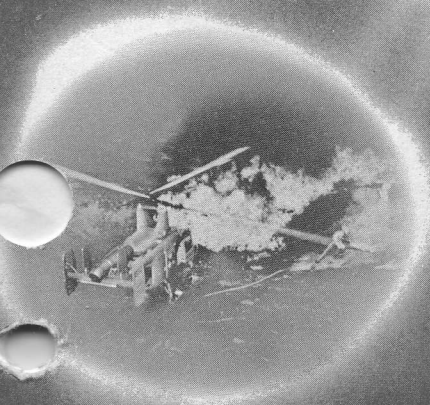




# *Rotor Tips*

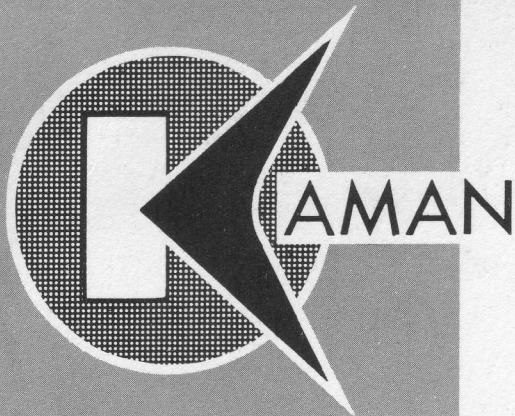
ISSUE NO. 2

MAY 1960



THE KAMAN AIRCRAFT CORPORATION  
PIONEERS IN TURBINE POWERED HELICOPTERS





# Rotor Tips

MAY, 1960

PRESIDENT — GENERAL MANAGER  
Charles H. Kaman

SENIOR VICE PRESIDENT —  
ASS'T. GENERAL MANAGER  
Edward J. Odum

ASS'T. VICE PRESIDENT —  
FIELD SERVICE MANAGER  
C. L. Morris

SUPERVISOR OF SERVICE PUBLICATIONS  
F. G. Weber

EDITOR  
Everett F. Hoffman

#### ADDRESS ALL INQUIRIES TO:

Kaman Rotor Tips  
Field Service Department  
The Kaman Aircraft Corp.  
Old Windsor Rd.  
Bloomfield, Connecticut

#### IN THIS ISSUE

MEET the HUSKIE! . . . . .	3
Maintenance Mailbag . . . . .	5
More From Les . . . . .	6
Training . . . . .	7
Q's and A's . . . . .	8
Report From the Ready Room . . . . .	10
Current Changes . . . . .	15
Kaman Service Representatives . . . . .	16

#### THE COVER

*H-43B versatility is shown in the pictures portraying some of its many uses which range from personnel rescue and fire-fighting to cargo carrying.*

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— PLEASE SHARE THIS COPY —

meet  
the

# HUSKIE!

by ROBERT D. COUGHLIN  
Military Operations  
Research Analyst

**H**-43B turbine-powered helicopters for local base rescue and general utility operation are now being delivered to the U. S. Air Force by the Kaman Aircraft Corporation. These rugged, highly maneuverable aircraft, officially designated the HUSKIE, will soon be stationed at USAF bases throughout the country.

The H-43B, which set a world altitude record for helicopters of its class by climbing to 30,000 feet a few months ago, is powered by a Lycoming T53-L-1 gas turbine engine mounted above and to the rear of the aft cabin, between the twin tail booms. The engine delivers 860 shp military power and 770 shp normal rated power. Tests have established the ability of H-43B components to absorb still higher power ratings should there be a future growth in the mission requirements for the aircraft.

The HUSKIE is another of Kaman's family of synchropters, having twin, intermeshing, counter-rotating two-bladed rotor assemblies mounted in a side-by-side arrangement on individual rotor pylons and driven by the twin shafts of a single transmission. Synchronous intermeshing is maintained by the gear train within the transmission. (Hence, the term SYNCHROPTER).

The H-43B's rotor blades incorporate a simplified control system centered around the servo flaps, which are small airfoil surfaces mounted on the outboard trailing edges of each blade. The servo flap controls the pitch or angle of attack of the rotor blade, and is itself controlled by the pilot's collective stick, cyclic stick and/or directional pedals by means of simple, lightweight mech-

anical linkages. Detailed discussions of both the synchropter design and servo flaps will be given in subsequent issues of Kaman Rotor Tips.

The pilot can adjust the track of the rotor blades from the cockpit either in flight or on the ground. This insures smoother flights and reduces pilot fatigue on long flights, as well as minimizing ground tracking procedures.

The HUSKIE's cockpit is arranged in the standard manner with the pilot on the right, and the co-pilot or observer on the left. Controls are provided at both positions. The full panel flight instruments, the engine instrument and the console and overhead panel arrangements have been designed for maximum pilot convenience without compromising the aircraft's excellent visibility.

The spacious aft cabin has provisions for up to ten seats for transport of passengers or troops. When the H-43B is being used as an ambulance, four litters and an attendant can be accommodated. In addition, the compartment's 166 cubic feet of clear space will accept a variety of cargo items for which high strength tie-down fittings are provided. The rear-opening clamshell doors make for easy entry and loading. A rescue door is also provided on the right side, immediately aft of the pilot's door. The lower fuselage houses two flexible interconnecting fuel cells with a total capacity of 198 gallons of JP-4. Access to the cells is provided through removable floor panels in the cabin.

The HUSKIE's tail section has twin outboard vertical fins with controllable rudders

NEXT MONTH: *The SEASPRITE!*





PERSONNEL RESCUE



CARGO TRANSPORT



FIRE SUPPRESSION

and two dorsal fins on the center line of the tail booms. A horizontal stabilizer is mounted between the outboard fins.

