 66, they are known among their own as "Scrambling Sixty-Six."

The Sixty-Sixers left Norfolk, Va., aboard the America April 10 and returned there Dec. 16. The voyage from Norfolk took them to Rio de Janeiro, Brazil. They completed their circumnavigation of the globe there eight months later—Dec. 4. Leaving Rio the first time, April 30, their course was charted through the South Atlantic, Indian Ocean and South China Sea to Subic Bay, Republic of the Philippines, half-way around the world from New Jersey. Subic Bay was a supply and rest stop on the way to the Tonkin Gulf and Yankee Station. Arriving on Yankee Station May 30, the America's Angels joined the U. S. Seventh Fleet in blocking the flow of men and materials from North Vietnam southward. There, during continual day and night operations, the special training of the helicopter men began to pay off.

The helicopter they fly—exclusively—is built by Kaman Aircraft for rescue and is especially equipped for that purpose. It is manned by a pilot, a copilot and two aircrewmen when in use for its primary job. The Angels are trained rigorously. The aircrewmen, all enlisted men, must pass a rugged survival and swimming course before they become "qualified." During training, each aircrewman must be "rescued"—as often as not from the Atlantic Ocean near Toms River, N. J. The most commonly used rescue device is a three-pronged seat lower-



ed from the SEASPRITE on a cable by either the aircrewmen or pilot. The aircrewmen will enter the water to assist anyone incapable of helping themselves. A loop device, or a wire-net stretcher shaped for the body, is also used for unconscious or badly injured victims. These techniques enabled Scrambling Sixty-Six to make their routine (if any can be called that) rescues. Using the same techniques, they also made rescues with a twist added to their always dramatic work. Once, the Angel was on the scene so fast that the helicopter crew hovered and watched the pilot finish his parachute descent. He was aboard the America minutes later and Det 66 became known as the Angels with the fastest draw in the West—Pacific that is. Another time, a rescue was made during one of those nights when a black curtain appears to have been drawn around the world. Only a small penlight identified the exact position of the man, and instruments were used to guide the helicopter. It was learned after one rescue that the copilot of the Angel making the pick-up had scrimmaged against the downed aviator when both were high school football players in their native Wisconsin.

For 24 hours a day, the men and the trustworthy helos of the detachment were ready, whether for rescue or another less glamorous job, assigned when the other aircraft of the ship were at rest. That the helos are "trusty" is partially reflected by the squadron's winning of the Chief of Naval Operations' annual aviation safety award. Statistics show the importance of their other assignments. During their deployment they moved 11,928 pounds of cargo considered by the crew of America the most pre-



TONKIN GULF OPERATIONS—In the top left photo, ATN2 Donald H. Bellemare, a UH-2 aircrewman, checks hoist before takeoff. Top right, AM3 Richard J. Hallcock prepares to give pilot takeoff signal. A plane guard UH-2 leaves deck of USS America to protect pilots of aircraft such as the F-4's in background. Det 66 crewman keeps a sharp lookout as UH-2 approaches carrier. Mail delivery aboard the USS England is shown in last photo. (USN photos)



cious—U. S. Mail. They also moved 34,390 pounds of other cargo and transported 1,084 passengers, including the Secretary of the Navy Paul R. Ignatius and the Ambassador to New Zealand, John F. Henning.

To keep that "trustworthy" name and ever-ready reputation is no easy task. In addition to the months of training before deployment, the dets of the fleet must move aboard ship with enough tools and personal gear to keep them going anywhere in the world. All the equipment must be assembled and packed for shipment. It is one of the least pleasant aspects of a cruising det's job. The ships they are assigned to furnish most spare parts for the helicopters, and Det 66 has praises for the support of America's supply men. However, quite a few parts were included in the three tons of cargo moved aboard when the detachment left Lakehurst.

The man with the responsibility for the det's success and therefore its preparation, is the officer-in-charge, LCdr Thomas S. Hale, 38, a banjo-playing native of Denver, Colo. Scrambling Sixty-Six's record speaks for that success and the letters of appreciation for their work from destroyers and other squadrons emphasize it. LCdr Hale's senior enlisted assistant is Chief Aviation Electrician's Mate Leon F. Gorczyca, 35, a native of Elizabeth, N. J., now living in South Toms River. He is responsible to Lt Guy M. Maricich, 29, the maintenance officer and a native of Idaho, for the upkeep of the UH-2's.

Since the helos were required to be in the air when the other aircraft were flying, Gorczyca found that working his men in two 12-hour shifts, from noon to midnight or vice versa, was the best way to handle maintenance problems. Two first class petty officers assisted Gorczyca at the head of each shift. Aviation Structural Mechanic

LCdr

Thomas S.

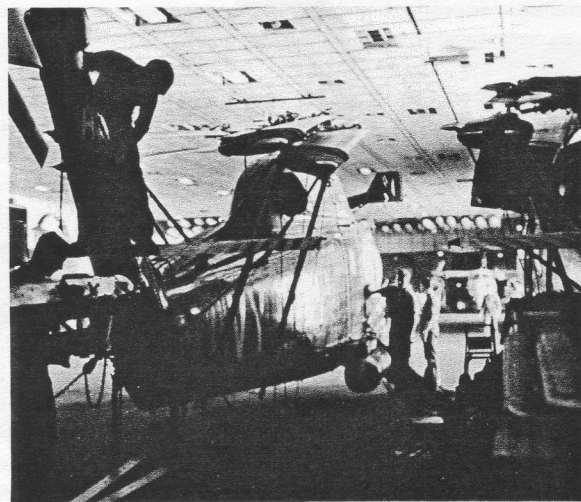
Hale



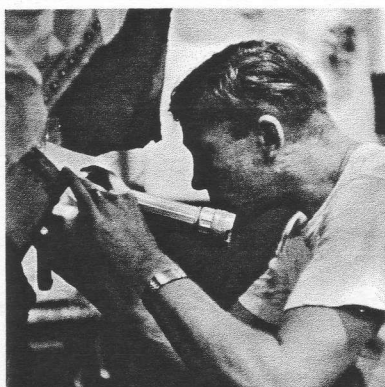
KAMAN ROTOR TIPS



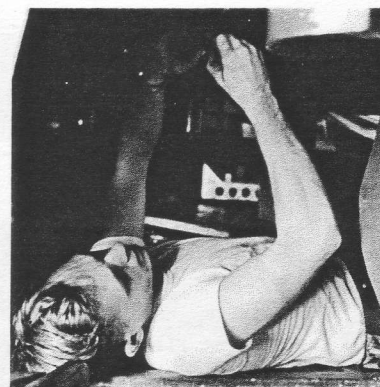
BEHIND EVERY MISSION—Supporting the UH-2 crews are the efforts of all Det 66 personnel. In top photo, Lt Geoffrey A. Foss, left, discusses maintenance scheduling with AEC Leon F. Gorczyca, center, and LCdr Thomas S. Hale. At right, a SEASPRITE is cleaned in the hangar bay of the USS America. The carrier was operating off the Vietnamese coast at the time. (USN photos)



ADJ3 DONALD R. HATFIELD refers to book during periodic calendar check on UH-2. (USN photo)



AMH3 JAMES M. HANN, an aircrewman, also helps maintain the helicopters. (USN photo)



AMH3 RONALD E. SMITH inspects a vent line on underside of SEASPRITE. (USN photo)

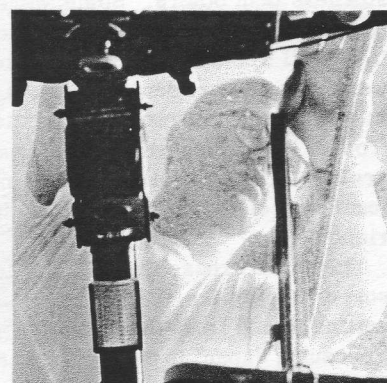
(Hydraulic) (AMH1) Francis A. Marr, 30, of Philadelphia is an aircrewman and headed one section. Aviation Machinist's Mate (Jet) Benny J. Willeford, 27, a native Texan currently living in Lakewood, N. J., headed the other. After maintenance personnel work on a SEASPRITE, the helicopter must be tested by a qualified test pilot. Lt Geoffrey A. Foss, 27, of Teaneck, N. J., is Det 66's man for that job.

These are the senior officers and enlisted men of the det that represent a cross section of the country from 22 states, the Republic of the Philippines and the British West Indies. Ten of the men are officers and pilots, the youngest of whom is Lt(jg) Charles M. Hartwell, 24, of Paducah, Ky. The enlisted members are mostly involved in maintenance—they are the ones who keep the helos up and flying—but 12 of them are also aircrewmen, six of

whom became fully qualified during the cruise (the others were already qualified). One of the aircrewmen is ADJ2 Orest N. Jarema, 22, whose brother AE2 Zenowij W. Jarema, 19, is the youngest man of the group. The Jaremas are from Erie, Pa.

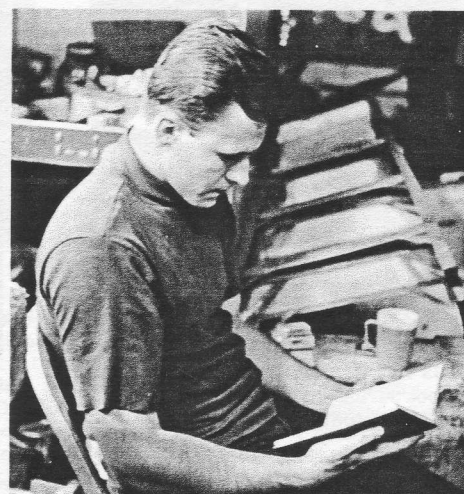
For about half of the group, their assignment to America represents their first full-length deployment. Perhaps they are "typical," if any small group (noticeably more individualistic than large ones) can be called that. Certainly the small unit appears somewhat representative of the Navy as a whole. They have their Texans, a Californian, those of the deep South and others of the Midwest. However, the majority are "East Coast" sailors, perhaps because of their headquarters location at Lakehurst. Some of them are enthusiastic career men but they also have their "short-timers."

AN MICHAEL L. OLSON, left, and AE2 JOSEPH E. BEALLER work on a gyro assembly. In middle photo, AMH3 HAROLD R. PATTEN flies regularly as an aircrewman and also maintains the helicopters. At right, AMS3 RICHARD J. HALLOCK adjusts UH-2 windshield wiper blade. (USN photos)





DAILY DUTIES—A Det 66 member checks the rotor head area on one of the detachment's UH-2's. Folding and unfolding rotor blades is a task performed quickly and efficiently by the men from the HC-2 unit. In third photo, SN RONALD A. JONES AND AM2 JAMES F. DEPOLITO secure a UH-2.



OTHER ACTIVITIES—In left photo, LT JOHN P. MEYN, a Det 66 pilot, does paper work in unit's ready room. LT (jg) CHARLES M. HARTWELL, middle photo, another of the detachment's pilots, plays Acey-Deucey while relaxing between flights over the Gulf of Tonkin. In photograph at right, ADJ3 JOHN A. SHARPE takes time out between jobs to read in the unit's maintenance shop. PR3 GARY L. LUDWIG, in last photograph, engages in one of the favorite pastimes of the off-duty sailor—writing a letter home. (USN photos)

Just like sailors a long way from home anywhere, there were some who suffered more from the pangs of homesickness than others. Some were separated for a long time from their loved ones for the first time. To some, it was all a completely new experience and to others who were vets of other deployments, it was something to take in stride with an air of sophistication, particularly in front of the greenhorns. It is always like that. But none are apt to forget their last eight months because, for at least part of them, it will be a once in a lifetime experience.

They have crossed the equator four times and are seasoned "Shellbacks." They have sailed 30,000 miles just getting to and from the Far East. They have set foot in Yokosuka, Japan, in the North and Sydney, Australia, and

Wellington, New Zealand, in the South. They experienced one date on the calendar—Nov 20—twice this year when they crossed the International Date Line on the way back to the States. And, if that were not enough to make them remember: on their second voyage to Rio they approached from a direction opposite to the one originally sailed. In so doing, they went "around the Horn"—Cape Horn at the tip of South America. To have been around the Horn, you have achieved the traditional mark of the sea-going "salt"—whether it is your first cruise or not.

