

KAMAN Rotor Tips



KAMAN AIRCRAFT CORPORATION

JUNE-JULY, 1966

President—General Manager
CHARLES H. KAMAN

Vice President—Test Operations/ Customer Service
WILLIAM R. MURRAY

Director of Customer Service
WILLIAM E. ZINS

Customer Service Manager
ROBERT J. MYER

Editor
EVERETT F. HOFFMAN

THE COVER

While under intense enemy fire, UH-2 crew rescues downed flier from Gulf of Tonkin. Story on page 3. Cover by Donald Tisdale, Service Publications.

ADDRESS ALL INQUIRIES TO:

Kaman Rotor Tips
Customer Service Dept.
Kaman Aircraft Corp.
Old Windsor Road
Bloomfield, Conn. 06002

Kaman Rotor Tips is published by the Customer Service Department of the Kaman Aircraft Corporation for informational purposes only and is not to be construed as authority for making changes in aircraft or equipment. This publication DOES NOT in any way supersede operational or maintenance directives set by the Armed Services. Written permission must be obtained from Kaman Aircraft before any material in Rotor Tips can be published.

In This Issue

Rescues Under Fire	3
Pilots To Receive Cheney Award	6
Timely Tips	7
SEASPRITE Activities	8
Q's And A's	10
Ground Support Equipment (Part I)	12
HH-43 Strut Servicing Tool	17
HUSKIE Happenings	18

KAMAN SERVICE REPRESENTATIVES

DONALD ALEXANDER
GERARD BOUTIN
PAUL WHITTEN
NAS Lakehurst, N.J.

HOMER HELM
GORDON FICKES
NAS Atsugi, Japan
NAS Cubi Pt., P.I.

FRANK HEFFERNAN
NAS Alameda, Calif.
NAS Lemoore, Calif.
NAS Whidbey, Wash.

JACK KING
NAS Jacksonville, Fla.
NAS Cecil Field, Fla.
NAS Key West, Fla.
NAS Pensacola, Fla.
MCAS Beaufort, S. C.

RICHARD FAIN
NS Adak, Alaska

HORACE FIELD
NATC Patuxent River, Md.

WILLIAM BARR
Morocco

CLINTON G. HARGROVE
DONALD ASHEY
Iran

DAVID RUSH
NAF Naples, Italy
ComFairMed

THOMAS LEONARD
NAS Corpus Christi, Tex.
NAAS Kingsville, Tex.
NAAS Chase Field, Tex.

JACK SMITH
Colombia

JOHN LACOUTURE
O&R NAS North Island, Calif.

LOGISTIC REPRESENTATIVES

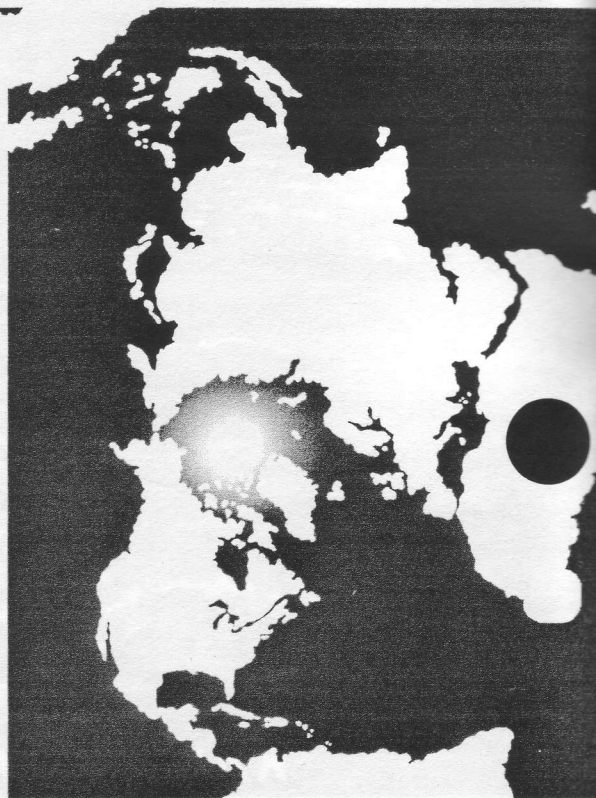
WILLIAM WELLS
JOHN ELLIOTT
DONALD BEASLEY
DONALD LOCKRIDGE
NAAS Ream Field, Calif.
NAS Miramar, Calif.
NS Midway

BILL MAGNAN
O&R NAS Jacksonville, Fla.

WILLIAM SOFIELD
NAAS Ream Field, Calif.

WILLIAM MORRIS
NAS Norfolk, Va.
NAS Oceana, Va.
NAS Patuxent River, Md.
NAS Quonset Pt., R. I.
MCAS Cherry Pt., N. C.

JOHN HENDRICKSON
NAS Lakehurst, N.J.



Rescues Under Fire

UH-2/HH-43 Crews Save Downed Fliers



The helicopters and types of operation may be different, but the objective of the crews manning the UH-2's and HH-43's is the same — save lives! Nowhere is this dedication and singleness of purpose more apparent than in Southeast Asia where rescues are often carried out with enemy fire adding to the hazards already presented by weather, terrain or similar natural obstacles. The following accounts, involving rescues in the Gulf of Tonkin and a jungle-covered valley in South Vietnam, are excellent examples of the devotion to duty shown by the chopper rescue teams.

The first operation began after a USAF F4C Phantom jet was hit by ground fire and the occupants ejected over the Gulf. Splashing down about two miles from shore, the two men scrambled into their life rafts and waited for help while other Phantoms flew protective cover overhead. Soon afterward, an HU-16, twin-engine Albatross piloted by Capt David Westenbarger from the 3rd Aerospace Rescue and Recovery Group at Tan Son Nhut AB, RNV, appeared and landed in the choppy waters to pick up the survivors. The two Navy Skyraiders which accompanied the Albatross to the rescue area took over the protective patrol from the circling Phantoms. As HU-16 crewmen kept watchful eyes on the shore, a pararescueman dived into the water to tow one of the survivors to the plane. Suddenly a North Vietnamese battery on the beach exploded into action. Fire from automatic weapons streaked toward the Albatross, mortar shells splashed nearby, and armed sampans began heading toward the stationary aircraft. HU-16 crewmen began returning fire and the Navy fighters streaked across the beach in strafing runs in an attempt to silence the entrenched batteries. Soon after the firing started, however, a mortar shell made a direct hit on the Albatross, killed two of the crew and set the plane afire. Captain Westenbarger and the other three surviving members of his crew groped their way through the smoke and flames and abandoned the aircraft.

As the fighters continued to strafe the beach, two SH-3A helicopters from the USS Yorktown appeared and,

disregarding the fire from shore, plucked five of the survivors from the water. But — before the sixth could be recovered — fighter cover had to be temporarily withdrawn and the enemy fire became so intense it was impossible for the choppers to rescue the last man. Capt David S. Price, already wounded by the mortar burst which struck the Albatross, was left alone in his tiny raft which was rapidly drifting toward shore.

A few minutes later a UH-2 SEASPRITE from the USS England, 80 miles away, arrived on the scene in answer to the May Day distress call which had been radioed earlier by the downed Phantom. With the UH-2 pilot, LCdr David J. McCracken, were Ens Robert H. Clark, Jr., copilot, and Herbert G. Davis, AECS, and Edward B. Campbell, ADJ1, crewmen. All are from HC-1's Det 5. Fighters also arrived and again began strafing the enemy shore batteries as the SEASPRITE crew prepared to rescue the man floating below. Despite the aircraft overhead, the sampans pressed forward and began firing at the chopper. Disregarding them, Commander McCracken maneuvered the UH-2 over the survivor and used the rotor wash to trap the wildly bobbing life raft. As Campbell sprayed the closing sampans with sub-machine gun fire, Chief Davis hoisted the survivor aboard and the SEASPRITE headed for safety.

HH-43 CREWMEN UNDER VC FIRE

The other mission involved two HH-43F crews, the perilous rescue of three wounded flyers from the advancing Viet Cong, and two courageous HUSKIE crewmen who braved continuous enemy fire to search for survivors and narrowly escaped death themselves.