All four wheels on the H-43B are the same size. Individual brakes on each aft wheel are actuated by toe pedals. The forward landing gear is equipped with swivel locks for rough area operation. Kaman-developed bear paws are provided on each wheel, insuring a large foot print area which permits operation from snow, mud, sand or other soft surfaces while allowing unimpeded taxiing on hard surfaces. Provisions are also made for attachment of instantly inflatable emergency flotation gear for overwater operations. The compact size of the HUSKIE, its excellent visibility, the absence of a tail rotor, and its ability to make sidehill landings on slopes of up to  $12^{\circ}$ , enables it to operate in extremely rough or confined areas.

An electrically powered, 600 pound capacity, personnel hoist is mounted on the right side of the HUSKIE directly over the rescue door, and is operable by either the pilot from his position or by a crewman in the cabin. Designed to withstand a 3g static load, the hoist operates at a speed of 100 feet per minute, and its location enables the pilot to tailor his approach and hover position to meet the requirements of each particular pickup situation. For illumination of night operations, floodlights are provided on the underside of the fuselage.

Each HUSKIE is equipped with a cargo hook on the underside of the fuselage. Loads can be released from the hook automatically upon touchdown in addition to the pilot's electrical and mechanical releases and an external mechanical release for actuation from the ground.

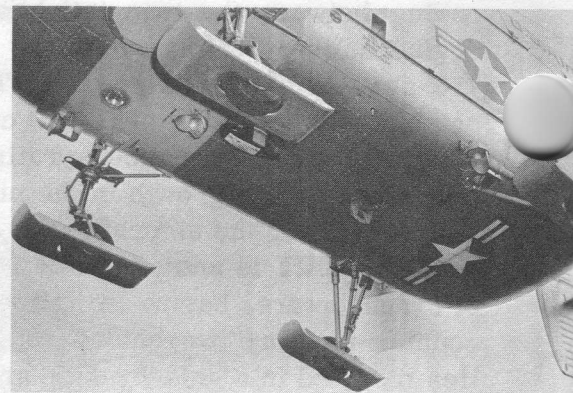
With its full panel flight instrumentation the H-43B is capable of mission operation, day or night, in all but a small percentage of instrument weather conditions.

One of the H-43B's main roles, that of local base rescue, was developed to provide a means of rescuing

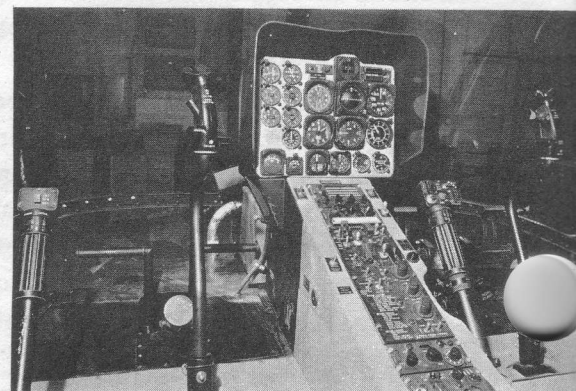
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TROOP TRANSPORT



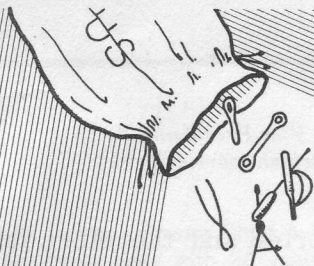
BEAR PAW—NIGHT LIGHTING



ALL WEATHER INSTRUMENTATION

KAMAN ROTOR TIPS





## MAINTENANCE MAILBAG

Dear Weepy,

Sorry I can't send you the twenty bucks; I'm still paying for the civvies that scroungy, one-eyed bull dog tore off me. Maybe he couldn't see so good, but there was sure nothing wrong with his footwork or the way he chewed. That was some date you fixed me up with that night--the only way to tell the girl from her dog was that she had longer teeth.

You'll be interested to know that I got a new man in my crew to take your place. First thing the poor guy did when I sent him up to check the rotor head on a 'copter was to miss the walkway and put his foot right through the top window. It's the third time this has happened in the last month, 'cause some of the crews aren't using the window covers when they're climbing around. We had to work late a couple of nights installing new windows and once a chopper was grounded when we really could have used it on a search and rescue job.

Reckon that's all for now.

Your friend,  
Hal



Dear Mike,

Congratulations on making that switch-over to the whirly-bird outfit, I know you won't regret it. The Air Force has put out a very good book which should be a big help to you. It's an on-the-job training package called "Helicopter Technician" (OJT Package JA43170), which was put together by the Sheppard Technical Training Center. Check with your base publications office on how to get it. It does just about everything but clue you on how to tell the boy from the girl helicopters.

That you'll have to find out for yourself.

Not much else doing here. We had a heck of a rain storm last month which flooded the parking lot and one of the guys lost his sports car for most of the day. He got an old canoe and paddled all over the place looking for it and then found out some jokers had put it up on a work bench in one of the shops. They told him they felt sorry for it outside in the wet. Nobody would help him get it off the bench either.

Joe





# More From Les

Each month in this column, C. L. Morris, Assistant Vice President—Field Service Manager reports on a subject in which particular interest has been shown

In practically every instance reported, the loss of a helicopter door in flight can be traced to the jettisoning mechanism which is a basic requirement in military aircraft. This necessity to quickly jettison a door creates a series of problems in design, structure, maintenance and, most important of all, SAFETY. There is always the possibility that a door lost in flight may contact the rotor system or some other part of the aircraft with serious, or even fatal, results.

Improvements in jettisoning mechanisms are constantly being introduced by the aircraft industry, but these very improvements cause new problems because the later designs may require different techniques for installation and checking by maintenance crews.

