



Rotor Tips



NOVEMBER-DECEMBER 1972

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CHARLES H. KAMAN

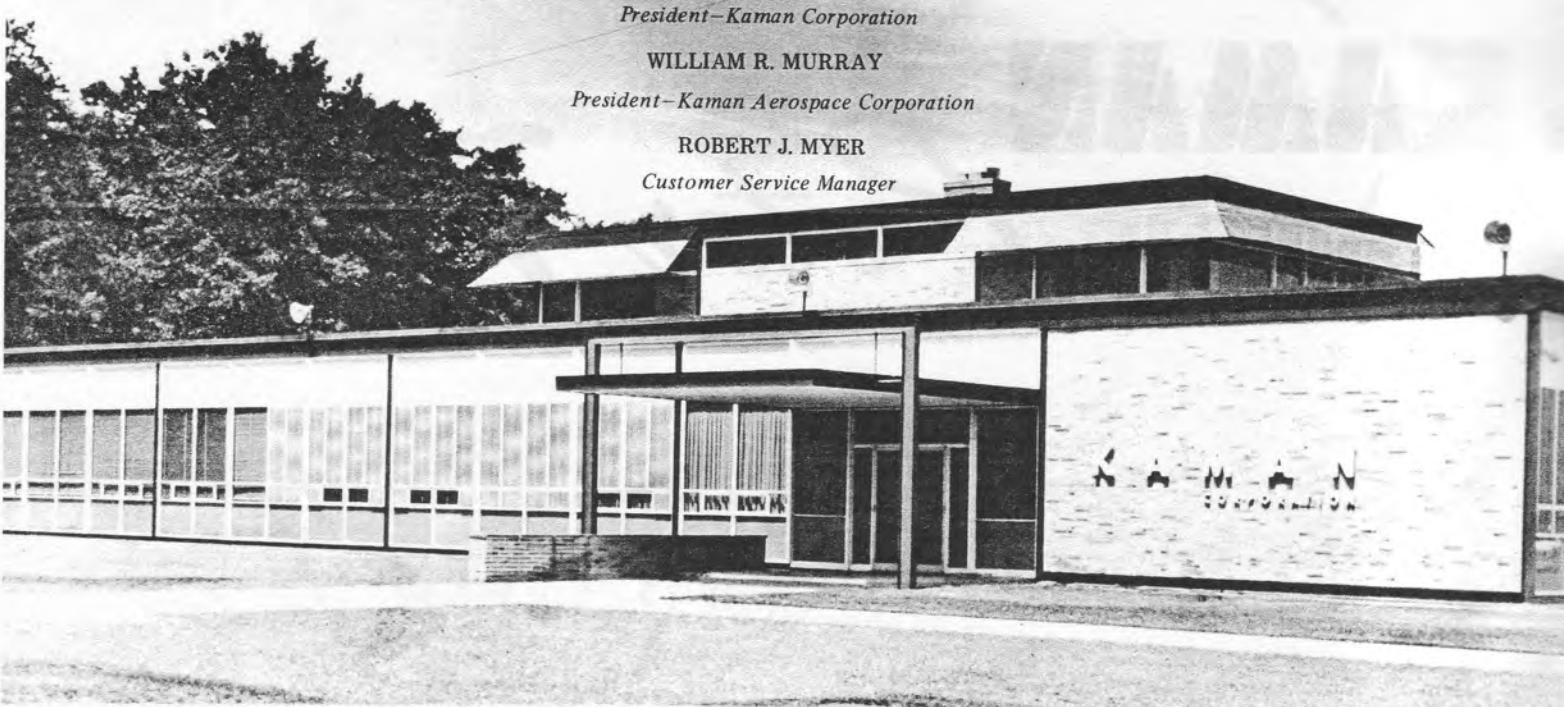
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Rotor Tips

Volume VII Number 7

ON THE COVER

Holiday greetings and best wishes for the New Year from Kaman Aerospace Corporation. Connecticut winter scene by KAC Photographer D. J. Ruggiero.

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KAMAN AWARDED CONTRACTS



25 More LAMPS Helicopters For Navy
48 HH-43 Rehabilitations For Air Force
Controllable Twist Rotor For Army
STAPL Feasibility Concept For Navy
Beartrap and Harpoon Test For Navy

LAMPS HELICOPTER CONVERSIONS

U. S. Naval Air Systems Command has contracted Kaman Aerospace Corporation for a third increment of 25 LAMPS (Light Airborne Multi-Purpose System) helicopter conversions. The latest model LAMPS SEASPRITES will incorporate Kaman's "101" rotor system for increased performance and maintainability and strengthened landing gear for the greater landing loads encountered while operating from destroyer decks while underway at sea.

The letter contract provides initial funding of about \$3 million and will ultimately be valued at \$8.5 million when completely funded for the aircraft and numerous support items to accomplish the shipboard anti-submarine warfare and anti-ship missile defense missions to which LAMPS is dedicated.

Twenty SH-2D model LAMPS SEASPRITES have been delivered under prior contracts and Navy LAMPS detachments are now operationally deployed aboard frigates and destroyer escorts in the western Pacific and in the Mediterranean.

Flight operations to 13,300 pounds gross weight (compared with 12,800 lbs. GW in the current SH-2D) are possible by adoption of the "101" rotor system, coupled with uprated General Electric T58-GE-8F twin turboshaft engines and increased strength landing gear in the latest SH-2D. The greater payload may be used for additional stores or more fuel to extend the SEASPRITE's range. For added safety in deck edge clearance and handling on small ocean escorts, the H-2s tail wheel has been relocated six feet forward of its present position.

Earlier model UH-2Cs, HH-2Cs and HH-2Ds scheduled for conversion to LAMPS SH-2Ds are now arriving at Kaman's Bloomfield facilities. Modified and reconfigured with LAMPS equipment, the new rotor system and landing gear, they will be returned to service beginning next Spring.

The next 25 LAMPS SH-2's that Kaman Aerospace delivers to the Navy will have a slight but noticeable difference in appearance. As shown in this photo of a test prototype, the H-2's tailwheel has been relocated six feet forward of its present position to provide for additional deck-edge clearance on small destroyer escorts. The main landing gear will be strengthened for hard landings in high sea states common to the destroyer environment. In addition, the 25 aircraft will be equipped with the "101" rotor system for increased performance. The "101" rotor system eliminates 60 percent of the parts in the existing rotor hub and control assemblies, provides a 10-knot increase in forward speed and an improved blade stall margin. The "101" has undergone two Navy evaluations and is qualified for retrofit on all H-2's and installation on new LAMPS helicopters.

Standard LAMPS equipment in the SH-2D includes a surface search radar, sonobuoys, magnetic anomaly detector (MAD), marine markers, an ASW homing torpedo, electronic support measures (ESM), data link and other communication and navigation equipment and associated processors, displays and recorders.

The "101" rotor system consists of new titanium rotor hub and blade retention assemblies and simplified servoflap controls that contain only one-third as many mechanical components as the earlier system. An intensive company flight testing program and two preliminary evaluations by the Navy have proven all Kaman's guarantees for increased performance, an expanded blade stall margin and 10-knot increase in forward speed in level flight at maximum gross weight. Final technical evaluation of the "101" rotor system is scheduled at Navy Air Test Center, Patuxent River, Md., in January.

The first LAMPS SH-2Ds became operational last December with deployment of a detachment from Helicopter Antisubmarine Squadron (Light) 30 (HSL-30), NAS Lakehurst, N. J., to the Mediterranean aboard the guided missile frigate USS Belknap (DLG-26). A month later, the second LAMPS detachment, from HSL-31, NAS Imperial Beach, Calif., went aboard the USS Sterett (DLG-31), which deployed to Southeast Asia. Since then, additional LAMPS detachments from East and West Coast squadrons have been assigned to DLGs and DEs in both Atlantic and Pacific Fleets. *(Continued on next page)*



HEADS THE LINE—The first of 48 HH-43F HUSKIES scheduled for rehabilitation at Kaman Aerospace arrived at the company's Bloomfield, Conn., plant in September. The "Pedro," from Det 18, 44th ARRSq (MAC), Plattsburgh AFB, N. Y., flew the 225-mile route in about 2-3/4 hours, including a refueling stop at the Air National Guard facility at Schenectady, N. Y. On hand to greet the Air Force crew were KAC Flight Test representatives. Left to right are, SSgt Jon C. Tindle, flight engineer; Capt Raymond R. Jeanes, Jr., copilot; Andy Foster, KAC chief test pilot; Capt Roy M. Allen, pilot; and Pete Russell, KAC senior test pilot. Before the week ended, the second of the 48 aircraft arrived from Det 7, 44th ARRSq (MAC), Seymour-Johnson, AFB, N. C.

Currently the Navy is evaluating at sea another Kaman SEASPRITE helicopter equipped with advanced sensors for the LAMPS missions. This aircraft, designated YSH-2E, has installed a Texas Instruments' APS-122 radar (the Canadian Marconi LN-66HP is carried in operational SH-2Ds) and other experimental electronic equipment.

Looking to future possible Navy requirements, Kaman Aerospace in May announced plans for its SEALAMP helicopter as a proposed next generation LAMPS aircraft, especially tailored for shipboard ASW and antiship missile defense (ASMD). It should be based upon operational experience gained with the SH-2D and earlier model SEASPRITES which have operated from destroyer decks since 1966 in combat search and rescue.

Pedro Veterans Being Rehabilitated

Under a contract received from Warner Robins Air Material Area (WRAMA), Air Force Logistics Command, Robins AFB, Ga., 48 HH-43F HUSKIES will be rehabilitated. The firm fixed price-type contract, valued at approximately \$1.8 million, also provides for the analytical condition inspection and flight testing of 10 of the 48 aircraft, and contains an option for the rehabilitation of 50 additional HUSKIES beginning in fiscal 1974.

Over 90 percent of the aircraft work will be performed at Kaman's production plant in Moosup, Conn., with flight testing at the company's facilities in Bloomfield. The aircraft began arriving at Kaman in September. Delivery of rehabilitated aircraft will start in December and, with the option, continue into 1974.

The rehabilitation will involve stripping and inspecting the complete aircraft structure, replacement of worn components, complete rewiring and repainting with a new polyurethane paint system which is highly resistant to deterioration caused by weather and lubricants. The Air Force recently completed converting HH-43B models to F-models by installation of improved performance Lycoming T53-L-11A turboshaft engines with increased power rating (1100 shp. vs. 860 shp.)

HH-43F HUSKIES, known as "Pedro," are in service with the U. S. Air Force's Aerospace Rescue and Recovery

Service at about 70 airbases throughout the world, where they are assigned local base rescue (LBR) missions. They also are flown by the air services of Iran, Thailand, Burma, Morocco and West Pakistan.

During the HH-43's service career, Kaman has documented nearly 5,000 military and civilian rescues performed by the HUSKIE. In South Vietnam alone, according to an *AIR FORCE TIMES* report last January, HUSKIE/Pedros have rescued more than 1880 persons from certain death or capture since 1964—more than half of the 3400 lives saved by the 3rd Aerospace Rescue and Recovery Group. *AIR FORCE TIMES* said the HH-43 has saved more lives than any other aircraft in the Air Force inventory.

Soon after its operational introduction in 1959, the HH-43 captured seven world records for high altitude, time-to-climb and long distance flight. The planned rehabilitation program will extend the HUSKIES' operational life to continue their outstanding record of achievements.

Controllable Twist Rotor System Contract

Kaman Aerospace is conducting an experimental research effort on a new helicopter rotor system called the Controllable Twist Rotor (CTR), under a \$742,000 contract awarded by the Eustis Directorate, Army Air Mobility R & D Lab, at Ft. Eustis, Va.

CTR is a rotor system which uses two independent blade pitch control systems for each blade, a mechanical control at the root end and a flap control near the tip. In addition to conventionally controlling the aircraft's flight path by change of blade angle, proper programming of these two controls can also vary blade twist. This will enable the helicopter to fly faster, more efficiently and with more load for a given rotor system size. Reduced vibration and a smoother ride are also predicted.

Kaman will design and build a large scale model rotor system and whirl test it at Kaman's Bloomfield, Conn., facility, then the rotor system will be sent to Moffett Field, Calif., for additional tests at the NASA-Ames 40-by-80 foot wind tunnel. Some form of this rotor blade control system may be adapted to advanced rotor system designs for the late 1970's, if the CTR tests work out as planned.

(Continued on page 20)

DET 1 CLAIMS RESCUE RECORD



SAVED 129—An HH-43 Pedro crew unloads Korean refugees following a pickup from water-soaked rooftops. This Pedro, usually carrying a crew of five, saved 129 flood victims in only six hours of flying. (USAF photo)

Osan Air Base, Korea—Four helicopters here rescued more people in 30 hours than the total combined military and civilian rescue effort of calendar year 1971.

Starting early Saturday morning on Aug 19, the aircrews picked up stranded villagers from rooftops and flooded farmlands. Flying three HH-3 Jolly Green Giants and one HH-43 Pedro, men of Det 1, 33rd ARRSq (MAC) saved 763 Korean civilians from flood waters of the Chinwichon River.

According to statistics released by the Military Airlift Command, Det 1's total far surpassed the total saves credited to all services combined during 1971. This figure includes combat and non-combat saves.

"We got every one we went after, and we're damn proud of that!"

Capt James W. Albright

Pedro 43 (Aircraft No. 60-0252) was involved in flood evacuation missions in and around Osan AB, Korea, on 19 Aug 72. I feel a record may have been set—129 hoist pick-ups in 5.8 hours of flying time. All were recorded saves.