The mission, one of the most hazardous flown by the men of the 38th ARRSq, began when two HH-43F's from Det 7 took off from Da Nang AB to rescue the survivors from an AC-47 which had crashed in dense jungle at the bottom of a narrow valley 55 miles from the base. Manning the primary helicopter were Capt Donald J. Couture,

RCC; Capt Harold A. Solberg, copilot; SSgt David L. Lancaster, helicopter mechanic; and A2c Albert W. Foster, III, pararescue specialist. Aboard the secondary chopper were 1stLt Arthur F. Machado, RCC; Capt John B. Kneen, CP; SSgt Curtis F. Yancy, HM; and SSgt David J. Wheeler, PS.

Enroute to the crash site the rescue helicopters were warned that the downed crew was under intense enemy fire at close range and that a rescue attempt would be extremely dangerous — if at all possible. Although the helos were unarmed, the crews decided to continue on and rely on A-1 aircraft in the vicinity to suppress enemy fire. After rendezvous with one of the A-1's above the clouds, the HUSKIES made individual IFR descents into the valley and then rejoined below the clouds. As they were preparing for their rescue dash, other A-1's were making strafing runs on the Viet Cong in the vicinity of the downed aircraft three miles away and O-1 pilots were keeping up a continuous advisory on the desperate fight for survival that the AC-47 crewmen were making. Again the HUSKIE crews were warned that there was heavy VC fire in the area and that they would have to fly directly over enemy positions to reach the crash site. Adding to the hazard of the rescue attempt were the tall trees which pierced the jungle and reached as high as 100 feet from the valley floor. Shrugging off the danger, the men in the rescue choppers pressed forward toward the downed plane. Flying "on deck" at 95 knots, Captain Couture and Lieutenant Machado kept the hurtling choppers below the level of the tallest tree tops. As the two HH-43F's dodged and weaved their way through the trees, A-1's reported small arms fire all along their path; however, the combination of low altitude, speed, surprise and the tree cover kept them from being hit. As the helicopters neared the rescue site, the O-1's reported that the Viet Cong were less than 150 feet from the wrecked aircraft and moving in for another attack.

Arriving at the AC-47, the helicopter pilots executed a quick-stop maneuver which carried them to a small hill 75 feet away. For seconds, which seemed like hours, they hovered over the hill — but no survivors appeared. The chopper pilots moved closer to the plane, placed the nose wheels against the side of the hill, and hovered with the rear wheels off the ground. Suddenly three men ran from the wreckage toward the rescue chopper. Ser-

geant Lancaster and Airman Foster leaped to their assistance and helped the panting, blood-stained survivors into the helicopter. As they boarded the HUSKIE, both crewmen spotted Viet Cong in the jungle.

The first HUSKIE took off and the second, according to plan, moved into the spot to pick up the rest of the AC-47 crew. When none appeared, Sergeants Yancy and Wheeler jumped out and ran to the plane to investigate. Although A-1's were making repeated strafing runs as the VC advanced, both crewmen were under constant fire during their dash to the downed aircraft. As the enemy hammered at the wreckage with machine gun and small arms fire, the sergeants searched the craft from cockpit to tail. They found two crewmen who had been killed during one of the attacks — but there was no one else in the plane!

Meanwhile, the rescuemen in the first helicopter were told by the AC-47 crewmen that there were no other survivors. The word was immediately passed to Lieutenant Machado, and he alerted Yancy and Wheeler by going into a high hover and then returning to the landing spot. Seconds later the two airescuemen appeared but were immediately pinned down outside the plane by intense enemy fire. The sergeants answered with their M-16's, firing more than 40 rounds as an A-1 swept over the area in a close strafing run which momentarily scattered the VC. During the confusion, Yancy and Wheeler broke cover and desperately ran for the helicopter 30 feet away. Machine gun bursts tore up the ground between them as they covered the distance; however, another A-1 again swooped down and suppressed the VC fire as both men — miraculously unscathed — scrambled into the HUSKIE. Lieutenant Machado immediately lifted the chopper into the cloud cover.

The HUSKIES had arrived just in time... It was learned later that all six crewmembers of the AC-47 survived the crash, but two had been killed by ground fire and the third was presumed to have been killed when he was caught outside the plane by the fourth VC attack. The VC had almost reached the wreckage several times but were driven off by A-1 strafing runs and fire from the AC-47 crewmen. Two of those rescued were seriously wounded and the other was in critical condition due



Honored For Vietnam Valor

Capt Glen L. McFarlane of Det 7, EARRC(MAC), Seymour Johnson AFB, N. C., was recently awarded the Air Medal, the first Oak Leaf Cluster to the Air Medal, and the Air Force Commendation Medal in recognition of services performed while on temporary duty with Det 9, 38th ARRSq, Pleiku AB, Vietnam. The presentations were made by Col Homer C. Boles, 4th Tactical Fighter Wing commander, at the Officers' Open Mess.

Captain McFarlane received the Air Medal and Cluster for the "successful accomplishments of important missions under extremely hazardous conditions," and for distinguishing himself while serving as a rescue combat crew member in Southeast Asia when "he was required to remain in an HH-43F over hostile territory under extremely hazardous conditions, including the continuous possibility of hostile ground fire."

The Commendation Medal was awarded in recognition of the Captain's meritorious service as operations officer of Det 9 where his "outstanding professional skill and initiative aided immeasurably in identifying and solving numerous problems encountered in accomplishment of his duties."

Decorated For Hazardous Missions



Col Lucian A. Dade, Jr., commander, EARRC, left, congratulates Capt Floyd R. Lockhart and SSgt Millard L. Brickle after presenting them with decorations for rescue services performed in Vietnam. Captain Lockhart was awarded the Distinguished Flying Cross, the Air Medal with 11 Oak Leaf Clusters, the Purple Heart, and the Air Force Commendation Medal. Sergeant Brickle was awarded the Air Medal with two Oak Leaf Clusters. Both recipients are now attached to Det 7, EARRC, Seymour Johnson AFB, N. C.

to a severed artery and loss of blood. Just before their rescue, the survivors were told by a circling O-1 that the helos were on their way but that the Viet Cong were also advancing and, by this time, were less than 100 feet away. The downed airmen were advised to carry their weapons during the run to the choppers as it was debatable whether the helicopters or VC would arrive first.

VETERAN PILOT'S MOST MEMORABLE FLIGHT

Recognition for their services in Vietnam were recently given to two Aircuemen now attached to Det 7, EARRC, Seymour Johnson AFB, N. C. In a recent ceremony, Capt Floyd R. Lockhart and SSgt Millard L. Brickle, see photos above, were decorated by Col Lucian A. Dade, Jr., EARRC commander. The Captain flew 438 combat support missions in HH-43F HUSKIES from October, 1964, to October, 1965, while operating from Da Nang AB. During one of these missions he rescued 43 people. Sergeant Brickle, stationed at Da Nang from October, 1964, to August, 1965, flew a total of 77 combat support missions as an HH-43F crew chief.

The following account of Captain Lockhart's most unforgettable mission appeared in the "Seymour Scope," the base newspaper at Seymour Johnson. It is another excellent example of the hazards to which the men of the rescue choppers—Air Force and Navy—expose themselves while carrying out their humanitarian work.

Captain Lockhart had just returned to the base and was going off duty at the time the mission began:

"The copilot had already left," said Captain Lockhart, "And the crew chief and I were stripping the chopper of its rescue and survival equipment. We got a call to scramble at 7:05 p.m. A Cessna O-1E Bird Dog had been forced down about 10 miles north of the base.

"There wasn't time to recall my copilot so I had to go without him.

"We arrived at the crash scene approximately 10 min-

utes after receiving the call. By this time the plane was engulfed in flames.

"I made my approach to the burning aircraft and let the para-rescue man down by hoist. He was unable to get near the plane because of the intense heat, so he signaled for his fire-fighting equipment.

"As the gear was being lowered, I set up a 'hover' so that the wash from the chopper blades would force the flames away from him.

"At this point we were hit by ground fire and the chopper went out of control, hit the top of the trees, fell to the ground and rolled over about 50 feet from the burning O-1E.