While the only official source of information on the installation and inspection of cabin doors is the maintenance handbook, it may be helpful to review and highlight a few factors here. The current inspection handbooks for some models still call for a post-flight check of the jettison mechanisms but experience has shown that uninformed ground personnel may accidentally use the jettison handles for hand-holds or otherwise partially trip the release mechanism. Therefore, we are taking steps to issue revisions as necessary calling for inspection of these areas during the PRE-flight check.

## HOK, HUK, H-43A

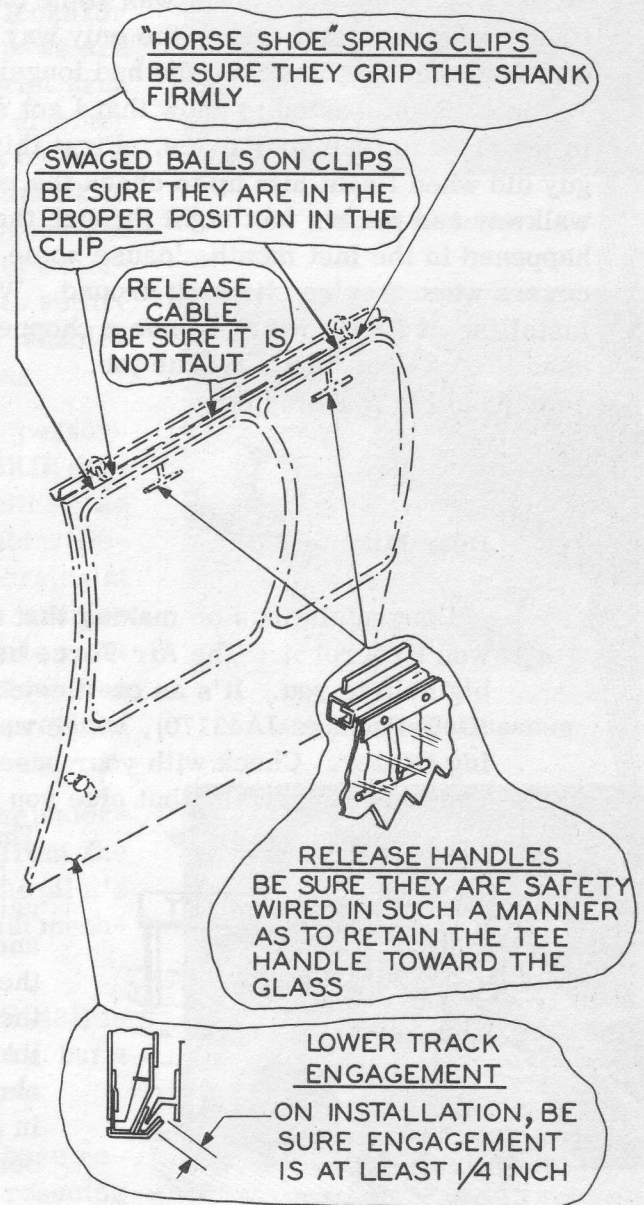
On the HOK - HUK - H-43A the things to check specifically are:

(1) The "horseshoe" clip or spring angle that clips around the shank of each jettison fitting at the top of the door. This clip may

have become distorted and therefore fail to grip the shank firmly.

(2) The tee-shaped emergency release handles at the top of the door frame. If the handles should become dislodged from their retaining clips, they could jam against the rear bulkhead when the sliding door is opened,

(continued on page 11)





# TRAINING

## Navy

Homer C. Helm, a former Chief Aviation Machinist Mate with 20 years service in the U.S. Navy, has become a member of the Field Service Department's Training School at Kaman Aircraft. He will be the lead instructor when instruction begins on the HU2K-1 for Navy Personnel.

Helm's last tour of duty with the Navy was in the Training Command at NATTC, Memphis, with the Naval Air Mobile Trainers (Maintenance) for use in HU2K-1 training. Helm is now preparing a training outline for the NAMT Factory Training Course which Navy instructors receive at KAC.



**SECOND H-43B MAINTENANCE CLASS—(FRONT ROW, LEFT TO RIGHT)**—Mr. Richard R. Mann, Land-Air Inc., Cheyenne, and Francis E. Warren AFB, Wyo.; T/Sgt. Charles W. Smith, 389th Combat Support Gp. (SAC), Warren AFB; Mr. Robert I. Wilson, KAC; T/Sgt. Vernon Gleason, 3635th Flying Training Gp. (ADY), A 1/c Edward D. Pepper, A 1/c William W. Allen, 3635th Flight Line Maint. Sqdn., Stead AFB, Nev. **(REAR ROW)** Mr. Edward J. Polaski, KAC; Mr. David R. P. Sweeney, MAAMA-AMC, Olmstead AFB, Pa., Mr. Dale A. Johnstone, Mr. Marshall N. Timmons, Land-Air Inc. and Warren AFB; S/Sgts. Roy D. Brewer, Andrew Cota, Tony Valenzusla, 3635th Flight Line Maint. Sqdn. Stead AFB; Mr. Raymond A. Vokes, KAC.