Pedro 43 was launched at 1308 (L) to assist in the evacuation of Korean civilians clinging to roof tops, telephone poles, and compound walls. Weather at time of launch was light-to-moderate rain, low ceilings and visibility and winds gusting to 30 kts. The river had swollen six to eight miles in width and houses in the local area were being washed away with currents estimated at 15 knots. Pedro immediately began evacuating survivors one and one half miles west of Osan AB using the forest penetrator seat and hoist. All survivors were returned to Osan Air Base MAC terminal where they were released to medical personnel. Numerous trips between Osan and villages within a 10 mile radius of the base were made. Rescue operations were terminated at 1930hrs because of darkness.

All services rescued a total of 739 people worldwide during 1971, 24 less than were rescued on Aug 19 and 20 by the four helicopters of Det 1.

Normally, large rescue efforts might employ hundreds of helicopters from various services. That fact alone makes the record set by the tiny contingent of only four Osan aircraft even more significant.

Below is a flood rescue report concerning the activities of HH-43 crews from Det 1. It was written by Capt James W. Albright, aircraft commander of "Pedro 43" which made 129 hoist pickups in less than six hours.

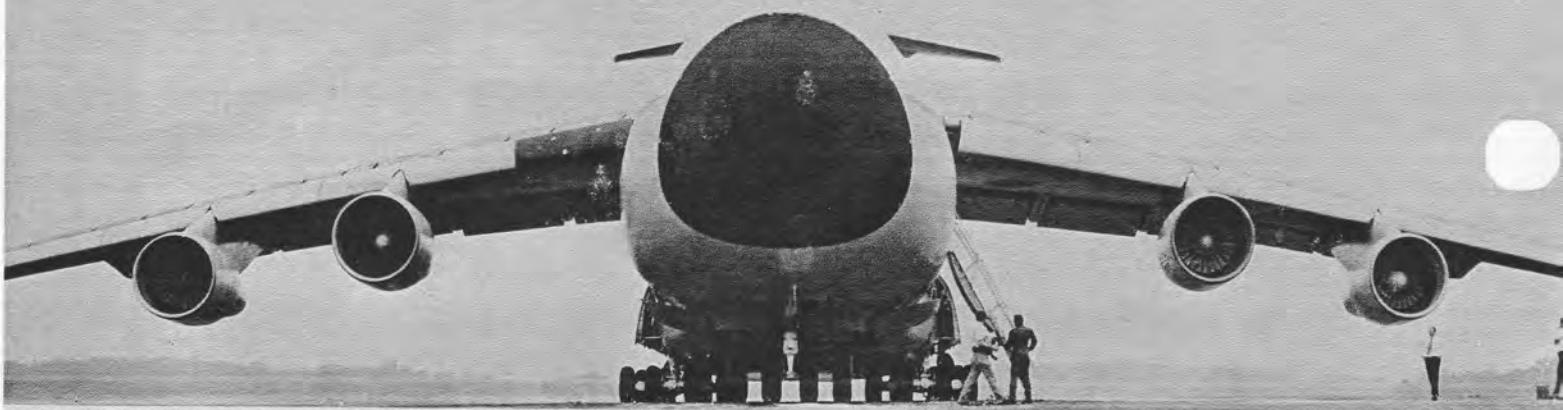
Some of the more exciting incidents of the afternoon were:

(1) SSgt Dennis Looney (HM) hoisted seven persons from a floating haystack. Just as he lifted the last survivor off the haystack, it disintegrated. In all, Sergeant Looney made 94 hoist pickups.

(2) TSgt Howard D. McClellan (MT) was lowered down the hoist into the river to assist in the evacuation of an elderly man, unable to get onto the penetrator seat. At the same time he brought up a woman with an infant and a dog.

(3) Two men were spotted in the middle of the river, one clinging to a telephone pole and the other, floating on an air mattress. Hoist pickups were made by Sgt Ronald S. Thornhill (HM) his first actual live pickup. Before the mission was over, he had made 35 such pickups.

Pedro really came through. The blades showed no signs of rain damage and after three sorties and two refuelings there were no maintenance write-ups. (Cont. on page 19)



I'M GONNA' GETCHA'

KAC photographer Nick Ruggiero captured this sequence during the loading of a UH-2C into a C-5A at Bradley International Airport, Conn. As reported in the September-October issue of Rotor Tips, the helicopter was delivered

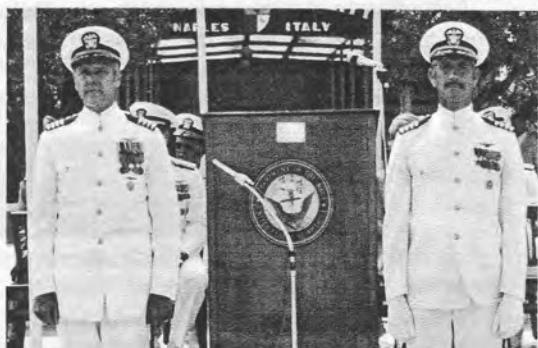
to the West Coast where it successfully demonstrated that a Sparrow missile can be launched from a helicopter against a moving target. The tests were conducted at the Pacific Missile Range, Pt. Mugu, Calif.

ITALIANS HONOR NAF NAPLES FOR HELICOPTER FLIGHTS

In a recent change of Command ceremony, Capt H. E. Camp assumed command of NAF Naples, Italy, from Capt R. E. Blalack. During the ceremony, recognition was given by Italian government and military officials for the 70 mercy missions flown by NAF helicopters during the last two years to aid civilians.

Presented to Captain Blalack was a gold medal on behalf of "the people, the city administration and the prefettura of Naples Provence." He also received, on behalf of the facility, a marble plaque from the administrations of the two major islands, Ischia and Capri. The names of the pilots who carried out mercy missions in the last two years are to be inscribed on the plaque.

Another gold medal was presented to the Captain on behalf of the citizens, City Council, and Mayor of Naples for the timely help given by the NAF pilots. During presentation of a plaque by the Italian Air Force, particular note was made of the "very friendly relationship" which characterized the period of Captain Blalack's tenure.



70 MERCY MISSIONS NOTED—In left photo, shown at change of command ceremony, left to right, seated, Father Gustavo Galeota; Professor Luigi Ciccone, assistant mayor of Naples; LCdr Ray W. Fullilove, NAF chaplain; Capt Herbert E. Camp, new commanding officer; RAdm Patrick J. Hannifan; RAdm Pierre N. Charbonet, COMFAIRMED; Dr. Aurelio Grasso, assistant prefect of Naples. Standing at the podium is BrigGen Antonio DeCamillis, Italian Air Force. In photo above, are Capt R. E. Blalack, left, and Captain Camp. (USN photo by SN Gary Key)



GOTCHA'



GOING



GOING



GONE



GOOD, BUT ROOM FOR MORE

THREE OF MANY—Photographs typifying the 70 mercy missions carried out by NAF helicopter crews are, opposite page, solicitous crewmen remove stretcher from an H-2 SEA-SPRITE after evacuation of a critically-ill Italian woman from the Island of Ponza. Above, UH-2C lands on the Alitalia pad, Island of Capri. At right, Italian Air Forceman carries tiny meningitis victim from H-2 after night flight to the Island of Ischia.
(USN photos)

LAMPS Activities

By Bruce Goodale,
LAMPS Program Manager

At the beginning of November, HSL-31 from NAS Imperial Beach, Calif., had LAMPS (Light Airborne Multi-Purpose System) detachments deployed in the Pacific on four ships: the DE 1066 Marvin Shields, the DE 1074 Harold E. Holt, the DLGN 35 Truxton, and the DLG 29 Jouett. Other ships are now preparing for deployment. HSL-30 from NAS Lakehurst, N. J., has dets deployed in the Mediterranean on the DLG 32 William H. Standley and the DE 1079 Bowen, and in the Pacific on the DLG 34 Biddle and the DE 1078 Joseph Hewes. The DLG 28 Wainwright, having completed the LAMPS Op-Appraisal, is now preparing for an extended deployment.

The USS Biddle with HSL-30 Det 4 is scheduled to return this fall, after nearly six months in the Pacific combat zone. Their SH-2D (BuNo 152202) has provided exceptional availability—this det averaged over 146 flight hours per month for a four-month period (June thru September); the LAMPS support concept is based on 60 hours per month.

Hats off to an outstanding detachment. A photograph of Det 4 personnel appears at the bottom of the page.

The present at-sea portion of the Naval Air Development Center's D/V-98 Program, utilizing the DLG 33 Fox, an HSL-31 det, and two YSH-2E helicopters to evaluate improvements in LAMPS mission equipment, will end in November, 1972. Additional improvements will then be installed for further evaluation, aimed toward the requirements for the next-generation LAMPS helicopter.

The first of the 25 Fiscal Year 1973 H-2's to be modified into LAMPS configuration will arrive at Kaman this winter, with deliveries to commence in May, 1973. These SH-2D's will incorporate Kaman's new "101" rotor system, the landing gear structure will be strengthened, and the tail wheel moved forward for improved operational safety on small decks. Navy evaluation of these improvements will be completed in the spring of 1973, and kits will soon be available for retrofit on previously delivered SH-2D's.

Nato Briefing

Kaman was represented at the NATO Naval Warfare meetings in Brussels in September by Bruce Goodale, LAMPS program manager, and Jack Goodwin, assistant chief test pilot. Kaman presented a detailed briefing on the LAMPS Program at the invitation of the U. S. Navy delegates, Capt George Kelly and Capt William Stuyvesant. The program is of interest to several of the free-world navies who have similar requirements.

RECORD CLAIMED BY HSL-30 DET

NAS LAKEHURST, N. J.—Helicopter Anti-Submarine Squadron (Light) Thirty LAMPS Det 4 recently set a world's record for a single deployed SH-2D by logging over 600 flight hours in less than five months.

Embarked aboard the USS Biddle (DLG-34) in the Gulf of Tonkin, the detachment flew a variety of missions, including anti-submarine warfare (ASW), electronic reconnaissance, search and rescue, and utility. The SH-2D, affectionately called "Hard Charger 15,"

has enjoyed exceptional availability and utilization, and has become one of the most familiar helos in the northern gulf.

The officer-in-charge, LCdr F. M. Dirren, Jr., credits the record to several factors, the foremost being the spirit, ability, and perseverance of the entire crew. Justly proud, the officers and men of HSL-30 LAMPS Det 4 have challenged any single H-2 detachment, LAMPS or otherwise, to better their record.



AT THE 500 MARK—LAMPS Det 4 personnel are shown with sign made early in September when the unit's SH-2D logged its 500th hour. Det 4 went on to log 646 flight hours in less than five months. Standing, left to right, ADJC H. D. Jones, AMS3 R. M. Wells, AMS3 J. D. Kradel, Lt C. D. Nelson, Capt E. W. Carter, commanding officer of the USS Biddle; AT1 R. L. Daniel, LCdr F. M. Dirren, Jr., officer-in-charge of Det Four; AXAN J. T. Richardson, and ATAN T. Smith. Sitting, ADJ2 L. King, AE3 D. H. Stiles, AW1 L. R. Waugh, AWAN S. T. Mayo, AO2 G. Vanhof, Lt R. W. Phillips, ADJ1 R. O. Fite, AE2 K. W. Flippo, AW3 J. E. Keiper, and Lt T. J. Corcoran. (USN photo)

7th H-2 LAMPS ILS CONFERENCE



Extra-Curricular Support—Problem Discussion



Spares Sub-Committee



Trainer/Training Sub-Committee



Publications Sub-Committee



Fleet-KAC Interchange



GSE Sub-Committee



Mr. Wayne Cerny, foreground, H-2 Aircraft Program Manager, Logistics, in the cockpit of an HH-2D before a flight with Al Ashley, KAC test pilot.



10th CONSECUTIVE YEAR—For 10 consecutive years Det 7, 40th ARRWg(MAC), Torrejon AB, Spain, has been awarded the MAC Flying Safety Award. Shown during the presentation ceremony are, left to right, MSgt Berkley E. Naugle, maintenance superintendent; SSgt Raymond R. Levesque, Maj Leslie E. Johnson, SSgt Wilfred D. Gleason, Col Tony M. Greget, commander, 401st TFW (USAFE); Maj Peter W. Gissing, Capt Ronald I. Pass, Maj Ronald K. Dalrymple, Det 7 commander. (USAF photo)

1000-HOURS HAILED WITH HAPPY HOSING

Tradition being what it is, Maj Leslie E. Johnson hit the 1000-hour mark in the HH-43 recently and, in turn, was hit with a stream of water soon after he set the HUSKIE back down on the apron at home base—Det 7, 40ARRWg, Torrejon AB, Spain.

Hosing down a pilot for an accomplishment such as this is sometimes done in the name of tradition, but Major Johnson's "friends" were particularly careful not to let him know what they had in mind. In fact, the Major had been led to believe that he still lacked a few hours before he logged his 1000th hour in the HUSKIE.

When Major Johnson landed, the airborne firemen attached to the Det informed him that they were having a required egress exercise and asked that he get on the stretcher they had brought. Obligingly the unsuspecting pilot lay on the stretcher and waited to be carried off—that's when the water hit!

Major Johnson's friends recorded the event on film, of course. The results appear on the right.