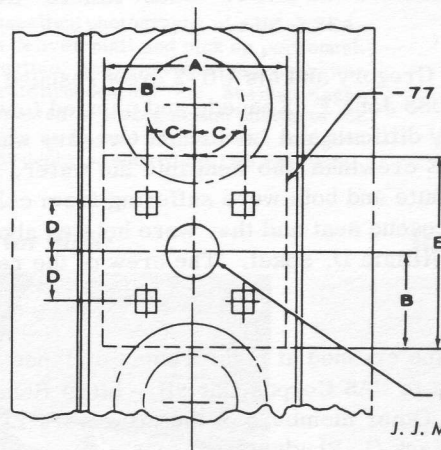
So, despite a series of sights and actions in other parts of the world that could keep any sailor in sea-stories for months, to Scrambling Sixty-Six, 1968 will probably always be the year "we went around the Horn in the good ship USS America."

Timely Tips

Grounding Wire Connections (UH-2)

In order to preclude starter ground lead burnout, it is recommended that aluminum doublers (Alclad 2024) be added to the K636716-61 (LH) and -62 (RH) channels. (The channels are part of the frame installation at Station 152.00; see figure 6-7, NAVAIR 01-260HCA-3, Dated 1 October, 1967). Fabricate the doubler in accordance with the dimensions shown in the accompanying illustration. Prior to installing the doubler, remove the ground lead and clean the forward face of each channel (for the entire doubler area) in accordance with the -3 Handbook to insure good electrical contact. Install the doubler as shown in the illustration; mask off the ground lead attach-area; and match-paint in accordance with the -3 Handbook. Reinstall starter ground leads. To exclude moisture, apply a fillet of EC750 or EC801 sealing compound to all edges of the doubler.

Doubler, K636716-77; Material:
0.063 x 1.41 x 1.41 inches
2024 ALCLAD SH
A - 1.38
B - 0.69
C - 0.37
D - 0.35
E - 1.38
F - 0.380 Hole
MCF rivet holes



J. J. McMahon, Service Engineer

"Noisy" Main Rotor Blade Retentions (UH-2)

From time to time reports of "Noisy retentions" are received. Phrases such as "A scraping sound," "A clicking sound was heard while rotating the retention" are used to describe the noise. Several retentions reported to be noisy have been examined and no discrepancies have been discovered. However, there usually is evidence that the tension-torsion straps have contacted the inner surface of the retention barrel. With no CF the straps relax and can contact the barrel. The noise can usually be eliminated by positioning the suspect retention/blade in the LEFT FRONT QUADRANT and pulling on the blade to simulate some CF. Numerous overhaul inspections have established that the above described retention noises are not related to any structural deficiency and are no cause for operational concern.

W. J. Wagemaker, Service Engineer

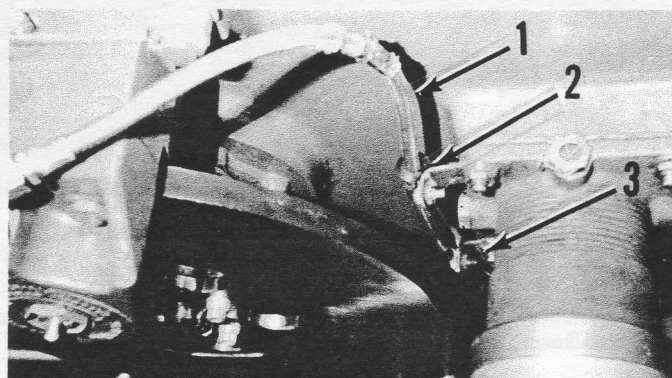
Folding Pin Torque (UH-2)

Field experience on main rotor blade folding pins indicates the following: When the torque applied to the folding pin is increased to 300-400 pound-feet, better seating of the pin will result. For this reason, the recommended torque has been increased from 300-350 lb-ft to 300-400 lb-ft. This information will be incorporated in NAVAIR 01-260HCA-2-4.2 (Rotor System) by a future change.

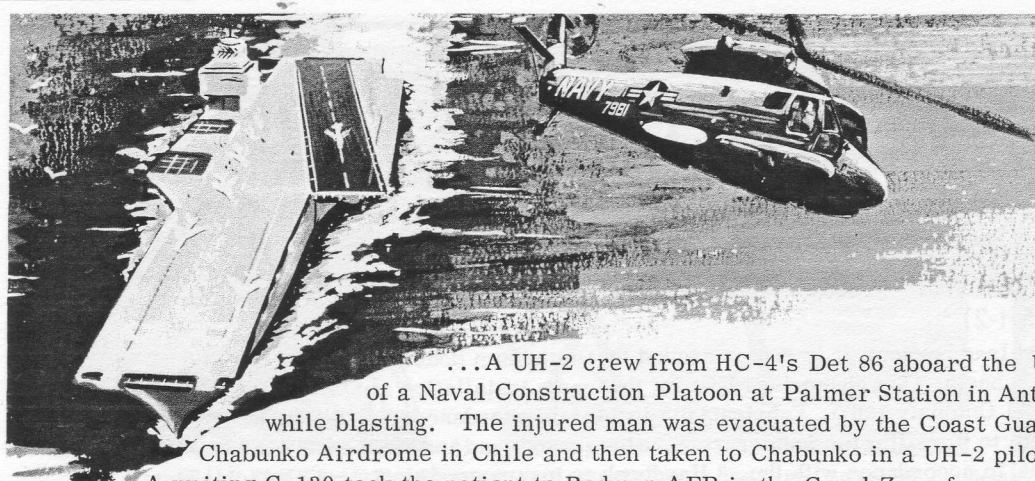
W. J. Wagemaker, Service Engineer

Rotor Brake Hydraulic Line Clamping (UH-2C)

A recent design change provides additional restraint for the main rotor brake hydraulic flex line, P/N K682710-37. The added restraint will preclude the possibility of the line contacting the rotor brake disc by assuring an interference-free route for the line. The flex line is shown as item 1 in the accompanying Photo. Item 2 shows the location of the new clamp; item 3 shows the clamp which is currently in use. As can be seen, both clamps are attached to the mounting studs which secure the hydraulic pump to the combining gearbox assembly. Part numbers for the clamp and associated hardware are: clamp, P/N MS21919DG5; screw, P/N AN520-10R10; nut, P/N NAS679A3; and clip, P/N K386076-75.



R. J. Trella, Service Engineer



SEASPRITE ACTIVITIES

...A UH-2 crew from HC-4's Det 86 aboard the USS Edisto aided in evacuating the OIC of a Naval Construction Platoon at Palmer Station in Antarctica after he suffered critical injuries while blasting. The injured man was evacuated by the Coast Guard icebreaker to within 100 miles of Chabunko Airdrome in Chile and then taken to Chabunko in a UH-2 piloted by Lt Carl S. Park, OIC of Det 86. A waiting C-130 took the patient to Rodman AFB in the Canal Zone for an emergency operation. Others aboard the UH-2 were Lt(jg) James G. Schaefer, copilot; and AMH2 Douglas R. Neal and ADR3 George J. Bell, crewmen. Lieutenant Park served with HC-4's Det 36 "Ghost Riders" in Vietnam prior to the Antarctica assignment.

...Despite darkness, high seas, winds and cold, Lt William H. Gregory and his UH-2 crew rescued an F-4 pilot and the RIO when they ejected from the aircraft after it took off from the USS John F. Kennedy and plunged toward the water. Six-foot waves and the enveloping darkness made the rescue extremely difficult and Lieutenant Gregory was also hampered by ship searchlights, and turbulence. D. L. Lewis, AE1, the SEASPRITE crewman who went into the water, was almost exhausted by his efforts to assist the survivors. One was entangled in a chute and both were suffering from cold and shock and not able to help themselves. Lewis managed to get both men to the rescue seat and they were hoisted aboard by ADJ3 J. H. Cooper. Aiding the pilot on the hazardous mission was Lt(jg) William D. Sokel. The crew of the rescue helicopter were attached to HC-2's Det 67 aboard the giant carrier.

...A seriously injured pilot whose plane crashed at night a short distance from NAS Chase Field, Texas, was taken in a UH-2 from the Chase Field SAR unit to NAS Corpus Christi. Lt(jg) Ronald D. Grooters landed the SEASPRITE in a field near the crash to make the pickup. Other members of the crew were Lt Joseph C. Finley (MC), ADR1 Donald L. Saul, ADJ2 Michael F. Melichar, and HM1 Jack C. Rhudy.

...Less than eight minutes after a man fell overboard from the USS Ranger, he was back aboard due to the prompt action of a UH-2 crew from HC-1's Det 61 deployed aboard the carrier. Lt(jg) R. R. Mason took off as soon as the man overboard call sounded. The survivor was quickly located and AT1 R. E. Morris left the helo and went to his aid. Both were hoisted aboard by ADJ3 S. D. Wood, the first crewman. Copilot on the flight was Lt(jg) J. E. Kahle....A pilot who ejected from his crippled A-7 near the USS Ticonderoga was plucked from the water a few minutes later by the UH-2 flying plane guard. The helo was from HC-1's Det 14 aboard the carrier and flown by Lt(jg) K. R. Smith. SEASPRITE crewman AMS3 B. A. Ekhooff went into the water to aid the survivor and AMCS V. W. Ganderton hoisted both men aboard. Lt(jg) C. W. Davis was UH-2 copilot.

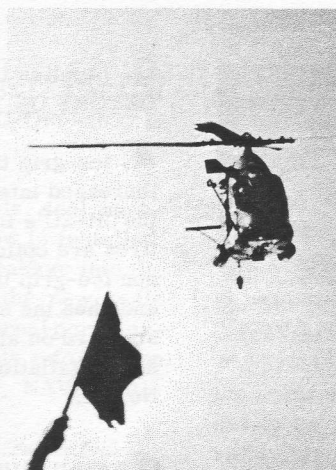
...A UH-2C crew from HC-1's Det 43 aboard the USS Coral Sea was flying plane guard near the carrier when a small fishing boat capsized a short distance away. As Lt J. P. Smith hovered the SEASPRITE over the survivors, AN P. E. Zollars went into the water to assist. He placed one rescuee in the sling, although some difficulty was encountered due to the man's reluctance to enter. The capsized boat, which was moving erratically in the heavy swells, then fouled the hoist cable so the crewman dove underwater and freed it. As the first survivor was hoisted to safety by D. P. Bergman, ATR3, Zollars swam to the other survivor, a small boy, and freed him of ropes securing him to the boat. The crewman placed the boy in the sling, hooked himself up and both were hoisted to the SEASPRITE. Copilot on the rescue was Lt(jg) C. T. Pyles.

...A pilot who ejected from his crippled aircraft was rescued by a UH-2 crew from HC-7's Det 108 deployed aboard the USS King. Although three sharks were in the vicinity, AMS3 Charles F. Johnson went into the water from the helo to aid the survivor. The crewman untangled the survivor's legs from a life raft lanyard and then both men were hoisted aboard the SEASPRITE. Lt L. L. Duncan was pilot of the rescue helicopter and Lt(jg) R. W. Basore was copilot. Operating the hoist was ADJ2 Joseph M. Parlato....One of two pilots who ejected from a crippled F-101 was rescued a few minutes later by a UH-2 crew from HC-2, NAS Lakehurst, N. J. Pilot of the SEASPRITE was Lt(jg) Wilbur A. Davis and the copilot was Lt William H. Gregory. The survivor was hoisted from the swamp in which he landed by UH-2 crewman Douglas G. Wainwright, AMS2. A Coast Guard boat rescued the other pilot from the canal in which he landed.