**THIRD H-43B MAINTENANCE CLASS—(FRONT ROW, LEFT TO RIGHT)**—S/Sgt. Monroe S. Taylor, 4520th Operations Sqdn, Nellis AFB, Nev.; S/Sgt. Jan Gale, 56th Consolidated Acft. Maint. Sqdn., K. I. Sawyer AFB, Mich.; Sgt. Frank L. Dewitt, 42nd Acft. Support Sqdn. (SAC), Loring AFB, Maine; A 1/c William D. Cole, 380th Acft. Support Group, Plattsburg AFB, N. Y., Mr. Jack E. Smith, F. (Red) Kelliher, KAC. **(REAR ROW)** —Mr. Raymond A. Vokes, KAC; Mr. William L. O'Shea, MOAMA-AMC, Brookley AFB, Ala.; T/Sgt. William H. Eckert, 4510th Field Maint. Sqdn. (TAC), Luke AFB, Ariz.; A 2/c Tommy L. Colvin, Hq. 389th Combat Support Gp., Francis E. Warren AFB, Wyo.; A 2/c Maynard J. Zorowski, 56th Consolidated Acft. Maint. Sqdn.; K. I. Sawyer AFB, Mich.; Mr. Edward J. Polaski, Robert W. Spear, KAC.

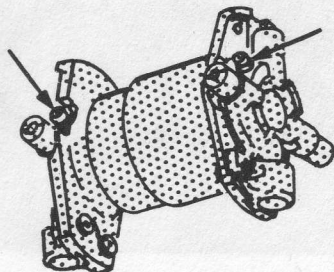
## Air Force

Another new member of the Kaman Aircraft Service Training School is Raymond Vokes who is presently instructing U.S. Air Force personnel in H-43 B classes. Vokes has been an employee of KAC since 1951. He started on the K-225 production line, then specialized on HTK transmissions and progressed from there to the flight test line. After several years experience as a flight test mechanic, Vokes was promoted to the position of a Senior Training instructor in the Training School.



# 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.



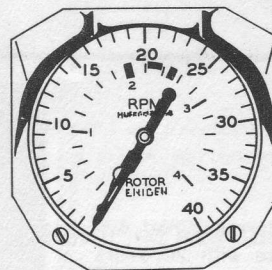
**Q.** WHAT IS THE FEDERAL STOCK NUMBER OF GREASE USED FOR THE ENGINE TRANSMISSION DRIVE SHAFT AND HOW OFTEN DO WE GREASE THIS ASSEMBLY? (Applies H-43B)

**A.** MIL-G-25537 (Aero Shell #14) grease, Federal Stock No. 9150-616-9020, should be used to lubricate the drive shaft daily.  
-L. L.



**Q.** WHEN WAXING THE ROTOR BLADES, WHAT SUBSTITUTE MAY BE USED IF WING WAX, GRADE FR, IS UNOBTAINABLE? (Applies HOK, HUK, H-43A, H-43B)

**A.** Any good paste wax is acceptable. Paste wax may be procured under Federal Stock Number R7930-266-7125-G600.—N. W.

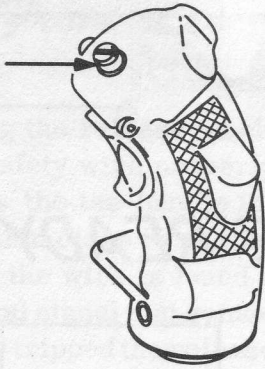


**Q.** WHAT IS THE CORRECT PART NUMBER FOR THE 9.357 TO 1 TACHOMETER INDICATOR? (Applies HOK, HUK, H-43A)

**A.** The part number is: 8DJ-19GAN6 (GE). Alternates called out for use on the HOK/HUK are: 8DJ-19ADT-5A (GE) and 8DJ-19ADT-Y29A (GE). The "A" at the end of the part number for the alternates denotes that it has been converted from a 10:1 to 9.357:1. A method for a quick check to determine the correct tachometer indicator: If the 20 representing 2000 engine rpm and the 2 representing the rotor rpm are vertically aligned, it is a 10 to 1 indicator. On a 9.357 to 1 indicator the 2 (rotor rpm) on the inner dial will be to the left of the 20 (engine rpm) on the outside dial.—A. S.

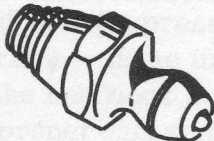






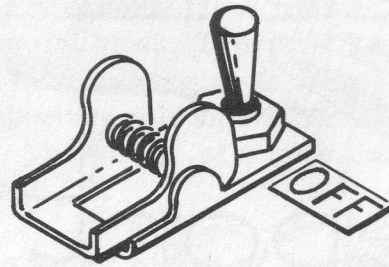
**Q.** CAN THE RADIO-INTERCOM BUTTON ON THE CYCLIC STICK BE ADJUSTED FOR FINGER PRESSURE? IS THE ADJUSTMENT SCREW ON THE RIGHT-HAND SIDE OF THE GRIP TO BE USED FOR THIS PURPOSE? (Applies H-43A and H-43B)

**A.** The cyclic stick radio intercom button can be adjusted by turning the screw (Reference -4 Section of Technical Manual) on the top of the cyclic control grip to the desired pressure. Do not adjust the screw on the right-hand side of the grip since this is not an adjustment for button pressure.—A. N.



**Q.** ATTACHING A GREASE GUN TO THE ZERK FITTING ON THE AUXILIARY LANDING GEAR SCISSORS (R. H. ONLY) IS EXTREMELY DIFFICULT. WHAT CAN BE DONE TO REMEDY THIS? (Applied H-43A, HOK, HUK)

**A.** The present zerk fitting, MS15002-1 should be replaced with fitting MS15001-2 which is longer. Base supply points probably carry these fittings in stock, if not, KAC can furnish fittings upon request.—D.G.



**Q.** IS IT NECESSARY TO TURN OFF THE BATTERY AND GENERATOR SWITCHES WHEN USING AN AUXILIARY POWER UNIT? (Applies H-43A, HUK, HOK)

**A.** The battery switch and the generator switch must both be OFF if external power is to be connected. Reversed polarity between the external source and the helicopter electric power supply system can cause severe damage to the electric equipment and may result in a fire.—A. S.



