KAMAN Rotor Tips

VMO-1 HOKS OKINAWA

KAMAN AIRCRAFT CORPORATION

PIONEERS IN TURBINE POWERED HELICOPTERS

OCTOBER, 1962

KAMAN Rotor Tips

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IN THIS ISSUE

VOL. II No. 11

THE COVER

Kaman Aircraft Corporation presents the versatile "HUSKIE III," the Nation's first medium weight, twin-turbine helicopter.

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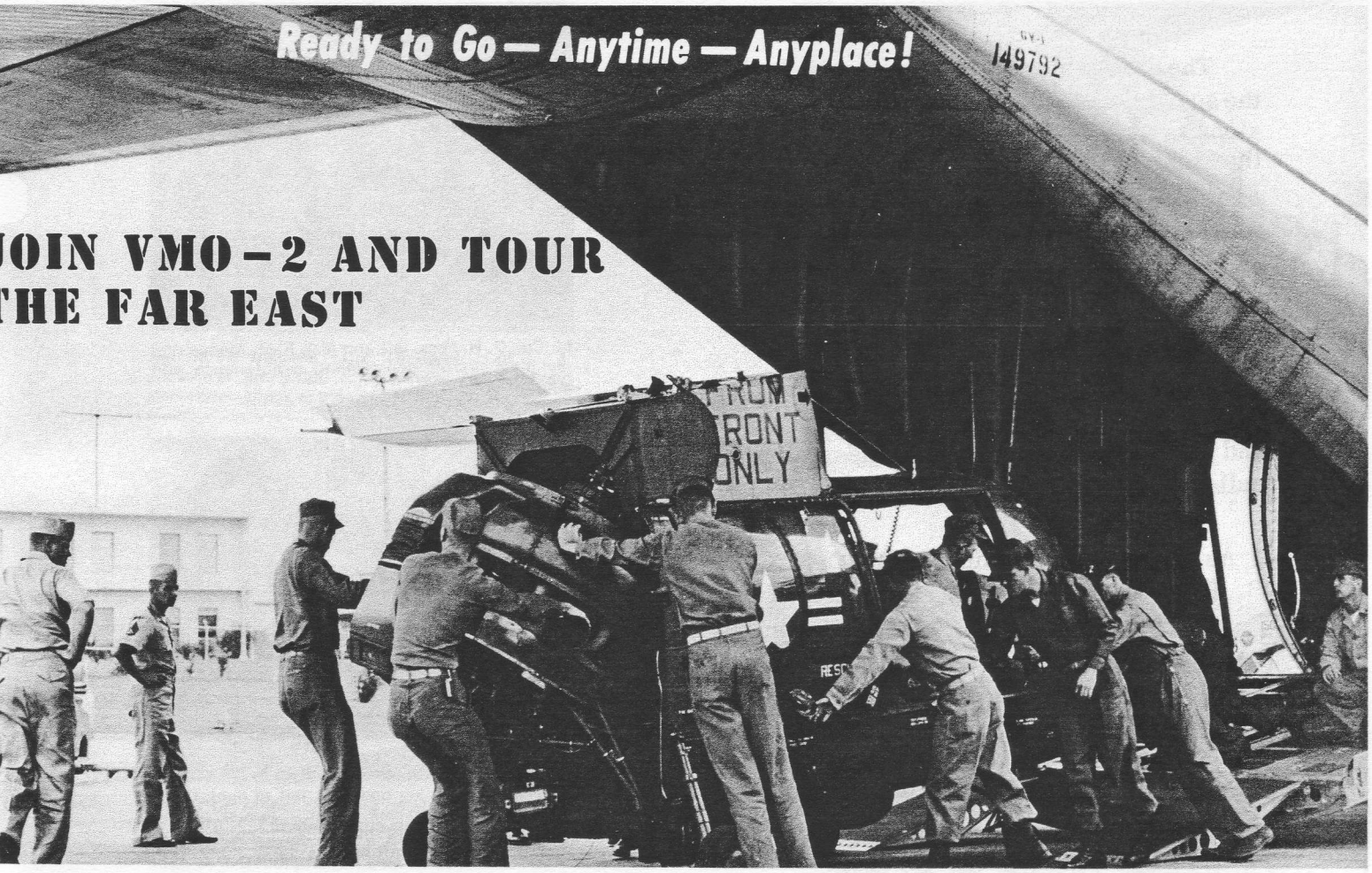


JOIN VMO-2 AND TOUR THE FAR EAST

by D. R. Tancredi
Field Service Representative

Either of the above titles would aptly describe VMO-2 and its activities.

The squadron calls MCAF Futema, Okinawa, home, but Sub-units of the squadron are likely to be found scattered throughout the Far East. VMO-2 is a well-trained squadron that is capable of "moving out" at any time and continuing to operate with a minimum of confusion or delay.

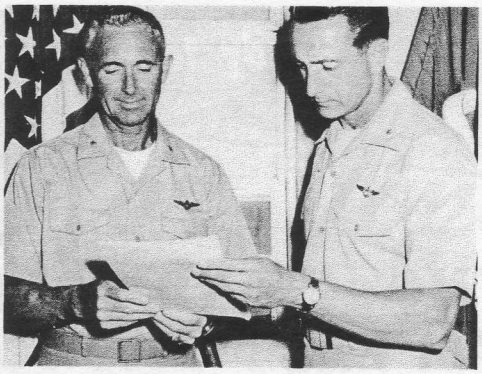
The Marine Corps states that a VMO squadron should be capable of carrying out the following mission — "Conduct visual aerial reconnaissance and observation and such other air operations as directed by proper authority."

TASKS:

1. Conduct aerial reconnaissance and observation for troop units.
2. Provide aircraft for aerial radiological reconnaissance.
3. Conduct flight for support of tactical air observation, artillery observation, and naval gunfire spotting missions.
4. Conduct emergency aerial supply and resupply.
5. Augment local search and rescue facilities within the capabilities of assigned aircraft.
6. Provide airborne control of tactical air support operations as required.
7. Conduct liason and courier service.
8. Provide aircraft to conduct frontline, low-level aerial photography.
9. Maintain the capability to operate from aircraft carriers or other floating bases.
10. Maintain the capability to operate under conditions of darkness and reduced visibility.
11. Conduct front line casualty evacuation.
12. Conduct aerial spraying of insecticide.
13. Conduct aerial wire laying.
14. Conduct aerial message pickups.
15. Maintain a vigorous and comprehensive aviation safety program.
16. Provide for the health, welfare and moral guidance of assigned personnel.

In order to carry out all of these varied missions, the squadron employs the Kaman HOK-1 and Cessna OE-1 type aircraft.

The degree and high proficiency with which the squadron accomplishes its assigned missions is a direct result of the leadership of the Commanding Officer, Lt. Col. Donald H. Foss. Col. Foss is assisted by Maj. R. H. Cook, Executive Officer, Maj. G. L. Ferguson, Operations Officer; and Maj. F. M. Kleppsattel, Assistant Operations Officer.



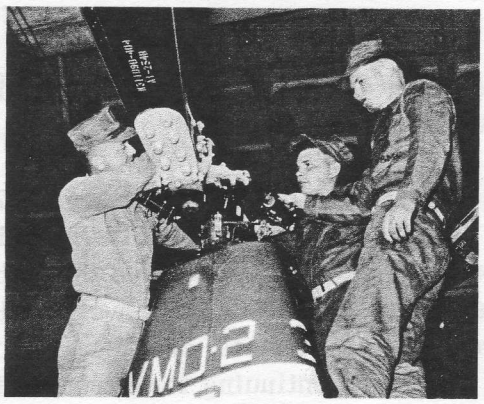
Lt. Col. D. H. Foss, left and Maj. F. M. Kleppsattel planning aircraft deployment, maintenance and support.

To be able to deploy two different type aircraft to three or four different locations and also maintain and support these aircraft calls for a great deal of advance planning.

As Maintenance Officer of VMO-2, Capt. B. P. "Buck" Germagian is the man who fills this billet. Capt. "G" is an 18-year veteran with over 10 years of helicopter experience to call upon. Three other officers and 94 enlisted men are assigned to the various shops that come under Maintenance. These shops include Power Plants, Planning, Airframes, Avionics, Flight Equipment, Quality Control, Aircraft Records Section, Flight Line, and Tool Room.

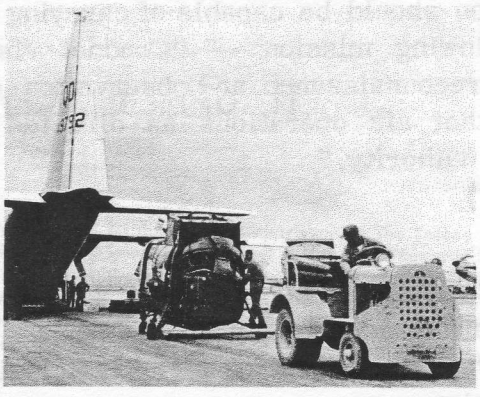
Checking aircraft log book are, left to right, Capt. B. P. "Buck" Germagian, GySgt. J. Janusz, quality control and assistant maintenance chief; LCpl. M. J. Bornstein, aircraft records clerk.

A problem that is always present is the rapid turnover of personnel. A normal tour of duty on Okinawa is 13 months with a new cadre rotating every four months. This means that new personnel are being trained at all times. To help alleviate this problem, part of each new cadre attends the KAC-sponsored HOK School at Bloomfield, Conn., and then joins the rest of the cadre in VMO-6 at Camp Pendleton, Calif., for more training before being sent overseas. Once the new cadre checks into VMO-2, the Staff NCOs under the direction of MSgt. J. M. "Stud" Schmidt, see that each man learns his job quickly and thoroughly. Since many times a crew chief will be in the field with no one to assist him in his maintenance work, he must be familiar with all of the systems in the aircraft including hydraulics and radio.

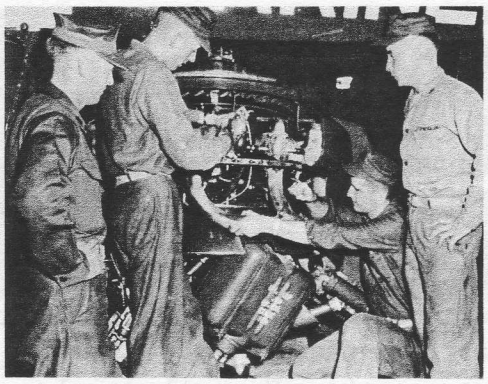


SSgt. R. L. Russell checks out LCpl. E. L. Bauer and LCpl. R. R. Farrell on proper way to rig HOK-1.