Other 1000-Hour Plaque Recipients

In addition to Major Johnson, six other pilots qualified recently for the plaque awarded by Kaman Aerospace to those logging 1000 hours in helicopters produced by the company, they are:

HH-43—Warrant Officer A. Alvand, IIAF, 11th Search and Rescue Squadron, Mehrabad AFB, Iran. He is the first warrant officer in the Iranian Air Force to log 1000 hours in the HUSKIE. 1stLt Taghi T. Oskuei, also from Mehrabad AFB. Maj George S. Mangum and Maj William P. Shea, both attached to Det 12, 41st ARRWg, Andersen AFB, Guam.

H-2—Lt O. A. Newton, Lt Charles F. Raysbrook, HSL-31, NAS Imperial Beach, Ca.

This Is A Drill? . . .



Horrorified victim suddenly realizes he's been "had" and begins struggling to his feet from stretcher. From left to right are TSgt Otto C. Herzog, unidentified firefighter, Sgt James C. Barnette, firefighter; SSgt William D. Foley, medical technician; Sgt Michael R. Sizemore, firefighter; Capt Ronald I. Pass, in helicopter.

At Least They Didn't Use The FSK! . . .



An "obviously reluctant" SSgt Bobby J. Best sees that Major Johnson receives the hosing tradition demands. In background are Sergeant Herzog, Captain Pass and Sergeant Foley. (USAF photos)

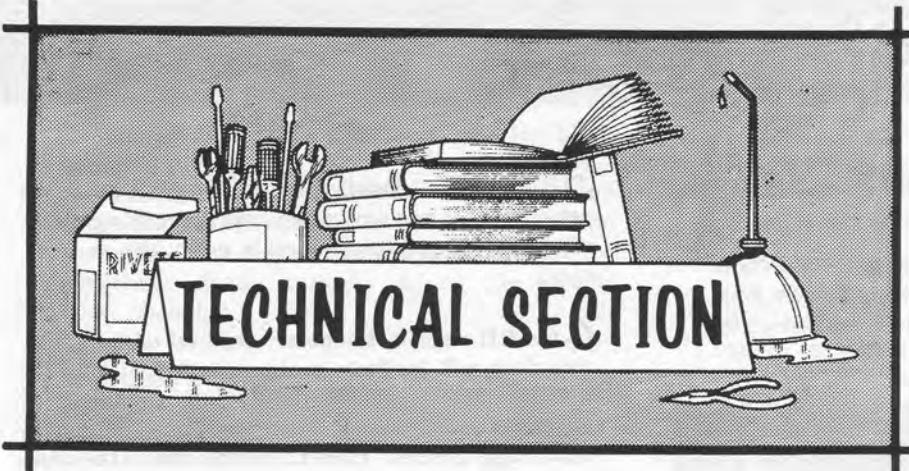


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Technical Section information has been reviewed and approved by Service Engineering.

G. M. Legault, Supervisor

H-2

T-58 ENGINE STALL MARGIN CHECK

H. Zubkoff, Service Engineer

A recent change to Navy Manual Specifications resulted in deletion of the Installed Engine Stall Margin Check information from the T-58 engine manual, (GE) NAVAIR 02B-105AHB-2. The following procedure will be incorporated into the (KAMAN) Power Plant Maintenance Instruction Manual (MIM), NAVAIR 01-260HCA-2-4 by a future change. In order to accomplish the stall margin check with the engines installed on the aircraft, the Remote-Actuated Stator Vane Actuator Lockout Tool, P/N K604524-1, FSN RX4920-784-4199BH7X, must be used. The tool is shown in Photos A and B.

The engine stall margin check entails engine operation at a speed high enough for the variable stator vanes to fully open (approximately 87 to 92% Ng). With the vanes open, and the stator vane actuator mechanically locked by the remote tool to keep the stator vanes from closing, reduce Ng speed to the point where the vanes would normally be partially closed. If, under these conditions, compressor stall does not occur, compressor condition is satisfactory.

An engine stall margin check is required at each engine Calendar Inspection, at every fuel control change, and at 50-hour intervals when operating under environmental conditions which may be conducive to premature compressor blade erosion or compressor efficiency deterioration. For detailed stall margin check procedures, refer to paragraph 10-25 of NAVAIR 02B-105AHB-2, dated 15 May 1972. The paragraph refers to test cell engine operation but it will also apply to installed engines with the exception that Ng is reduced by 3% instead of the 6% called out in step f. Also, the Kaman remote lockout tool must be used in lieu of the GE locking link. (The close proximity of the rotors to the top of the engine precludes use of the GE lockout link.) The 14-foot-long Kaman tool enables the pilot or crewman, whoever is monitoring the stator vane position indicator to remotely engage the stator vane actuator piston, thus preventing the vanes from closing. (*Continued on page 12*)

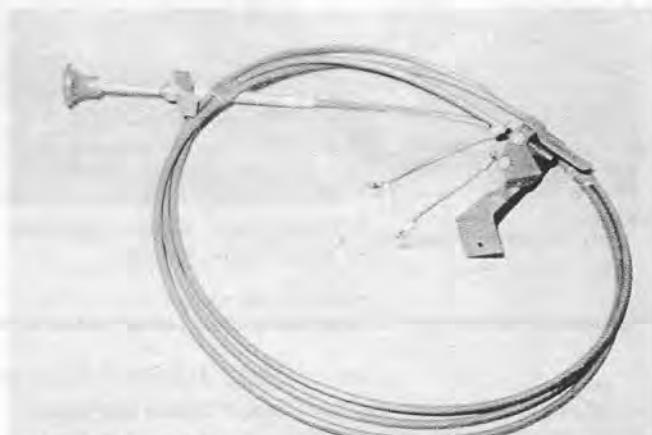


Photo A K604524-1, Remote lockout assembly, stator vane assembly

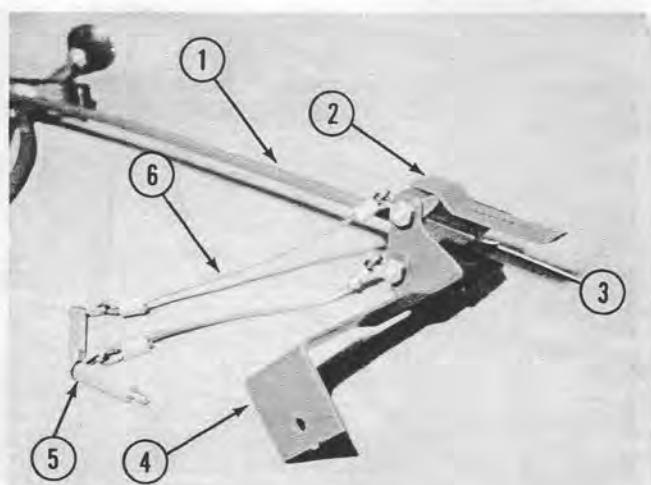


Photo B

1. Cable assembly	4. Bracket
2. Guide assembly	5. Knurled screws
3. Gauge block	6. Cable assemblies

TECHNICAL SECTION

INSTALL THE KAMAN TOOL AS FOLLOWS:

1 Remove the stator vane actuator cover. See Photo C. (Some covers are secured with three screws; most are secured with two screws.) Retain the screws for re-installation.

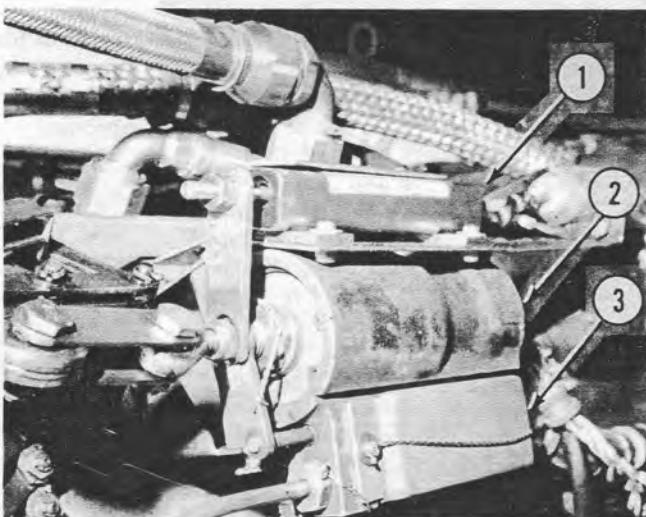


Photo C

1. Stator vane position indicator
2. Stator vane actuator
3. Cover

2 Install the lock-out tool bracket onto the stator vane actuator in place of the cover as shown in Photo D. Secure the bracket with the two knurled screws attached to the bracket or use the previously removed screws.

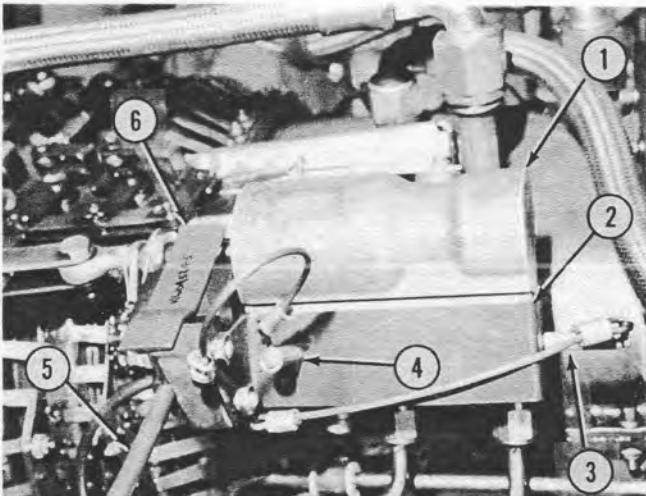


Photo D

1. Actuator
2. Tool bracket
3. Knurled screw
4. Knurled screw
5. Tool cable assembly
6. Tool guide

3 With the tool installed onto the engine, route the cable (on LH engines) down over the outboard side of the engine and into the cabin or cockpit as necessary.

4 On RH engines, temporary removal of the guillotine door will facilitate tool installation. Route the tool up from below, between the inboard side of the engine and the firewall at the point just aft of the centrifugal purifier. Place the handle end in the cabin or cockpit as necessary. Install the tool onto the stator vane actuator in the manner described in steps 1 and 2.

5 With the tool installed (on either engine) manually extend the stator vane actuator piston to place the vanes in the full open position and perform the following check:

- a. Push the tool handle in and hold; check that the gauge block engages the actuator piston as shown in Photos E and F.

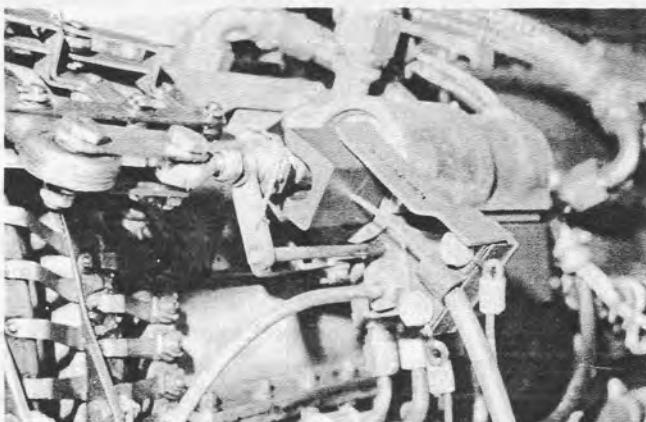


Photo E Block assembly engaging piston assembly

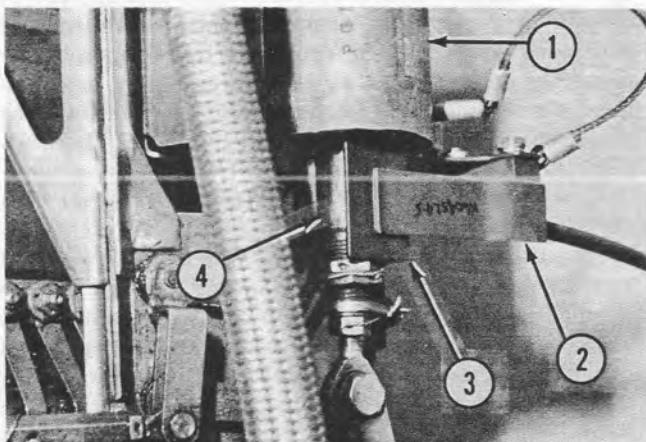


Photo F

1. Actuator
2. Guide
3. Gauge block
4. Actuator piston

TECHNICAL SECTION

b. Release the handle and check that the block fully retracts.

c. Manually retract the stator vane actuator piston to the vanes full-closed position. Be sure there is no interference with the tool which could prevent the vanes from closing normally during the ensuing engine operation.

6 Reinstall the RH guillotine firewall panel prior to engine run-up.

The following is a brief summary of the engine stall margin check procedures presented to illustrate how the Kaman tool is used. It is absolutely necessary that the procedures listed in NAVAIR 02B-105AHB-2 be followed when actually performing a stall margin check. The exceptions are the new tool and the 3% band instead of the 6% called out for the test cell procedure.

- A. Remove access doors as necessary.
- B. Install the GE stator vane position indicator shown in Photo C.
- C. Install the remote controlled lockout tool shown in Photo D.
- D. Operate the engine at a speed high enough for the stator vanes to fully open. This should occur between 87-92%Ng. The SV position indicator meter will read 0°.

E. Slowly retard engine throttle until the vanes close 5.5° from the full open position as indicated on the position indicator. Record the Ng at this time. (Ng taken at this point will be referred to as the Base Ng.)

F. Increase engine speed to fully open the vanes (0° on the stator vane position indicator). Push the lockout tool handle in to engage the actuator piston as shown in Photos E and F. (Hold in this position for duration of the check.) The piston will be locked out as shown until the handle is released. Slowly decrease engine speed and allow the engine to stabilize at the Base Ng. Slowly decrease Ng to 3% below the Base Ng. This 3% band is the engine stall margin. Compressor stall should not occur within this band if compressor condition is satisfactory.