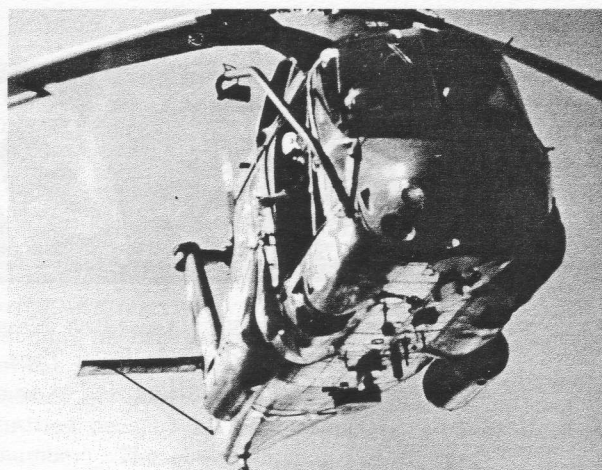
...An A-4 pilot who ejected after an engine flameout was picked up by a UH-2 crew which was flying plane guard for the USS Forrestal. Lt(jg) C. G. Tourigny and his crew made the pickup, about 20 miles from the carrier, without incident. Others manning the rescue helo were Lt J. A. Bugni, copilot; ADJ2 G. R. Garrison, 1st aircrewman; AN T. E. Hollis, 2nd aircrewman. All are attached to HC-2's Det 59 deployed aboard the Forrestal.



Welcome sight



Almost there



Mail delivery

BUSINESS AS USUAL—SN1 Robert Kagan took these excellent photographs of a UH-2 SEASPRITE making a "routine" flight to the USS Dyess to deliver mail and pick up personnel. The circumstances at the time were anything but routine, however—the destroyer was cruising the Bosphorus despite Russian cries of "deliberate provocation" etc. Seaman Kagan knew his father, Al Kagan, would be particularly interested in seeing action photos of the SEASPRITE. The senior Kagan is one of the engineers at Kaman Aircraft who designed the UH-2. The SEASPRITE shown is from HC-2's Det 59 deployed aboard the USS Forrestal.

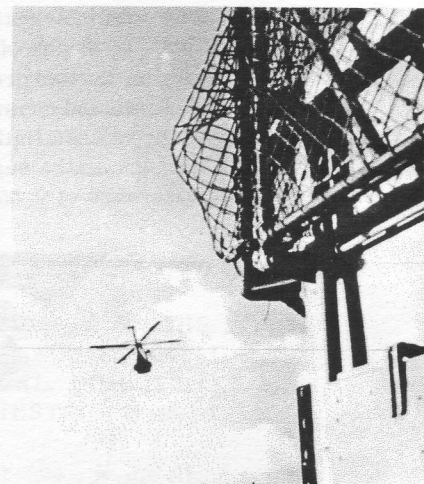
Personnel pickup



Securing for flight



Heading for Forrestal



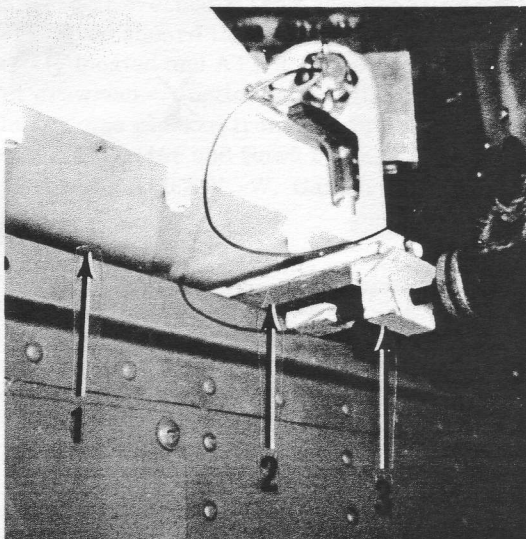
HELO CREWS HONORED—Several HC-4 pilots and crewmen were presented with Kaman Mission Awards or Scrolls of Honor recently for humanitarian flights in UH-2's. Mission Award recipients were, left to right, Lt(jg) James Schaefer, Lt Carl Park, Lt(jg) Paul Petrucka, ADR3 George Bell, Lt David Trace and AMH2 Douglas Neal. At center is Cdr R. G. Burkemper, commanding officer of HC-4, who made the presentations. At his left are the three pilots and two aircrewmen who received Scrolls for a hazardous mission flown at night in bad weather to evacuate an injured civilian from a ship 80 miles offshore. They are ADR1 Dick Mastriano, AT1 Tony Amarosa, Lt Frank Peirce, Lt Paul Lien, and LCdr Ray Avila. (USN photo by PH2 Peter J. Anerine)

Q's AND A's

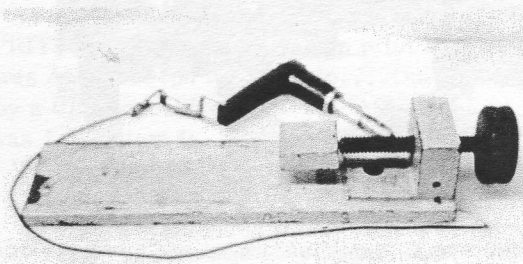
If you have a question regarding Kaman Aircraft maintenance, send it along to Rotor Tips. The Service Department's engineers will be glad to answer it.

Q. (Applies UH-2C) WHAT CLEARANCE IS RECOMMENDED BETWEEN THE ENGINE/COMBINING GEARBOX MOUNT AND THE SUPPORT PLATE?

A. The minimum clearance between the engine mount assembly, P/N K672730-1 and -3 (1, Photo A) and the engine removal support assembly, P/N K631734-1 and -3 (2, Photo A) is 0.050-inch. This is the minimum clearance required to allow insertion of the engine support set tool, P/N K604522-1, (item 3, Photo A; also shown in Photo B) prior to removing the combining gearbox. Properly positioned by means of the knurled knob and secured with the pip-pin, the tool prevents engine movement during CGB removal and assures alignment of the CGB to the engines at re-installation. If the clearance is not correct, the legs of the support may be filed to achieve minimum clearance of 0.050-inch.



A



B

H. Zubkoff, Service Engineer

Q. (Applies UH-2) WHY ARE ICE-GRIP TIRES MANDATORY ON THE UH-2C?

A. Ice-grip tires are mandatory because they have the increased lateral stiffness necessary to compensate for the UH-2C's increased gross weight capability. Ice-grip tires are optional on the UH-2A and UH-2B; however, the non ice-grip tire is being replaced on an attrition basis and when the supply is depleted, the ice-grip tire will be standard on all UH-2 models. For further information and installation instructions, refer to Airframe Change No. 54.

H. Zubkoff, Service Engineer

Q. (Applies UH-2C) WHAT COULD BE THE CAUSE OF AN INCREASE IN ENGINE OIL TANK LEVEL, COUPLED WITH A SIMULTANEOUS DECREASE IN TRANSMISSION OIL TANK LEVEL?

A. A loss of a quantity of oil from the transmission oil system and a simultaneous increase in the oil level in the engine oil system would most probably be caused by an unbalanced condition between the two venting systems. The design of the transmission and engine lube oil systems is such that a negative pressure must be maintained within the gearboxes by the scavenge portions of the lube pumps. The engine speed decreaser gearbox has a greater negative operating pressure than the main or combining gearboxes. The differential of negative pressures within the two separate lube systems is kept in a balanced condition by the oil pumps' pressure/scavenge capacities, and the restrictors located in the venting system plumbing. Each gearbox and its lube oil system is vented to its respective oil tank and hence overboard. The two systems are separated by a lip-type seal located at the coupling area of the CGB and the SDG. Therefore, any negative pressure unbalance occurring between these two venting systems during operation will cause lube oil from one system to be siphoned to the other lube system (usually from the transmission system to the speed decreaser system). The trouble shooting information listed below will enable a mechanic to locate and rectify the situation. This information will be incorporated into NAVAIR 01-260HCA-2-4.1, by a future change.

Probable Cause

1. Loose fitting or cracked oil vent line between CGB and transmission oil tank.
2. Loose fitting or cracked oil scavenge line between CGB and CGB oil pump.
3. Malfunction of the scavenge portion of CGB oil pump.
4. Loose or cracked coupling dust cover between CGB and SDG.

Remedy

- 1 Check fittings and lines for air leaks and security. Replace or tighten as necessary.
- 2 (Same as above)
- 3 Replace faulty oil pump assembly.
- 4 Tighten clamp or replace dust cover.

R. J. Trella, Service Engineer

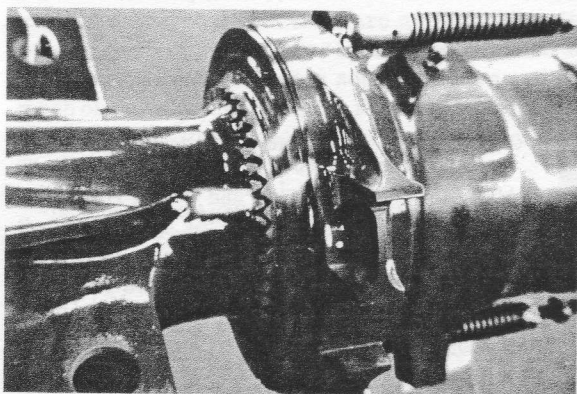
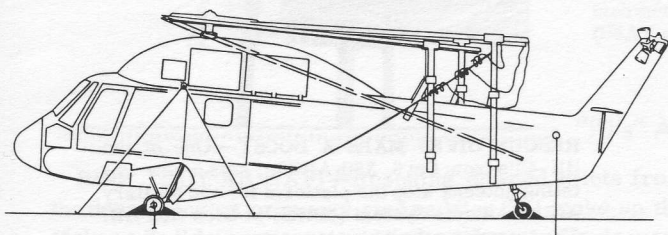
Q. (Applies UH-2) SHOULD NEW SEALS BE USED EACH TIME A WINDOW, P/N K633034-205 AND/OR -207, IS INSTALLED?

A. Yes. It is recommended that new seals, seal washers, and gaskets be used each time a window is installed. This procedure will help prevent water leakage into the pilot/copilot's compartment. Installing the new seals does not eliminate the requirement for external peripheral sealing with the specified sealants. This information will appear in a future change to the MIM, NAVAIR 01-260HCA-2-2, Airframe.

H. Zubkoff, Service Engineer

Q. (Applies UH-2) WHY SHOULD THE INNER AND OUTER MAIN ROTOR BLADE RETENTIONS BE INDEXED BEFORE ATTEMPTING TO FOLD THE BLADE?

A. Before folding the main rotor blades, the outer retention should be indexed to the inner retention in order to ensure that the blades fold in the correct plane. When properly indexed, a blade can easily be guided aft to its folded position. However, if the blade is not properly indexed, it will fold at an unacceptable and unexpected angle. The dotted lines in the accompanying illustration depict what could happen--instead of moving in a plane approximately parallel to the upper fuselage, the blade angled down. This condition could result in aircraft damage and/or injury to ground personnel. NAVAIR 01-260HCA-2-1 contains detailed folding procedures; the Photo shows a close-up of the index marks on the inner and outer retentions. Line up the mark adjacent to the "L" (on outer retention) for left-hand blades and use the mark close to the "R" for right-hand blades.