The last cadre arrived on Okinawa while the squadron was in the Philippines participating in "Operation Tulungan." Within two days of their arrival on Okinawa, they were being airlifted to the Philippines. This maneuver was a good example of VMO-2's

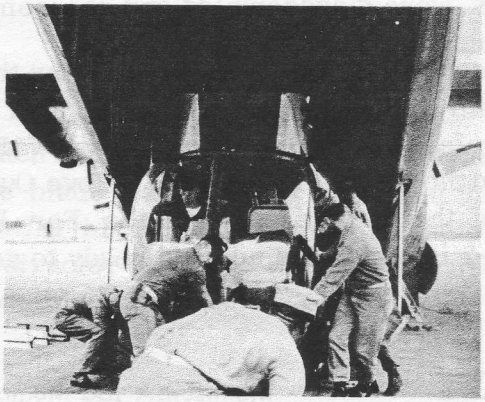


SSgt. B. E. Olsen on tractor tows HOK away from Marine GV at Kadena AFB, Okinawa. Air delivery of helicopters has become routine for VMO-2 personnel.

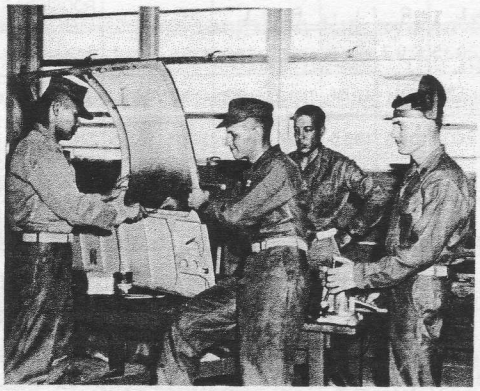


Sgt. R. H. Williams, LCpl. Thatcher, LCpl. M. J. Ainsworth and LCpl. J. J. O'Neill, maintenance personnel, check engine.

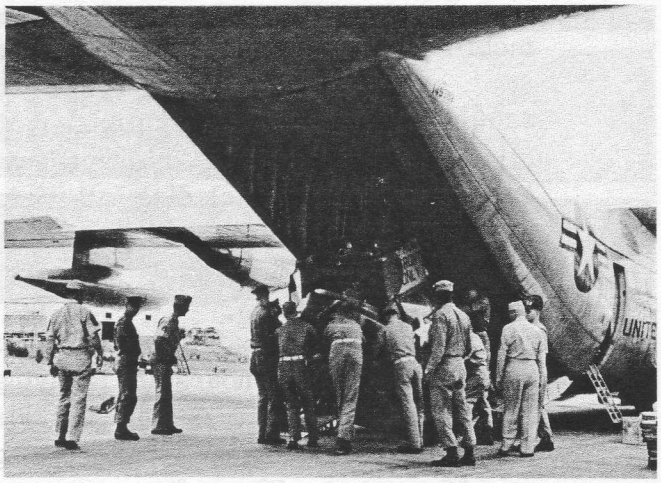
Supply personnel checking catalog to make sure parts are sent to the various sub-units on time are SSgt. B. R. Beard, W.O. J. A. Johnson, OIC: and SSgt. D. J. Boudreaux, NCOIC.



Cpl. L. F. Whitham, in cockpit, keeps feet on brake pedals as Air Freight personnel ease HOK from GV.



LCpl. E. H. Daniel, Pfc. J. T. Cullom, Sgt. R. R. Lopez and Cpl. E. J. Uptegrove, metal ship personnel; replace plexiglass in HOK door.



MSgt. J. M. Schmidt, on far left, oversees off loading of HOK's which have just returned after a tour of duty with the VMO-2 Sub-unit. Sergeant Schmidt is maintenance chief of the squadron.

Representative VMO-2 unit—the men who fly and the men who back them up. Front, left to right, Sgt. A. E. McClellan, LCpl. R. J. Gittens, Cpl. L. F. Whitham. Back row, Cpl. C. Bundchu, Sgt. A. A. Jaffarty, 1st Lt. D. L. Salem and 1st Lt. J. H. Durdan.

In the clear, helicopter is pushed into position for tractor hook-up. LCpl. J. J. O'Neill, by door, aids Air Freight Personnel Cpl. L. F. Whitham is in cockpit.

Official USMC photos
by Cpl. W. M. Pruitt

mobility. The squadron had aircraft operating in Japan, on the LPH Princeton, NAS Sangley point, and two locations on Mindoro Island. Also, during this maneuver the entire squadron, including all personnel, equipment, and aircraft, were moved from the aircraft carrier to shore and back again, three separate times.

The nine HOK's participating in this maneuver logged 428 hours in 13 flying days. Aircraft availability during the six-week period that the maneuver was taking place was 92 percent. These figures are a direct reflection on the excellent maintenance being performed daily in VMO-2.

Another example of the efficiency of the squadron in planning ahead, is the very low Aircraft Out of Commission for Parts (AOCP) rate each month. The AOCP rate usually runs at a low, low two-to-three percent. A prime reason for this low figure is the HOK Component Status Board designed by Captain Germagian. By using this board, the time to go until the "End of Operating Interval" on all time-change components can readily be seen at a glance. A couple of advantages to a board of this type is the fact that the A/C Time column is the only column that needs to be changed daily. As new components are installed on the aircraft, the total hours to go on that component are added to the current A/C Time and then posted in the proper column. The A/C Time column is changed daily. When the A/C Time gets within 70 hours of the figure under the Time Change Component column, that column is red lined and the supply section is notified. This gives the supply section about 60 days lead time to acquire the necessary part replacements. When the A/C Time figure matches the Part Time column, the part is replaced.

Whenever aircraft are deployed, an aircraft packet is sent along with each Sub-unit. Similar Status Boards on a much smaller scale are included in each packet. Each Sub-unit keeps correct records of their assigned aircraft. Usually once a week this information is relayed back to the squadron and the Master Boards are brought up to date. This system eliminates bottlenecks by having the necessary parts at the right place at the right time.

Whenever aircraft are transferred to Japan, Korea, Philippines, or other areas in the Far East, they usually are disassembled and airlifted by Marine GV's or Air Force Globemasters, then reassembled on location. During the past ten months the HOK's were disassembled and reassembled 21 times and the OE's ten times.

In conclusion, I would like to say that it certainly is a pleasure to serve with such a professional organization as VMO-2. Should the call be received to "Move Out" to one of the trouble spots in the Far East, VMO-2 is highly trained and ready to go. K

VMO-2 HOK COMPONENT STATUS

	TIME 0800 DATE 24 MAY		400	600	600	600	480	600	600	600		600		360		360		360		600	600	600
	BUNO NUMBER	A/C TIME	ENG	FAN	CLU	AZI	TRA	T PIN	LAG PIN	DRIVE SHAFT UP	DRIVE SHAFT LO	ROTOR SHAFT R	ROTOR SHAFT L	ROTOR HUB R	ROTOR HUB L	ROTOR BLADES R	ROTOR BLADES L	BLADE FLAPS R	BLADE FLAPS L	LONG RODS	SHORT RODS	L CRANK
1	163380 *	1495.4 *	1764	1807	1969	2035	1787	2035	1910	2035	2035	2035	2035	1793	1540	1756	1794	1756	1794	2035	2035	2035
2	163518	1050.3	1363	1609	1568	1562	1360	1212	1212	1204	1499	1272	1272	1241	1241	1192	1192	1192	1192	1620	1272	1272
3	163058	1583.0	1900	2181		2112	1985	2105	2105	2105	2004	2004	2004	1865	1865	1617	1865	1805	1865	2105	2105	2105
4	163781	1760.3																				
5	163181	1762.2																				

*Bureau numbers and times are fictitious. Nos. 2 and 4 are attached to sub-unit No. 1.

In above example, No. 1 has a left hub within 70 hrs. of change
No. 3 has a clutch in the process of being changed and right hand Rotor Blades are within 70 hrs.

Timely Tips

Window Washing

When washing the windows and bubbles on H-43B's, HOK's and HUK's, always use mild soap and water--never gasoline, thinner or similar liquids as they will cause the plastic to cloud and craze. The windows should be blotted dry using a clean, damp chamois skin whenever possible. Some H-43B Maintenance personnel have found that if a chamois skin is not available, disposable cleaning cloths of non-woven fabric (FSN 7920-543-7615) can be used. Make sure that the chamois or cloth is damp to prevent building up an electrostatic charge on the plastic which will attract dust and, one other thing, mechanics wearing rings should remove them to prevent the possibility of scratching the plastic surface. *F. Starses, Analyst*

Pinpointing Oil Leaks

Looking for an easy way to pinpoint elusive oil leaks? Clean the suspected area thoroughly and then dust it with talcum powder. Start the engine and during the runup the oil leak will show up in the powder and indicate the source. Dye check developer may also be used if the talcum is not available. *J. D. Elliott, Service Rep.*

H-43B Flap Protractor

When using the H-43B Flap Protractor - Once the first blade of a pair is rigged, loosen only the blade leading edge block and the flap trailing edge block to remove the tool. Adjust the mating blade so that the protractor may be installed without binding or changing any of the protractor settings. This procedure will insure that both blades are rigged as nearly alike as possible. *N. E. Warner, Analyst*

Azimuth Bar Adjustment

Some mechs have been trying to adjust the azimuth bar flatness on the H-43B, HOK/HUK without first removing the friction bell housing over the stick socket on the co-pilot's side of the cockpit. This causes excessive aft cyclic by mispositioning the cyclic rigging jig and makes it necessary to lengthen the cyclic fore and aft rods beyond the safety holes before approaching a flat azimuth. Remember, the bell housing must be removed in order to seat the cyclic jig positively in the stick socket during all rigging operations. *W. J. Wagemaker, Analyst*

Timely Tips Sought

The "Timely Tips" appearing on this page have all been written by KAC employees. It is hoped that others, especially pilots and mechanics, will also contribute so that all of our readers will have the opportunity to benefit from their "know how." A "Tip" need not be of a technical nature, sometimes the simplest are the best and save the most time. The names and organizations of contributors will be published unless otherwise specified by the sender. Contributions should be submitted to, Kaman Rotor Tips, Field Service Dept., Kaman Aircraft Corp. Old Windsor Rd., Bloomfield, Conn.

NAVY'S OPEN SEA RESCUE SYMPOSIUM

KRT OCT. 62

The Boom . . .