"When the chopper quit moving, I got out to help the rest of the crew. The para-rescue man had been hit by a piece of the rotor blade which had broken off when the chopper hit the trees.

"Another HH-43F which had been standing by picked us up and took us to the hospital at Da Nang. I was released after examination and the para-rescue man was released the following day."

Captain Lockhart said had the copilot been in the aircraft, he at least would have received serious injury since the left side of the chopper was badly mangled.

Not all rescues in Southeast Asia are made under fire, of course, but HH-43 crews are still confronted with other hazards from natural causes during their missions. One of the most recent of these involved the after-midnight flight of a HUSKIE crew from Det 3, 38th ARRSq, Ubon AB, Thailand. Capt Israel Freedman, RCC; and Capt Jay M. Strayer, copilot, were in a precautionary orbit with the FSK when they saw an F4C explode eight miles away while on final approach. Both occupants ejected. Captain Freedman returned to the ramp, discharged the fireman and FSK and picked up the crew chief, SSgt Benjamin Selph. Flying through darkness and heavy haze layers, the HUSKIE pilot used voice signals from the downed pilot as a guide and picked him up in a rice paddy. The copilot was picked up a few minutes later and was treated for back injuries by the other HH-43 crewman, A1c Reedus L. Haraway, medical technician, as the chopper headed back to the base. ◀

PILOTS TO RECEIVE CHENEY AWARD

by MSgt R. E. Rogge



CAPT. JAMES A. DARDEN, JR.

Capt James A. Darden, Jr., and Robert S. Henderson of Det 10, AARRC, Aviano AB, Italy, have been selected as the 1965 recipients of the Cheney Award. The award will be presented to the two HUSKIE pilots by Gen John P. McConnell, chief of staff, USAF, in Washington, D. C., in the near future. The pilots were singularly

honored for their valorous work during last September's floods in north-east Italy when they saved the lives of a number of stranded Italian civilians and military.

Captain Darden has already been awarded the Airman's Medal, the Air Force's highest non-combat award for actions involving voluntary risk of life and limb. The captain had himself lowered in a HUSKIE sling and picked up and carried to safety, while still hanging in the sling, an ageing Italian who was trapped in a tree by the flood waters. Captain Henderson was awarded the Air Medal for his many flights during the three-day period of the floods. During these missions he was responsible for the spotting and eventual rescue of numerous persons.

The Cheney Award was established in memory of 1stLt William



CAPT. ROBERT S. HENDERSON

H. Cheney, Air Service, who was killed in an air collision in Italy in 1918. It is presented annually for an "act of valor, extreme fortitude, or self-sacrifice in a humanitarian interest performed in connection with aircraft," but not necessarily of a military nature. The pilots will receive certificates, bronze plaques and an honorarium.



KAMAN AIRCRAFT CORPORATION
Bloomfield, Conn. 06002

Beef Sheet

RECOMMENDED CHANGE TO SERVICE PUBLICATION

2nd Fold

PLEASE FILL IN THE FOLLOWING:

2nd Fold

PUBLICATION NO. _____ NAME: _____
PUBLICATION DATE _____ ADDRESS: _____
PAGE NO. _____ PARAGRAPH NO. _____ FIGURE NO. _____

Check appropriate box and explain below what is wrong.

ILLUSTRATIONS NOT ADEQUATE WORDS/ILLUSTRATIONS NOT CLEAR ERRORS OR MISSING DATA

If you would like to recommend a minor change in a handbook, technical order or other official publication prepared by Kaman Aircraft, fill in the "Beef Sheet" with the heading shown above and return it to the company. The purpose of this form is to expedite and supplement, not replace, the present system for making handbook

revisions through official channels. The "Beef Sheet" is provided so that mechanics and other maintenance personnel can make suggestions, or call attention to publication errors or omissions of a nature which do not warrant more formal handling. For example: It might be suggested that, for greater clarity, a sentence should be

rewritten, a portion of an existing drawing emphasized in a future handbook revision, or a procedural sequence changed to avoid duplication of later effort—in fact, any recommendation to improve the usefulness of the handbooks.

In publications where thousands of words and numbers appear, and drawings run into the hundreds, mistakes do show up even though each book has been carefully checked a number of times before distribution — a comma might be missing, a number transposed, and so on. Sharp-eyed publication users who spot things of this nature can see that they are corrected in future revisions by using the "Beef Sheet." The sheets, which are self-addressed and prestamped, were prepared by the Technical Publications section and can be obtained from KAC Field Service Representatives or by writing to Kaman Aircraft Corp., Old Windsor Road, Bloomfield, Conn. 06002 Attn: Customer Service.

Timely Tips

Corrosion Of Rotor Blade Trailing Edge (UH-2)

Several K611008-209 main rotor blades have been returned to overhaul because of corrosion on the trailing edge spline. This corrosion was due to minor nicks and scratches which had been left unattended because of their seeming insignificance; however, since no protective measures were taken, the corrosion got a toe hold and then progressed to such an extent a blade change was necessary. To save time, trouble, and money — all nicks, scratches and surface blemishes should be taken care of as quickly as possible: 1. Smoothly blend out the imperfection to remove any corrosion. 2. Treat the reworked surface immediately with a brush-coat of Alodine, MIL-C-5541. 3. Apply two coats of zinc-chromate primer. 4. Apply the finish color as applicable. Refer to the HMI, Structural Repair, NAVWEPS 01-260HCA-3, for allowable rework limits.

W. J. Wagemaker, Service Engineer

T53-L-1B and T53-L-11A Engines (HH-43B, HH-43F)

To prevent inadvertent reference to instructions which do not apply, maintenance personnel concerned with T53-L-1B or T53-L-11A engines should exercise caution when referring to Section III - Power Plant and Related Systems in T.O. 1H-43(H)B-2 (15 February 1963, changed 15 February 1965). Maintenance instructions for both engines are found in this T.O. but, since there are certain differences between the two, paragraphs 3-1 through 3-247 apply to the -1B and paragraphs 3-248 and subsequent apply to the -11A engine. The Special Torque Table (Fig. 1-29) in Section I, applies to the -1B and also to the -11A engine except when otherwise stated in the text applicable to the -11A.

Example: Fig. 1-29 lists 250-320 pound-inches as the torque for all of the engine mounting pad bolts. This is correct for the -1B engine but not for the -11A. Reference to paragraph 3-279, which applies to the -11A, shows that the forward engine mount pad bolts for this engine should be torqued to 600-635 pound-inches and the aft to 250-320 pound-inches. For the -11A engine, REFER TO THE TEXT FIRST before using the torque values specified in Fig. 1-29. If the -11A instructions do not define torque values, then those in Fig. 1-29 will apply.

H. Zubkoff, Service Engineer

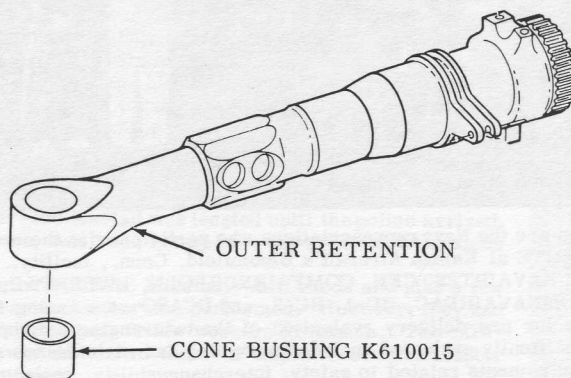
Throttle Adjustment (UH-2)

When making throttle adjustments to increase or decrease the FLY and "max beep range," a good rule of thumb to follow is: If the maximum RPM is low and the minimum RPM is high, the correction should be made at the electrical beeper actuator; however, if the minimum beep as well as the maximum beep range is low, then an adjustment at the serrated compensator is the proper corrective action. After making these adjustments, make certain that the throttle goes into the stop-cocked position when the throttle is in the OFF position. Refer to the HMI, NAVWEPS 01-260HCA-2-3, for throttle rigging procedures.