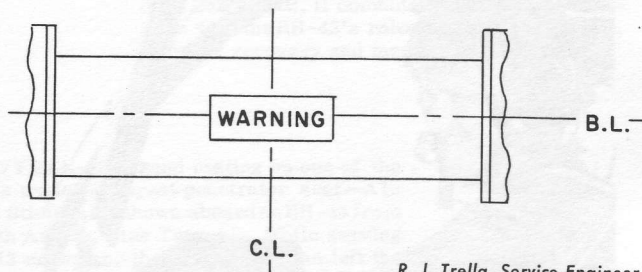


W. J. Wagemaker, Service Engineer

Q. (Applies UH-2) WHY IS IT NECESSARY TO KEEP ALL COMPONENTS OF THE MAIN DRIVE SHAFT ASSEMBLY TOGETHER AS A UNIT?

WARNING
MATCHED AND BALANCED ASSYS
DO NOT INTERMIX PARTS

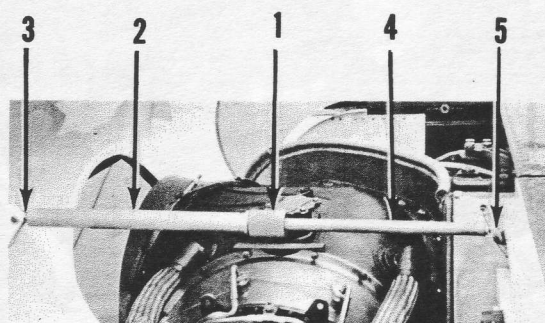
A. The preceding warning vividly explains why the main drive shaft assembly must be maintained as an assembly. The parts from one assembly must NEVER be mixed with the parts of another assembly. A matched assembly may easily be identified because all components carry the same serial number. The above warning will be stencilled on all new main drive shafts. The stencil, which may be applied on installed shafts at the discretion of the unit maintenance officer, will consist of three lines of 1/4-inch high letters and will be worded exactly as shown above. It will be painted in the positions shown in the accompanying illustration. (One location is shown; the other is 180 degrees opposite.) Because the main drive shaft is cadmium plated, most paints will not adhere to it. Therefore, it is recommended that the following paint be used: Black Laquer, Specification MIL-L-81352, Color Number 37038 (or an equivalent).



R. J. Trella, Service Engineer

Q. (Applies UH-2C) THE RODENDS ON THE HOLD-OPEN STRUT FOR THE LONG ACCESS DOOR ON TOP OF THE ENGINE ARE IDENTICAL. DOES IT MAKE ANY DIFFERENCE WHICH WAY THE STRUT IS INSTALLED?

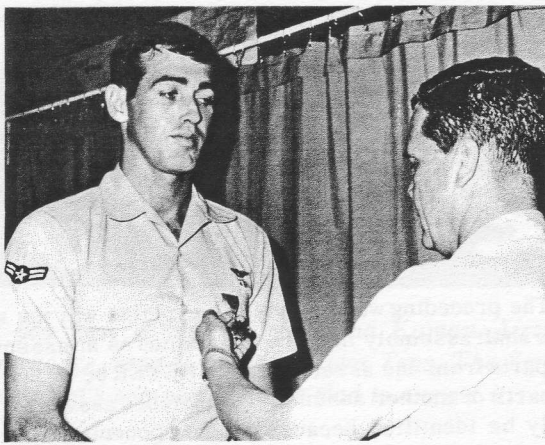
A. Yes, it does make a difference. In the illustration, note that the telescoping strut, P/N K636809-1, consists of 2 tubes (outer and inner), a knurled lock ring, and 2 identical rodends. The outer or larger diameter tube should be attached to the door and the smaller tube to the nacelle structure. If the installation is reversed, and the door is closed, the strut will chafe against the top of the engine-mounted gas shield. Continued chafing will severely damage the strut and cause premature replacement.



1. Knurled locking collar
2. Large tube
3. Rodend
4. Small tube
5. Rodend

H. Zubkoff, Service Engineer

Southeast Asia



CREWMAN DECORATED—Last August A1c Donald H. Goodlett, Jr., leaped from a hovering HH-43 into the water to aid two downed pilots who were entangled in shroud lines. Goodlett, a pararescueman with Det 8, 38th ARRSq, Cam Ranh Bay AB, entered the water despite warning that sharks were nearby. For his courageous action, the Airman was recently presented the Airman's Medal by Col R. R. Melton, commander, 12th Tactical Fighter Wing. With 10 rescues to his credit, Goodlett also received the Air Medal for "meritorious achievement while participating in aerial flight." (USAF photo by A1c Bob Mulica)



RECORD MAKER—Maj Richard H. Coan gives the "thumbs up" signal to his crew chief after a mission in the HH-43B. The Major, who set a world record for distance in the HH-43B in 1962, recently assumed command of Det 8, 38th ARRSq, Cam Ranh Bay AB. During the seven-hour flight nine years ago, Major Coan flew the HUSKIE for a helicopter world's closed-course distance mark of 655.64 miles, eclipsing the record then held by the Russians. (USAF photo by Sgt Berry Askew)



RESCUE GIVES MARS A BOOST—One of the HH-43's from Det 6, 38th ARRSq, sets a new rotating antenna atop the platform for the Military Affiliate Radio System (MARS) at Bien Hoa AB. The antenna can be operated on several frequencies, resulting in a longer range and improved reception. (USAF photo by A1c Fred Zastawski)



2,000 HOURS—Two ARRS pilots serving in Vietnam each logged 2,000 hours in the HH-43 recently. At left, Capt John F. Patterson of Det 8, 38th ARRSq, Cam Ranh Bay AB, is shown after returning from the flight during which he accumulated the 2,000th hour. Copilot on the memorable flight was Capt Samuel E. Chapin, Jr., (USAF photo). In second photograph, Maj Tom W. Brumfield, left, is shown after logging his 2,000th hour in the HH-43. With him is his copilot, Capt John E. Murray. Both are assigned to Det 7, 38th ARRSq, Da Nang AB. (USAF photo by A1c Gary Butler)

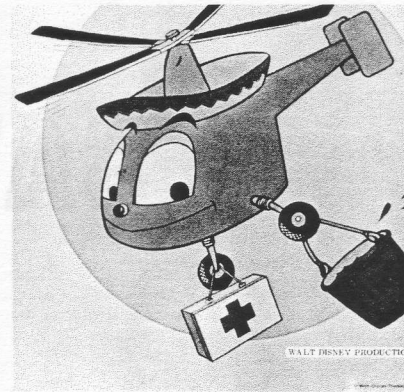
Creighton W. Abrams
General, United States Army
Commanding



FIRST AT U-TAPAO—SSgt John B. Gent, right, recently became the first member of his unit, Det 12, 38th ARRSq, to reenlist at U-Tapao Royal Thai Navy Airfield. He was sworn in for another Air Force tour by Maj James H. Madeen, detachment commander. Gent received a \$6,000 Variable Reenlistment Bonus (VRB), believed to be one of the largest such ever awarded at U-Tapao. The ceremony was performed in one of the unit's HH-43B's while flying 500 feet over U-Tapao's runway. (USAF photo by A1c Rod Garrett)



PEDRO PLAQUE—For SEA radio communication purposes (and sometimes in other locations) the HH-43 HUSKIE is referred to as "Pedro." ARRS crews are proud of their association with Pedro—the helicopter in which they have rescued so many downed airmen and carried out so many medevacs, often under fire. Their affection for the HH-43, "workhorse of the 14 detachments in the 38th ARRSq," is reflected in the insignia above. Maj Charles E. Trapp, Jr., commander of Det 5, Udorn Royal Thai AFB, displays a plaque bearing the detachment's insignia. During an informal ceremony, it was hung in the officer's club along with plaques from other units at the base. The second insignia appeared in Rotor Tips sometime ago. Designed by Walt Disney productions at the request of personnel from Det 7 at DaNang AB, it combines the Pedro call letters with the HH-43's roles of fire suppression, aircrew recovery and medevac. (USAF photo)



AIDED NAVYMEN—His hand resting on one of the tools of his trade—a forest penetrator seat—A1c Richard C. Stiefken is shown aboard an HH-43 from Det 10, 38th ARRSq, Binh Thuy AB. While serving as an HH-43 crewman, the pararescueman left the helicopter to go to the aid of two Navy SEALs (Sea, Air, Land, intelligence reconnaissance) seriously wounded during a night ground action. MSgt John G. Regan, Jr., and Stiefken administered first aid on the flight to the hospital. Maj Ralph L. Gaede, detachment commander, was pilot of the HH-43. (USAF photo by A1c Timothy J. Nowak)

"PJ's" Aid War Victims

BINH THUY AB (7AF)—Rescuing downed pilots from the dense jungles or mucky rice paddies that make up the Mekong Delta is just a part of the lifesaving endeavors of the pararescuemen at Binh Thuy AB. Assigned to Det 10, 38th ARRSq (MAC), the rescuemen stand by, ready to go wherever their services are needed. When they are not on recovery missions or evacuating wounded military personnel from hostile-fire zones, the paramedics spend much of their time helping Air Force surgeons save lives at Phong Dinh Province Hospital in the nearby city of Can Tho.

The Air Force has an 11-man trauma team assigned to the hospital to act as advisors to the Vietnamese medical staff. Because of the tremendous number of Vietnamese civilians seeking aid they have found it necessary to help them. The team's four surgeons perform more than 80 percent of the hospital's major surgery. Many of these patients are innocent victims of the war.

"Pararescuemen have been helping the trauma team for a couple of years now," said TSgt Dudley R. Peckinpaugh, noncommissioned officer-in-charge of the pararescue section. "We gain valuable experience while lessening

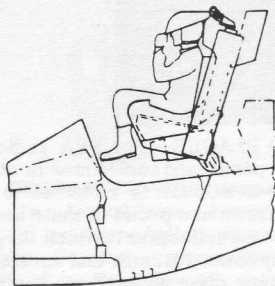
the load of the team, and also help fellow humans." Peckinpaugh added that "probably the man who has assisted at the hospital more than anyone else is A1c Theodore J. Polys."

continued on page 20



INTENT—A1c Theodore J. Polys tends to a shrapnel wound in the shoulder of a young Vietnamese man. (USAF photo by Sgt Ron Gimbert)

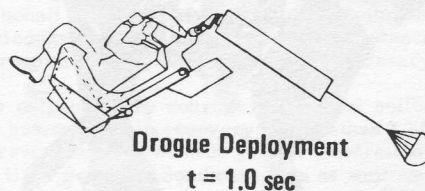
SAVER



Ejection
t = 0.45 sec



A-7 Cockpit
t = 0 sec



Drogue Deployment
t = 1.0 sec

SEAT

As part of a joint Navy/Air Force program, a contract to conduct concept definition and preliminary design of AERCAB—a flying rescue seat to be used by aircrews ejecting from disabled aircraft—has been received by Kaman Aircraft. Work on the project began at the company's Bloomfield, Conn., facility immediately after the contract was awarded by the Naval Air Development Center (NADC) at Johnsville, Pa.

Kaman has proposed a turboprop-powered gyroplane with an unpowered rotor. Called SAVER, for Stowable Aircrew Vehicle Escape Rotoseat, it will have stowable and telescoping blades which will fold, along with the turboprop engine and controls, into a compact pilot seat for normal use.

In an emergency requiring a bailout, the pilot will eject, propelling the entire seat with pilot into the airstream. Within seconds, a drogue chute opens to start the full deployment; the folded rotor opens, extends and deploys, the engine will start, be brought up to full power, and the seat is then a gyroplane.

Combat experience in Vietnam has shown a need to provide flying crews with a capability to remove themselves from the vicinity of a downed aircraft, so as to avoid de-



Craig AFB, Ala—The Military Airlift Command (MAC) has selected Det 11, EARRC, at Craig AFB, Ala., as the world-wide Aerospace Rescue and Recovery Service's "Local Base Rescue Unit of the Year." BrigGen Michael C. McCarthy, Craig AFB wing commander, presented the annual award to Maj Charles P. Nadler, detachment commander, in recent ceremonies and congratulated all members in the unit on their achievement.

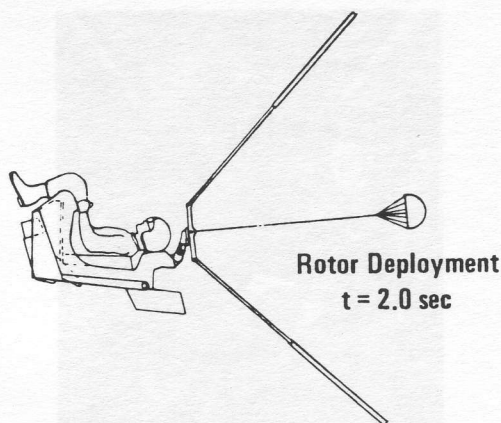
MajGen W. H. Reddell, MAC deputy chief of staff for Materiel, in conveying his congratulations said, "The selection of Detachment 11 from among all eligible nominees indicated dedicated leadership, superior management of resources and complete dedication to duty by all personnel."