**Q.** WHEN IT IS FOUND THAT POWERED MOLY-SULFIDE DOES NOT CLING TO THE INBOARD FLAP BEARINGS IS IT PERMISSIBLE TO MIX THE MOLY-SULPHIDE WITH ENGINE OIL AND "DAB" IT ON THE BEARING? (Applies HOK, HUK, H-43A and H-43B)

**A.** This practice is not recommended as such a mixture tends to attract dirt and grit which will be ground into the bearings. It is preferred that the powdered moly-sulfide be applied daily to the bearings. The best

*(continued on page 14)*

**KAMAN SERVICE ENGINEERING SECTION** — R. J. Myer, Supervisor, Service Engineering; H. N. Rose, E. J. Polaski, G. S. Garte, Assistant Supervisors. **ANALYSTS** — Roy Berg, Richard (Ted) Chaapel, Dave Godbout, Wayne Jenkins, Chuck Nolin, Al Savard, Norm Warner, Loring Lynes, Ross Wynott, Bill Wagemaker, Frank Bober, Robert Krans.



# Report

## FROM THE READY ROOM

### A New Helicopter — A New Mission

**P**roduction deliveries of the H-43B, designated the "HUSKIE", have begun. The United States Air Force has contracted for this helicopter to perform the new prime mission of LOCAL BASE RESCUE. This mission requires, among other things, that fire fighting equipment and personnel be quickly brought to the location of crashed or burning aircraft.

Essentially, the helicopter must quickly deliver fire-fighting equipment and crash entry personnel to the scene of landing and take-off accidents so that the air crew may be speedily removed from the downed aircraft, even if it is on fire.

The Air Force has selected the HUSKIE for this specialized mission because of its inherent flight qualities and design characteristics which particularly fit the mission requirements.

Some of these are:

Excellent speed-into-action performance since the T-53 gas turbine engine will provide take-off capability from a cold start of about thirty seconds with ample reserve power for accomplishment of the mission, regardless of adverse operating conditions.

The HUSKIE has excellent low airspeed qualities. The synchropter helicopter achieves translational speed as low as eight knots TAS due to low disc and blade loading. This means that at airspeeds from thirty to forty knots and less, the helicopter flies at comparatively low power. Obstruction flying such as confined area take-offs and landings can be made more easily than in other types because of its performance at just over translational speed. For example, on a confined area take-off, climb-out at fifteen or twenty knots is almost as good as at best climb speed of around forty five knots.

(continued on page 12)



**AL NEWTON**  
Chief Test Pilot



## More From Les . . .

(continued from page 6)

thus causing the release mechanism to be actuated. Safety wire properly applied not only retains the tee-handle in a safe out-board position close to the window glass, but also, if the wire is found broken, it is a clear visual signal that someone may have accidentally tripped the release mechanism and an immediate recheck should be made. Note that the safety wiring of the tee-handle should be applied in such a manner that if the handle is dislodged from its clip, the safety wire will break.

(3) The cables. They should not have any tension. If the swaged ball on the cable end is installed in the wrong position in the horseshoe clip by maintenance crews, a steady tension on the clip can result which may eventually pull the clip and the door will fall free.

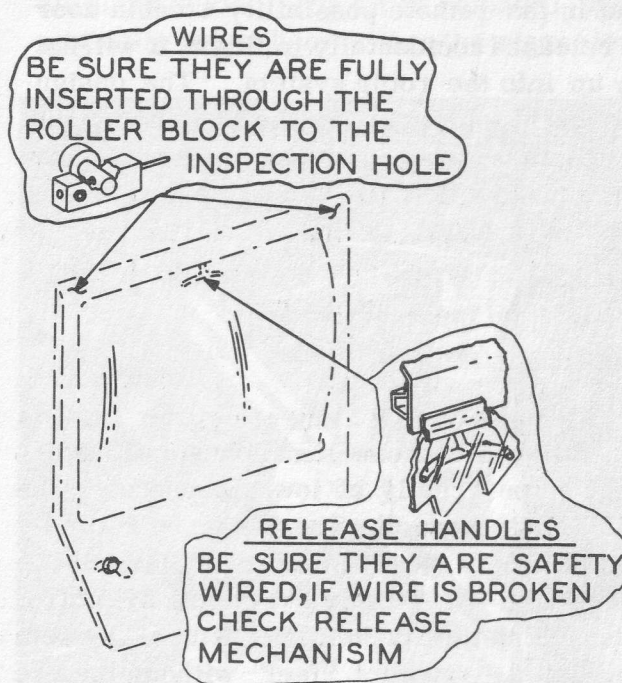
(4) The lip along the lower edge of the door. Make sure it fully engages the lower door track which is attached to the fuselage. The proper overlapping engagement is called out in the handbook (at present, 1/4-inch minimum overlap). If the installation instructions in the handbook are understood and followed, proper engagement is assured. Particularly, the friction latch clip at the lower front corner of the door should be removed before adjusting for proper engagement, to prevent the spring loaded friction block from pulling the front end of the door down. A somewhat simpler installation procedure has recently been worked out and will be covered in future handbook revisions. Under this procedure, the door handle is retained at its extreme open position, thus preventing the block from contacting the lower track, until adjustments are completed.

### H-43B

On the H-43B the things to check specifically are:

(1) The wire going through the hole in each roller mount block. This must be fully inserted so that the wire is visible through the inspection hole on the far side of the block. The wires, of course, should not be kinked.