The Net . . .

The Ramp . . .

Ten "rescuees" were plucked from the water by the HU2K-1 SEASPRITE in 4 minutes and 15 seconds during a demonstration at the Navy's recent third annual Open Sea Rescue Symposium. As the last of the swimmers was taken aboard, a spokesman for Kaman Aircraft pointed out that in the case of an actual rescue, the helicopter with the 13 men aboard (pilot, co-pilot, rescue crewman and "rescuees") would then have a range of well over 100 nautical miles.

The demonstration was just one of many viewed by the military and civilian observors attending the three-day symposium which was hosted by Kaman and held at the company's main plant in Bloomfield, Conn. The program included the demonstration of new equipment and techniques at nearby Lake Congamond and presentation of technical papers by Navy, Coast Guard and Industry representatives.

Approximately 100 officers and civilian representatives of the U.S. Navy, Coast Guard, Air Force and Army attended as well as representatives from the Canadian Armed Services and members of the aviation industry. The officers represented a cross section of operational forces and command levels.

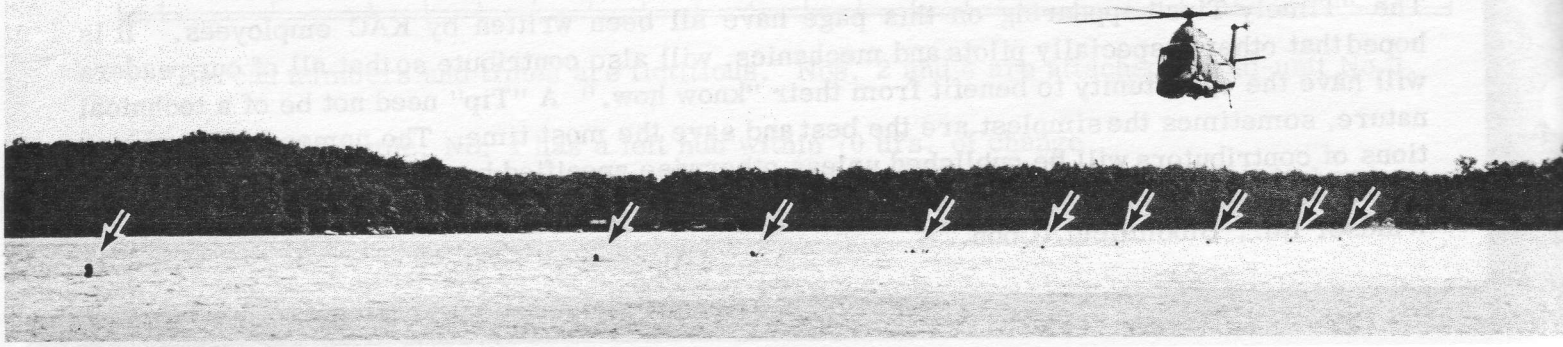
The equipment shown for the first time by Kaman Aircraft included a rescue ramp used in water alighting rescue operations, a rescue boom which makes it faster and easier for a pilot to position the rescue hoist cable, and a five-foot net designed so unconscious rescuees can be "ladled" out of the water.

The hoist on the HU2K-1, which fleet personnel will use, has been positioned so that pilot has it and the rescuee within his view during the rescue operation. The three advanced devices shown by KAC have been designed to speed up the work of rescue even further and one or more may become standard equipment at some later date.

The use of the net makes possible the rescue of an immobile or unconscious swimmer without the helicopter crewman being subjected to the hazard of entering the water to assist. The pilot, able to see both the net and the rescuee at the same time, can literally scoop him out of the water with one pass. The ramp is used if it becomes necessary for the HU2K-1 to alight on the water to make the rescue. The boom removes the communications problem between the pilot and crewman which existed in the past as the rescuee was hoisted to safety. When the survivor is lifted in the net or seat and reaches the end of the boom opposite the helicopter, a microswitch is tripped and the man on the hoist is automatically brought to the helicopter hatch by the retraction of the boom. The boom may also be operated by the crewman.

The designation of the SEASPRITE, a turbine-powered utility rescue helicopter, was recently changed by the Navy to UH-2A from HU2K. The high-speed helicopter is in volume production with deliveries to the fleet anticipated before the first of the year. The rescue equipment demonstrated was developed both by Kaman under parallel Navy contract and Kaman's corporately-funded programs.K

GUARDIAN ANGEL—SEASPRITE hovers over swimmers before making pickups in exceptionally short space of time. Nine of the 10 "rescuees" are shown in photo just before operation began. The pickups were made using standard rescue gear already in service.



Mountain Side, Landing Light Rescue

Darkness was fast approaching, the wind was blowing in fitful gusts and the altimeter in the H-43B read 11,600 feet. Below, held in place on the 70-degree slope of Mt. Ritter by his companions, was a seriously injured climber. His finger had been ripped off in the fall which also left him with internal injuries, a broken leg and slashed foot. He was in shock and suffering from a loss of blood.

This was the challenging situation facing Capt. Frederick M. (Marty) Donohue and his co-pilot, 1st Lt. George L. Kekuna of the 3635th Flying Training Wing, Stead AFB, Nev. Also to be contended with was the fact it was impossible to use the rescue hoist due to the serious nature of the climber's injuries and the crew chief of the helicopter, SSgt. Charles E. Baker, was no longer aboard, having been left behind at the base camp. Fuel was getting low.

There was no hesitancy on the part of the two pilots in accepting the challenge, however—the man below was in desperate need of medical assistance and probably would not survive the night without it. Using landing and flood lights, Captain Donohue eased the HUSKIE to within a foot of the ground (a landing was impossible) and in as close to the slope as he could. Lieutenant Kekuna watched the tips of the rotor blades, calling a warning when they got too close to the cliff looming above. At times the blades were missing the rocky surface by 24 inches or less as time after time the hovering aircraft was blown out of position by the gusting winds. Finally, after 30 trying minutes, the injured man's companions were able to lift him aboard and the chopper made its cautious way from the precarious spot.

Despite his concern with the fuel state, Captain Donohue took one look at the climber's injuries and decided to fly him directly to the hospital rather than to the ambulance at the base camp.

As the helicopter safely touched down, the fuel warning light flashed on.

Fanfare At Maxwell

The mission capabilities of ARS Det. 56, EARC, should be well known, not only to military personnel at Maxwell AFB, Ala., but to civilians for many miles around thanks to the base commander, Col. William J. Wrigglesworth.

When the detachment became operational recently, the base information office sent press releases to 26 military and civilian TV, radio and newspaper agencies. A news luncheon was held by Colonel Wrigglesworth during which the H-43 and LBR concept were thoroughly discussed with the approximately 20 newsmen attending. The detachment, commanded by Capt. Donald W. Lajeunesse, held open house afterward and a short movie of the H-43B's performance and flying characteristics was shown. Included were shots of the helicopter in action at a C-123 crash. At the conclusion, the group was shown through the operations portion of the detachment. Then came an actual scramble and intercept after a pre-planned "emergency" was received over the crash phone. The newsmen were then given a chance to look the HUSKIE over, observe the hoist operation and ask questions.

Periodically Colonel Wrigglesworth entertains personnel from the various news media and officially introduces new units assigned to Maxwell.

Stead HUSKIE Tops 1,000 Hours

1000TH HOUR—Shown after the record-setting flight are, l to r, 1st Lt. David P. Clark, co-pilot; Capt. John A. Link, pilot and SSgt. Joseph R. Hatfield, crew chief. (USAF photo)

To an H-43B at Stead AFB, Nev., has fallen the distinction of being the first HUSKIE in the Air Force inventory to log 1,000 hours. At the controls when the thousand-hour mark was reached were Capt. John A. Link, pilot; and 1st Lt. David P. Clark, co-pilot, of the 3635th Flying Training Wing. Crew chief was SSgt. Joseph R. Hatfield. Besides being the pilot of the first H-43B to reach this mark, Captain Link, according to available records, also has the distinction of being the Air Force pilot with the most total flying hours in the HUSKIE. Captain Link has a total of 800 hours H-43B time and 3500 hours total flying time--3000 of this in helicopters.

The H-43B which set the mark is usually referred to as "850" and has also been dubbed "Old Faithful" of the turbine-powered choppers by Steadmen. The helicopter has participated in the majority of Stead's approximately 25 rescue missions carried out during the last two years and helped train 327 helicopter pilots, 323 firemen and many Allied students who have graduated from the Stead school.

Thule HUSKIES In Action

THULE AIR BASE, Greenland - Det. 1, 54th ARS, first of the overseas units to receive H-43B's, has already put the HUSKIE's to good use. Soon after the first helicopter was assembled, its crew joined in an hour and forty minute search for a missing Coast Guardsman later located by ground personnel. During this time the crew of the H-43B, Capt. E. L. Neville, pilot; Capt. W. J. Murphy, co-pilot; Sgts. F. A. Grooms and R. H. Cain, rescue survival technicians; A2C R. S. Puro, medical technician and A2C W. H. Crosby, crew chief, had ample time to study the aircraft's reaction to "heavy weather"—winds were gusting up to 50 knots during the entire search.

Shortly afterward, the rescue unit was called upon again when a boat containing the Danish inspector for northern Greenland and a party of seven drifted to an isolated shore after an engine failure. An H-43B piloted by Captain Murphy and Capt. R. L. Foster made the 85-mile trip, picked them up and flew them to safety.

Q's AND A's

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

Q. (Applies HOK-1, HUK-1, H-43B) WHAT IS THE RECOMMENDED PROCEDURE FOR REPLACING THE BEARING, P/N K101032-11, IN THE ROTOR BLADE FLAP FITTING?

A. The instructions in the Maintenance Handbook should be followed regarding flap support during the bearing removal and installation. In addition, it is recommended that the old bearing be pressed out toward the inboard side of the fitting and the new bearing be installed from the same (inboard) side. This procedure does not disturb the original staking on the outboard side of the fitting and consequently affords the best possible retention of the K101032-11 bearing against centrifugal force. After installation in this manner, staking will still be required on both sides as described in the manual. - N. E. W.

Q. (Applies HOK-1, HUK-1, H-43B) WHAT KIND OF WEATHER PROTECTION IS RECOMMENDED FOR ROTOR BLADE FINISHES?

A. The Kaman Aircraft Corporation uses a product called "Wing Wax," Grade F. R.; but any good paste wax is acceptable. "Wing Wax" has no Federal Stock Number assigned, but suitable paste wax may be procured under FSN R7930-266-7125-G600. - N. E. W.