H. Zubkoff, Service Engineer

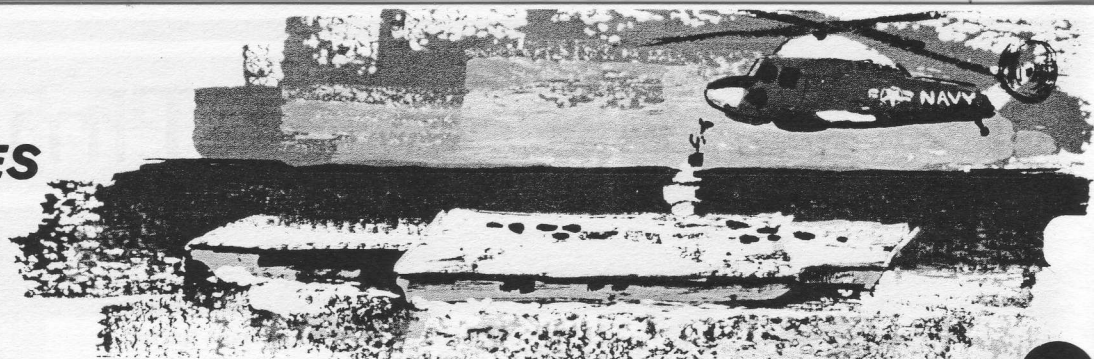
Replacement Of Folding Pin Locking Cone Bushing (UH-2)

The main rotor blade folding pin locking cone bushing, P/N K610015, is installed or replaced in the outer retention assembly at overhaul facilities ONLY. The installation of the bushing should not be attempted by maintenance personnel because of the shrink fit and final grinding requirements. The bushing, as delivered for spares, is only partially machined and requires final grinding of the tapered surfaces AFTER installation into the outer retention assembly, P/N K618192. If the folding pin cone bushing is extracted with the blade folding pin during removal, the retention assembly must be replaced and returned to overhaul for repair.



W. J. Wagemaker, Service Engineer

SEASPRITE ACTIVITIES



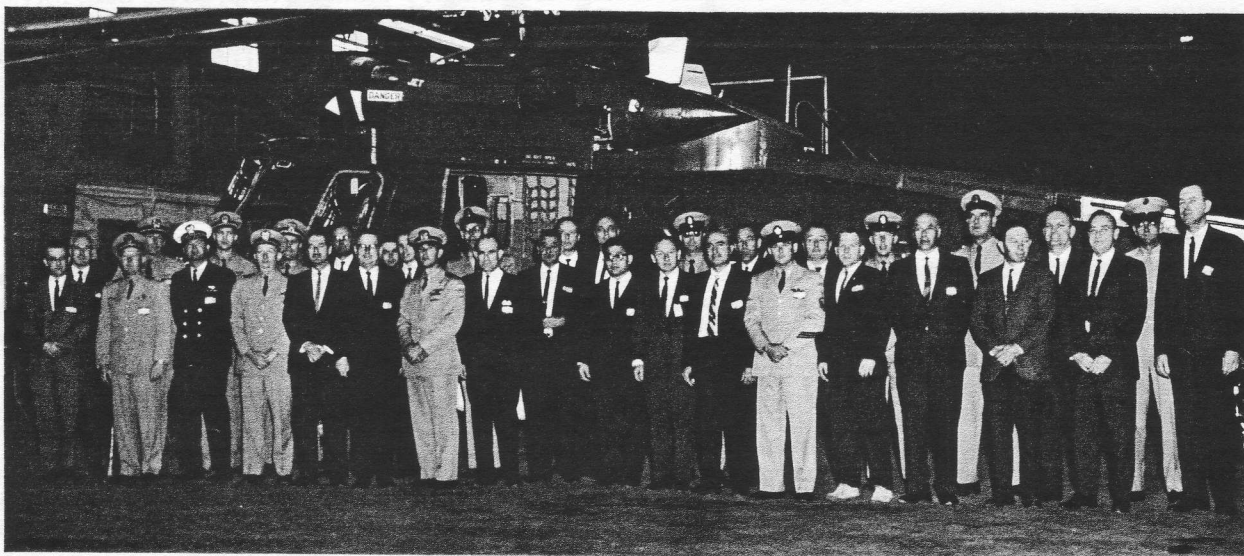
... In response to request for emergency air evacuation of badly burned epileptic boy to hospital, UH-2 crew from SAR unit at NAS Whidbey Island, Wash., makes 65-mile night-flight over Puget Sound in rain and snow showers. Next day, helo joins in search for missing USAF T-38. SEASPRITE Pilot is LCdr J. H. Weatherly, Lt H. Z. Mc Daris, copilot; E. E. Stout, ADR3, and J. H. Demaris, HM1, hospital corpsman, crewmen... In another mission, UH-2 from NAS Whidbey Island flies seriously injured boy to hospital. Hundred and fifty-mile round trip made at night over Puget Sound in poor weather. Landing at hospital is in partially lighted ball field. Lieutenant Mc Daris is UH-2 pilot and crewmen are W. L. Burkenbine, ADR2, and Demaris.

... UH-2 crew from SAR Unit, NAS Pensacola, Fla., evacuates Navy enlisted man with heart attack from fishing boat 30 miles off coast and takes him to hospital at Pensacola. George W. Shockey, ADC/AP, SEASPRITE pilot; Victor Christine, ADJ1, crewman; and Lt M. R. Volow (MC), School of Aviation Medicine, flight surgeon... SEASPRITE crew from HC-1's Det 5 rescues four sailors stranded in boat three miles from Grande Island, P.I. Pilot of rescue helo is LCdr David J. McCracken, Ens Robert H. Clark, Jr., is copilot, and Herbert G. Davis, AECS, crewman. UH-2 operating from USS Coontz at time.

... Wallace A. Wilkinson, ADRC(AP), and C.A. Gnann, O&R mechanic, on routine test flight in UH-2 from NAS Jacksonville, Fla., when house is seen afire. SEASPRITE pilot lands nearby and woman, revived by civilian fire-fighters after smoke inhalation, is placed aboard. Her husband, suffering from second and third degree burns, is also taken into SEASPRITE and Chief Wilkinson flies to NAS golf course. Waiting ambulance takes couple to Naval hospital.

... SEASPRITE from SAR unit at NAS Patuxent River, Md., launches after engine on F8U flames out. Fighter pilot, who ejected, rescued from tree 32 miles from air station a few minutes later. UH-2 pilot is Lt Lawrence McGuire and crewmen are Ronald Schweizer, AE3 and Richard Mausteller, AD3... Pilot who bailed out 44 miles from NAS Cecil Field, Fla., after A-4 flame-out, picked up soon afterward by UH-2 from SAR unit at field. LCdr R. E. Bryan is SEASPRITE pilot; R. G. Spooone, ADR3, and J. L. Reardon, ADRAN, crewmen; Lt Craig A. Mehldan (MC), flight surgeon.

... UH-2 crew from SAR unit at NAS Corpus Christi, Texas, picks up pilot of trainer which collided with another aircraft 50 miles from Kingsville. Lt Roger P. Hulson, SEASPRITE pilot; Lonny J. Jaynes, ADJ1, and Ralph L. Autry, HM3, crewmen... Civilian pilot of light plane makes emergency landing in field and picked up soon afterward by SEASPRITE from NAS Cecil Field, Fla. LCdr Paul H. Kirshner, UH-2 pilot, and R. G. Spooone, ADR3, crewman.



MEI FOR TWIN SEASPRITE—Shown are the Navy representatives who participated in the recent Maintenance and Engineering Inspection of the UH-2C SEASPRITE at Kaman Aircraft's Bloomfield, Conn., facility. Military and civilian personnel from NASC, BWFRRRLANT, NAEL, NAVAIRTESTCEN, COMFAIRNORFOLK, BWFRRPAC, O&R JAX, O&R NI, NAVAVN-SAFECEN, COMNAVAIRLANT, COMNAVAIRPAC, HC-1, HC-2, and DCASO were among those attending. Purpose of the MEI was to provide an opportunity for pre-delivery evaluation of the twin-engine helicopter regarding maintenance and support of the aircraft. Areas specifically evaluated included servicing and maintenance suitability, adequacy of ground support equipment, and design requirements related to safety, interchangeability, replaceability, and accessibility. The inspection was concerned only with those aircraft systems directly affected by the twin-engine modification.