(2) The safety wiring of the tee-handles. H-43B handles are firmly sheathed and



curved to prevent interference with the bulk-head, but the safety wire, if broken, provides a clear visual signal that someone may have accidentally tripped the release mechanism and an immediate recheck should be made.

(3) The retainer strip along the bottom of the door. It should be adjusted to provide frictional drag by itself. That is, without the benefit of additional drag from the brake shoe. In this way it is assured the door is adequately retained along its lower edge.

The cabin clamshell door emergency release mechanism is also safety-wired at the release handle and door hinge pip-pins. It is important that the proper safety wire be used (MS 20995-CU 20), and that the pip-pins be fully engaged. (continued on page 12)



### ALL MODELS

Frequent inspections should be made of the sliding door tracks to make certain they have not been damaged or deformed. This is particularly important on the upper tracks where damage might cause a roller to become disengaged.

A so-called "tether" or retaining cable has been developed by Kaman engineers so that in the remote possibility a cabin door is released accidentally in flight, it will not fly up into the rotor system. The design has been submitted for the HOK and HUK helicopters, and a request has been made for authorization to submit the design for the H-43A and H-43B. **K**

### Report From The Ready Room

(continued from page 10)

The symmetrical control system, tied in directly with the excellent low speed qualities, helps greatly at low airspeeds. The HUSKIE is a docile, gentle machine to fly and is a very steady platform in hover. The servo flap system and symmetrical control characteristics permit the control system to have a good pilot "feel" without the use of servos or feedback. Rudder pedals remain in neutral any time a heading is being

held, regardless of airspeed or power. These factors make for an easy-to-fly helicopter.

The inherent stability characteristics of the HUSKIE are positive on all three axes permitting hands-off flight at all but low airspeeds. This means that the helicopter tends to hold attitude and airspeed in turbulent air.

The aircraft is relatively insensitive to changes in center of gravity, both fore-and-aft and laterally. This quality contributes to the utility employment of the H-43B since varied loads are readily handled and pilots are relieved of concern should load factors change radically and suddenly as is the case in local rescue missions.

Restricted area operation is exceptionally good. The HUSKIE is completely contained within the rotor disc with the lowest moving parts being on the sides, comparable to the wing tips of a conventional airplane. Therefore, wherever the rotors will fit, the helicopter can be landed. Minimum rotor clearance on the sides is about eight feet above the ground, clearance fore-and-aft is twelve feet, and the pilot has side vision sufficiently aft to visually clear obstructions. With the Bear Paw landing gear, the helicopter can be efficiently operated on very rough, soft or unimproved terrain.



This head-on view shows the synchropter design and features of local base rescue configuration of the HUSKIE.



For personnel rescue by hoisting techniques, the H-43B is ideal in comparison with older helicopters. The hoist is on the pilot's side so that he can observe the rescue operation without neglecting his flying and yet the crewman normally operates the hoist from the main cabin. For loading activities the main cabin has aft clamshell type doors making awkward loads such as litters relatively easy to handle.

During "Rescue From Fire" work the rotor downwash pattern makes the helicopter ideal. Due to the intermeshing type rotor system, the downwash is directed mainly fore-and-aft along the ground from the ship, so that while working with fire fighting chemicals, the helicopter does its best pointed directly at the fire. The opposite rotating rotors take out the circular effect of the downwash. The steady and easy hovering characteristics help tremendously as does its ability to perform well when heading downwind.

The best way to fight a fire is to hover upwind of it and with the helicopter pointed at the fire direct the large volume of cooling air from the downwash into it. This opens an entry path for the fire fighters and lowers temperatures significantly. Such a procedure requires that the helicopter have capability to hover with its tail into the wind.

To the best of the writer's knowledge, blade tip stall has never been reported nor encountered on a Kaman helicopter. Factors such as altitude, low rotor RPM, turbulent air, high speed and various combinations of them will not produce blade tip stall as is experienced in most helicopters.

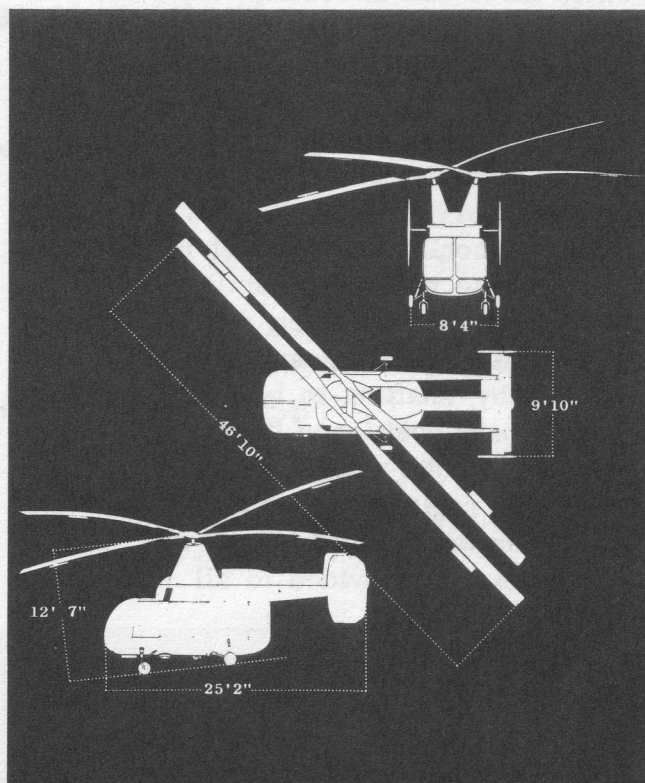
The low disc and blade loading gives this helicopter a wide range of operating RPM which in turn makes the gas turbine helicopter a happy marriage. Maximum low speed performance is achieved at less than maximum rotor RPM, which adds to the docility of the helicopter to the pilot.