Q. (Applies H-43B, HOK-1, HUK-1) CAN A KINKED OR LOOPED OIL LINE CAUSE OIL PRESSURE FLUCTUATION?

A. Yes. Lubrication oil in motion becomes aeriated to some degree. If an oil line becomes kinked or looped in such a manner that the full flow of oil in that line is interrupted, an air bubble will form at the kink or at the top of the loop. This bubble will continue to grow until it becomes large enough to be picked up by the oil. The bubble being pushed along by the oil passes the oil pressure transmitter and is indicated by a drop in oil pressure or fluctuation. This type fluctuation may appear intermittantly or at regular intervals. Replacement of a kinked line or re-routing a looped line will generally solve the problem. - C. W. J.

Q. (Applies H-43B) WHAT IS THE PROPER ACCELERATION TIME FROM ZERO TO GROUND IDLE (0 TO 42 $\pm$ 1%)?

A. There is no set time value for engine acceleration from zero to ground idle since there are several variables which could influence this time. Among them are: (1) The condition of the power unit or battery which influences the rate of starter motor acceleration. (2) Condition of the igniter plugs. (3) Temperature——cold engines generally take longer periods of time. It was found during testing at KAC that 15 to 20 seconds was the nominal range on factory aircraft. Since this is the case, the average time from zero to ground idle will fall approximately in the 15 to 25-second range. We do not feel that if the engine were to take 26 to 27 seconds, however, there should be any cause for concern if inspection reveals no malfuction exists. - A. A. W.

Q. (Applies H-43B) SHOULD THE FIBER GLASS PRESSURE TANK ON THE FIRE SUPPRESSION KIT BE PROOF-TESTED BY MAINTENANCE PERSONNEL AFTER BEING RECEIVED FROM SUPPLY?

A. No, the bottles should not be proof-tested by maintenance personnel. Over-pressurization is detrimental to endurance life and should be avoided. - W. J. R.

Q. (Applies H-43B) WHAT PROCEDURE SHOULD BE USED IN DISSASSEMBLING THE GD220-2 OIL PUMP?

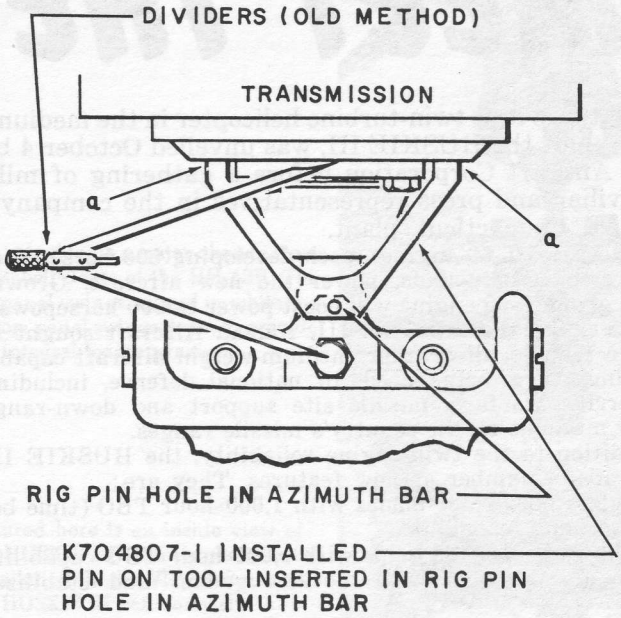
A. Remove the filter assembly from the body of the pump in the normal manner. To disassemble the filter element from the cap, use a one-inch wrench to hold the cap hex, insert a 1/4" Allen Wrench into the Allen wrenching head located in the center of the cap. Turn the wrench clockwise to disassemble the filter elements as they have left-hand threads. After re-assembly, check to make sure the safety wiring is facing in the correct direction on the Allen head to prevent it from loosening. The torque value of the filter to the cap assembly is 90 to 120 pound-inches. - C.W.J.

Q. (Applies HOK-1, HUK-1, H-43B) WHAT IS A CAUSE FOR THE ROTOR BLADE LAG PINS FAILING TO SEAT PROPERLY EVEN THOUGH THEY ARE CORRECTLY TORQUED AND ARE DIMINSIONALLY CORRECT?

A. Improper installation of the lag pin washer, P/N K310057-15, can cause this condition. If this washer is erroneously installed beneath the rotor blade grip it raises the grip in the hub which, in turn, raises the taper bore and lag pin. The washer should be installed on top of the rotor blade grip where it is used to prevent scoring of the lag pin liner flange and the hub. The lower flange on the grip is bronze and does not require a washer. Correct installation procedures are outlined in T.O. 1H43B-2 for the H-43B helicopter and in AN260HBA-2 for the HOK-1 and HUK-1 helicopters. - N.E.W.

Q. (Applies HOK-1, HUK-1, H-43B) WHAT IS THE ONLY CORRECT MAINTENANCE PERFORMED ON ANY HELICOPTER?

A. That which has been performed according to the HANDBOOK OF MAINTENANCE INSTRUCTIONS. - C.W.J.



Q. (Applies H-43B) WHY ARE THE TWO POINTS ON TOP OF THE "V" ON THE NEW COLLECTIVE HEIGHT RIGGING TOOL (P/N K704807-1) SO FAR APART AND WHAT IS THE PROPER PROCEDURE FOR USING THIS TOOL?

A. This gage will provide right height identical to the divider method but removes the chance of misrig which has occurred when dividers were used. The two points on top of the "V" contact the proper surface on the transmission (see "a" in drawing) when the pin on the tool is inserted in the azimuth bar rig hole. - W.J.W.

Q. (Applies H-43B) SMALL CRAZE MARKS, OR TINY CRACKS SOMETIME APPEAR IN THE RESIN-RICH AREAS ON THE FIBER GLASS PRESSURE TANK OF THE FIRE SUPPRESSION KIT. ARE THESE CAUSE FOR RETIRING THE TANK FROM SERVICE?

A. No, they are not. Such marks or cracks should not be a cause for alarm since rigid, unsupported resin will craze when exposed to to strains of bottle growth when the bottle is pressurized. However, during the inspection of the bottle surface, it should be checked carefully for evidences of mishandling. - W.J.R.

KAMAN SERVICE ENGINEERING SECTION—*G. D. Eveland, Supervisor, Service Engineering, E. J. Polaski, G. S. Gart, Asst. Supervisors; E. L. White, A. Savard, G. M. Legault, Group Leaders.*
ANALYSTS—*R. A. Berg, P. M. Cummings, M. T. Fiaschetti, P. A. Greco, E. Hermann, C. W. Jenkins, D. W. MacDonald, J. McMahon, W. J. Rudershausen, F. E. Starses, W. J. Wagemaker, N. E. Warner, A. A. Werkheiser, M. Whitmore, W. H. Zarling, R. W. Olsen.*

MEET THE HUSKIE III

The nation's first twin-turbine helicopter in the medium-weight range, the HUSKIE III, was unveiled October 4 by Kaman Aircraft Corporation before a gathering of military, civilian and press representatives in the company's Bloomfield, Connecticut, plant.

Two Boeing YT-60 engines, each developing 500 horsepower and weighing 240 pounds, power the new aircraft. Growth versions of the T-60 engine will boost power to 600 horsepower.

In developing the HUSKIE III, Kaman Aircraft sought to produce a reliable, all-weather, medium-weight aircraft capable of meeting the growing needs of national defense, including anti-guerrilla warfare, missile site support and down-range recovery missions on the country's missile ranges.

In addition to the twin-engine reliability, the HUSKIE III incorporates a number of new features. They are:

- All glass fiber rotor blades with 1,000-hour TBO (time between overhaul) capability
- New hubs and blade grips with 1,000-hour TBO capability
- A single tailboom with movable rudder and stabilizer surfaces
- A dual instrument panel which, with twin engine reliability, provides IFR (instrument flight rules) operation
- Longer, higher aft cabin seating 12 troops or six VIP's
- Aft cabin passenger windows
- An integral rear loading ramp equipped with passenger stairs
- Increased fuel capacity
- A chin pod housing electronic gear

The HUSKIE III is a company funded growth development of the U. S. Air Force HH-43B HUSKIE utility-rescue helicopter. Previously developed dynamic components, many of them operationally proven in service on the HH-43B, have been utilized in the design of the HUSKIE III.

Substantial increases in high altitude performance, payload capacity and range have been designed into the HUSKIE III to meet the requirements of all these missions.

The HUSKIE III has an empty weight of 5,232 pounds and a gross weight of 10,500 pounds providing a useful load of 5,268 pounds. With 320 gallons of internal fuel the HUSKIE III has a range of 340 nautical miles. The addition of two 150-gallon bladder-type auxiliary fuel tanks provides a ferry range of 715 nautical miles.

The Kaman HUSKIE III with its twin-turbine engine locations clearly visible is pictured above in flight. The movable vertical and horizontal stabilizer surfaces are also visible.

In its role as a cargo transport the HUSKIE III has a large, rectangular cabin 10 feet long, five feet wide and four and one-half feet high. Internal cargo capacity is 3,800 pounds at a 100 nautical mile radius of action. An external cargo hook has a capacity of 3,000 pounds.

Major elements of the fuselage are identical to the HH-43B and will be fabricated with existing tooling. The HH-43B transmission has been utilized with only minor modifications to provide for the second engine drive shaft and a relocated generator take-off drive. The transmission is continuous rated at 1,100 horsepower with a five minute rating of 1,200 hp. and has initial TBO of 150 flight hours. The HUSKIE III has a basic weight, with adverse weather capability of 5,295 pounds or, with all-weather capability, 5,570 pounds.

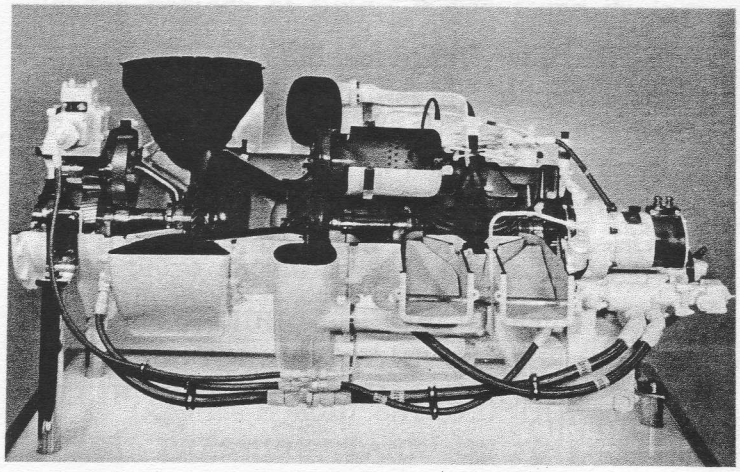
The Boeing T-60-10, which is scheduled to become the standard engine for the Kaman HUSKIE III, has a take-off rating of 600 shaft horsepower, a specific fuel consumption of .65 pounds per shaft horsepower hour, and a weight of 240 pounds. The 50-hour preliminary flight rating test for this engine is scheduled this year. Fully qualified engines will be available for production delivery by December, 1963.