COURAGEOUS CREWMEN AID SURVIVORS

Eight more rescues have been carried out by SEASPRITE's from HC-1 detachments operating from ships off the Vietnamese coast. As they have during the many other lifesaving missions chalked up by the men manning the helicopters, crewmen jumped or went "down the wire" to aid survivors whenever necessary.

A fighter pilot who ejected after his plane struck the ramp during a night landing on the USS Ticonderoga was rescued shortly afterward by a Det Bravo UH-2. To effect the rescue, D. P. Walker, AMS2, went to the aid of the survivor who was tangled in his chute. The crewman also became caught in the lines but, after vain attempts to get free, calmly had himself and the survivor hoisted aboard the UH-2, chute and all. C. R. McCall, AE3, was hoist operator, Lt(jg) C. R. Trail, pilot, and Lt(jg) J. H. Henkel, copilot.

In a similar incident, UH-2 crewman T. A. Opperman, AA, went "down the wire" to aid a fighter pilot who had been forced to eject from his crippled aircraft. Opperman dove underwater and cut all the shroud lines within reach; however, when the survivor was being hoisted aboard it was found he was still attached to the chute. He was lowered to the water, the crewman cut the rest of the lines, and the rescuee was taken aboard the chopper. Lt(jg) J. F. Blakely was UH-2 pilot; Lt(jg) G. W. Siebe, copilot; and T. G. Jessen, AO2, hoist operator. All are attached to Det Golf on the USS Oriskany.

When an A-1E left the flight deck of the USS Kitty Hawk and plunged into the South China Sea, the plane guard UH-2 from Det Charlie immediately responded. Walter S. Cluer, ATAN, was lowered from the helo and assisted the survivor into the sling. The rescuee and crewman were hoisted aboard the SEASPRITE by John T. Litzinger, ADR3. Lt(jg) Robert E. Sloan was pilot

of the UH-2 and Lt(jg) James M. Flynn, copilot. During another rescue, Charles R. Hasselbach, ADJ3, from Det Charlie, went into the water to assist when it could not be determined if the survivor, who had ejected from an F-8, was free of his chute. Others manning the SEASPRITE were LCdr Ben A. Lehman, pilot; Lt(jg) Guy A. Ishiguro, copilot; and Billy D. Jones, ATN3.

SEASPRITE crewman Donald Millhauser, AN, went to the aid of the survivors after a helo plunged into the water when taking off from the USS Kitty Hawk. The crewman helped one rescuee into the sling and when it was lowered again, assisted another. The third time Millhauser was hoisted aboard. Others manning the UH-2 were Lieutenant Sloan, pilot; Lieutenant Flynn, copilot; and Horst G. Rauch, AE2, crewman. In other rescues made by Kitty Hawk SEASPRITE crews: An A-4 pilot who "punched out" of his crippled plane at 10,000 feet was circled by the rescue helo on the way down and plucked from the water as soon as he splashed in. Lieutenant Sloan was pilot of the UH-2 and Lieutenant Ishiguro, copilot. Hasselbach and Millhauser, were crewmen. The occupants of an F-4 who ejected from their crippled plane were hoisted to safety a short time afterward by a Kitty Hawk UH-2 manned by Lieutenant Sloan, pilot; Lt(jg) Harry M. Borders, copilot; Jones and Hasselbach, crewmen.

In another incident, an A-4 pilot who ejected after a flameout was rescued a minute after striking the water by a UH-2 crew from Det Lima aboard the USS Hancock. The helicopter was waiting for the rescuee when he splashed down. LCdr William A. Stennett was pilot of the chopper, Lt(jg) David L. Fenner, copilot, and crewmen were Charles A. Schaaf, AMS3, and Billy J. Fields, AMH/AN.

Chiang Kai-Shek UH-2 Passenger

LCdr Robert L. Wheeler of HC-1 and Lt(jg) Kent L. Fixman of HC-2 recently had the honor of flying the UH-2 SEASPRITE which transported President Chiang Kai-shek from Taipei International Airport to the USS Enterprise. Once aboard the giant carrier, the National Chinese leader watched sea and air power demonstrations and inspected static displays. For the occasion, the UH-2 had been transformed from a hard-working rescue and utility aircraft to a plush transport. It was outfitted with a special chair, rugs and steps and the interior was painted. The addition of a large five-star emblem completed the transition. Lt(jg) Paul G. Carroll and Lt(jg) John K. Beaver of HC-2 flew the UH-2 which escorted the Presidential helicopter.

SEASPRITE Crewman Decorated

Donald C. Baker, ATR3, a SEASPRITE crewman from HC-2, NAS Lakehurst, N. J., was awarded the Navy Commendation Medal with Combat "V" recently for his part in the rescue of two downed airmen from North Vietnam. The presentation was made by Cdr Glenn E. Kemp, commanding officer of the helicopter combat support squadron. At the time of the incident, Baker was serving with HC-2's Det 62 aboard the USS Richard K. Turner. To effect the rescue, a UH-2 from the detachment flew through heavy small arms and anti-aircraft fire to the top of a 4,000-foot mountain and rescued two of four Naval aviators. The petty officer was honored for his "courageous performance" during the hazardous mission. Two other members of the crew were also honored recently.

Twin SEASPRITE In SAR Mission

Although still in the testing stage, the twin version of the UH-2 has already successfully carried out its first SAR mission. The honor fell to two pilots from Kaman Aircraft who located a lost three-year-old boy while on a test flight in the UH-2C.

Jack C. Goodwin, assistant chief test pilot, and his copilot, Peter J. Russell, senior pilot in charge of production, began searching for the child after KAC's control tower radioed that Windsor, Conn., police had asked for assistance. A UH-2A flown by Al Ashley, another Kamantest pilot, also joined in the search. Thirty minutes later Russell spotted the boy, and his dog, beside a stream in a heavily wooded area. Goodwin flew to the nearest police cruiser a few miles away, gained the attention of the occupants, and then circled the area where the lost lad was located until the police arrived. The child, unharmed by his adventure, was soon returned to the arms of his anxious mother.

Goodwin and Russell were presented with KAC Mission Award cards and pins a few days later in recognition of the humanitarian service performed. However, they had already received a special "award" from their fellow workers at Kaman. The cardboard plaque, shown on the right, was affixed to the twin-engine rescue helicopter soon after it landed from the SAR mission.



Q's AND A's

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

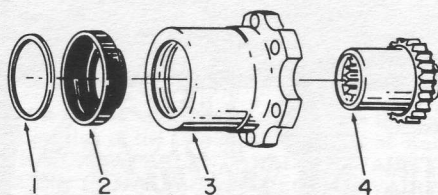
Q. (Applies UH-2) WHAT ARE THE LATEST MAIN ROTOR BLADE RIGGING PROCEDURES FOR SINGLE OR MULTI-BLADE REPLACEMENTS?

A. To find the flap setting on the replacement blade(s), check existing flap angle, prior to blade removal, as follows:

1. Rotate the rotor hub until the blade which is to be replaced, is 45 degrees to the port (forward left-hand quadrant) side of the aircraft. Use the rotor blade folding index markings for reference.
2. Lock the rotor shaft in this position with the rotor brake.
3. Install rigging pins into the mixer as outlined in HMI, NAVWEPS 01-260HCA-2-2.
4. Position and hold the rotor blade on its LEAD stop.
5. Measure and record the flap angle with the protractor, P/N K604701, while preloading the rotor blade and flap trailing edges up (rotor blade leading edge should pitch down against the static pitch stop).
6. Remove the main rotor blade from the aircraft and reinstall replacement blade as outlined in HMI, NAVWEPS 01-260HCA-2-5.
7. Position and hold the rotor blade as in step 4, adjust and set the flap angle to the identical degree setting of the removed blade.

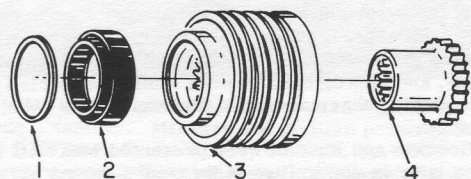
NOTE: For greater accuracy, set the protractor assembly, P/N K604701, at the desired angle and secure the wing nuts, on the tool, at the leading and trailing edges of the rotor blade. Adjust ONLY the aft-most plate (in contact with the trailing edge of flap) when transferring the protractor from blade to blade. Prior to replacing a complete set of rotor blades, measure and record the flap angle on the "A" blade ONLY and set all the replacement blade flaps to this angle. If the "A" blade flap angle is unknown, then set all the flap angles to the nominal setting for local operating conditions (plus 1/2 degree to plus 4-1/2 degrees reading on the protractor).