Det 11 LBR Unit of the Year

The detachment was chosen for the honor in competition with more than 50 rescue organizations according to Col Walter F. Derck, commander of EARRC. Craig's rescue detachment earned 900 points—the maximum possible. The unit was graded on such factors as productivity, aircraft condition and appearance, aerospace ground equipment, facilities and noteworthy maintenance accomplishments.

Members of Det 11, the MAC Local Base Rescue Unit of the Year are: Major Nadler, commander; Maj William Deere, Capt Daniel Thomsen, and Capt Willie Farrow, helicopter pilots; SSgt Clayton Langley, SSgt George Sheehan, Sgt Roy Rivera, Sgt Hoke Johnson, and Sgt Charles Murray, rescue specialists. Also CMSgt Charlie Wood, maintenance supervisor; TSgt Emil Miehke, TSgt Arthur Downing, TSgt Robert Billot and SSgt Lester Berry, helicopter technicians; Sgt Charles Brown, engine specialist; A1c William Williams, helicopter mechanic; and MSgt Aubrey Butler and SSgt John Yarwood, medical technicians.

In the photo, a Det 11 HH-43 is shown preparing to lift off on a mission. (USAF photo by SSgt Aubrey Green.)



tection and capture by the enemy. Further, a gyroplane, unlike a parachute, is not dependent on the vagaries of the wind which can blow a pilot into an unsuitable landing area. With SAVER, a pilot can fly to and land in friendly areas, or stay airborne, communicating with helicopter rescue crews for a coordinated intercept and rescue, thus cutting rescue time and reducing the enemy's ability to interfere.

Preliminary design parameters call for a range of 50 nautical miles and a speed of 100 knots. Rate of climb will be 1,000 feet a minute with a deployed rotor diameter of 15.5 feet. The unit will be designed to operate from a minimum ejection altitude of 1,000 feet, and for a minimum safe altitude for unpowered vertical descent (autorotation) of 800 feet. SAVER's weight, without crewman, would be 345 pounds, and its turbofan engine would generate about 275 pounds of thrust. Stowed in its pilot seat configuration, SAVER will measure 22 inches in width, 38 inches in depth and 54 inches in height.

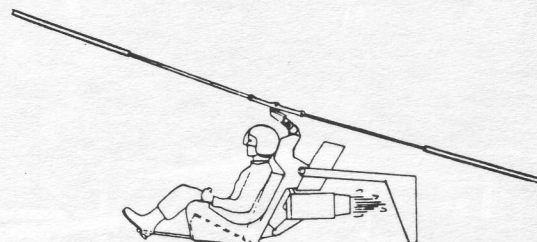
Like all gyroplanes, SAVER will not be able to hover. Its rotor system will spin, providing lift, from the force of passing air. Forward propulsive force will come from the turbofan.

The agile SAVER gyroplane will be capable of a pinpoint landing or can be jettisoned for a parachute landing, if desired. The pilot can cause the rotor system to separate from the powered seat, and then bail out from the seat. This capability affords a choice of landing means and also provides a safety backup in the event of malfunction or combat damage. The flying SAVER seat will have automatic flight and homing equipment, an automatic locator beacon plus life support equipment, survival kits and restraint harness.

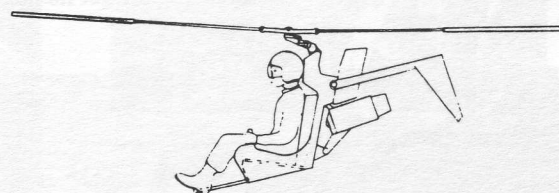
Under the five-month contract, Kaman will have responsibility for SAVER airframe considerations including engine installation; and will further define stowed rotor escape systems to recommend the optimum configuration to NADC.

Kaman has conducted more than 1,500 air drops of self-deploying rotor systems that demonstrate the feasibility of stowed rotor systems that can be deployed at subsonic, transonic and supersonic speeds. Kaman also has built and demonstrated a 24-foot-diameter, telescoping rotor system that established the workability of telescoping blades.

Subcontractors to Kaman on the program are the Vought Aeronautics Division of LTV Aerospace Corporation, in Dallas, and Continental Aviation and Engineering Corporation in Detroit. LTV Aerospace Corporation will study the installation and integration of SAVER in A-7 and F-4 aircraft, while Continental Aviation & Engineering Corp. will further define the characteristics of the engine needed for SAVER.

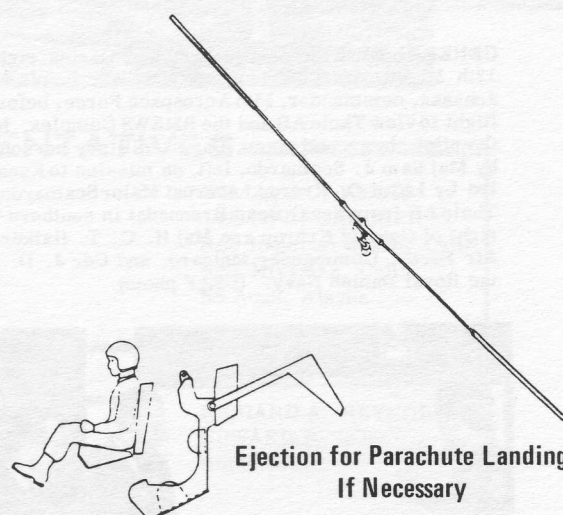


Autogyro Flight Mode - Fly Away From Danger
t = 6.0 sec



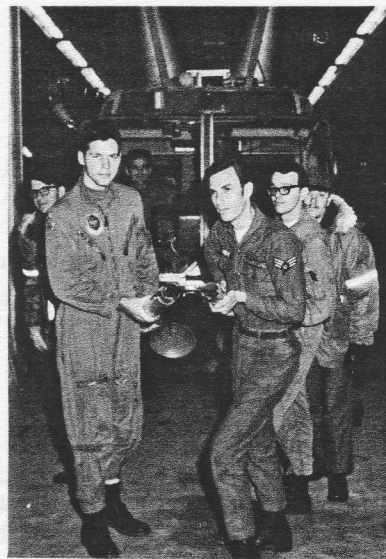
Rotor/Glider Mode - Autorotate
to a Safe Landing Area

OR





TOP OF THE WORLD RIDE—Maj Charles W. Simmons, a Det 18 pilot, has the rare distinction of riding a rotorless HH-43B down the main street of Thule AB. The signpost gives distances to a wide variety of places ranging from Washington, D.C., 2344 miles, and Moscow, 2444, to the North Pole, 808 miles away. The HUSKIE was pulled to the base motor pool maintenance shops where it was refinished by Danish workmen. Teamwork, as shown on the right, was the order of the day. Personnel from Det 18, the 4683rd Air Base Group and the Danish Construction Company combined their efforts to see that the helicopter got its new paint job. (USAF photos)



SCROLL OF HONOR—Cdr Jørgen Mølgard, left, Danish liaison officer at Thule AB, presents a Kaman Scroll of Honor to HH-43 crewman SSgt Ronald E. Levi. Sergeant Levi was a participant in a life-saving flight to a remote village. Looking on is Maj Frank W. Schnee, Det 18 commander. (USAF photo)



GENERAL BRIEFING—Col Stanton G. Daries, right, commander, 12th Missile Warning Squadron BMEWS, briefs MajGen Oris B. Johnson, commander, 14th Aerospace Force, before the general's flight to view Thule AB and the BMEWS Complex. Major Schnee is the pilot. In second photo, Danish military personnel are briefed by Maj Sam J. Scamardo, left, on mission to Kanak. The group, led by LtCol O. Krarup, nearest Major Scamardo, were visiting Thule AB from Naval Base Brønnedal in southern Greenland. To right of Colonel Krarup are Maj H. C. T. Halker, Royal Danish Air Force, Commander Mølgard, and Cdr J. D. Brusendorff of the Royal Danish Navy. (USAF photo)

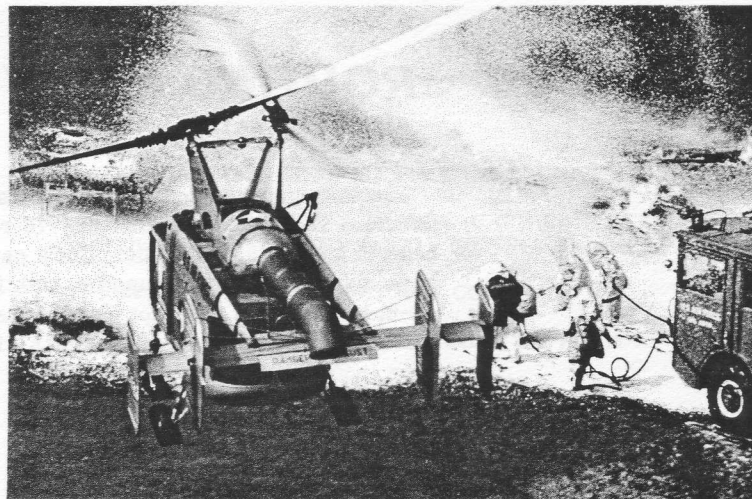
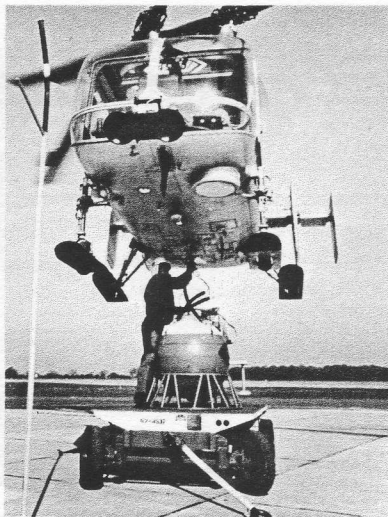


Det 18, EARRC (MAC), Thule AB, Greenland, flew 146.2 hours, moved 46,707 pounds of cargo, 9,917 pounds of mail and transported 325 passengers during the second quarter of the fiscal year 1969. The greatest portion of the operation was accomplished in total darkness in temperatures that sometimes freeze flesh in a matter of seconds, and with only 60 percent of the manning complement available.

The unit, which has three HH-43B's assigned, supported the 4683rd Air Base Group in every capacity requested and in addition made many flights to the isolated village of Kanak to provide medical and other services. Several USO/morale teams were carried to the USCG Loran Station at Cape Athol and numerous high ranking officers and dignitaries were also transported by the Det 18 HUSKIE crews.

The detachment has recently received: the Unit PRIDE plaque for superior supply actions and the MAC 5,000 hour Flying Safety Award. SSgt Ralph E. Fitzgerald reenlisted soon after arriving at Thule, thus becoming the first person in the detachment, and one of the very few in the history of Thule AB, to do so.

KAMAN ROTOR TIPS



WETHERSFIELD AB, ENGLAND—Shown are members of Det 9, 40th ARRWg (MAC), the local base rescue unit here, as they respond to an exercise involving a simulated airplane crash. A detachment airman hooks up a fire suppression kit, which produces 1,000 gallons of expanded foam, to an HH-43 HUSKIE for transportation to the crash scene. After deploying from the helicopter, airborne crash rescue firemen use the foam from the FSK to "cut" a path through the fire to the burning aircraft. Ground equipment also arrives on the scene. In the HH-43 overhead, Maj Hubert M. Berthold, detachment commander, directs the rotor downwash from the HH-43 toward the flames to assist in forming the path for the firemen to use while rescuing the crew from the burning aircraft. Completing the job, the HUSKIE crew returns to the takeoff pad where an airman directs Major Berthold in placing the FSK back on the trailer—Det 9 has once again shown aircrews at the base that the ARRS unit is "cocked and ready" to help them if an emergency arises. (USAF photos by SSgt Ed Watson)



KAMAN SERVICE REPRESENTATIVES

HORACE F. FIELD
NAS Lakehurst, N.J.

JACK L. KING
GERARD A. BOUTIN
DONALD R. DELANEY
NORMAN M. MYERS
ROBERT C. BELISLE
NAS Atsugi, Japan
NAS Cubi Point, P.I.