The T-60 turboshaft power plant is a two-shaft engine utilizing single-stage components throughout. The engine's 6:1 pressure ratio represents an outstanding state-of-the-art development. It is achieved through a double-sided single-stage compressor.

The engine also employs the Boeing developed hydrodynamic or slipper bearing which supports the high speed rotors, turning up to 45,000 rpm, on a cushion of oil. These bearings, suspended in an oil film, give the engine an important vibration damping characteristic not found in the more common rolling contact type of bearing. Besides soaking up destructive imbalances, the hydrodynamic bearings also allow rotor components to be replaced and even interchanged in the field without balancing.

The first model of the T-60 successfully completed its initial 50-hour preliminary flight rating test in mid 1960. This was the first turboshaft in the 350 to 600 horsepower class to achieve this rating.

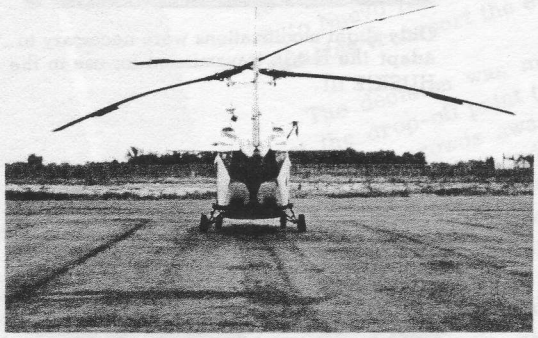
Since that time development work on this engine has yielded a 0.40 weight-to-power ratio and advanced state-of-the-art performance while retaining the T-60's simple design.



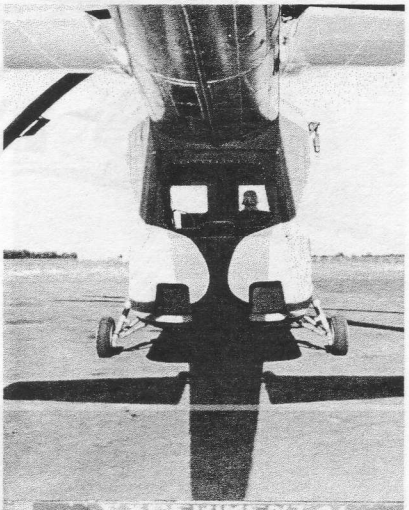
Cutaway view of the T-60 gas turbine, power plant for the Kaman HUSKIE III shows the engine's internal operation. At right is the double entry single-stage centrifugal compressor which compresses air to 6.2 times its original pressure. This is the highest known performance for an operating single stage compressor. Above the compressor, can be seen one of the two combustion chambers. Production version of the 240 pound T-60 will be rated at 600 horsepower. In the center of the engine is a single-stage radial inflow compressor-drive turbine. At left, coupled to reduction gearing, is a single-stage axial power turbine of this two-shaft engine.

The front view clearly shows the forward engine installation, electronics chin pod and rescue hoist.

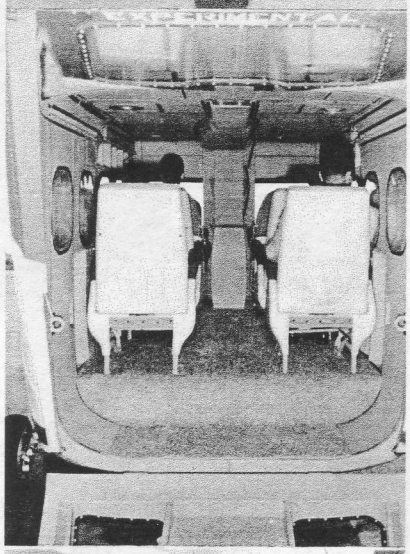
Another over-all view.



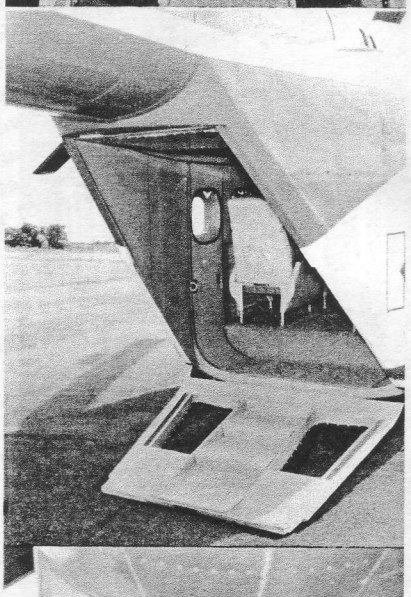
This rear view picture shows the HUSKIE III tail assembly. The rotor blades are of all glass fiber construction.



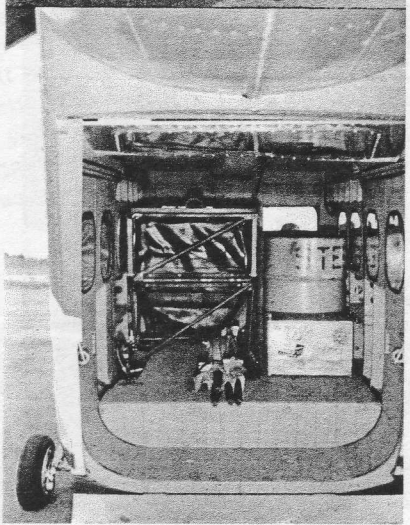
The rear door is a major change from clamshell doors of the HH-43B. The top panel swings up and in while the bottom panel swings down to provide the integral loading ramp.



Pictured here is an inside view of the HUSKIE III with its plush seat installation. In the VIP configuration the HUSKIE III can carry six passengers plus pilot and co-pilot.

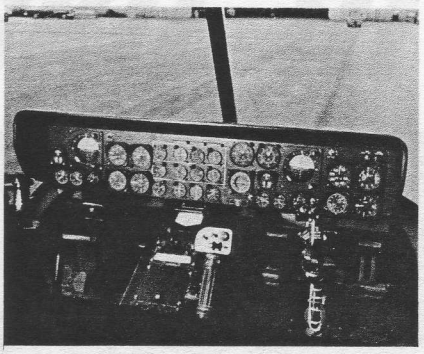


The rear ramp has integral steps for passenger loading.

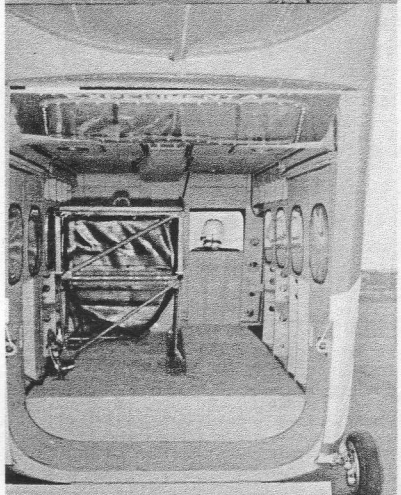


The rear cabin which measures 10 feet long, five feet wide and four and one-half feet high, has ample room for cargo. Up to 3,800 pounds can be carried internally.

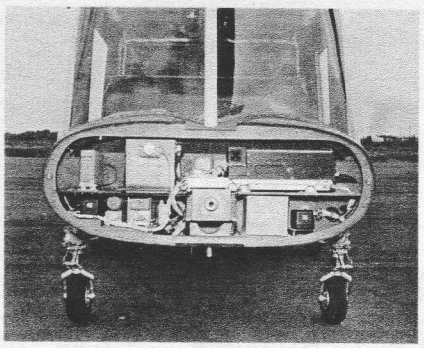
The rescue hoist is located on the right side, immediately behind the pilot. The winch can be operated by pilot or crewman.



The dual instrument panel and electronic gear provide full IFR (instrument flight rules) capability.

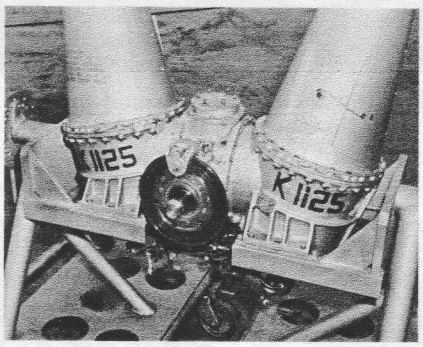


Two 150-gallon auxiliary fuel cells of the type shown can be installed in the cabin for increased range.

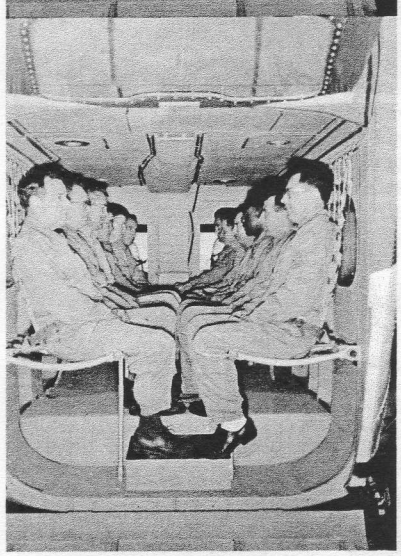


The electronics compartment is located in the helicopter chin pod.

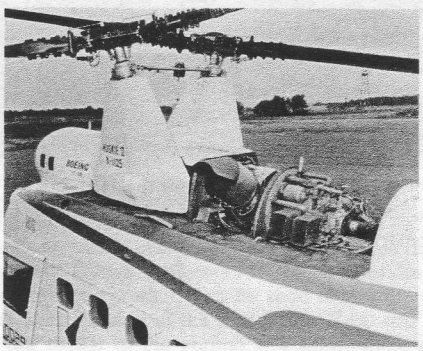
The rear cabin can readily accommodate as many as six litters.



Only slight modifications were necessary to adapt the H-43B transmission for use in the HUSKIE III.



Twelve troops can be seated comfortably in the longer, higher rear cabin.