8. Refer to HMI NAVWEPS 01-260HCA-2-2 for final



TAIL ROTOR SHAFT COUPLING
EXPLODED VIEW

1. RETAINING RING
2. SEAL
3. SLEEVE
4. HUB



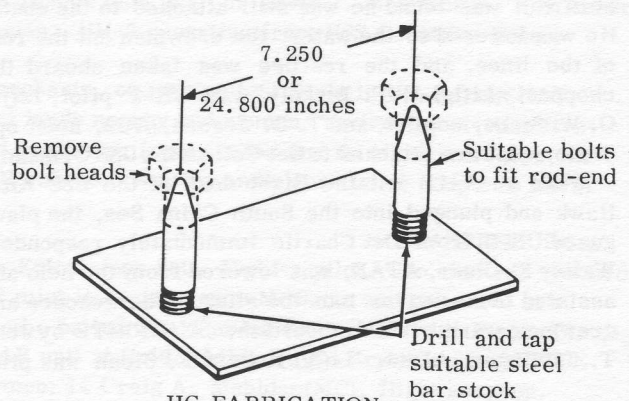
MAIN DRIVE SHAFT COUPLING
EXPLODED VIEW

flap angle setting procedures for autorotation RPM requirements.

Whenever the main rotor control rod (shoe-string rod), P/N K659108, or the tracking turnbuckle, P/N K659270, rods or rodends are replaced, or during the re-rigging of the control system, the following nominal rodend lengths are recommended:

1. Adjust all 4 tracking turnbuckles, P/N K659270, to a 7.25-inch dimension between rodend centers. (Bench rig.)
2. Adjust all 4 main rotor control rods (shoe-string rods), P/N K659108, to a 24.80-inch dimension between rodend centers. (Bench rig.)

These presetting lengths will eliminate the need for using the L-crank rigging lock, P/N K604705-3, and the lag angle rigging spacer, P/N K604718-1. This information will be included in a future revision to the HMI, NAVWEPS 01-260HCA-2-5.



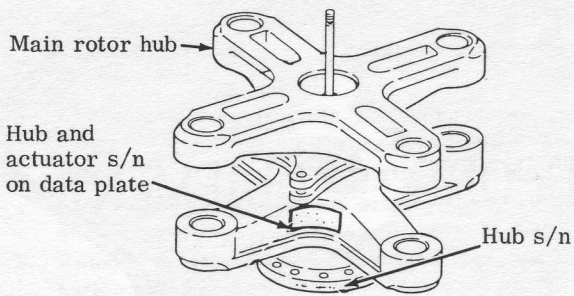
Dimensioning jigs can be easily fabricated by drilling and tapping a suitable steel bar to accept bolts of correct diameter. Cut off the heads of the bolts and maintain the dimensions called out in steps above. See sketch for jig example.

W. J. Wagemaker, Service Engineer

Q. (Applies UH-2) WHAT IS THE CORRECT PROCEDURE FOR INSTALLING THE GREASE SEALS INTO THE COUPLING SLEEVES ON THE MAIN AND TAIL ROTOR DRIVE SHAFTS?

A. Always install the grease seals (2) into the main and tail rotor drive shaft coupling sleeves (3) so that the retaining ring (1) is visible from the exterior side of the seal (2). See the exploded-view drawing for correct seal/retaining ring relationship. This information will be incorporated in a future revision to the HMI, NAVWEPS 01-260HCA-2-4.

F. E. Stares, Service Engineer



Q. (Applies UH-2) WHERE IS THE SERIAL NUMBER OF THE MAIN ROTOR HUB LOCATED?

A. The HUB serial number is vibrascribed on the hub mounting flange. The data plate on the hub contains the serial number for the hub and actuator assembly. This data plate should not be used when only the hub serial number is desired.

W. J. Wagemaker, Service Engineer

Q. (Applies UH-2) IS IT PERMISSIBLE TO USE RETENTION ASSEMBLIES HAVING COUNTERWEIGHTED L-CRANKS IN COMBINATION WITH RETENTIONS WHICH DO NOT HAVE THE COUNTERWEIGHTED L-CRANKS?

A. This is not permissible—retentions with counterweighted L-cranks must be used in full ship sets. In addition, the new collective stick bungee assembly (Ref AFC #73) must be installed in the aircraft in order to use the retentions with counterweighted L-cranks. The following chart outlines the possible combinations of retention assemblies. Where retentions can only be used in pairs with other type retentions, the replacement pairs must be installed on opposite ears of the hub.

W. J. Wagemaker, Service Engineer

UH-2 RETENTION COMBINATIONS

P/N 618080 Basic Retention	Spindle Type	AFC 73 Installed Part II Ct'Wt L-Crank	AFC 100 Installed (ECP 218)	Comment	Can Be Used With	REPLACEMENT		
						In Single (1) Retention	In Ship Sets (4) Retentions	In Pair (2) Retentions
-209	618096-1 618097-1 (light)	No	No		-303 -305	X	X	X
-303	618493-1 618494-1 (light)	No	No	ASC #6 plus IAB, 52 & supplements must be installed	-209 -305	X	X	X
-305	618493-5 618494-5 (light)	No	No	IAC #84 (ECP #210) must be installed	-209 -303	X	X	X
-309	618592-1 618593-1 (heavy)	No	Yes		-209 -303 -305			X
-409	618493-5 618494-5 (light)	Yes	No	BUNO's 152200 thru 152206 have -409's. Only 28 of this dash number will exist.	-603			X
-603	618592-1 618593-1 (heavy)	Yes	Yes		-409			X

Q. (Applies UH-2, HH-43B/F) WHAT IS THE SOURCE OF "SELF-GENERATED" CONTAMINATION IN HYDRAULIC FLUID AND WHAT PRECAUTIONS SHOULD BE TAKEN TO CONTROL THIS AND OTHER TYPES OF CONTAMINATION?

A. Every hydraulic system having moving parts is subject, in some degree, to self-generated contamination; the greatest amount is usually generated during the wear-in period after a new or overhauled component has been installed in the system. Hydraulic pumps may be considered the greatest source of self-generated contamination because of their motion and speed of operation. Contamination of this nature can only be controlled by replacement of the filter elements and a thorough flushing of the system when required. In the event that a component in the hydraulic system fails, the system should be flushed—this is particularly important in the case of a hydraulic pump failure. Other precautions which should always be observed to prevent outside contamination are: When changing a component, always make certain the open lines and fittings are securely capped until the replacement is completed. Whenever possible, service the aircraft hydraulic reservoir with a pressurized unit; if this procedure cannot be used, make certain that precautions are taken to prevent dirt, lint, and other foreign matter from entering the system at the time of servicing. A good point to remember is that an aircraft hydraulic system is ONLY AS CLEAN as the equipment used to service it. For further information on hydraulic contamination as applied to the UH-2, refer to the article in the April-May, 1964, issue of Kaman Rotor Tips. Reprints may be secured by writing to the Customer Service Department at KAC.

P. M. Cummings, Service Engineer

G R O U N D S U P P O R T & E Q U I P M E N T

PART I

Although ground support equipment is an important member of the aviation family, only too often it is treated like a neglected "stepchild" with scant heed being paid to its care, preventative maintenance or proper stowage. Equipment thus treated, repays in kind by becoming balky when it should operate smoothly, failing at inopportune times or — in some cases — by threatening the safety (or at least the knuckles) of the users. It all adds up to one thing: Preventive maintenance now can save hours of trouble and unnecessary work later on.