CAUTION

The pilot must be alert for an immediate stop-cock in the event compressor stall occurs.

G. If compressor stall occurs within this 3% band, the trouble shooting section of NAVAIR 02B-105 AHB-2 should be consulted.

H. If compressor stall does not occur, increase engine speed to fully open the vanes. Release the lockout tool handle and shut down the engine per normal procedures.

I. Remove the stator vane position indicator, the remote lockout tool, re-install the cover (and lock-wire), and secure as necessary.

H-2

COMBINING GEARBOX HYDRAULIC PUMP OIL CUP

H-2 Airframe Change (AFC) 199, Part 3, installs an oil cup, P/N K678771-11, onto the combining gearbox hydraulic pump as shown in Photo A. The oil cup is an interim action pending incorporation of AFC 199, Part 2,

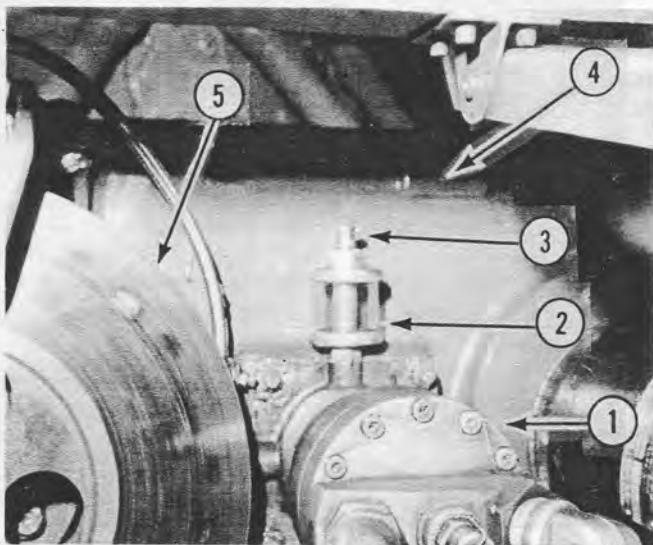


Photo A

- 1. Hydraulic pump
- 2. Oil cup
- 3. Filler cap
- 4. Combining box
- 5. Rotor brake

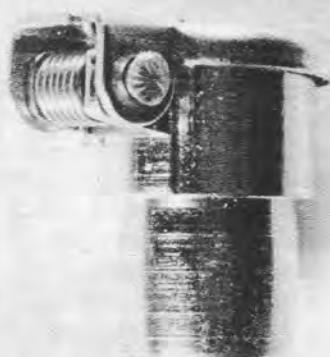


Photo B

which reworks the components in the gearbox and re-identifies it as a K674702-5 combining gearbox. The -5 gearbox does not require an oil cup because of internal spline lube passages.

The oil cup cap has reportedly cracked or has been dislodged by daily normal servicing and, since the oil cup was an interim measure, the cap was not provisioned as a spare. To preclude possible maintenance or supply problems in the fleet due to faulty or damaged oil filler caps, replacement oil filler caps (shown in Photo B) may be obtained from Kaman Field Service Representatives.

R. Trella, Service Engineer

TECHNICAL SECTION

H-2

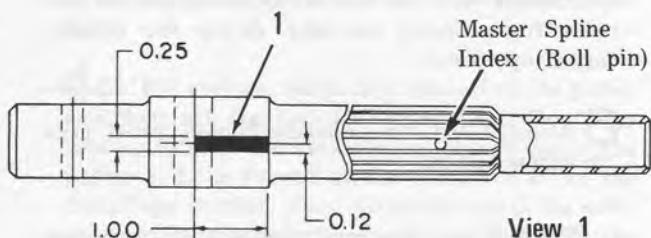
AZIMUTH/GEARBOX INSTALLATION

W. Wagemaker, Service Engineer

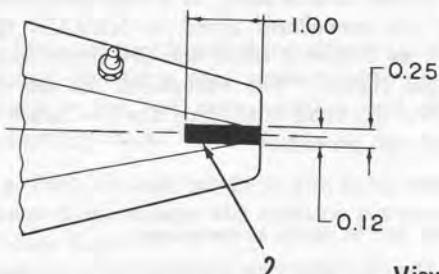
A recent flight control problem was traced to the azimuth assembly where, it was discovered, the master spline had been improperly installed, shearing the roll pin. In order for this to occur, someone had to force the components together, probably by attempting to lower a main gearbox onto an azimuth which was already installed into the aircraft. In the event the gearbox is lowered onto the installed azimuth, the two may appear to mate properly but due to the mass involved, no "feel" for possible interference will be evident. Consequently, damage can result, and as in the previously described incident, much maintenance time is expended attempting to correct the error.

H-2 maintenance manuals point out the azimuth should be installed into the main gearbox prior to installing the gearbox into the aircraft. If the azimuth is in the aircraft, remove it and install into the gearbox; *do not attempt to install a main gearbox onto an installed azimuth.*

A drawing change accomplished in early 1970, assists in aligning the two components. The change added a 1/4-inch wide by 1-inch long white paint stripe on the spindle support and on the spindle. Detachments may add these stripes in accordance with the dimensions listed on Views 1 and 2. Use paint color No. 17875, in accordance with MIL-L-19537.

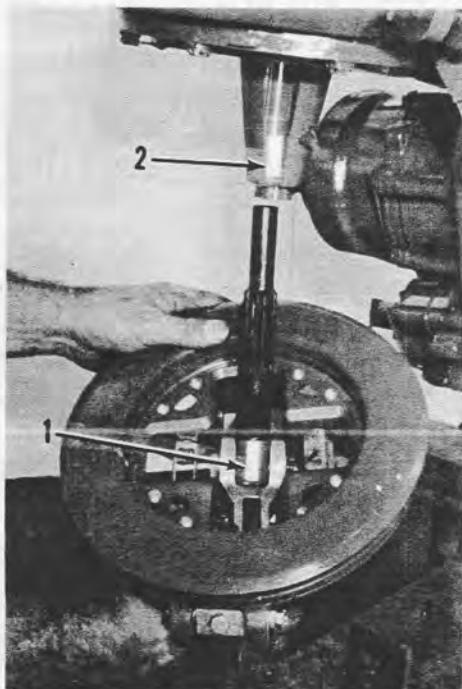


View 1



View 2

The stripe on the spindle (item 1, View 1 and the accompanying photo), is in line with the master spline located inside the support. The photo shows an azimuth assembly with the azimuth spindle about to be inserted into the support. Notice the paint stripes indicated by the arrows. This information will be incorporated into applicable manuals by a future change.



H-2 SMOKE MARKER DISPENSER LUBRICANT

A future change to NAVAIR 01-260HCA-2-3 (1 March 1972, changed 1 July 1972) page 244, paragraph 21-4, steps b and g will recommend using grease Specification MIL-G-81322 instead of the specified DC 33. The change is in keeping with the trend toward standardization of consumable materials whenever possible. Figure 21-2, page 243 of the -2-3 will also be changed to reflect the 81322 grease.

H. Zubkoff, Service Engineer

H-2 T58B/F ENGINE FUEL CONTROLS

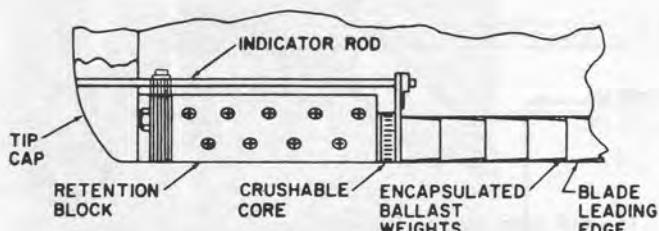
A Timely Tip in the August/September 1971 (page 29) issue of KRT cautioned against using T58-8F engine fuel controls on -8B engines. The "TT" listed three fuel control part numbers; however, since that date, other models of the -8B fuel controls have been modified (and re-identified with new part numbers) to the -8F configuration. Furthermore, the manufacturer (General Electric) will continue to modify -8B controls to the -8F configuration. It is strongly recommended all replacement fuel controls be checked against the GE IPB, NAVAIR 02B-105AHB-4 to insure compatibility with the engine model.

H. Zubkoff, Service Engineer

TECHNICAL SECTION

Q. (Applies H-2) Is the main rotor blade tip cap failsafe indicator rod an indicator of main rotor blade overspeed?

A. No. The main rotor blade tip cap failsafe indicator rod is a quick method of determining whether the blade ballast weight bond is intact. Blade ballast weights are bonded to the blade leading edge and the assembly built up as shown in the accompanying illustration. If the bond fails, centrifugal force will cause the weights to shift outward and crush the impact assembly core. The indicator rod, which is threaded into the impact assembly, will also shift outward and protrude from the tip cap. If the core has been crushed, the blade must be returned to an overhaul facility; occasionally, however, the rod may loosen and protrude from the tip cap.



To determine whether a blade change is necessary when an indicator rod is discovered protruding, remove the four screws and remove the tip cap. (Tip cap installation and removal instructions are contained in NAVAIR 01-260HCA-2-4.2.) Photo A shows the blade tip with the cap removed. Photo B shows the components removed from the blade (right-hand side of photo represents the outboard end). After removing the tip cap, use a mirror and light to check the impact assembly for evidence of having been crushed. If the impact assembly has been crushed, return the blade to Overhaul.

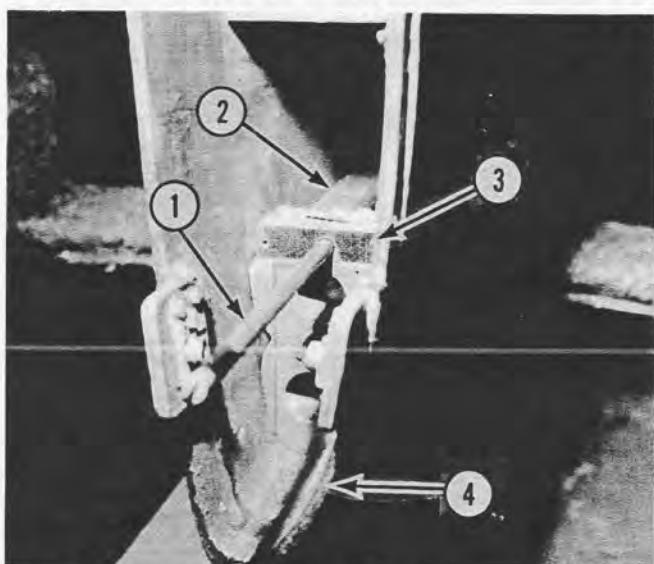


Photo A

1. Indicator rod
2. Retention block assembly
3. Phenolic guide
4. Main rotor blade assembly

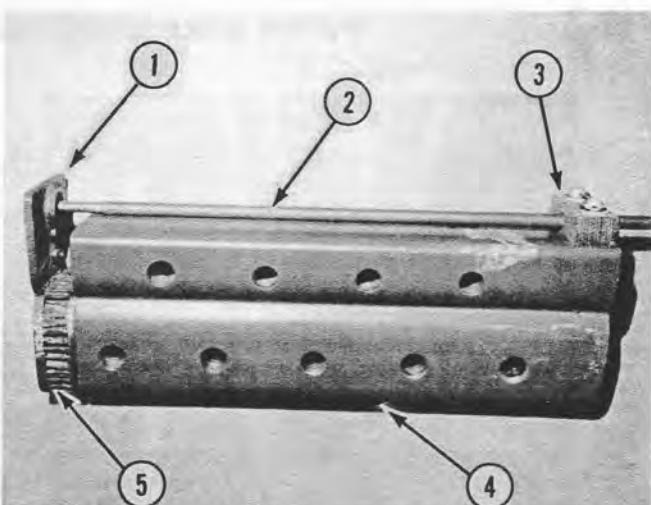


Photo B

1. Impact assembly
2. Indicator rod
3. Phenolic guide
4. Retention block assembly
5. Crushable core

If the impact assembly core has not been crushed, remove the rod, inspect the threads for damage; if necessary, replace the rod (P/N K611583-13). If the rod is not damaged, apply a drop or two of Locktite, Type C, on the threads, re-install into the impact assembly and replace the tip cap. Be sure to seal the screws.

After tip cap installation, adjust the indicator rod so it will be flush to 0.060-inch (1/16-inch) below the surface of the tip cap. Upon completion of this step, the blade will be ready for re-use. This information will be incorporated into applicable manuals by a future change.

W. Wagemaker, Service Engineer

Q. (Applies H-2) Do differences in gross weight affect the main rotor hub fatigue life?

A. No, the differences in an aircraft's gross weight have little effect on main rotor hub fatigue life. The significant factor in determining hub fatigue life is the aircraft's forward center of gravity (CG) limit. Hub fatigue is increased as the forward CG limits are moved forward. For example: the forward CG limit on HH aircraft is two inches AFT of the forward limit on UH-2C aircraft. Therefore, hub life on HH models is 1,000 hours while on the UH-2C, it is 500 hours.

W. Wagemaker, Service Engineer

H-2 HYDRAULIC PUMP ASSEMBLIES

The following information will appear in NAVAIR 01-260 HCA-2-3:

Before AFC 199, Part 3, and after AFC 199, Part 2, the hydraulic pump should contain a plug and bleeder in all four ports; After AFC 199, Part 3, an oil cup is installed in the topmost port (12 o'clock position) while plug and bleeders are installed in the other three ports.