Twin Boeing T-60-10 engines are installed forward and aft of the transmission. In this picture, the aft engine cowl was removed to show the engine detail.

REPORT *from the ready room*

RESCUE OF 78—NUEVO LAREDO, MEXICO

As a means of aiding other helicopter rescue units in their programs, Capt. Clyde W. Lemke, USAF, agreed to a Rotor Tips' request for a personal account of the mission describing the conditions encountered and the action taken. Similar accounts written by Air Force, Navy and Marine helicopter pilots will appear from time to time with this purpose in mind.

CAPT. C. W. LEMKE
Det. 36, CARC (MATS)
Laredo AFB, Texas

I was notified by Wing Operations that the Base Commander, Col. Woods W. Rogers, Jr., wished to brief me on a pending mission that would take place in Mexico. After reporting to his office, he informed me that the Mexican Consul located in Laredo, Texas, had requested assistance from our detachment. It was reported that several families had gone on an Easter Sunday picnic and were stranded approximately 15 miles northeast of Nuevo Laredo, Mexico. A heavy rainstorm the night before had trapped the families.

After the briefing was completed, diplomatic arrangements were made to fly into Mexico. With Capt. Theodore C. Vurbeff and crew members, SSgt. Bobby W. Singleton, A1C Donald D. Powell and A1C James D. Driver, I proceeded across the Rio Grande River into Mexico. Laredo tower informed us that a United States Border Patrol light aircraft was also searching in the area. The area was cut off from access by flood waters which had washed out the dirt highway, leaving many places under four to six feet of water.

After a 15-minute search we spotted the Border Patrol aircraft which had landed on a small portion of the highway that was clear of water. Huddled nearby were approximately 20 people. We landed on the highway and after he had consulted with the Border Patrol pilot, Captain Vurbeff informed me that many of the people had been without food or water for the past two days. The most pressing problem was that several babies and children were ill. The Border Patrol aircraft could not fly out any of the families because of the highway's poor condition. It was decided that women and children would be transported first from our present position to a point on the highway approximately one mile away, which was clear of water all the way in to Nuevo Laredo. Arrangements were made through Laredo Tower to have Mexican Army vehicles transport the evacuees back to town.

The decision was made to leave Airman Driver at the pick-up point, and Airman Powell at the drop-off point (with flashlights) to help load and unload people aboard the aircraft and keep the crowds away from the helicopter, with Captain Vurbeff and Sergeant Singleton assisting. Simple hand signals were used to guide the evacuees. Some of the people appeared quite apprehensive about being airlifted, while others appeared to be looking forward to the ride. However, it was a choice of reaching safety or being left behind. Being a hearty race of people they accepted the obvious — the chopper ride.

Loading and unloading was accomplished without any great hitch. Each passenger was strapped into a seat, with the exception of small children who were held in women's arms. Sergeant Singleton remained strapped in the "gunner's" belt to allow freedom of movement about the cabin. Being the father of four children, (expecting his fifth — and possibly the sixth) he was cognizant of the fears that might assail our young charges: he had each child hang on to the loose ends of the "gunner's" belt which established a psychological sense of security. Only one child cried out of the 35, and this was because she had been separated from her mother.

Other stranded people began arriving at the pick-up point; they had seen the Rescue Helicopter and quickly understood its mission. A thorough evaluation of the landing site at both points had been accomplished and the evacuation continued. No moon, darkness and no visible horizon put us into instrument condition. While I was on the gages, Captain Vurbeff kept a sharp lookout for the flashlight located at each landing point, and visually insured adequate altitude by use of the landing light.

After approximately two hours, all the people had been airlifted to the pick-up point. Our original 20 people had become, in the final count, 43 adults and 35 children.

Captain Lemke also furnishes the following specific advice for the consideration of helicopter crews who have not yet participated in a mission of this type.—Ed.

a. A good machine, well-trained crews, and high motivation are really the primary ingredients for any successful operation. Although each mission is the result of a team effort, no group can be considered a team unless each individual accepts and fulfills his responsibility toward the mission. On this particular mission, each individual assigned and attached accepted and reacted on this premise.

b. Rescue personnel should always present a calm, assuring picture. Emotionalism under these circumstances is contagious and can lead to a complete breakdown of order.

THE TEAM THAT DID THE JOB—Front row, left to right, Capt. Theodore C. Vurbeff and Capt. Clyde W. Lemke. Rear row, A1C Donald D. Powell, A1C James D. Driver and SSgt. Bobby W. Singleton. (USAF photo)

c. Whenever possible, personnel to be evacuated should be given some task or responsibility. In this way their problems become secondary and they tend to become calm and readily accept instruction. During this rescue many of the women were charged with the responsibility of a child other than their own while loading and during the flight: their concern for the child calmed them considerably and they in turn calmed the child.

d. Any mutual bond between rescue personnel and the evacuees, such as the gunner's belt used by Sergeant Singleton, produces a feeling of security and reduces apprehension.

Capt. Clyde W. Lemke, pilot, was born on 27 July, 1934, in Detroit, Mich. He was assigned to the helicopter section, now Det. 36, CARC, Laredo AFB, Texas, on 4 Jan. 1960. He has eight years of service, 3-1/2 of which have been spent in Air Rescue Service. Captain Lempke has a total of 1700 hours pilot time with 1200 logged in helicopters.

Capt. Theodore C. Vurbeff, co-pilot, was born on 24 December, 1930 and is from Syracuse, N.Y. He was assigned to the helicopter section at Laredo AFB, Texas, on 10 Feb. 1958, and is currently with Det. 36. Captain Vurbeff entered the Air Force in May 1955 and has logged 2470 pilot hours, with over 1800 hours in helicopters. During his career, he has attended three Air Force flying schools qualifying him in multi-engine aircraft, single-engine jet aircraft, and helicopters.

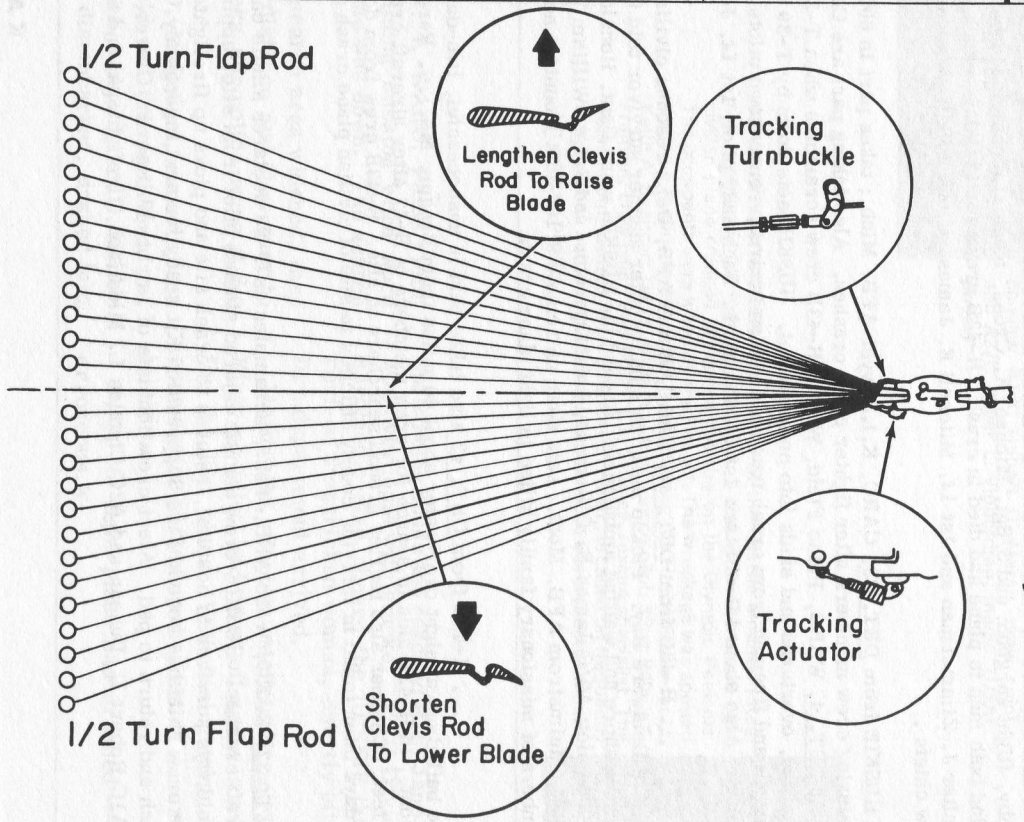
SSgt. Bobby W. Singleton, crew chief, is from Baton Rouge, La. He has served 10 years in the Air Force and has been a helicopter mechanic for the past 2-1/2 years. Sergeant Singleton recently graduated from the H-43B Mechanic School at Sheppard AFB, Texas. He is assigned to Det. 36.

A1C James D. Driver, helicopter crash-rescue man, was born in 1934 and is from North Vernon, Ind. He has 10 years of service in the crash rescue firefighting field. He attended one firefighting school and has taken several courses in fire fighting. Airman Driver is currently assigned to the Fire Department at Laredo AFB, and attached to Det. 36.

A1C Donald D. Powell, helicopter crash-rescue man, was born in 1940 and is from Parsons, Kans. He entered the Air Force in January 1958. He received all his technical and practical helicopter fire suppression training while attached to Det. 36, and is assigned to the Fire Department at Laredo AFB. K

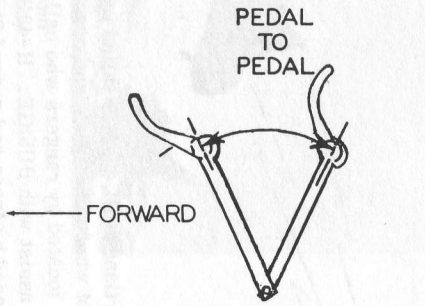
ROTOR CONE & TRACKING ADJUSTMENT CHART HOK-1/HUK-1

ADJUSTMENT			RESULT			
Location	Number of Blades Adj.	Tracking Actuator	Movement at Blade Tips	Rotor Speed % Autorotation	Flap Control Rod Clevis	Pedal to Pedal Displacement
1 Hole at Turnbuckle	1	0.01 in.	1/8 inch	N/A	N/A	N/A
1 Hole at Turnbuckle	4	0.01 in.	1/8 inch	N/A	N/A	N/A
3 Holes at Turnbuckle	1	1/32 in.	3/8 inch	N/A	N/A	N/A
13 Holes at Turnbuckle	1	0.13 in.	1-5/8 inch	N/A	1/2 turn	N/A
13 Holes at Turnbuckle	4	0.13 in.	1-5/8 inch	4-6 RPM	1/2 Turn	N/A
1/2 Turn Flap Control Rod Clevis	4	0.13 in.	1-5/8 inch	4-6 RPM	N/A	N/A
1/2 Turn Flap Control Rod Clevis	One Rotor Both Blades	0.13 in.	1-5/8 inch	N/A	N/A	2.00 inch



Desired 2200 RPM And 19 In. Hg.