Many GSE tools or pieces of equipment, due to their simplicity of design and obvious method of operation, are provided with neither lubrication charts nor written instructions; also, because of this lack of complexity, these tools are often overlooked when it comes to periodic inspection and care. Other equipment, especially when only used occasionally, may be neglected because of its rugged appearance which seems to call for little or no maintenance. In either case, rust, corrosion,

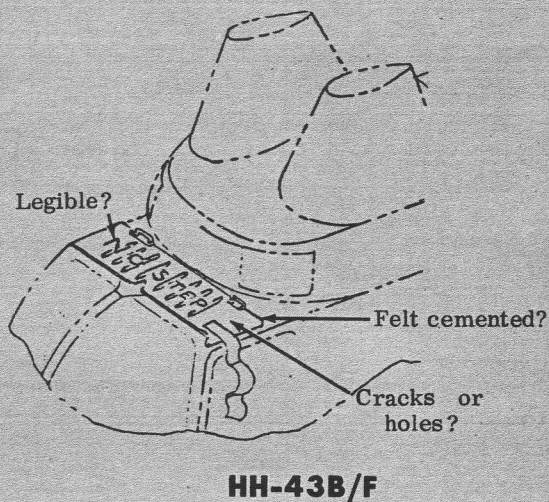
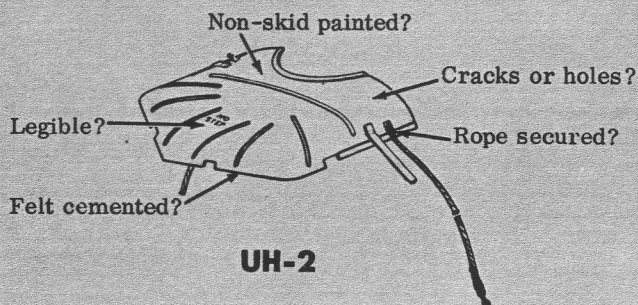
dirt and general "hangar rash" are common enemies which can lead to maintenance headaches far out of proportion to the time necessary to properly protect or stow such equipment.

Since lubrication is one of the greatest weapons against the ills that beset ground support equipment, it might be well to point out at this time that standard lubrication procedures should always be used on such equipment as well as aircraft. Points and surfaces to be lubricated, whether by gun, oil can, or hand, should be wiped clean before and after applying the lubricant to prevent the introduction of dirt or other abrasives between moving parts. When using a grease gun, be sure to purge bushing-type bearings of old grease by pumping until the new grease emerges from the bearing. Wipe the area clean of excess grease and always apply oil sparingly. Such a precaution removes a definite hazard to personnel who may slip on greasy equipment or oily drippings — remember, the neck you save may be your own!

The following information is supplied as a handy reference and guide for preventive maintenance on ground support equipment used by personnel operating the UH-2A/B and HH-43B/F helicopters. Many of the drawings show equipment peculiar to only one type aircraft; however, the checks and corrective action apply to both. For component replacements refer to IPB NAVWEPS 01-260HCA-4-7 or T.O. 1H-43(H)B-4.

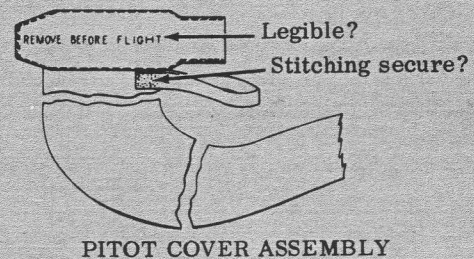
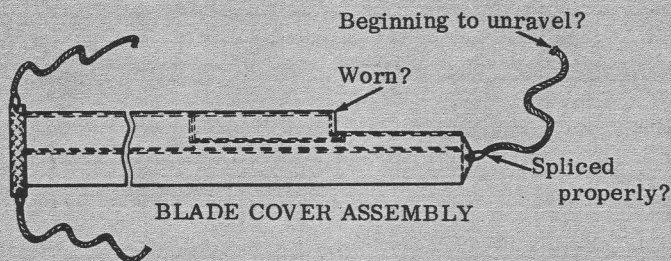
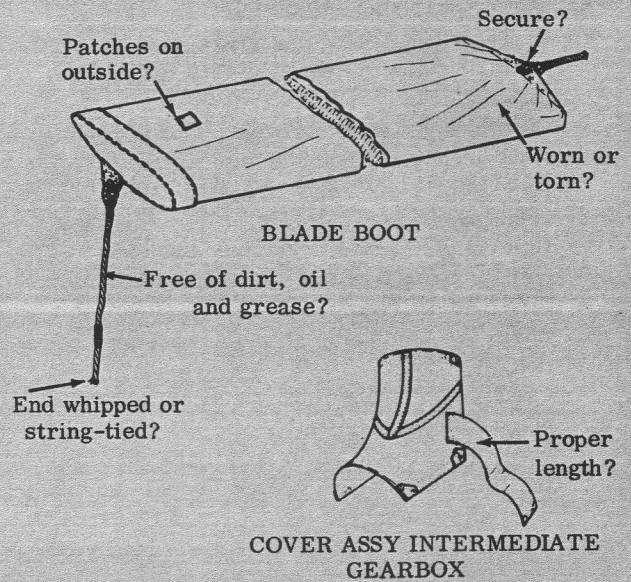
Protective Shields

1. Check fiberglass protective shield for cracks or holes and repair with standard fiberglass procedures. Install all doublers or reinforced patches on the exterior side.
2. Ensure that protective felt binding is free of abrasive particles and properly secured to the shield.
3. Repaint non-skid area as necessary to eliminate possible safety hazard while in use.
4. Store in protected areas where shield will not be subjected to "hangar rash."



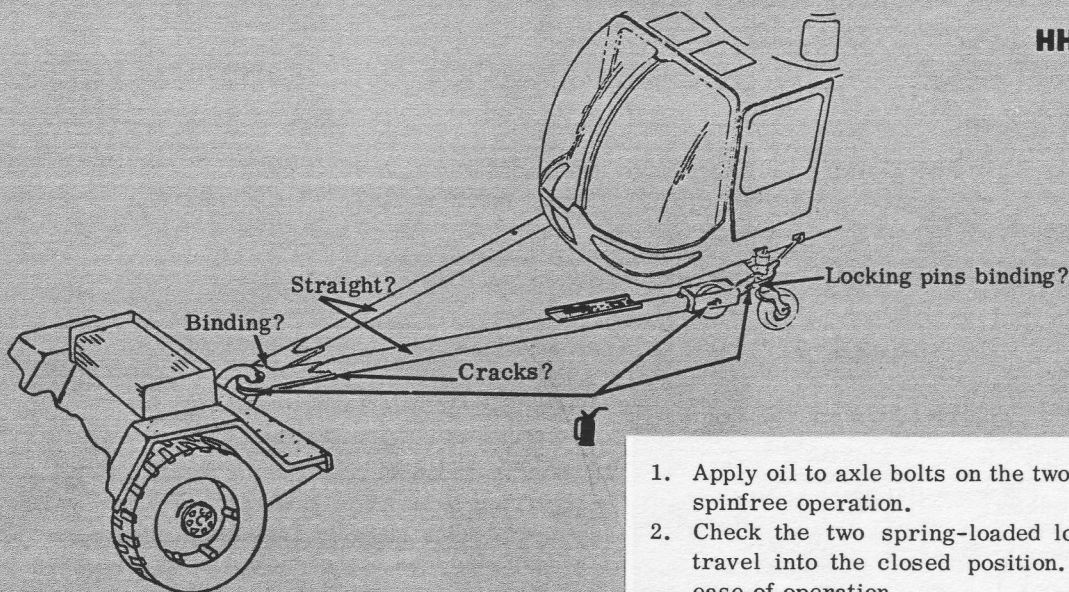
Protective Covers

1. Check canvas materials for worn spots, tears in canvas and loose or broken stitching in seams. Make sure grommets and streamers are secure. Streamers less than their original length (36 inches) should be replaced.
2. Remove oil and grease from protective covers with safety solvent, P/N P-D-680.
3. Clean rope and guide lines with soap and water or replace if worn.
4. Ensure that splice areas of rope are tight and that rope ends are whipped or taped to prevent unraveling.
5. Fold, or roll up loosely, canvas covers prior to storage in a well ventilated rack or bin. To prevent mildew, whenever possible, do not store in a damp area.
6. After cleaning, and before folding for storage, hang up to "air dry" naturally in a clean dry, and preferably sunlit, area.
7. When canvas repairs are necessary — sew canvas patches on exterior surfaces only.