WILLIAM C. BARR
MICHAEL T. FIASCHETTI
USS Wright

DONALD P. ALEXANDER
BILL L. MAGNAN
Iran

HOMER C. HELM
NARF North Island, Calif.

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

DONALD T. LOCKRIDGE
NAF Naples, Italy

RICHARD A. REYNOLDS
EDWARD F. NOE
Home Office

CUSTOMER OPERATIONS SECTION — ROBERT L. BASSETT, Supervisor

UH-2C—ROUTING K683776 RELAY PANEL WIRES

by J. J. McMahon, Service Engineer

The listing presented here reflects the latest information concerning wire numbers and routing on the K683776 relay panel. (The panel is mounted overhead in the cabin, aft of the pilot's canted frame.) The information contained here may be used in conjunction with figure 48, Sheet 4 of NAVAIR 01-260HCA -2-8.1. If a panel does not contain the wires as listed here, it is an indication that one or more of the applicable Airframe Changes and/or Bulletins have not been incorporated into the aircraft.

Terminal Block 60

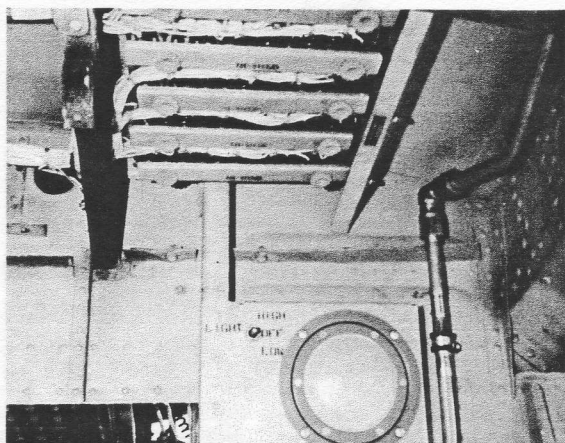
TERM	WIRES	DESTINATION
1	M45A20 4-20	HOIST/SLING PANEL CONN 132 PIN C SLING RLSE RLY
2	M44A20 2-20	HOIST/SLING PANEL CONN 132 PIN E SLING RLSE RLY
3	V106A22 14-20	PWR RLY BOX CONN 721 PIN s (MON DC BUS RLY) STARTER INTLK RLY
4	P60A22 12-20	3A CONV CB DC EXT PWR INTLK RLY
5	Q232A20 Q244A22	CABIN ROOF CONN 814 PIN P #1 ENG CHIP DET RLY PIN X2
6	Q243A22 Q231A20	#1 ENG CHIP DET RLY CAUTION LT PANEL CONN 742 PIN F
7	V62A22 14-20	PWR RLY BOX CONN 721 PIN j (GEN PWR RLY) #1 GEN INTLK RLY
8	V61A22 7-20	NO. 1 GEN AC PWR CB #1 GEN INTLK RLY
9	V134A22 13-20	TB 61, POST 10 DC EXT PWR INTLK RLY
10	V63A22 4-20	AC EXT PWR RLY CB (PRIOR TO AFC 96) #1 GEN INTLK RLY
11	V84A22 V84B22 1-22E 13-20	MON AC BUS RLY CB PWR RLY BOX CONN 721 PIN e PRI 26 VAC SEN RLY AC EXT PWR INTLK RLY
12	V73A22 V87A22 5-20	PWR RLY BOX CONN 721 PIN g (GEN PWR RLY) PWR RLY BOX CONN 721 PIN x (MON AC BUS RLY) AC EXT PWR INTLK RLY

Terminal Block 61

TERM	WIRES	DESTINATION
1	V65B22 8-20	PWR RLY BOX CONN 721 PIN w AC EXT PWR RLY COIL
2	X75A14A X75B22A X75C14A 13-20	INV INPUT RLY CONTACT B2 115 VAC INV BUS (CB PANEL) PRI 26 VAC XFMR INV OUTPUT RLY
3	X93A22 12-20	26 VAC PRI BUS (CB PANEL) INV OUTPUT RLY
4	V107A22 3-22E	PWR RLY BOX CONN 721 PIN HH (LTG BUS RLY) 26 VAC SEN RLY
5	X85A22 5-22E	PRI 26 VAC SEN RLY CB 26 VAC SEN RLY
6	Q31A22A 11-20	3A FUSE (MAIN CB PANEL) AUX FUEL AIR CPRSR RLY
7	Q33A22B 14-20	3A FUSE (MAIN CB PANEL) AUX FUEL AIR CPRSR RLY
8	Q35A22C 13-20	3A FUSE (MAIN CB PANEL) AUX FUEL AIR CPRSR RLY.
9	P114A22 P114C22 7-22	PRI BUS RLY COIL DC EXT PWR SEN DIODE (CATHODE) PRI BUS CONT RLY
10	P56B20 P56C22 V134A22 8-20	DC EXT PWR RLY COIL DC EXT PWR SEN DIODE (ANODE) TB 60, POST 9 DC EXT PWR INTLK RLY COIL
11	P61A22 1-20	CONV INPUT RLY COIL DC EXT PWR RLY
12	Q309A22 Q309B22	CPRSR PRESS. LT CB AUX FUEL INTLK RLY

Wherever possible, the following abbreviations have been extracted from Proposed MIL-STD-12C, dated 29 March 1968.

AC	Alternating current	DET	Detector	INV	Inverter	SDG	Speed decreaser gearbox
AUX	Auxiliary	ENG	Engine	LT	Light	SEL	Selector
CB	Circuit breaker	EXT	External	LTG	Lighting	SOL	Solenoid
CEB	Combining gearbox	GEN	Generator	MON	Monitor	TB	Terminal board
CONN	Connector	GND	Ground	PRESS.	Pressure	TERM	Terminal
CONT	Control	GRBX	Gearbox	PRI	Primary	VAC	Volts, AC
CONV	Converter	INTLK	Interlock	PWR	Power	XFMR	Transformer
CPRSR	Compressor	INTMD	Intermediate	RLSE	Release		
DC	Direct current	CGB	Speed decreaser gearbox	RLY	Relay		



Terminal Block 62

TERM	WIRES	DESTINATION
1	M48A22 6-20	CARGO HOOK CONN 478 PIN K (SOL) SLING RLSE CABLE CUT RLY
2	M46B22 5-20	PILOT COLL STICK CONN 458 PIN S (DROP SW) SLING RLSE CABLE CUT RLY COIL
3	K51A20 11-20	START-FUEL PANEL CONN 806 PIN X START INTLK RLY
4	V104A22 5-20 6-20	MON DC BUS CONT CB (STA. 50-RH) DC EXT PWR INTLK RLY START INTLK RLY
5	K4A20 K4B20 12-20	START-FUEL PANEL CONN 806 PIN V PWR RLY BOX CONN 721 PIN J (START SEL RLY) START INTLK RLY
6	X135A22A 1-20	PWR RLY BOX CONN 721 PIN p (LTG BUS RLY-A2) INV OUTPUT RLY
7	V94A20 1-20	INV CONTROL CB #1 GEN INTLK RLY
8	V68A22 1-20 8-20	INV INPUT RLY COIL INV OUTPUT RLY INV OUTPUT RLY COIL
9	X76A22A 5-20	INV CONN 9 PIN C INV OUTPUT RLY
10	H42A22 6-20	HEAT-MISC PANEL CONN 152 PIN J AC EXT PWR INTLK RLY
11	H77A20 14-20	DE-ICE TIMER CONN 210 PIN B AC EXT PWR INTLK RLY
12	Q103A22 Q103B22	LDG GEAR CONT HANDLE CONN 153 PIN E AUX FUEL INTLK RLY

Terminal Block 63

TERM	WIRES	DESTINATION
1	3-20 4-22 3-20 2-22E 549	DC EXT PWR INTLK RLY COIL GND PRI BUS CONT RLY COIL GND INV OUTPUT RLY COIL GND PRI 26 VAC SEN RLY COIL GND TO STRUCTURE
2	3-20 3-20 1-20	AC EXT PWR INTLK RLY COIL GND STARTER INTLK RLY COIL GND SLING RLSE CABLE CUT RLY GND
3	Q250A22 3-20 3-20 709	AUX FUEL INTLK RLY COIL GND AUX FUEL AIR CPRSR RLY COIL GND #1 GEN INTLK RLY COIL GND TO STRUCTURE

4	K57A20 10-20	PWR RLY BOX CONN 721 PIN G (START SEL RLY) START INTLK RLY
5	Q136A20 Q136E20 Q136G20 4-22	ROOF CONN 717 PIN U (MAIN GRBX CHIP DET) ROOF CONN 814 PIN L (C G B CHIP DET) TB 48, POST 4 (TAIL ROTOR & INTMD. GRBX CHIP DET) GRBX CHIP DET RLY COIL GND
6	Q135A22 7-22	CAUTION LT PANEL CONN 742 PIN M (GRBX CHIPS) GRBX CHIP DET RLY
7	Q134A22 1-22 8-22	CHIP DET CB GRBX CHIP DET RLY CHIP DET RLY COIL
8	Q241A22 Q242A22 8-22 1-22	#1 ENG CHIP DET RLY #1 ENG CHIP DET RLY COIL #2 ENG CHIP DET RLY COIL #2 ENG CHIP DET RLY
9	Q159A20 7-22	CAUTION LT PANEL #2 ENG CHIP DET RLY
10	Q253A22 4-22	ROOF CONN 812 PIN N (#2 SDG CHIP DET) #2 ENG CHIP DET REL COIL
11	Q213E22 Q149B22	AUX FUEL INTLK RLY COIL LH AUX TANK SKIN CONN 190 PIN 7 (LH AUX TANK)
12	Q248B22 Q248A22	AUX FUEL INTLK RLY WIRE SPLICE IN WIRE #Q149A22 (RH AUX TANK)

Terminal Block 64

TERM	WIRES	DESTINATION
1	M47A20 8-20	ROOF CONN 715 PIN AA (HOIST CABLE CUTTER) SLING RLSE CABLE CUT RLY
2	V67B22 12-20	#2 GEN PANEL CONN 254 PIN M AC EXT PWR INTLK RLY
3	K53A20 2-20 8-20	PWR RLY BOX CONN 721 PIN M (START SELECT RLY) START INTLK RLY START INTLK RLY COIL
4	V51B20 11-20 713	#1 GEN PANEL CONN 12 PIN M #1 GEN INTLK RLY JUMPER WIRE TO TB 64, POST 5
5	V138E20 10-20 713	ROOF CONN 812 PIN B (#1 GEN, F1 TERM) #1 GEN INTLK RLY JUMPER WIRE TO TB 64, POST 4
6	V64A22 13-20	#2 GEN PANEL CONN 254 PIN U #1 GEN INTLK RLY
7	V81A22 12-20	#2 GEN PANEL CONN 254 PIN N #1 GEN INTLK RLY
8	V54A22 8-20	#1 GEN PANEL CONN 12 PIN A #1 GEN INTLK RLY
9	Q36A22C 5-20	AUX FUEL CPRSR CONN 158 PIN C AUX FUEL AIR CPRSR RLY
10	Q34A22B 7-20	AUX FUEL CPRSR CONN 158 PIN B AUX FUEL AIR CPRSR RLY
11	Q32A22A 8-20	AUX FUEL CPRSR CONN 158 PIN A AUX FUEL AIR CPRSR RLY
12	Q249A22 8-20	AUX FUEL INTLK RLY AUX FUEL AIR CPRSR RLY

continued from page 13

Many times after flying rescue missions all night, Polys has journeyed to the medical facility the following morning to render his assistance.

"I try to help out as often as possible," Polys said. "It is a gratifying feeling to assist these people, particularly the ones who were unfortunate enough to become war casualties. Mainly, I attend to the less seriously injured patients. I cleanse and stitch wounds and occasionally remove shrapnel from some of the victims. Once I removed a bullet that was lodged in an elderly woman's shoulder.

"We feel fortunate that we have the opportunity to receive this experience and the trauma team feels fortunate to have us to assist them. Most important to us however, are the smiles and sincere thanks we get from the Vietnamese after we have treated them."