By Raising Rotor Tip Path Plane Manifold Pressure INCREASES	By Raising Rotor Tip Path Plane Autorotation R. P. M. DECREASES
By Lowering Rotor Tip Path Plane Manifold Pressure DECREASES	By Lowering Rotor Tip Path Plane Autorotation R. P. M. INCREASES

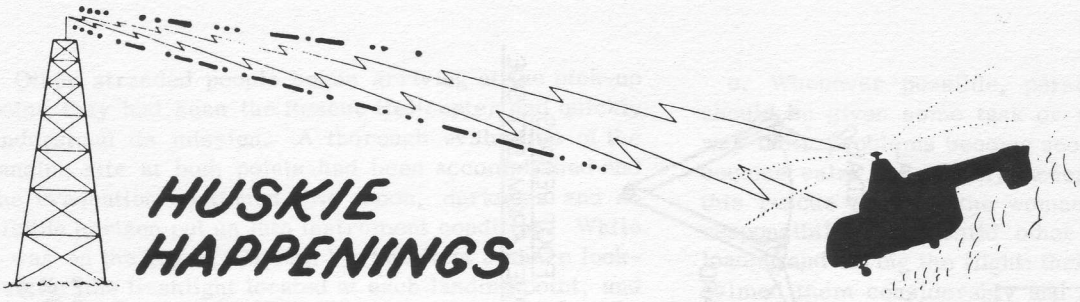


FOOT PEDALS
VIEWED FROM LEFT SIDE

RUDDER PEDAL

PERMISSIBLE LIMITATIONS (PEDAL TO PEDAL)	
In Hover	- 1/4" Rudder Displacement
In Cruise	- 1/2" Rudder Displacement at 90 Knots
In Autorotation	- 1/2" Rudder Displacement

The purpose of this chart, devised by Edward White of Service Engineering, is to show what happens when rotor cone and tracking adjustments are made. The adjustments appear to the left of the center line of the rotor hub; the results to the right. Since all blades do not have the same aerodynamic characteristics, the results of the adjustments are approximate. Maintenance personnel should continue to use the applicable sections of H. M. I. AN 01-260HBA-2 when tracking blades.



HUSKIE HAPPENINGS

...H-43B from ARS DET. 35, CARC, Kirtland AFB, N. M.; called upon to evacuate Robert Spaulding, Los Alamos scientist-pilot, from rugged country near spot where his light plane crashed three days before at 11,000 feet on Truchas Peak. Spaulding, seriously injured in crash, located by rangers who called for air evacuation. Due to high altitude and turbulent air in mountain area, ARS asked to assist with HUSKIE. H-43B piloted by Capt. R. K. Baliles proceeds to rescue site, a small, uneven clearing surrounded by trees and rugged terrain. Despite severe buffeting by high winds and the 10,200-foot altitude, Captain Baliles and his co-pilot, Capt. Charles E. McClusky, land safely and Dr. Spaulding placed aboard helicopter. Takeoff made under same hazardous conditions and scientist flown directly to hospital. Also aboard H-43B are S/Sgt. Douglas W. Drier, crew chief; and Airman Baudinio Baca, rescue technician.

...Mother and three-year-old son, lost for 22 hours in rugged wilderness of Cascade Mountains, rescued by H-43B from DET. 9, WARC, Portland International Airport. Helicopter, piloted by Capt. Arthur J. Bennett, spots pair perched on cliff almost four hours after craft enters air-ground search. Operating at 6,000-foot level, in 30 to 40-knot winds, Captain Bennett manuevers helicopter between trees and rests forward wheels on side of canyon. Al Combs, Mountain Rescue Council search coordinator, leaps from chopper and assists mother and child aboard as pilot maintains precarious position. Also aboard HUSKIE are 1st Lt. Donald F. Donk, co-pilot; S/Sgt. Franklin S. Farmer, fireman; S/Sgt. R. L. Grigsby, medic.

... 18-year-old exchange student from Paraguay, seriously injured in fall while mountain climbing, rescued by H-43B from DET. 5, WARC, McChord AFB, Wash. Pickup made with hoist due to rugged nature of terrain. Oxygen administered by doctor from Mountain Rescue Council and A1/C Karl F. Aldridge, para-medic. Also aboard HUSKIE are 1st Lt. James L. Cantey, pilot; 1st Lt. William A. Luther, co-pilot; and S/Sgt. Ronald A. Warren, crew chief. Second rescue for Lieutenant Cantey in three days. The first involved the evacuation of an injured airman from a radar site to Madigan Hospital at Ft. Lewis .

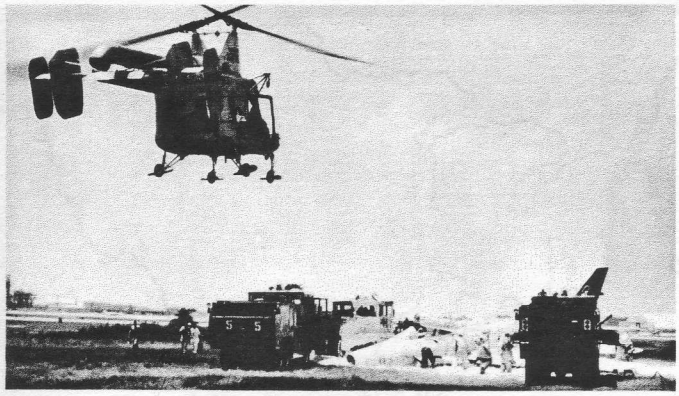
... Crew of H-43B from DET. 42, EARC, Dow AFB, Me.; spots wreckage of Cessna 180 float plane, object of extensive two-day search. Area had been covered by fog and low clouds during first day of search. Aircraft spotted atop 1100-foot Waldo Mountain with landing made impossible by large trees and steep, rocky terrain. Capt. William Hanby, flight surgeon; and S/Sgt. Michael A. Cross, medical technician; lowered by hoist to check for possible survivors, find both men in plane had died in crash. H-43B crews for two-day search included Capt. Glenn M. Marks, 1st Lt. Walter J. Zimmerman and 1st Lt. Mitchell E. James, pilots; S/Sgt. Weldon E. Cobb and A2/C Charles E. Fettinger, crew chiefs .

... Crew of HUSKIE from DET. 23, CARC, K.I.Sawyer AFB, Mich.; takes part in 600-square-mile search of Lake Superior for two missing crew members after fighter plane crashes. Also taking part are Coast Guard, State Police and private boats .... At DET. 4, WARC, Paine Field, Wash.; H-43B crew scrambles when T-39 declares emergency. Aircraft overshoots runway, overturns and skids into embankment. HUSKIE sets down by T-39 and lets firemen out. S/Sgt. L. G. Miller, fireman; and fireman from crash truck which also arrived, remove two pilots and seriously injured survivor flown to hospital. Also aboard H-43B are 1st Lt. Ronald L. Bachman, pilot; 1st Lt. Jerry D. Stroh, co-pilot; A2/C L. E. Mercer, fireman.

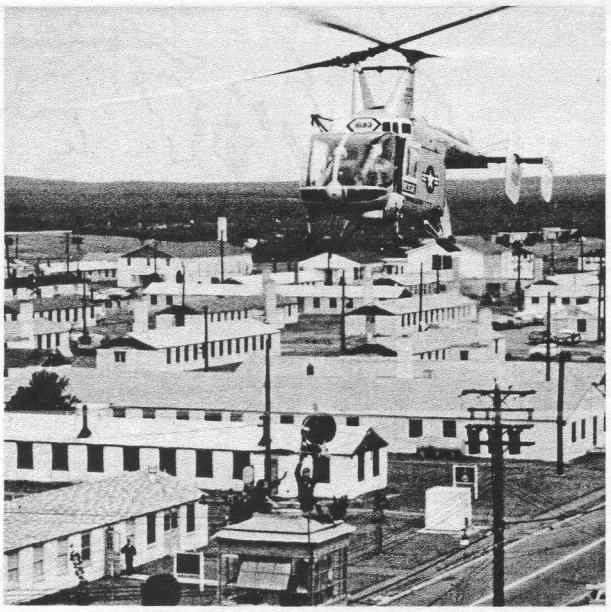
... H-43B from DET. 48, EARC, Dover AFB, Del.; rescues civilian whose 14-foot boat sank after being swamped in Delaware Bay. Pickup made 20 minutes after another survivor told Coast Guard of mishap. Both survivors then flown to shore and waiting ambulance. Aboard the HUSKIE were Capt. Ronald L. Ingraham, pilot; 1st Lt. Frank W. Larson, co-pilot; A2/C James E. O'Gorman, hoist Operator; and S/Sgt. William Terry, observer.... H-43B from DET. 7, WARC, Malmstrom AFB, Mont.; sets down on remote 9,100-foot mountain northwest of Helena to recover bodies of four members of missionary family killed in light plane crash.

... H-43B from DET. 42 also takes part in unsuccessful, two-day search with Navy and Coast Guard for pilot who bailed out at night over water about 60 miles from Bangor, Me..... Personnel from DET. 7, WARC, Malstrom AFB, Mont., in H-43B aids in search for crew members of B-47 after aircraft crashes into side of Emigrant Mountain at 8,500 feet. Chopper also ferries ground searchers to site. H-43B crew from detachment called out on another mission few days later to aid in ferrying county officials to site of civilian plane crash on mountain called the China Wall .

...H-43B from DET. 32, CARC, Webb AFB, Tex., scrambles as T-38 declares single engine emergency, lands just a second after aircraft crashes. HUSKIE crew assists injured student pilot from site, applies foam to smoking crash area, gives first aid, flys survivor to hospital, returns to crash site and picks up firefighter crew members, returns to alert pad where crew chief has second Fire Suppression Kit ready for next emergency. Eleven minutes elapse between time of crash and return to pad. Alert crew consists of 1st Lt. William F. Glover, Jr., pilot; 1st Lt. Keith H. Ricks, co-pilot; A1C Robert L. Duncan and A2C Charles L. Middleton, firefighters; and SSgt. Morris L. Mixon, crew chief.