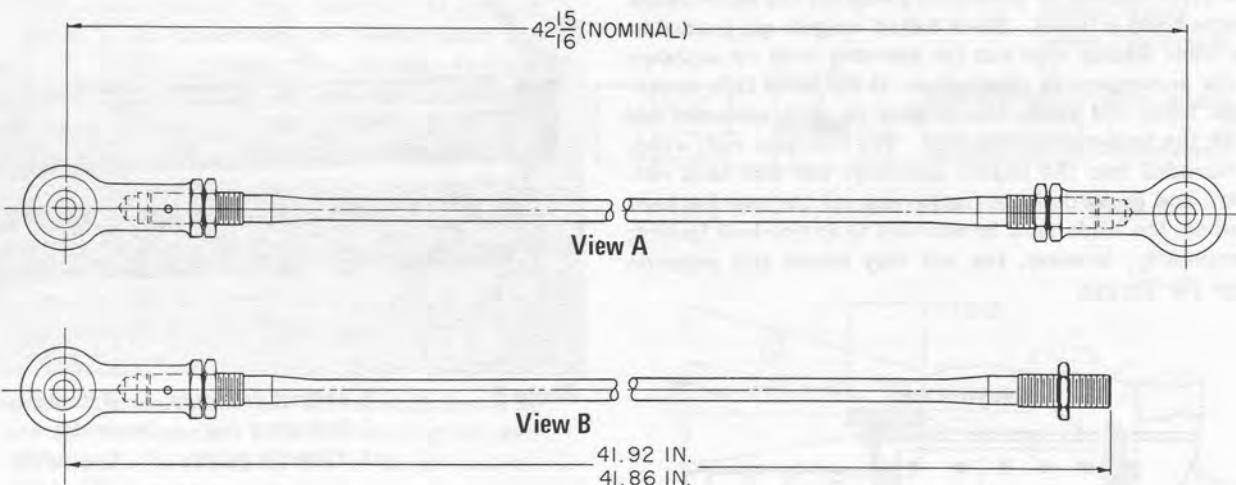
W. Wagemaker, Service Engineer

TECHNICAL SECTION

H-2

BENCH RIGGING AZIMUTH ROD ASSEMBLIES

W. Wagemaker, Service Engineer



Paragraph 4-105 of NAVAIR 01-260HCA-2-2.1, dated 15 April 1972, changed 15 June 1972, details assembly of azimuth rod assemblies, P/N K659027-5. The instructions establish a nominal preset length of 42-15/16 inches (View A) between the fixed and the adjustable rodend centers. During installation of the rod into the aircraft, the adjustable rodend is removed and installed into the azimuth. The rod is then installed down through the main rotor hub and is threaded into the installed rodend. In order to take advantage of the nominal length to which the rod was pre-set, it is important not to disturb the checknut when removing the adjustable rodend from the rod.

To aid in installation, it is recommended maintenance personnel apply a drop of Locktite, Type C, to the checknut threads when bench rigging the rod assembly. With

the nut held by the Locktite, maintenance personnel will be able to remove the adjustable rodend, install the rod assembly through the hub and into the installed rodend while maintaining the overall rod assembly nominal dimension established during bench rigging as shown in View B.

If Locktite is not readily available, other means of maintaining checknut position may be used. For example, a turn or two of masking tape around the nut and rod will retain the nut until installation of the rod is completed. Be sure to remove all foreign material from the rod/checknut after rod installation.

For further information refer to NAVAIR 01-260HCA-2-2.1 and NAVAIR 01-260HCB-4-7.

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CUSTOMER OPERATIONS SECTION — ROBERT L. BASSETT, Supervisor

TECHNICAL SECTION

H-2

OUTSIDE MIRROR BRACKET AND COPILOT'S WINDOWS

H. Zubkoff, Service Engineer

The lower aft outside mirror bracket (item 1 in Photos A and B), can contact the pilot's window and, after a period of time will cause the window to crack. To prevent this from occurring, add one thick washer, P/N AN960PD10, between the bracket and the window frame as shown in Photo C. This information will be incorporated into applicable manuals by future changes.

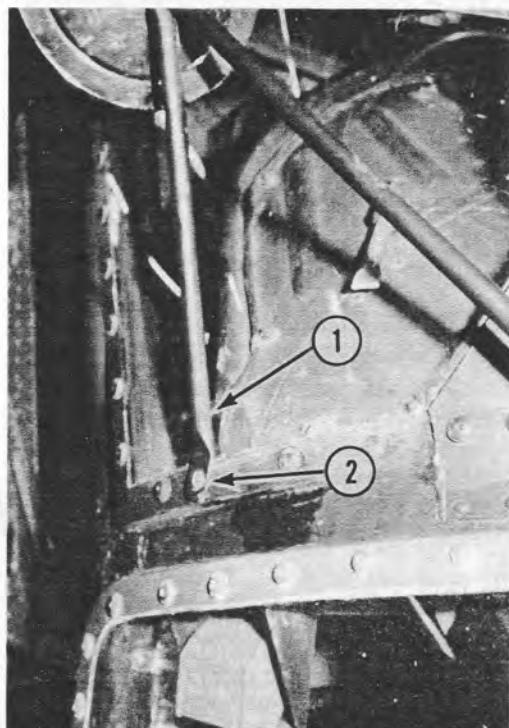


Photo A

1. Bracket
2. Screw

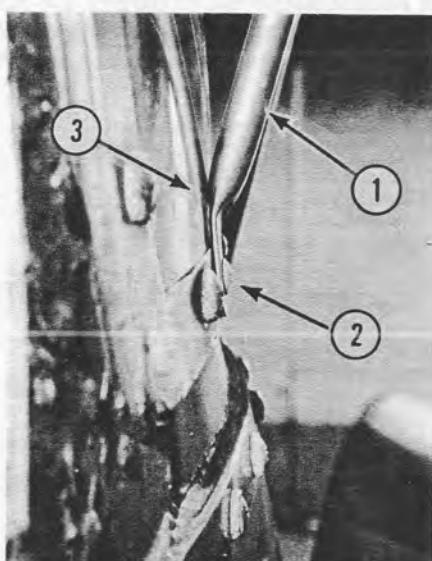


Photo B

1. Bracket
2. Screw
3. Point of contact

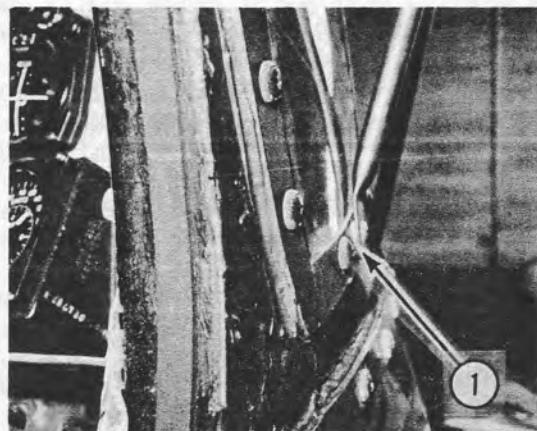


Photo C

1. Washer

AIRFRAME CHANGE 97 INFORMATION

H-2

N. Hankins, Service Engineer

NAVAIR 01-260HCA-2-8.1 will be changed to incorporate the information contained in Airframe Change 97. (The AFC title is: Fuel Quantity Gage Amplifier Repositioning.) In the interim, the accompanying connector diagram (reprinted from the AFC) may be used for trouble shooting purposes.

MAIN HARNESS	326	335
MS3126E-20-41S	PLUG	MS3122E-20-41P
Q156A20N	A	1A-20
Q25A22C	B	6A-22
Q21A22A	C	12A-22
Q23A22B	D	9A-22
Q123A22	E	3A-22
Q20A22	F	20A-20
Q22A22A	G	13A-22
Q24A22B	H	10A-22
Q26A22C	J	7A-22
Q4A22	K	4A-22
Q2A22	L	2A-22
Q157A20N	M	3-20
Q41A22A	N	11-20
Q43A22B	P	14-20
Q45A22C	R	13-20
Q143A22	S	8-20
Q44A22B	T	7-20
Q46A22C	U	5-20
Q42A22A	V	10-20
Q158A20N	W	3-20
Q51A22A	X	11-20
Q53A22B	Y	14-20
Q55A22C	Z	13-20
Q142A22	a	8-20
Q54A22B	b	7-20
Q56A22C	c	5-20
Q52A22A	d	10-20
Q106B20	e	14A-22
Q82A20	f	15A-22
Q107B20	g	16A-22

G57000 RELAY
 (SUMP TK AC PUMP)

K383491-4 RELAY
 ASSY (PUMP NO. 1)

K383491-4 RELAY
 ASSY (PUMP NO. 2)

G57000 RELAY
 (SUMP TK AC PUMP)

PUBLICATION INFORMATION

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

R. H. Chapdelaine, Supervisor, Service Publications

NAVAIR 01-260HCA-2-2 — Manual, Maintenance Instructions, Navy Models UH-2C/HH-2C/HH-2D/SH-2D Helicopters, AIRFRAME
30 November 1971
changed 15 September 1972

NAVAIR 01-260HCA-2-5.1 — Manual, Maintenance Instructions, Navy Models UH-2C/HH-2C/HH-2D/SH-2D Helicopters, INSTRUMENTS
1 October 1967
changed 1 September 1972

NAVAIR 01-260HCB-1 — NATOPS FLIGHT MANUAL, Navy Model UH-2C Helicopter
1 September 1972

NAVAIR 01-260HCB-4-1 — Illustrated Parts Breakdown, NUMERICAL INDEX AND REFERENCE DESIGNATION INDEX, Navy Models UH-2C/HH-2C/HH-2D/SH-2D Helicopters
1 September 1972

NAVAIR 01-260HCB-4-2 — Illustrated Parts Breakdown, AIRFRAME, Navy Models UH-2C/HH-2C/HH-2D/SH-2D Helicopters
1 June 1967
changed 1 September 1972

NAVAIR 01-260HCB-4-9 — Illustrated Parts Breakdown, SPECIAL SUPPORT EQUIPMENT, Navy Models UH-2C/HH-2C/HH-2D/SH-2D Helicopters
1 June 1972
changed 1 September 1972

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

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

NAVAIR 03-95D-11 — Manual, Depot Maintenance Instructions, MAIN ROTOR SYSTEM, Navy Models UH-2C/HH-2C/HH-2D/SH-2D Helicopters
15 January 1966
changed 1 October 1972

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

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

NAVAIR 03-95D-25 — Illustrated Parts Breakdown, COMBINING GEARBOX ASSEMBLY, P/N K674702-3, -5
1 October 1970
changed 15 July 1972

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

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

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

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

SEC/AFC No.	TITLE	RELEASE DATE (KAC)
H-2 Airframe Change 177, Amend 1	Rotor System, MODIFICATION OF BLADE LOCKING MECHANISM	5 October 1972
H-2 Airframe Change 206	Instrument Panel, INSTALLATION OF REVISED PILOT'S CHECKLIST	18 September 1972
H-2 Airframe Change 207	Power Plant System, ENGINE CENTRIFUGAL FILTER ACCESS COVER MATERIAL CHANGE	5 October 1972

MAST

50 MISSIONS FLOWN BY DET 15

LUKE AFB, Ariz.—During a nine-month period starting January 1, 1972, HH-43 crews from Det 15, 42nd ARRSq, at this base flew approximately 50 missions—the majority were under the Military Assistance to Safety and Traffic (MAST) Program.

Included in this impressive record of service to the community were 16 missions flown recently during a one-month period. The lives of 12 premature babies—including two sets of twins—were saved by the speedy response of the rescue helicopter crews, and five recoveries were made.

In the latter category, Det 15 personnel medevaced: a seriously injured driver whose road grader rolled on him; a critically-injured accident victim from a crash scene in the desert; a possible heart-attack victim from the Gila Bend Auxiliary Air Field; and two men who were injured when a piece of heavy equipment left a mountain road and fell into a ravine. An HH-43 crew from the Luke detachment also flew through heavy thunderstorms in response to a call to medevac a critically-ill patient. Another HUSKIE responded when a home-made helicopter crashed near the base. The medic was deployed but not required.

Det 1 Claims Rescue Record - Continued from page 5

Crewmembers were Capt James W. Albright, aircraft commander; Capt Kenneth E. Grice, copilot; SSgt Dennis Looney, helicopter mechanic; Sgt Ronald S. Thornhill, helicopter mechanic; TSgt Howard D. McClellan, medical technician; TSgt William D. Watkins, medical technician.

On 20 Aug 72 Pedro was called upon again. The water level had subsided almost as fast as it came up. Pedro transported a Korean doctor and medics to isolated villages and also made food and medical supply drops. Two sorties 3.2 hours.

Crewmembers: Capt Kenneth E. Grice, AC; Capt James W. Albright, CP; TSgt William D. Watkins, ME; Sgt Robert J. Reott, HM.

Det 1, 33ARRSq is a combined detachment with both HH-43F and HH-3E helicopters. In all, the detachment was credited with 763 saves using three HH-3's and one HH-43F Pedro.

Crewmembers who flew missions during the one-month period are:

AIRCRAFT COMMANDERS—LtCol Zack L. Stockett, 5; Capt Cole E. Walker, 5; Maj Ralph L. Gaede, 4; Capt Robert Nelson, 1; Capt Jay W. Hansen, 1.

COPILOTS—Capt Larry Lindberg, 5; 1stLt Ralph S. Winston, 5; LtCol Stockett, 1; Capt John I. Drexler, 1; Maj Thomas Lambert, 1.