—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
H-2 Airframe Change 96 - ELECTRICAL SYSTEM, Installation of AC Power Monitor	30 April 1969
H-2 Airframe Change 169 - UH-2C HELICOPTER, Modification of Transmission Mount Structure	11 April 1969
NAVAIR 01-260HCA-2-5 - Manual, Maintenance Instructions, Navy Models UH-2A/UH-2B/UH-2C Helicopters, AUTOMATIC STABILIZATION EQUIPMENT	1 October 1967 changed 15 March 1969
NAVAIR 01-260HCB-4-1 - Illustrated Parts Breakdown, Navy Model UH-2C Helicopters, NUMERICAL INDEX AND REFERENCE DESIGNATION INDEX	1 May 1969
NAVAIR 01-260HCB-4-2 - Illustrated Parts Breakdown, Navy Model UH-2C Helicopters, AIRFRAME	1 June 1967 changed 1 May 1969
NAVAIR 01-260HCB-4-3 - Illustrated Parts Breakdown, Navy Model UH-2C Helicopters, FLIGHT CONTROLS	1 June 1967 changed 1 May 1969
NAVAIR 01-260HCB-4-4 - Illustrated Parts Breakdown, Navy Model UH-2C Helicopters, EQUIPMENT (FURNISHINGS HYDRAULICS, INSTRUMENTS, UTILITIES)	1 June 1967 changed 1 May 1969
NAVAIR 01-260HCB-4-6 - Illustrated Parts Breakdown, Navy Model UH-2C Helicopters, TRANSMISSION SYSTEM	1 June 1967 changed 1 May 1969
NAVAIR 01-260HCB-4-7 - Illustrated Parts Breakdown, Navy Model UH-2C Helicopters, ROTORS	1 June 1967 changed 1 May 1969
NAVAIR 01-260HCB-4-8 - Illustrated Parts Breakdown, Navy Model UH-2C Helicopters, RADIO AND ELECTRICAL	1 June 1967 changed 1 May 1969
NAVAIR 03-10EW-13 - Manual, Overhaul Instructions, FUEL BOOSTER PUMP, P/N RG12240E	15 April 1969
NAVAIR 03-10EW-14 - Illustrated Parts Breakdown, FUEL BOOSTER PUMP, P/N RG12240E	15 April 1969
NAVAIR 05-45RA-1 - Manual, Overhaul Instructions, AUTOMATIC STABILIZATION EQUIPMENT AMPLIFIER P/N 9616-10-04; K687703-1	15 March 1969
NAVAIR 17-15KL-23 - Manual, Operation and Service Instructions with Illustrated Parts Breakdown, ELECTRIC THROTTLE TEST SET, P/N K604624-1	15 February 1969

R. H. Chapdelaine, Supervisor, Service Publications



INSTRUCTOR TURNED STUDENT—Maj Phillip J. Knobel prepares to take off in an HH-43 "Pedro" after completing his first solo flight in the rescue helicopter. A seasoned instructor pilot with nearly 3,600 hours flying time and 18 years service in the Air Force, Major Knobel was recently assigned to Det 2, 38th ARRSq, Takhli AB, Thailand, and became a student in order to learn to fly the detachment's HH-43's. The command pilot said several of his former students are F-105 pilots in Southeast Asia. "I guess the biggest lesson for me, being a student and seeing my old students, is that in the Air Force, you never stop learning," Major Knobel said. (USAF photo by Sgt Henry Lipka, III)

Maj Maxie L. Trainer arrived recently in Vietnam to become the commander of Det 14, 38th ARRSq, at Tan Son Nhut AB. Soon afterward, he flew his first mission as an HH-43 rescue crew commander in Southeast Asia and also recorded his first combat save. Major Trainer and his crew evacuated a shrapnel-wounded harbor pilot from a cargo vessel after it came under enemy fire 17 miles southeast of Saigon. With the Major were Capt Jimmy D. Griffin, SSgt Claude A. Duke and SSgt Donald J. Nason.

TUSLOG 84 Mountain Medevac

Scrambling in response to a night call for a medevac, an HH-43B crew from TUSLOG 84, Incirlik AB, Turkey, flew through the moonless, overcast sky to a dam under construction in a rugged mountainous area. The dam, located at an elevation of 1,500 feet, is in a deep gorge surrounded by 4,000-foot mountains. Fearing the presence of wires in the unfamiliar territory, Maj Robert H. Busch, RCC, made a slow 30-knot spiraling descent and brought the HUSKIE to a near hover over trees adjacent to the site. Because high tension wires, construction material, and equipment were nearly everywhere, Major Busch landed on the only suitable place—a small bridge.

Leaving Sgt Walter E. Myers to guard the HUSKIE, the rest of the crew began following the Air Force sergeant who had placed the call for help when a member of a fishing party became ill. The patient was located after a two-mile hike into the mountains and examined by LtCol William H. Behrens, flight surgeon. The patient was helped to the HH-43, the HUSKIE spiraled back up through the same obstruction-free space and began the flight back to Incirlik. Other members of the HH-43 crew were Maj Jay M. Strayer, copilot; MSgt Melvin C. White, medical technician; and Mr. Muhtar Gucum, Turkish interpreter.



DA NANG (7AF)—ON ITS WAY—A Det 7 HH-43 lifts off with the fire suppression kit to intercept an aircraft which has declared an airborne emergency.
(USAF photo by Sergeant Jim Lester)

DA NANG (7AF)—The emergency crash network crackles... an F-4D Phantom is beginning final letdown and the gear-down light indicates an unsafe landing lock on the landing gear. A host of agencies spring into action... from the fire department's crash trucks to the unit which has prime responsibility for aircrew recovery—Det 7, 38th ARRSq. Within seconds, "Pedro," the HH-43 twin-rotor helicopter piloted by Air Force Maj Keaver Holley, III, is airborne and heads for the north ramp where the fire suppression kit is located. Minutes later, the small chopper swoops low and hovers as the flight engineer attaches the cable to pick up the fire suppression kit. It then heads into an orbit, intercepting the crippled aircraft as it makes the final approach to Da Nang AB. However, this emergency turns out like most of the more than 100 such scrambles per month at Da Nang... the aircraft lands without an incident.

"These scrambles are only part of our mission," Holley said. "Most of our missions are medical evacuation flights, taking injured or wounded men to the Naval Support Hospital or the hospital ships in the nearby South China Sea. In fact, the highlights of our past year include two equipment saves, the medical evacuation flights and a

Det 7... Heart of a Thousand Men

by TSgt Marv Matter

significant role in transfer of 2,000 pounds of whole blood to the nearby hospitals during the Tet Offensive."

The equipment saves concerned a burning F-100 Super-sabre jet that ran off the runway and an oil fire on the side of a tank storage yard.

"The incident happened on the first of August," continued Holley. The fighter ended up in an area where the crash trucks couldn't go. One of our two HH-43's went in and rescued the pilot, then extinguished the fire with the airborne kit."

The other equipment save happened as a crew flying Pedro spotted a fire near an oil storage tank and succeeded in containing the fire by using the powerful rotor wash until base fire department trucks could respond to the emergency. Holley noted that since the 15th of May, when he took command of the small unit, they have flown more than 1,800 sorties, recording 32 "saves"... six of which were combat saves.

"A combat save is one where an aircraft has been downed by enemy action or the pickup is made from an insecure area. The common save is one such as a medevac flight between secure areas where we get credit for rushing the injured individual to a medical facility," he explained.

Besides the flying accomplishments, the unit worked on "self help" projects. "Our first headquarters building was a small trailer," Holley said. "Then we were able to move to a 20'x80' shell building, which was unfinished on the inside. Everyone took an interest and in a short time we had the inside of our present building finished and furnished."

The 366th Combat Support Group commander, recently named the detachment area as the "most improved" area of any unit at Da Nang AB. "These are the accomplishments that make you proud to command a unit like I have... one which has two aircraft, three crews of six men each and six maintenance men, but the heart of a thousand men," he concluded.

1000-Hour Pilot Awards



In left photo, Kaman Service Representative Gerard A. Boutin prepares to present 1,000-hour flight plaques to UH-2 pilots LCdr James W. Jowers, left, and Lt Ronald B. Lewis. Both pilots are from HC-7, NAS Atsugi, Japan, which maintains a continuous SAR vigil off the coast of Vietnam. In second photo, Maj Zack L. Stockett, left, assistant flight commander of the HH-43 flight at Sheppard AFB, Texas, receives his Kaman 1,000-hour plaque from LtCol Charles O. Smith, commander of the 3638th Flying Training Squadron. Three other Air Force and two more Navy pilots also recently joined the list of those who have been awarded plaques by Kaman for logging 1,000 hours in helicopters produced by the company. Recipients are: HH-43 HUSKIE - Maj Robert D. Vespico, Det 2, 40th ARRWg (MAC), Upper Heyford AB, England. Capt Mark C. Schibler, Det 17, CARRC (MAC), Grissom AFB, Ind. Capt Vance E. Need, Det 9, 41st ARRWg (MAC), Osan AB, Korea. UH-2 SEASPRITE - Lt Patric J. Burtch, and Lt Geoffrey A. Foss, HC-2, USNAS Lakehurst, N.J.

Huskie Happenings



...A three-year-old child with a hairpin lodged in her trachea was taken to a medical facility by an HH-43B crew from Det 5, 40th ARRWg (MAC), at Hahn AB, Germany. Pilot on the night flight, which was over mountainous territory, was Maj Robert J. Bennett. Other members of the crew were Capt Ronald L. Bachman, copilot; Sgt Nicholas F. Beaumonte, flight engineer; Sgt Ronald D. Bryant, medical technician; and Maj Gordan S. Landsman, flight surgeon....An 11-year-old boy, who accidentally shot himself in the throat while hunting, was evacuated by an HH-43 crew from Det 16, WARRC (MAC), Williams AFB, Ariz. To make the pickup, it was necessary for Capt David C. Weber to land the HUSKIE on a hill in a small area surrounded by rocks and shrubs. Capt Leonard J. McIntyre (MC), and Sgt Arthur Luna, medical technician, immediately began treating the boy. His trachea had been pierced by the bullet. After the patient was placed in the HUSKIE, a downwind, marginal excess power takeoff was made from the hill and the helicopter headed for the hospital. Captain McIntyre said afterward that the boy was going into deep shock when he arrived and probably would not have survived an over-land delivery to the medical facility. Sgt Duboise Gooden was flight engineer on the mission.

...The life of a seriously-ill pregnant woman was saved by an HH-43B crew from Det 10, 40th ARRWg, Aviano AB, Italy. The woman, a military dependent, was taken to a hospital facility at Vicenza in a HUSKIE piloted by Capt Wendell B. Wood. Other members of the crew were Capt George R. Andrews, copilot; Capt William D. Henderson (MC), flight surgeon; Sgt Alan L. Suit, medical technician; and SSgt Jimmie E. Rogers, flight engineer. Doctors at Vicenza credited the time-saving flight with saving the woman's life....Wounded crewmen from a Republic of Korea destroyer operating in the Yellow Sea were evacuated by two HH-43B crews from Det 9, 41st ARRWg, Osan AB, Korea. A pararescueman was lowered from one helicopter to the deck of the ship and prepared the patients for hoisting. To pick up the four men and then the pararescueman, it was necessary for the HH-43 pilots to hover in gusting, 20-knot crosswinds over the pitching deck. Capt Vance E. Need, RCC; Capt Robert M. Garlow, CP; and A1c Jeffery C. Morissette, PJ; formed one rescue crew. The other HH-43 crew consisted of Maj Alex P. Lupenski, RCC; Capt William A. de Vries, CP; TSgt Larry L. Holocker, CC; and SSgt Thomas F. Bradley, PJ.