All pilots who have flown the HUSKIE agree that the autorotation characteristics are excellent. Rate of descent is low and because of the airframe configuration, the helicopter can be flared close to the ground. **K**

## Meet the HUSKIE

(continued from page 4)

injured or trapped airmen from crashes often inaccessible to ground vehicles and frequently resulting in fires. In the fire rescue technique established by Kaman and the Air Force, the HUSKIE proceeds to the crash scene from its position of standby alert, with a rescue team aboard and a fire suppression kit slung below. The kit is released automatically at touchdown, then the rescue team



Engineer's 3-view drawing of specifications highlighting the compactness of the H-43B. The aircraft can land in any area big enough to fit the diameter of the rotor disc.

is landed. The H-43B also carries a crash-entry kit containing sufficient tools to force entry into a downed aircraft if necessary for rescue, and a fully equipped first aid kit. While the rescue team approaches the aircraft, the HUSKIE rises and hovers at a point where its powerful rotor downwash will beat back the flames and open a path for the team's entry. The rescue team then uses foam to keep the path open and prevent any flashback of flames. The rotor downwash



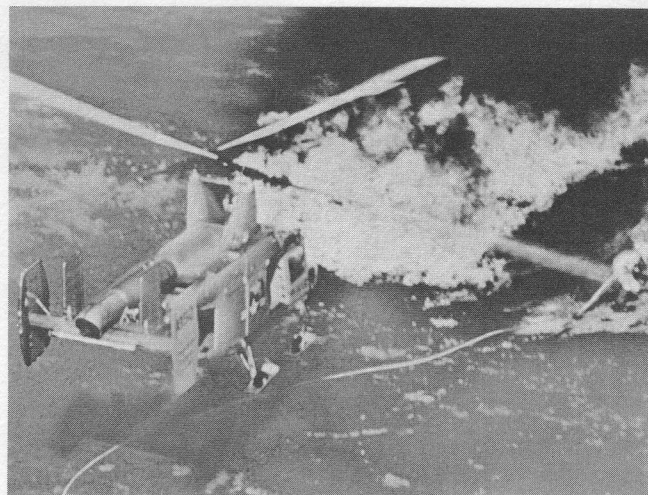
also supplies a large volume of cooling air to the team and occupants of the downed bird. Here again this chopper excels, because of its exceptional maneuverability.

Upon rescue, the survivors can be rushed directly to hospitals if required, with both litters and seats available for the trip. Rescue is thus accomplished in a minimum of time, regardless of terrain or fire, with the equipment on hand to do the job right.

Because of the many tasks which a helicopter is called upon to perform and for which the H-43B is readily adaptable, it is essential to have an aircraft which is easy to maintain in order to assure continuous availability. The HUSKIE was designed with this philosophy in mind. Minimum effort and equipment are required to maintain and service this aircraft. The synchropter configuration itself is a boon to maintenance and serviceability, since its components are relatively simple, and there are no intermediate gear boxes, tail rotors or lengthy shafting to be concerned with. The exposed position of the engine, together with its light weight, permits rapid removal and replacement as well as providing wide open work space. Easy and immediate access is provided to all components



A 2/c Tommy L. Colvin of Hq. 389th Combat Support Gp., Francis E. Warren AFB, Wyoming, demonstrates the accessibility of the gas turbine engine which powers the HUSKIE.



In fire suppression employment the H-43B hovers after delivering suppression kit and fire-fighting team to open an entry path to the downed plane with the powerful downwash of cooling air from the rotor.

requiring periodic maintenance and servicing. The compact size of the H-43B does away with requirements for most of the usual work platforms and ladders.

Summing up this introduction—the HUSKIE was manufactured in close cooperation with the Air Force in order to produce a versatile, rugged aircraft which is easy to maintain and fly and which will meet the primary requirement of being available for the missions assigned to it. In view of this Kaman Aircraft believes the HUSKIE is on the threshold of an outstanding career in military service. **K**

#### Q. s and A. s (continued from page 9)

solution is to use the alternate called out in the maintenance handbooks—"Lubri-bond." This product has the moly-sulfide suspended in solution in an aerosol type container. Vendors for these products are: Alpha Moly Kote Corp., Stamford, Conn., and Lubi-Bond, Electrofilm, Inc., 716-21 Laurel Canyon Blvd., North Hollywood, Calif. Limited quantities of Lubri-bond have been supplied to KAC service representatives until a Federal Stock number has been assigned. When this is done, the handbooks will be changed to call Lubri-bond as the primary lubricant for exposed bearings.—C. N. **K**



# CURRENT CHANGES

## AIRCRAFT SERVICE CHANGES (USN)

Applies — HOK/HUK ASC No. 103 15 April 1960  
HOK-1 Addition of Spring Assy to reverser installation URGENT.  
HUK-1

## FIELD INFORMATION DIGESTS (KAMAN)

Applies — No. B-12, 24 March 1960  
H-43A Removal of Bolt from clutch Manual Control Bracket. (H-43A)  
H-43B

No. B-13, 24 March 1960  
Limits in Use of Cyclic Stick Trim Release Switch During Check-out procedures. (H-43B.)