HELICOPTER MECHANICS—SSgt David Darden, 5; Sgt Robert Prunty, 4; SMSgt David Joe, 4; Sgt Ralph Gay, 4;

MEDICAL TECHNICIANS—Sgt Jeffrey M. Miekam, 5; A1c Albert Schaff, 4; TSgt William L. Dean, 3; SSgt Robert R. Vecchio, 2; MSgt Peter J. Lee, 1; SSgt Marion Bankson, 1.

FIREFIGHTERS—TSgt William Thomas, Jr., 1; Sgt Steve Beier, 1.

In describing his first actual rescue to Capt Larry Greer from the Office of Information, Sergeant Thornhill said, "It was sort of fun, but a pretty hairy experience."

"One of our biggest problems," Thornhill said, "was that the Koreans didn't know how to get on the penetrator."

The hoist operator lowered the large orange colored penetrator with seats for several persons. From the open door of the helicopter, he had to motion to the victims below to guide them in climbing on.

"Some of them stood up, some sat down, some hung on to the wrong parts, but they all got up."

Captain Albright, aircraft commander of the HH-43, probably best expressed his crew's feeling of accomplishment.

He said, "We got every one we went after, and we're damn proud of that!"



AIDED KOREAN FLOOD VICTIMS

At left are HH-43 crew members from Det 1, 33rd ARRSq (MAC), Osan AB, Korea, who participated in the flood rescue work or relief missions afterward. Their efforts saved, or brought aid and comfort to, several hundred Korean flood victims. Kneeling, left to right, are Sgt Robert J. Reott and SSgt Dennis Looney, helicopter mechanics, and TSgt William D. Watkins, medical technician. Standing are TSgt Howard D. McClellan, medical technician and Capt Kenneth E. Grice and Capt James W. Albright, pilots. Sgt Ronald S. Thornhill, helicopter mechanic, who also participated, was not present when the photograph was taken. (USAF photo)

STAPL Feasibility Concept

Kaman Aerospace will demonstrate the feasibility of its Ship Tethered Aerial Platform (STAPL) concept under an approximate \$188,000 contract recently awarded by the U. S. Navy's Office of Naval Research, Washington, D. C.

Under the contract, Kaman will design, fabricate, flight test and evaluate two unmanned autogyro aircraft configured with automatic flight control systems and data recording equipment. The experimental drones will be launched and retrieved by powered winch from a moving truck under varying speed and wind conditions to simulate shipboard operations. The self-contained automatic flight control system engineered by Kaman will provide three axis stabilization and automatic flight path control and contain the necessary redundancy for mission reliability.

Kaman performed concept analysis, feasibility studies and preliminary design planning on STAPL under an initial \$78,000 ONR contract two years ago. The tethered system has potential for several applications requiring an elevated platform.

Kaman has pioneered in the development of drone helicopters and rotorchutes, producing the world's first remotely-controlled free flying helicopter and world's first electrically-powered tethered drone helicopter. The Kaman QH-43G, a version of the famed HH-43 HUSKIE, accumulated several hundred flight hours as a shipboard-based tethered drone, erecting a 10,000-foot VLF antenna vertically over a communication ship while underway at sea.

Kaman also has designed and developed numerous remote control and automatic control systems for helicopters and other types of vehicles, such as target boats and armored tanks.

Beartrap and Harpoon Test

"Beartrap" and "Harpoon" rapid-capture and securing systems for helicopters landing on small, non-aviation ships in high sea states will be installed, tested and evaluated in a modified HH-2D SEASPRITE by Kaman Aerospace Corporation.

Kaman has received a \$648,000 letter contract from the

U. S. Naval Air Engineering Center, Philadelphia, for the aircraft modification, systems installation and testing. The testing and evaluation will be performed at Kaman's Bloomfield facility and at the Naval Air Test Center, Lakehurst, N. J., beginning next March.

The Beartrap hauldown and securing system scheduled for experimental installation and testing on the H-2 is designed and built by Dominion Aluminum Fabricating Co., of Toronto, Canada. It is currently in use by the Royal Canadian Navy and formerly was used in U. S. Coast Guard helicopters operating from ice breakers and cutters.

In operation, a small winch in the aircraft lowers a messenger cable through a probe recessed in the underside of the helicopter near the center of gravity. The messenger is manually attached to a larger cable on the ship's flight deck and drawn up to the aircraft where it locks automatically in the probe. A constant tension is then applied to the fly-down cable to stabilize the helicopter in hover. Upon signal, this tension is increased, guiding the probe into a locking device on deck as the pilot lands the helicopter. As a safety feature, the system has a quick release device which the pilot can activate.

The Harpoon system is commonly in use in the French Navy and is manufactured by the Societe Nationale Industrielle Aerospatiale (SNIAS), with whom Kaman engineers will work on the H-2 modification and installation. This system features a trident-shaped probe with mechanical locking hooks attached to a hydraulic actuator cylinder. The cylinder is secured by a universal ball joint to a hard-point inside the airframe. The locking hooks on the probe secure instantly and automatically when they engage a grid on the ship's deck.

The two systems installed in the modified HH-2D will be designed for ready interchangeability without degradation of the helicopter's structural integrity or flight characteristics and without interference to the aircraft's cargo hook installation. They will be designed for testing and evaluation under maximum magnitudes of ship's motion corresponding to sea state six.

Upon completion of evaluation of these and other systems, the Navy may select one for incorporation in ships operating LAMPS helicopters.

At Least It Didn't Rain

"They didn't catch any fish either!"

Capt John W. Petersen's comment aptly summed up the misadventures of two rescuees who had gone fishing earlier in the Snake River Valley. Captain Petersen was copilot on an HH-43 from Det 22, 42nd ARRSq, Mountain Home AFB, Id., which answered a call for assistance when the fishermen failed to return before dark as scheduled. The local sheriff had found their car and boat trailer but no sign of the men. The ARRS det was called on for help and began a first-light search over the Valley, a part of the Grand Canyon and inaccessible by land.

The two men were quickly spotted near a brightly-burning fire on a sand bar and Capt James L. Woolace landed the HH-43 to make the pickup. The survivors' story was a simple one: (1) The motor on their boat quit the night before. (2) Wind-whipped, two-foot waves prevented them from drifting back downstream. (3) They spent the night on a sand bar at 2,500-foot altitude (4) They didn't catch any fish. Other members of the HUSKIE crew were

SSgt Richard G. Robbins, helicopter mechanic; and TSgt Bedford T. Lockard, medical technician.

In another mission, Det 22 was notified by the Elmore County sheriff of an apparent heart attack victim who required immediate medical attention. An HH-43, "Pedro 80," flew to the area and landed on a dirt airstrip at 4500-foot altitude in a valley between two high peaks. After Capt Leonard B. Hughes (MC), a flight surgeon, examined the man, he was airlifted to St. Alphonsus Hospital in Boise about 40 miles away. The flight was over extremely rugged, mountainous terrain, and occasionally the HH-43 wove its way between the peaks to keep as low as possible due to the patient's condition. Eventually the HH-43 was forced to climb to 7500 feet and travel at almost tree-top level in order to complete the flight. The patient was delivered to the hospital and the crew returned to their base without further incident. Members of the crew were Captain Petersen, pilot; Captain Woolace, copilot; Sergeant Robbins, helicopter mechanic and SSgt William B. Powers, medical technician.

HH-43 CREW BRAVES EXPLOSIONS TO MAKE RESCUES

An excellent example of ARRS teamwork and dedication may be found below in this report received recently from Det 4, 3rd ARRGp, at Korat RTAFB. It was written by Capt David E. Buchholz, aircraft commander of "Pedro 26."

. . . At approximately 0723L, the engine on Pedro 26 was shut down. The crew, with the exception of the pilots, had deplaned, and the pilots were accomplishing the cocking checklist when one of the crewmembers called out there was an aircraft on fire on the runway. . . Pedro 26 launched with the Fire Suppression Kit at approximately 0725L.

As Pedro left the alert pad, the two crewmembers from the burning aircraft could be seen running across the infield between Runway 24, and the parallel taxiway. The crewmembers were safe, and as Pedro passed abeam of the distressed aircraft, the base firefighting force had the fire engaged. At this point the decision was made to fly to a safe distance, lower the FSK, land, and stand by until the emergency was terminated, or until directed otherwise by the on-scene commander. . .

At approximately 0728L, a transmission on FM Crash Net revealed that the foam supply was nearly exhausted. Since there was still evidence of fire, and numerous personnel were in close proximity to the aircraft, the decision was made to pick up the kit and continue to stand by in case a flashback threatened personnel working near the aircraft. Pedro 26 landed, deployed the medic for the hookup, and was moving over the kit when an explosion was heard. . . the aircraft had blown up and many people had been injured. The hookup was completed, and Pedro was flown to the scene where the kit was deposited approximately 75 feet upwind from the aircraft in a position where it could be utilized to fight fire. At that point the base firefighting equipment was out of foam and the trucks were unmanned. . . there was no fire in the immediate area of the injured firemen; and after kit deployment both Pedro firemen (Sgt Norman R. Jones and Sgt Peter Marcotte) began evacuating the injured to a safer distance. Pedro 26 retreated to a point some 200 feet away both to minimize the hazard to the helicopter and crew, and to remain clear of the men and equipment which had begun the task of trying to extract the many seriously injured men from the area.

The medical technician, TSgt James E. Morse, had made his way to the scene, and taking up a position near "Medic 2," an ambulance, began to administer treatment to injured personnel as they were removed from the site. Sergeants Jones and Marcotte, working as a team, extracted a severely injured man from a point very near the aircraft. After they had removed him from the area to a position on the grass infield, they returned for a second victim, also lying unconscious and severely injured at a point dangerously near the aircraft. As they removed him to the infield, another explosion occurred. At this point, Sergeant Jones returned to the helicopter to secure a litter for one of the victims. During the time that the firemen were engaged in extracting the victims, Captain David E. Buchholz, the aircraft commander, had deplaned and was preparing the rear of the helicopter for litter loading when Sergeant Jones

arrived, picked up a partially assembled litter, finished the assembly, and raced back toward the place where the injured lay. At almost the same time, Sergeant Marcotte came to the helicopter for the second litter. (Still at the HH-43 controls was Maj Jack A. Weatherford.)

At approximately 0742L, Sergeant Jones and an unidentified fireman returned to the helicopter with a severely injured man secured to the litter. Assisted by Captain Buchholz, the man was placed aboard the helicopter and secured for flight. While this litter loading was taking place, Sergeant Marcotte, aided by an unidentified security policeman, secured the second victim to the second litter, and placed him aboard an ambulance.

At approximately 0745L, Pedro 26 departed for the Base Dispensary with Sergeant Jones and one victim in the back of the helicopter. A landing was made in a grassy area just South of the Dispensary, the victim was delivered to the care of a pair of medics, and Pedro departed, returning to the scene to determine if further assistance would be required.

While Pedro 26 was enroute to the Dispensary, Sergeant Marcotte again returned to the wreckage and sought to aid a third victim, but realized that this man was beyond help. Seeing no others who needed to be removed from the area, he turned his attention to the firefighting equipment which had been abandoned by drivers seeking to aid the injured. He first ran to F-6 (call sign "Tanker 3") and shut down a water turret that was spewing water and hampering rescue efforts, then he ran to "Tanker 1," and drove it to a safe point. When he looked back toward the scene of the accident he saw a Thai climbing into the large P-2 (call sign "Crash 2") vehicle with obvious intentions of moving it from the area. Being extremely knowledgeable of the personnel qualified and able to drive these trucks, Sergeant Marcotte knew that the Thai would not be able to move the truck and would be in danger of losing his life were he to remain in the vehicle. Sergeant Marcotte again returned to the crash scene, mounted the truck, and backed it and the Thai to safety.

Sergeant Marcotte joined the Pedro crew in the vicinity of the withdrawal area, and when it was determined that no further assistance was required, Pedro 26 and crew (with the exception of Technical Sergeant Morse who returned to the Dispensary to render medical assistance) returned to the Pedro pad to terminate at 0805L. 3 sorties. . . 7 hour flying time logged on the mission.