ARS HELICOPTER AT WORK—An H-43B from Det. 59, Andrews AFB, Md., was flying locally when this F-100 crashed on takeoff, skidded to a stop just off the runway and burst into flames. The pilot evacuated the aircraft and ran to avoid the possible explosion. Meanwhile, the H-43B picked up the Fire Suppression Kit and arrived at the scene. Firemen from the helicopter and crash trucks joined in extinguishing the fire. Aboard the HUSKIE were 1st Lt. Quinten F. Staudt, Jr., pilot; Capt. Ronald L. Haglund, co-pilot; S/Sgt. Dallas W. Grim and A1/C Lloyd R. Pearce, firemen. (USAF photo)



AERIAL DELIVERY—Saving time and expense involved in using crane, H-43B piloted by Lt. Frank Chase, Det. 46, EARC, Suffolk County AFB, N.Y. lowers Radar Antenna to top of 60-foot tower. (USAF photo)

HAPPY WITH RESCUE SERVICE—Capt. James Jasper, smiles broadly as he leaves H-43B from Det. 4, Paine Field, Wash.; which picked him up after he ejected from an F-102 and landed in heavily wooded area 73 miles from the base. The pilot of the helicopter, 1st Lt. Ronald L. Bachman, maneuvered the H-43B in between 150 to 200-foot trees and hovered 50 to 75 feet above a small clearing to make a hoist pickup. The entire mission, from notification to return to base, took 2:05 hours. Also aboard the HUSKIE were 1st Lt. Jerry D. Stroh, co-pilot; A1/C Hubert O. Marsh, crew chief; and A2/C Roger L. Vipperman, medic. (USAF photo)

CRASH INVESTIGATION—A member of the Seattle Mountain Rescue organization is lowered from Det. 5 H-43B to site where light civilian plane crashed in rugged country on the Olympic Penisula. The occupants were killed by the impact. The wreckage was spotted during a routine forest patrol flight. Piloting the HUSKIE was 1st Lt. Keith A. Spencer; 1st Lt. William Luther was co-pilot; SSgt. Wilbur T. Franklin, crew chief; and MSgt. I.G. Seckley, rescue specialist. The detachment, located at McChord AFB, Wash,; is called on frequently to aid civilian authorities in search and rescue work. (Seattle Mountain Rescue photo)

Quick Action

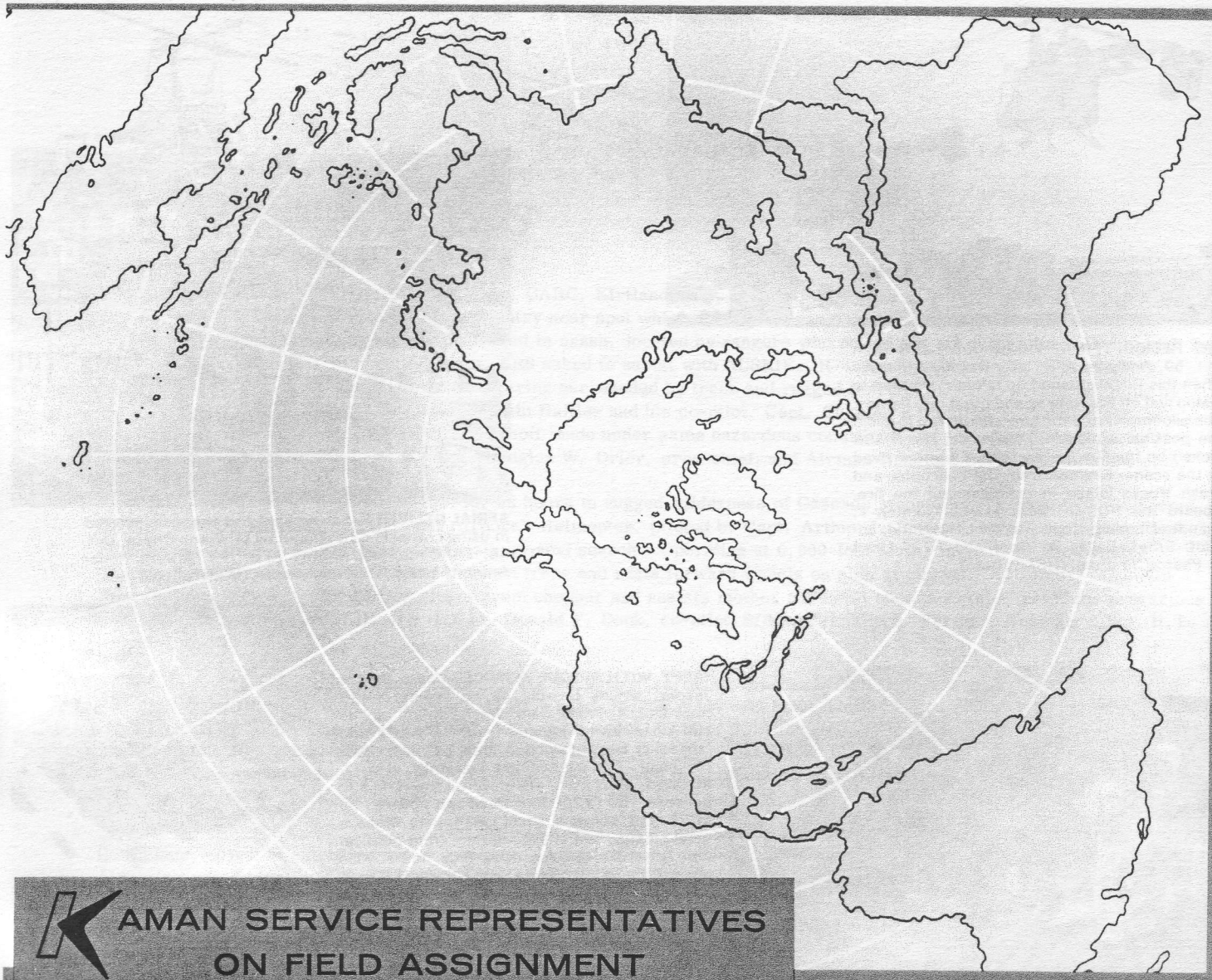
The H-43B crew from Det. 4, WARC, Paine Field, Wash.; was on a routine training mission when word was received that a light plane was down. The search began!

A short time later, as the search area widened, they saw a burning house in the distance and flew over to investigate. Neither firetrucks nor police were at the scene.

The pilot, Capt. Robert D. McDougal, reported the fire's location to Paine Field and then set down in a church parking lot. Two firemen, S/Sgt. Larry G. Miller and A2/C Larry E. Mercer, disembarked, dashed into the burning house and rescued Mrs. Jane Moore, 57, who was overcome with smoke. A2/C David E. Thayer, an aeromedic also aboard the HUSKIE, then took over and revived the stricken woman. Shortly afterward the local fire department arrived.

Meanwhile, Captain McDougal and 1st Lt. Karl G. King, co-pilot; had taken off again in a fruitless search for the lost plane. With fuel getting low, they landed once again, picked up the rest of the crew and returned to base.

P. S. No light plane had crashed — the report was erroneous.K



KAMAN SERVICE REPRESENTATIVES ON FIELD ASSIGNMENT

WILLIAM C. BARR
Cannon AFB, N. M.
Reese AFB, Texas
Sheppard AFB, Texas
Vance AFB, Okla.
Webb AFB, Texas
Kirtland AFB, N. M.
Briggs AFB, Texas

R. C. BOYD
Charleston AFB, S. C.
Myrtle Beach AFB, S. C.
Seymour Johnson AFB, N. C.

JOHN D. ELLIOTT
Kingsley Field, Ore.
McChord AFB, Wash.
Paine Field, Wash.
Portland Int'l Airport, Ore.

CLINTON G. HARGROVE
Stead AFB, Nev.

DARRELL HEICK
Duluth AFB, Minn.
Grand Forks AFB, N. D.
Minot AFB, N. D.

HOMER HELM
NAAS Ream Field, Calif.

GAROLD W. HINES
Davis-Monthan AFB, Ariz.
George AFB, Calif.
Luke AFB, Ariz.
Nellis AFB, Nev.
Williams AFB, Ariz.

JOSEPH T. JONES
Edwards AFB, Calif.
NAS, Corpus Christi, Texas

JACK L. KING
DAVID M. RUSH
STANLEY M. BALCEZAK
EDWARD F. NOE
DONALD LOCKRIDGE
RICHARD FAIN
NATC, Patuxent River, Md.

ROBERT KRANS
NAS Lakehurst, N. J.

JOHN R. LACOUTURE
O&R, NAS North Island, Calif.
Midway Island
NAS Barbers Pt., Hawaii
VMO-6 Camp Pendleton, Calif.

ROBERT LAMBERT
Brookley AFB, Ala.
Craig AFB, Ala.
Moody AFB, Ga.
Maxwell AFB, Ala.

THOMAS C. LEONARD
Dow AFB, Maine
Loring AFB, Maine
Pease AFB, N. H.
Westover AFB, Mass.

BILL MAGNAN
NS, Mayport, Fla.
NAS Cecil Field, Fla.
O&R, NAS Jacksonville, Fla.

DOMINIC L. RAMONDETTA
England AFB, La.
James Connally AFB, Texas
Laredo AFB, Texas
Perrin AFB, Texas
Randolph AFB, Texas
Laughlin AFB, Texas

RICHARD C. REYNOLDS
Burma

RAY G. RUSSELL
VMO-1 MCAF Jacksonville, N. C.

JACK E. SMITH
Thailand

DONALD TANCREDI
Okinawa

HENRY J. TANZER
NAS Atsugi, Japan
NAS Agana, Guam
NAS Cubi Point P.I.
NAS Sangley Pt. P.I.
Shin Meiwa Ind. Co., Ltd.
Toyonaka City, Japan

TERRELL C. TURNER
Fairchild AFB, Wash.
Glasgow AFB, Mont.
Malmstrom AFB, Mont.

BILL C. WELDEN
K. I. Sawyer AFB, Mich.
Kincheloe AFB, Mich.
Selfridge AFB, Mich.
Wurtsmith AFB, Mich.

ROBERT I. WILSON
Dover AFB, Del.
Griffiss AFB, N. Y.
Suffolk County AFB, N. Y.
Andrews AFB, Md.

CUSTOMER OPERATIONS SECTION

R. L. BASSETT, Supervisor; W. G. WELLS. Asst. Supervisor, Field Service Representatives.
R. W. SPEAR, Asst. Supervisor, Training