No. B-14, 25 March 1960  
Procedure for Restarting Engine in Flight. (H-43B)

No. B-15, 25 March 1960  
Rotor Speed Limitations, and Action Required in Event of Over-speed. (H-43B)

No. B-16, 25 March 1960  
Operating Gross Weight Limitations. (H-43B)

No. B-17, 25 March 1960  
Effect of Excessive Ground Taxiing on Rotor Blades. (H-43B)

No. B-18, 25 March 1960  
Maximum Gross Weight for Hovering in Ground Effect with Maximum power. (H-43B)

No. B-19, 25 March 1960  
Engine and Transmission Operating Limits Chart. (H-43B)

No. B-20, 1 April 1960  
Take-off Ground Run Distance Chart. (H-43B)

No. B-21, 1 April 1960  
Power Required to Hover Charts. (H-43B)

Applies — A-47 Modification of Blade Folding Lock Assemblies,  
HOK-1 25 March 1960  
HUK-1

# **Kaman Service Representatives**

## **on field assignment**

### **DONALD P. ALEXANDER**

Okinawa

### **STANLEY M. BALCEZAK**

Wright-Patterson AFB  
Dayton, Ohio

### **CLARENCE E. CHICK**

Loring AFB  
Maine

### **JOHN D. ELLIOTT**

K. I. Sawyer AFB,  
Gwinn, Mich.

### **GAROLD W. HINES**

Luke AFB,  
Phoenix, Ariz.

### **JOSEPH T. JONES**

Edwards AFB,  
Mojave, Calif.

### **JACK L. KING**

O&R NAS Jacksonville,  
Fla.

### **JOHN R. LACOUTURE**

VMO-6, Camp Pendleton  
Barbers Pt., Hawaii  
O&R, NAS North Island  
San Diego, Calif.

### **GERALD M. LEGAULT**

3566th Field Maint. Squad.  
James Connally AFB,  
Waco, Texas  
3514th Field Maint. Squad.  
Randolph AFB,  
San Antonio, Texas  
3557th Field Maint. Squad.  
Perrin AFB, Sherman, Texas  
3640th Field Maint. Squad.  
Laredo AFB, Laredo, Texas

### **JOHN R. MILES**

Sheppard AFB,  
Wichita Falls, Texas

### **EDWARD F. NOE**

NAS, Cubi Point P.I.  
NAS, Sangley Point, P.I.  
NAS, Agana, Guam

### **DAVID M. RUSH**

HU-2, NAS Lakehurst, N.J.  
NATC Patuxent River, Md.  
HMX-1, MCAS, Quantico, Va.

### **RAY G. RUSSELL**

3615th Field Maint. Squad  
Craig AFB, Selma, Ala.  
3505th F.T. Wing.  
Greenville AFB, Miss.  
3550th Field Maint. Squad.  
Moody AFB, Valdosta, Ga.

### **HENRY J. TANZER**

VMO-1 MCAF  
New River, N. C.

### **WILLIAM G. WELLS**

Stead AFB, Reno, Nev.

### **EDWARD L. WHITE**

Shin Meiwa Industry Co. Ltd.  
Toyonaka City, Japan  
MCAF Iwakuni, Japan

### **WILLIAM C. WELDEN**

Stead AFB,  
Reno, Nev.

### **ROBERT I. WILSON**

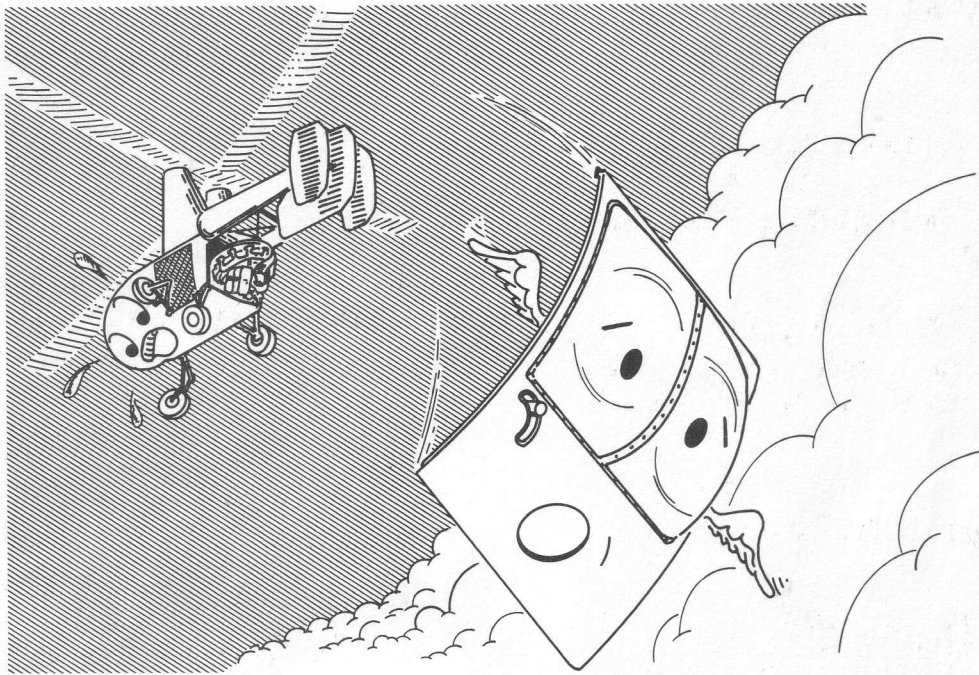
Warren AFB,  
Cheyenne, Wyo.



# LOST

## IN FLIGHT!

Several cabin doors due to improper installation following removal for inspection. Serious or even fatal accidents can result if proper procedure is not followed.



**ATTN: ALL MAINTENANCE CREWS — HOK/HUK , H-43A & H-43B AIRCRAFT**  
**Check Recommended To Make Certain**

**That Air Force T.O. 1H-43A-507 or NAVY NAV-AIRLANT General Helicopter Bulletin 171A (Equivalent to Navy ASC 100) is COMPLIED WITH.**

**REWARD — \$**afety In Flight Through Elimination of  
Potential Hazard.