...Two HH-43B crews from Det 6, 41st ARRWg, Kadena AB, Okinawa, began an extensive night, overwater search after a Navy pilot bailed out eight miles from the base. Manning the first HH-43 were Maj Bert E. Cowden, RCC; Capt Donald R. Berdeaux, CP; Sgt Lawrence H. Weller, MT; TSgt Charles C. Maxwell, CC; SSgt Daniel Gonzales and SSgt Vincent K. Matulja, FF's. In the second helicopter, "Pedro 2," were Maj Dale L. Potter, RCC; Capt Bobby L. Meadows, CP; SSgt Dwight L. Berry, FE; MSgt Elie J. Hebert, MT; Capt William Marks, FSO. The downed aircraft was spotted in approximately six feet of water by Pedro 1 and then the crew found the pilot on a nearby island and picked him up.

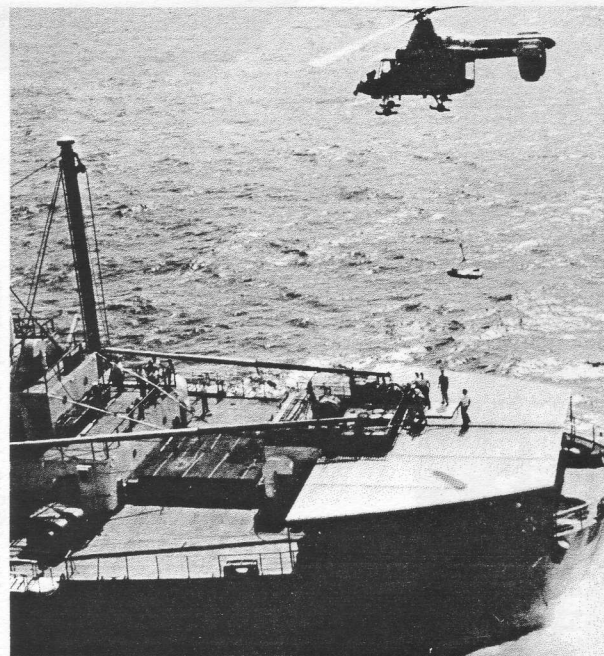
....An F-105 pilot who ejected when the engine caught fire, was picked up from a field soon afterward by a HUSKIE crew from Det 16, CARRC (MAC), at McConnell AFB, Kan. The survivor was uninjured except for minor scratches and bruises. LtCol William C. Emrie was HH-43B pilot; SSgt Norman V. Thomas, medical technician; Sgt Billy D. Grace, firefighter; and SSgt Walter J. Sobanski, flight engineer....A boy trapped on a sand island in the flooded Mojave River was rescued by an HH-43 crew from Det 12, WARRC (MAC), George AFB, Calif. Winds were gusting to 15 knots and a light rain was falling as Capt Troy G. Irvin landed the HUSKIE on the island to make the pickup. Soon afterward, two more stranded persons were rescued by the helicopter. Other members of the crew were LtCol John F. Ward, copilot; and SSgt John H. Hazzard, Jr., flight mechanic.

...A Korean Air Force pilot who parachuted from his crippled F-86 was picked up from a rice paddy a few minutes later by an HH-43B crew from Det 5, 41st ARRWg (MAC), at Suwon AB, Korea. LtCol Winfield C. McFarland was pilot of the rescue helicopter and crewmen were A1c Jeffery C. Morissette, pararescueman; and TSgt Larry L. Holocker, flight engineer....A seriously-ill Air Force sergeant was evacuated to the hospital by a Det 5 HUSKIE piloted by Capt Robert M. Garlow. Other crew members were SSgt John P. McCann, pararescueman; Sgt Edward W. Mann, flight engineer; and Maj William K. Haney (MC), flight surgeon.

...Brother Anthony C. Lobianco from a New Mexico monastery was rescued by an HH-43B crew after he was injured and trapped overnight in a mountain ravine. The survivor was located at dusk on the 7,600-foot level by Capt Richard L. Kelley and his crew from Det 3, WARRC (MAC), Kirtland AFB, N. M. SSgt Herbert H. Gantry was lowered to assist the brother and then both were hoisted aboard. On the return flight the survivor was given first aid by A1c Robert Albin. Copilot on the HH-43 was Maj Edward A. DuChene.



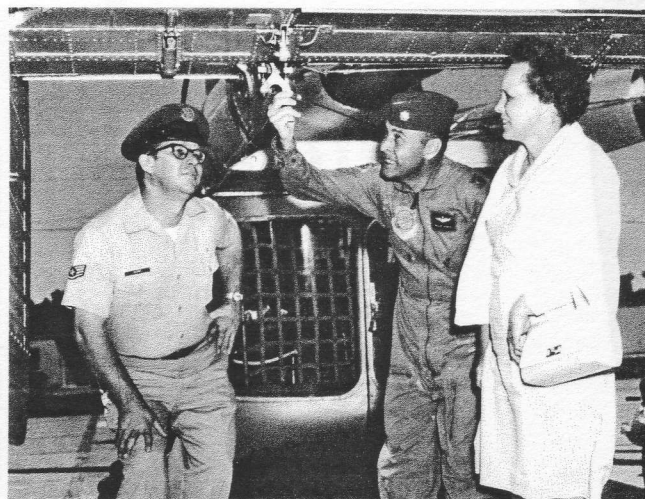
FAR FROM SHORE—HH-43 rescue crews from Det 6, 41st ARRWg, Kadena AB, Okinawa, flew far to sea on two occasions recently to carry out medevacs. In above photo, a seriously-ill seaman is hoisted from the sea-land carrier ship, Rafael Sims, to a HUSKIE piloted by Maj Dale L. Potter. On the 65-mile flight back to Okinawa, first aid was given by Capt William E. Marks, flight medical officer; and Sgt Lawrence H. Weller, medical technician. Copilot on the mission was Maj Bert E. Cowden and SSgt Dwight L. Berry was flight engineer. In right photo, a seaman suffering from a severe head injury is hoisted from the SS Greenport, 70 miles from shore, to an HH-43 piloted by Capt Donald R. Berdeaux. Others aboard the ARRS helicopter were Sergeant Weller, TSgt Charles E. Maxwell, the flight engineer, and Capt John P. Lauzon (MC), a flight surgeon. A second Det 6 HH-43 flew cover during the long, life-saving flight. Major Cowden was pilot and TSgt Alan Milner, the flight engineer. (USAF photos)



2,000 HOURS—Maj Alex P. Lupenski, left, RCC and flight examiner with Det 9, 41st ARRWg (MAC), Osan AB, Korea, recently logged his 2,000th flight hour in the HH-43B. On hand to offer his congratulations was LtCol Archie R. Taylor, right, detachment commander and senior Rescue representative in Korea. Major Lupenski has been flying the HH-43B without interruption since 1961 and has an unblemished safety record for the almost eight-year period. He has served at Suffolk County AFB, N. Y.; Ernest Harmon AFB, Newfoundland; Kirtland AFB, N. M.; and Osan AB. (USAF photo)



HELPING CELEBRATE—Several young women were aboard an HH-43 when it passed its 2,000th hour flying time at Thule AB, Greenland, recently. The pretty passengers from the Brigham Young University tour show "15 Carat Gold," were enroute to Cape Athol in the Det 18, EARRC (MAC), helicopter when the magic hour was reached. Shown with the sign commemorating the event are, left to right, Leslie Hinchcliff; SSgt Fred A. Giffin, flight engineer; Sharon Devin, Marion Rex, Suzanne Packer, Lynette Andersen, and Capt David Mullen, pilot. (USAF photo by Axel Jensen)



SILVER PRIDE AWARD—Maj Bruce C. Bowden, commander of Det 8, EARRC (MAC), at Myrtle Beach AFB, S. C., points to an elevator support assembly on an HH-43B HUSKIE. The part was one of many supplied by Mrs Esther Huggins and SSgt Robert E. Ragan shown with Major Bowden. Both are from the 113th Supply Squadron at Myrtle Beach AFB. They were recently presented with the Military Airlift Command's Silver Pride Award for error-free and outstanding support of the detachment, thus demonstrating their "professionalism and proof of their acceptance and practice of the Zero Defects concept." (USAF photo)

1968

SCROLL OF HONOR

Hall, Hurston, Captain, USMC
Hamilton, Samuel D., Sgt, USAF
Handy, Evert E., SSgt, USAF
Hanson, Anthony C., AT1, USN
Hastings, Robert W., Major, USAF
Haugen, William J., Captain, USAF
Havis, Felix H., SSgt, USAF
Helton, David A., Sgt, USAF
Henderson, Larry K., TSgt, USAF
Henderson, Robert S., Captain, USAF
Hennessey, John L., TSgt, USAF
Henry, John, Sgt, USAF
Henry, Terrance C., SSgt, USAF
Herrell, Jessie L., Sgt, USAF
Hines, James T., SSgt, USAF
Holley, Keaver, III, Major, USAF
Hollis, Thomas E., AN, USN
Hooke, Henry E., Captain, USAF
Hoppe, Harold O., LtCol, USAF
Hudson, Richard C., SSgt, USAF
Ingulli, Charles R., Jr., Alc, USAF
Jamison, C. F., Lt(jg), USN
Jansen, Harry E., Lt(jg), USNR
Jessee, Cecil A., Captain, USAF
Jogerst, David J., Captain, USAF
Johnson, Billy J., Captain, USAF
Johnson, Charles F., AN, USN
Johnson, Leslie E., Captain, USAF
Johnson, Neal K., Alc, USAF
Jones, Gerald H., SSgt, USAF

Jones, Kenneth R., SSgt, USAF
Jones, Luther T., Sgt, USAF
Jones, Stephen B., Sgt, USAF
Jordon, Donald L., Major, USAF
Jowers, Donald W., Sgt, USAF
Kammann, Philip H., 1stLt, USAF
Hearnton, Donald S., TSgt, USAF
Kelly, Earl A., Captain, USAF
Kilgore, Jackson H., TSgt, USAF
Kirk, Andy E., Lt, USN
Kirkland, Dennis, LCpl, USMC
Kislek, Gerald E., SSgt, USAF
Knefelkamp, Larry H., Sgt, USAF
Klein, Kenneth G., Sgt, USAF
Knox, Jon A., Sgt, USAF
Kolar, John F., 1stLt, USAF
Kralj, Andrew E., Major, USAF
Krause, Harry M., Alc, USAF
Laird, Robert E., ADJ3, USN
Larmee, Donald E., Captain, USAF
Larson, John H., Major, USAF
Lassen, C. E., Lt(jg), USN
Lawson, Roger E., Sgt, USAF
Leagon, E. W., ADJ3, USN
LeCorn, J. F., Lt(jg), USNR
Leech, Joseph V., Captain, USAF
Lepko, John V., Major, USAF
Levi, Ronald E., SSgt, USAF
Lien, Paul, Lt, USN
Lorren, Lonnie D., Lt(jg), USNR

Lucia, Donald B., SSgt, USAF
Luna, Angel, SSgt, USAF
Madden, Thomas F., Captain, USAF
Mallette, Thomas B., TSgt, USAF
Marcantel, Dexter R., Alc, USAF
Marcontell, Billy C., Captain, USAF
Martin, John C., Lt(jg), USNR
Martin, Loney A., SSgt, USAF
Mastriano, Dick, ADRI, USN
Mayer, Richard A., Captain, USAF
Mayes, Charles E., Captain, USAF
McCann, Arthur R., SSgt, USMC
McComb, Paul D., Captain, USAF
McGovern, Thomas B., Captain, USAF
McKim, Glenn C., Alc, USAF
McNeese, Richard L., Sgt, USAF
Meadows, Bobby L., Captain, USAF
Michalski, Henry, Jr., Sgt, USAF
Mieszkowski, Richard F., HM2, USMC
Migia, Juan H., Major, USAF
Momili, Isamu S., Captain, USAF
Morita, Robert S., Captain, USAF
Moynihan, Jere G., SSgt, USAF
Murray, John E., Captain, USAF
Murray, Julius, SSgt, USAF
Nash, Albert, Jr., SSgt, USAF
Newton, O. A., Lt(jg), USN
Nicholson, Larry D., Alc, USAF
Northern, Steve M., Sgt, USAF

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