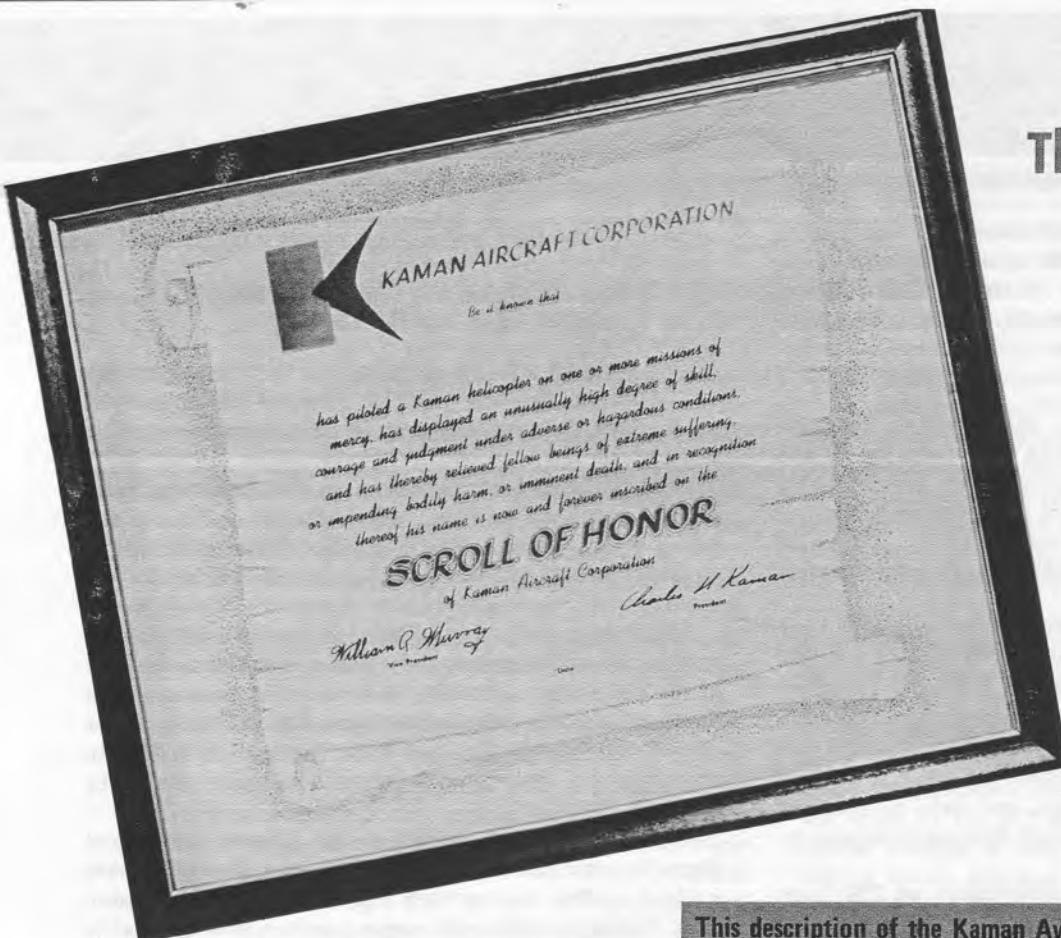
General Carlton Named MAC Commander

LtGen Paul K. Carlton recently was named commander of the Military Airlift Command with headquarters at Scott AFB, Ill. He also has been nominated by Pres Richard Nixon for promotion to four-star rank.

General Carlton succeeds LtGen Jay T. Robbins who had been serving as interim commander since Sept 12 when Gen Jack J. Catton, former MAC commander, assumed new duties at Wright-Patterson AFB, Ohio. General Robbins is vice commander of MAC.

General Carlton recently served as the commander of the Strategic Air Command's 15th Air Force, March AFB, Calif.

The Kaman Awards Program



This description of the Kaman Awards Program originally appeared in the May-June-July, 1970, issue of Kaman Rotor Tips. It is reprinted for the benefit of those who have since joined the ranks of the HH-43 and H-2 crews and may not be familiar with the program.

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

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

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

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

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





Kaman Scroll of Honor

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

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

To determine eligibility for the Scroll of Honor, a review board at Kaman appraises each mission nominated for the Award in terms of certain criteria. First of all, the mission must be a rescue mission or mission of mercy. In addition, the mission must call for an "unusually high degree of skill, courage and judgment" on the part of the pilot and crew while operating under difficult or hazardous conditions. In determining if accomplishment of a given mission qualifies for the Scroll of Honor, the review board takes into consideration many factors, among which are the following: night or restricted visibility en route; difficult or hazardous terrain en route; hovering with rotor blades in close proximity to trees, terrain, buildings, or other obstacles; required doppler approach to hover; extreme altitude and/or temperature where pilot technique and procedures are paramount; unusual weather conditions including high winds or severe wind gusts; performance of mission while under enemy gunfire. Almost without exception, several of these adverse factors must be present in those missions for which a Scroll of Honor will be awarded. The copilot will also be awarded the pilot Scroll if it is determined that he was as necessary to the success of the mission, in the role of pilot, as was the pilot, himself. Otherwise he will receive the crew Scroll, along with the other members of the crew.



Kaman Mission Award

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

To date more than 2300 Scrolls of Honor and 8300 Mission Awards have been presented to pilots and crewmen of Kaman helicopters.

One-Thousand-Hour Pilot Award

The ONE-THOUSAND-HOUR-PILOT AWARD is presented to pilots who have logged 1,000 hours in helicopters produced by Kaman. Commemorating this milestone in a pilot's professional career, 416 of these awards have been presented to date. In addition, Two-Thousand-Hour Pilot Awards have been presented to the first Air Force pilot and to the first Navy pilot to reach this milestone in Kaman helicopters. This award is made available only to the first pilot of each service to achieve this total.

Finally, a Three-Thousand-Hour Pilot Award is presented to all pilots reaching this particularly distinctive level during their flying career.

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

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

PENSACOLA SAR RESCUES TWO IN NIGHT MISSION

"All pilots should fly as a crewman at least once—it's quite an experience!" That was the thought expressed by Capt Paul L. Pearman, USMCR, after a night rescue mission flown by a UH-2C from the SAR detachment at NAS Pensacola, Fla. Pilot of the SEASPRITE was Lt Michael S. O'Leary, the copilot was Lt Ronald D. Grooters and AE3 (AC) Roderick G. Tafoya was first crewman.

Captain Pearman, an H-2 pilot, acted as second crewman on the flight which began shortly after midnight when "Spartan Angel 771" launched in response to a call for assistance from New Orleans Rescue Control. A 65-foot shrimp boat had hit a sand bar and was breaking up in 15 foot swells and high winds south of St. George Island near Appalachicola, Fla. Two men on board required evacuating, but the Coast Guard couldn't launch a boat in the high seas and there was no night SAR capability between Appalachicola and Pensacola.

"Spartan Angel 771" was on the scene 68 minutes later through the assistance of Tyndall AFB Approach Control which gave radar vectors through a low overcast to St. George Island. After searching for almost an hour, the UH-2C landed on the beach to confer with rescue personnel there. After an additional 15-minute search, 771 was forced by low fuel to return to Tyndall AFB.

After refueling, 771 returned to the scene and located the boat at 0510 after another 50 minutes of searching. The boat had drifted to approximately 50 yards offshore and was rolling in excess of 90 degrees in 10-15 foot swells. The two crewmen were on deck clinging to the wreckage of the pilot house. The deck was obstructed by two 60 foot whip antennas, two booms, nets and rigging run from the booms to the bow. The bow appeared to be the best point for a pickup. On the doppler approach to the ship, the RAD ALT mode inputs became erratic, making a manual approach and hover necessary.

The rescue sling was lowered to the bow of the ship, but the rolling vessel was also being carried in and out by the swells and was rising and falling on the crests and troughs. It was necessary to hover below the tops of the antennas and in close proximity to the booms for approximately one-half hour.

The first rescuer grabbed the rescue cable but was knocked into the water by the heavy seas. Clinging to the cable, but unable to put on the sling, he was dragged through the water to shore where he could untangle himself from the

hoist cable. The second rescuer managed to get into the sling, but was carried to shore 10 feet above the water to avoid falling from the sling while at 50 feet. The rescuers were then hoisted into the aircraft by the three-prong rescue seat which is considered safer for civilian use.

Spartan Angel 771 landed at Tyndall AFB where the rescuers were turned over to a medical team for examination. The UH-2C crew returned to NAS Pensacola after 5.5 hours of flying since midnight.

Other Missions Flown By SAR Det

In another mission, a UH-2C crew from the Pensacola SAR unit launched after being alerted that there was a crash at nearby Magnolia Field, Ala., about 25 miles away. Arriving at the accident scene the SEASPRITE crew found that both pilots of a T-34 were uninjured and walking around the downed aircraft. While landing at the crash site, the UH-2C experienced some difficulty with the rotor wash swirling dust from the freshly plowed field. The survivors were airlifted to NAS Saufley Field, then safety personnel were picked up and taken back to the crash scene. Pilot of the UH-2C was Lt C. T. Fowinkle and the copilot was Captain Pearman. Crewmen were ADJ1 Kelly and HM3 M. Turner.

Two other missions were also flown by UH-2C crews from the SAR unit. An officer injured in an accident on board the USS Lexington in the Gulf of Mexico was medevaced to Corpus Christi. Enroute radio difficulties were experienced and, due to the low overcast and gathering darkness, Lt J. P. Harris had to make a GCA approach. Instructions were relayed over the tower frequency and a landing was made without incident. Lt R. E. Rew, was copilot and ADJ2 G. P. Walker and AMH R. Franklin were crewmen on the mission.

In the other mission, a UH-2C crew from the Pensacola unit received a call that a T-28 had crashed in a field 12 miles northwest of NAS Whiting Field. After launching, the crew of the SEASPRITE contacted another T-28 who assisted in the search. Subsequently, the pilot of the downed aircraft radioed that no one was injured and he would like a ride back. Lt D. D. Weaver, pilot of the SEASPRITE, landed soon afterward and the survivor climbed aboard. Other crewmembers were Lt P. C. Jamison, AE3 R. Tafoya, and HM1 Fletcher.



"CENTURIONS"—Four helicopter pilots from the Pensacola-based Search and Rescue Detachment were honored recently aboard the USS Lexington. Capt Jack E. Davis, Lexington's skipper, right, presented the four pilots with "Lex" Centurion Certificates. Each man had made his 100 landings onboard while flying plane guard duty in the UH-2C helicopters assigned to the unit. The pilots were, left to right, Lt Mike O'Leary, Lt(jg) Puck Purnell, Lt Tom Dean and Lt Joe Hammons. (USN photo by PHAN DeVance)

Kadena HH-43 Crew Aids Ryukyuans



POISON VICTIM AIDED—SSgt Daryl Kubotsu unfastens the seatbelt of Keiko Higa who was airlifted from Tonaki-Jima to Naha AB by a Kadena-based HH-43 Pedro helicopter. (USAF photo)

KADENA AB, Japan—Two young Ryukyuans from Tonaki-Jima, who had reportedly eaten some poisonous fish, were air lifted to Naha AB by an HH-43 crew from the 33rd ARRSq (MAC), here.

The rescue helicopter, commanded by Maj Richard Smith, arrived on Tonaki-Jima shortly before sunrise. Rain showers were encountered during the overwater flight through the early morning darkness to the island, approximately 33 miles west of Kadena. The boy, girl, and three relatives were placed aboard the Pedro and it took off for Naha AB. During the flight, the patients' condition was monitored by SSgt Daryl Kubotsu, the medical technician.

Other members of the helicopter crew were the copilot, 1st Lt Wayne Hargrove, and crew chief, SSgt John Lewis.

Det 5 Medevacs Marine

UDORN RTAFB, Thailand—Flying at night through rain and over unlighted, rugged terrain, an HH-43 crew from Det 5, 3rd ARRGp (MAC), at this base medevaced a Marine with acute appendicitis from Nam Phon RTAFB approximately 48 miles away.

Capt Larry B. Doege and his copilot, Capt Thomas J. Meyer, used dead reckoning as the primary source of navigation to the pickup point. This was necessary as Udorn ADF was out of commission and no navigational aids were listed at Nam Phon. The flight was made over forested, rising hills which were obscured by light rain and haze encountered immediately after takeoff.

Anticipating a litter or stretcher patient, Captain Doege slowed the helicopter near Nam Phon and tracked the rotor blades for the smoothest possible ride. A ground mobile unit saw the spotlight being used by the helicopter crew, contacted the HH-43 and directed it to a landing site near the patient. He was placed aboard the Pedro and examined by Capt Richard C. Huff (MC), a flight surgeon who had made the flight from Udorn. Captain Huff said that without air evacuation to operating facilities at Udorn, the patient's life would be in jeopardy. Takeoff was made immediately afterward and again difficulties were encountered in the form of night navigation and rainstorms. Forty minutes later, however, the Pedro crew delivered their patient to Udorn.

Other members of the HH-43 crew were Sgt Thomas M. Holloway, helicopter mechanic; SSgt Paul A. Harshman, firefighter; MSgt Benny F. Stegall, medical technician.

LBR Det Saves Girl's Life

EGLIN AFB, Fla.—A 13-year-old girl, critically injured in an automobile accident, owes her life to the quick response of the 44th ARRSq (LBR) Det stationed here. "Pedro 31," an HH-43 from the det, picked up the patient at Eglin AFB Hospital at 2210L and airlifted her to Pensacola, approximately 50 miles away. At 2245L, Pedro landed on the rooftop helipad of Pensacola's Baptist Hospital. It was the first helicopter landing ever to be made at night on the comparatively new pad. A few minutes earlier, the girl's respiration and heartbeat had stopped while the HH-43 was on final approach, but she was revived by LtCol Johnny A. Johnson (MC), a flight surgeon, and SSgt Gary E. Ellison, a medical technician. The doctor said afterward that the helicopter flight had saved the girl's life. Maj Leonard N. Buck was pilot of the HH-43 and Maj David A. Cochenour, was copilot.

Rescued From Sea By Det 12

U-TAPAO, RTNB, Thailand—An enlisted man who had been in the water for more than 10 hours after a boating accident, was rescued by Pedro 36, an HH-43 from Det 12, 3rd ARRGp (MAC), at this base.

A helicopter search began after the detachment was notified that a sailboat with two men aboard was overdue. As darkness fell, the survivor was spotted about two miles southeast of the base and a forest penetrator with a flotation collar was used to make the pickup from the choppy sea. A search of the area for the second survivor began, then terminated when it was learned that he had been picked up on shore by a ground party.

Manning the rescue helicopter were Capt Carr E. Flournoy, pilot; 1st Lt David G. Rousseau, copilot; Sgt Thomas W. Hooker, helicopter mechanic, and Sgt Oliver Chapel, medical technician; and SSgt George E. Cotton, firefighter.

37th Pedro Saves Downed Pilot

DA NANG AFLD, Vietnam—A pilot who ejected from his battle-damaged F-105 was rescued from the South China Sea by an HH-43 Pedro from the 37th ARRSq (MAC), at this base.

Capt Donald R. Wagner and his crew had just returned from scrambling for another emergency when word was received that the F-105 was inbound to Da Nang. A minute after taking off to meet the crippled aircraft, Pedro was notified that the two occupants had ejected. The HH-43 received immediate clearance across both runways and six minutes later was over the ejection area eight miles from the base. One survivor was spotted in the two foot waves almost immediately, and a few minutes later was hoisted to safety. The other occupant of the F-105 was rescued by another helicopter, also attached to the 37th. With Captain Wagner in the HH-43 were Capt Allen C. Spitler, copilot; SSgt Charles R. Worley, helicopter mechanic; SSgt Samuel J. McElhaney, hoist operator; SSgt David Newman, firefighter; and Sgt Robert W. Parrish, medical technician.



SAILOR AIDED—HH-43 crew members from Det 26 and hospital personnel at Columbus AFB, Miss., transfer shooting accident victim from HUSKIE to a waiting ambulance. (USAF photo by Sgt James Powers)

Det 26 Medevacs Gunshot Victim

By Sgt John D. Mungan

COLUMBUS AFB, Miss.—A Columbus AFB, Miss., rescue and hospital team responded to an emergency request recently, airlifting a patient from the Northeast Medical Center in Tupelo, Miss.

A Kaman HH-43 HUSKIE from Det 26, 44th ARRSq here, brought an enlisted Navy man, the victim of a shooting accident, from Tupelo to Columbus where he was transferred to a C-9 Nightingale and flown to the Scott AFB, Ill. hospital.

According to the detachment commander, Maj Arthur E. Oakes, the helicopter left here for the 60 mile trip at 3:17 p.m. and arrived back with the critically wounded man at 4:43 p.m. The patient, home in Tupelo on leave from his station in Virginia, was accompanied by his wife.

Pilot for the airlift was Capt Gary Norris with Capt Allan Jones as copilot. Capt Wayne Britt (MC), flight surgeon, and SSgt John DeBell, helicopter mechanic, completed the team.

This was the third time this year the local rescue detachment's Kaman helicopter has been called on to help with aerovac procedures.

Det 10 Rescues Downed Bush Pilot

By Sgt Jesse Fulton

LORING AFB, Maine—"I'm sure glad to be back out," grinned Alan Hoytaz of St. Thomas, N. B., as he stepped from a rescue helicopter here recently.

Mr. Hoytaz was the pilot of a Canadian TBM aircraft which force landed into a densely wooded area approximately eight miles southeast of St. Pamphile, Que. He had been returning from a budworm spraying project for the Canadian Forestry Service in New Brunswick when engine trouble forced him to leave the six plane formation in which he was flying, and put his agricultural spray aircraft down just inside the Maine border.

"I think one of the engines swallowed a valve, but I didn't have the tools to find out after I landed," Mr. Hoytaz said.

He had downed his aircraft about 3:30 p.m. (EDT), and a rescue helicopter from Det 10, 44th ARRSq was airborne at 6:28 p.m. looking for him. The crew of the Loring-based HH-43F HUSKIE consisted of Maj George L. Schmidt, pilot of the aircraft and commander of the detachment; Capt Robert J. Hawley, copilot; TSgt Frank W. Davis, Jr., crew chief; and SSgt John L. McKenney, medical technician. *(continued on next page)*

Major Lupenski Returns to Kirtland



KIRTLAND AFB, N.M.—The Air Force HH-43 helicopter commander who led the first rescue team into a blizzard on the Navajo Reservation in northwest Arizona five years ago has returned to Kirtland AFB. He is Maj Alex Lupenski, at left, now in command of the 42nd ARRSq's Det 3 at the base.

The detachment's seven officers and 20 airmen fly three HH-43's.

Major Lupenski was a captain at Kirtland in December, 1967, when the Navajos asked for help after a series of three violent snow storms isolated the reservation from the outside world. Flying an HH-43, Lupenski managed to reach Window Rock, Ariz., in spite of the weather and began the largest air rescue operation in the history of the southwestern United States. Window

Rock is 150 miles west and a little north of Kirtland.

When it was over 11 days later, 18 military helicopters from as far away as Kansas, Nevada and California had rescued 236 people and delivered 150 tons of food. Major Lupenski flew in "white outs" which reduced visibility to almost zero. The snow had drifted higher than a horse's head in places and maintenance men worked around the clock to keep the durable HH-43's airborne.

"It was one of the highlights of my Air Force career," the Major recalls. "Not only the challenge to our flying ability, but the chance to witness the incredible courage of the Navajo people."

Major Lupenski spent his first three years in the Air Force as a security police commander. He completed pilot training in 1961 and now has 2,500 accident-free helicopter flying hours, most of them in HH-43s. He has flown rescue missions in Newfoundland and Korea, and received his second Kirtland assignment after a three-year tour at ARRS headquarters, Scott AFB, Ill.

Descending darkness hampered the first day's rescue and search operation, but the HUSKIE, along with several aircraft from the U. S. Forestry Service and a number of other planes, began the search again at 5:30 a.m. the next day. A C-130 Hercules coordinated communications among the various aircraft.

"The location we began the search in later proved to be very close to where we actually found him," Captain Hawley said.

For a time, the searchers were drawn afield by a radio message picked up and mistakenly identified as coming from Mr. Hoytaz' aircraft. Later in the day, back at the original location, the crew of the C-130 Hercules spotted the wreckage of Mr. Hoytaz' airplane and guided the helicopter to the site.

"Mr. Hoytaz had picked a good place to ditch his plane, and he softened his impact by shearing off the tops of the trees for a good two to three hundred feet before settling in, but because of the heavy woods, there was just no place to land any kind of aircraft conventionally," recalled Captain Hawley.

Therefore, while Major Schmidt hovered the helicopter some 80 feet above the ground, Sergeant McKenney was lowered to the crash scene on the rescue hoist. After checking Mr. Hoytaz to make sure he was all right, Sergeant McKenney sent him up to the waiting aircraft on the hoist, then followed him with Mr. Hoytaz's luggage.

About two hours later 4:25 p.m., Mr. Hoytaz stepped out of the helicopter here.

Det 5 Saves Downed Pilot

UDORN RTAFB, Thailand—An HH-43F Pedro crew from Det 5, 3rd ARRGp, here was notified at 1125L that an F-4E was inbound with severe battle damage. The alert crew scrambled with the FSK aboard and entered the normal holding pattern to await the damaged aircraft. At 1150, the control tower notified the Pedro crew that the pilot had decided to bail out. The FSK was returned to the pad and a Search and Rescue Kit picked up for the ensuing mission. After a few minutes of flying, the Pedro crew received a beacon from the downed pilot's radio and homed in on its signal. Enroute, two Thailand T-28's were

31st ARRSQ AIRLIFT HELPS FILIPINOS

U. S. Air Force rescue helicopters from the 31st ARRSQ (MAC) at Clark AB, R. P., airlifted more than 100,000 pounds of food and clothing to central and northern Luzon in the Philippines after more than 700,000 persons lost their homes and nearly 2,000,000 were affected by heavy flooding.

The helicopters, HH-43 HUSKIES and the HH-3 JOLLY GREEN GIANTS, also ferried members of the U. S. Army's DART (Disaster Area Relief Team) squads from Clark AB to various towns in the Philippines to assist in organizing joint American-Philippine Disaster relief work. (Similar helicopters have been responsible for saving thousands of U. S. aircrew members in Southeast Asia.)

The ARRS crews began their support, when the flooding first began, by transporting a Philippine Presidential Security Team and 1,500 pounds of cargo to Lingayen nearly 400 miles northwest of Manila. Then the helicopter crews transported as much as 35,000 pounds of supplies during one day, bringing the total to 109,000 pounds of food and clothing transported to stricken areas. ARRS crews such as these, stationed around the world, have been directly responsible for saving more than 22,000 lives in the past 25 years.

requested to provide cover since the area was not known to be "secure."

Capt Larry B. Doege, pilot of the HH-43F, contacted the survivor and was guided to his exact position in the heavily forested area which was also densely covered with 5 to 8-foot trees, the HH-43 slowly descended and came to a 10-foot hover over the survivor. Sgt Thomas M. Holloway lowered the forest penetrator seat through the underbrush and the downed pilot was hoisted to safety. A max power/restricted takeoff was made to avoid the encircling trees. Total time from ejection to return to base was 33 minutes.

Other members of the Pedro crew were 1st Lt Russell G. Hill, Sgt Alfred P. Avila and SSgt Foster D. Smith.



SMSgt Elmer R. Watts, first flight maintenance superintendent, at right, made his first flight in the Kaman HH-43F HUSKIE of Det 18, 43rd ARRSQ at Webb AFB, Texas, recently. There was a reason for the flight, however. Sergeant Watts was reenlisted at 65 knots, 500 feet altitude, heading 180 degrees south. Shown doing the job, left, is Maj Richard P. Barr. This was the sergeant's fifth re-enlistment. (USAF photo)

TWAS THE NIGHT BEFORE CHRISTMAS

Twas the night before Christmas, and out in the Med,
On a tin can most people slept,
But out o'er the sea, in an SH-2D,
A vigil was constantly kept.

About one hour prior, they had lit off the fire,
Launched and set up their track,
Two hours to go and they'd wind up their show.
It sure would be nice to get back.

But uneventful flight, didn't occur this night,
For the rear seat soon sputtered out,
"A contact I've got, a big one and hot,
It's live and it's real there's no doubt!"

Then the bird came alive, twas like a bee-hive,
Each man doing his job,
They ranged and they tracked, then the ICS cracked.
And the TACO spoke out with a sob,

This is hard to believe, but the data received,
Says he's surfacing directly ahead,
If he's missile-equipped, we're sure to get tipped,
Right here in the midst of the Med.

But back on the can, alert to a man,
Thanks to data link and other good gear,
General Quarters was set, twas an even odds bet,
They'd get him before he got near,

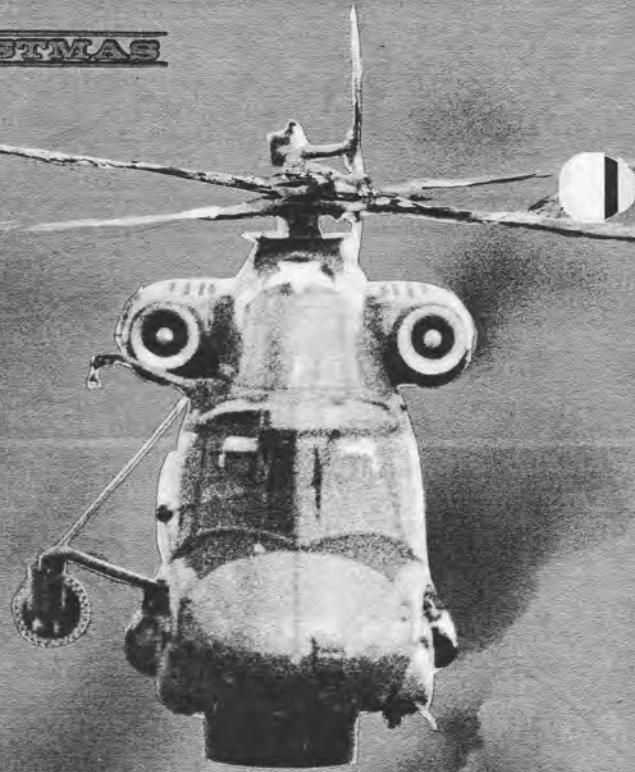
The helo flew on, all caution was gone,
Their eyes strained to catch the first sight,
Of what kind of a boat, submerged or afloat,
Had alerted them this cold Christmas night,

Then suddenly, A SUB!; (a moth-eaten tub)
But painted in bright green and red,
And it sat in the rear, of eight swimming reindeer,
And the leader's nose was bright red.

Came the clang of a catch, releasing a hatch,
And a strange figure climbed into view,
Shouting, "Ho Donner, Ho Blitzen, Ho Dancer and Vixen,
On this surface we'll have to heave to,

He was short and quite fat, in red costume and hat,
With a long, long, beard colored white,
And a great mass of belly, that quivered like jelly,
As his laughter boomed out through the night,

From below came a sleigh, and I heard his voice say,
Let's get loaded and start on our way,
For these gifts and these toys, to bring holiday joys,
Must be delivered before Christmas day,



Then a bullhorn he grabbed, and to them he gabbed,
Shouted, "Hey You up there in that 'Sprite,
My delivery points near, but I've had to stop here,
Cause the weathers so bad on this night,

As you know in the past, 'fact up to year last,
Flying all the way was my bag,
But now I don't dare, 'cause this polluted air,
causes me and my reindeer to gag,

And it's starting to be, that even the sea,
Is getting too filthy to live in,
For determined is man, to do what he can,
To ruin the environment God Give em,

But be as it may, I'll go on my way,
though some aid from you I beseech,
Radar you've got, as you see I have not,
Can you lead me in to the beach,

On this they agreed, and in they did lead,
Through fog, then back out and back through,
Flight after flight, it went on all night,
though they stopped for a "high drink" or two.

Came the dawnings first sun, the last flight was done,
And his final landing was made,
As they hovered nearby, he said with a sigh,
I'm grateful for all your NAVAID,

One final favor I ask, please accept this task,
Pound the drum, pass the word door to door,
Either clean up your trees, your skies and your seas,
Or old Chris Kringle ain't coming no more.

By Jack L. King
Senior Service Representative