HH-43/ UH-2

Tow Bar

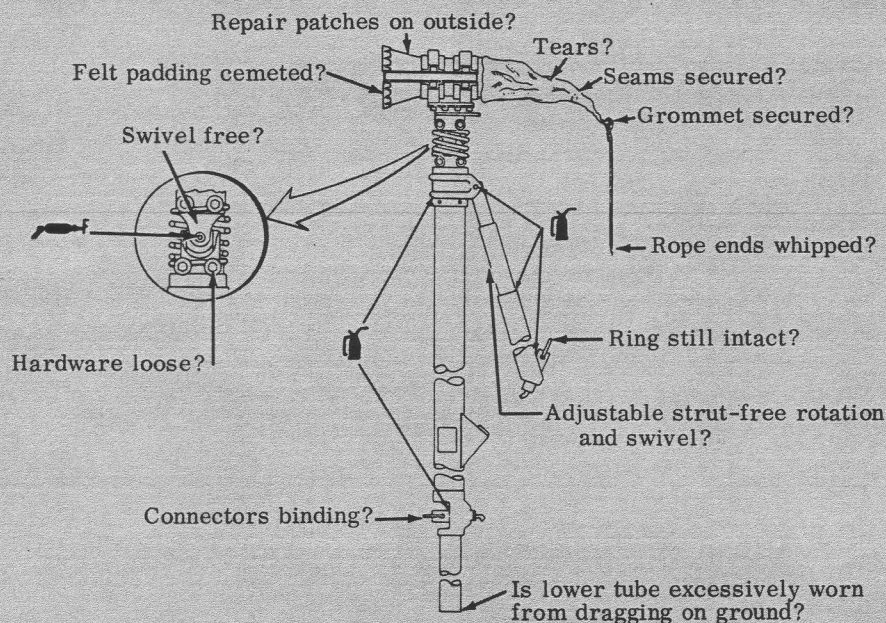


1. Apply oil to axle bolts on the two trailing wheels for spinfree operation.
2. Check the two spring-loaded locking pins for full travel into the closed position. Oil sparingly for ease of operation.
3. Ensure parallel alignment of the two draw tubes. Straighten if bent out of alignment.
4. Check for binding of the scissor feature and apply oil to pivot bushing.
5. Remove all sharp objects embedded in rubber-tired wheels and clean oil and grease from wheels.
6. Paint bars if necessary.
7. Check for cracks and weld if necessary.

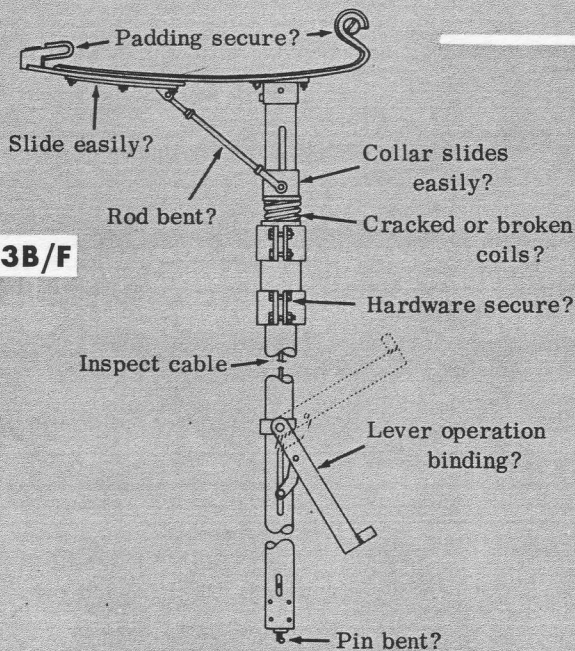
Rotor Blade Folding Retaining Assemblies

1. Lubricate in accordance with HMI NAVWEPS 01-260HCA-2-1 lubrication chart.
2. If repairing of the fiberglass boot is necessary, install reinforcement doublers or patches on exterior side only.
3. Clean and oil connectors on strut assembly to ensure proper engagement into aircraft receptacles. Make sure steel rings are still intact and replace as necessary.
4. Ensure that universal joint, enclosed within the coil spring, is free to swivel easily in all directions. Lubricate as required.
5. Check the adjustable strut for operation and condition.
6. Check lower end of tube for excessive wear and replace if necessary.
7. Apply a light coat of oil to all the pivot points and rotating components. Wipe excess lubricant from retaining assembly.
8. Inspect nylon bag for tears and sew nylon repair patches on outer surface only.
9. Inspect grommet for security on end of the nylon bag.
10. Clean dirt, oil and grease from nylon bag with soap and water.
11. Check guide ropes for fraying in the splice areas. String-tie the loose ends or replace the guide ropes if worn.
12. Check all attaching hardware for security and corrosion and clean or replace as necessary.
13. Check the felt liner inside of the fiberglass boot; if necessary apply adhesive and rebond felt to the boot. Ensure that felt is free from dirt and foreign objects so as not to damage rotor blade when retainer assembly is installed.
14. Check attaching hardware for security within the fiberglass boot and tighten if necessary.

UH-2



HH-43B/F



(HH-43B/F maintenance checks in addition to the ones above)

1. Ensure rodends are free to rotate and apply oil sparingly to attaching hardware.
2. Check sliding plate for freedom of operation. Ensure plate is not bent or sprung out of original shape. Straighten if necessary.
3. Inspect cable for broken strands and kinks; replace cable if necessary. Check swaging at both ends.
4. Clean oil and grease from rubber collar.
5. Inspect spring for broken or cracked coils.
6. Cycle the locking handle a few times to ensure bind-free operation of the attaching hardware. Correct any binding by replacement of parts or lubrication.

DET 153 RESCUES SEVEN



MISSION TO KARATAS—Rescue crew which evacuated "three generations" discuss mission. Left to right are A1c Millard E. Barker, Capt Charles W. Burrridge, 1stLt Ronald I. Pass and SSgt John F. Dorgan, Jr. (USAF photo)

To an HH-43B crew from Det 153, TUSLOG, Cigli AB, Turkey, fell the unusual distinction of rescuing seven persons — representing three generations of a Turkish family — from raging flood waters which threatened to engulf their farm house near the village of Karatas. 1stLt Ronald I. Pass was RCC and Capt Charles W. Burrridge, copilot, on the mission which involved a 110-mile round trip over mountainous terrain through fog, thick haze and 30-knot winds. The helo landed in about six inches of water in one of the few spots not

swept by the flood and Capt Ilhan Kilic of the Turkish Air Force, and SSgt John F. Dorgan, Jr., crewman, assisted the "three generations" to the helo. The evacuation to a safe spot was accomplished in two flights, then the crew members were picked up and the HH-43B returned to home base. A1c Millard E. Barker, rescue specialist, was the other HUSKIE crewman on the hazardous flight. Last year a Det 153 HH-43B crew rescued a shepherd from the same area.

The day after the seven persons were rescued, an HH-43B crew

from the detachment was called on to evacuate two high-ranking Turkish civilians injured in an automobile accident. Carrying two 55-gallon drums of JP-4 in an external cargo net, the HH-43B flew part of the 114-mile trip to Mugla through valleys partially obscured by intermittent haze, rain, and sleet showers. A landing was made on the soccer field and the HUSKIE was refueled. The two men, members of the Turkish National Parliament, were loaded aboard the helo and taken to Gazeimir AB where they were placed aboard a Turkish C-47 for a flight to Ankara. Captain Burrridge was RCC on the 228-mile round trip; other members of the HH-43B crew were TSgt Joseph R. Johnson and 1stLt Aydin Ustun, Turkish Air Force.

In a third mission, an HH-43B from Det 153 evacuated a Turkish woman seriously injured in an automobile accident in the town of Manisa. The HUSKIE landed in an open field, the patient was loaded aboard and taken to a Turkish C-47 for further air evacuation. Capt Burrridge was pilot on the mission and Capt Pasco Parker was copilot. Other members of the helo crew were Capt Oner Dincer, TAF, and A2c John M. Adrian, helicopter mechanic.

CURRENT CHANGES

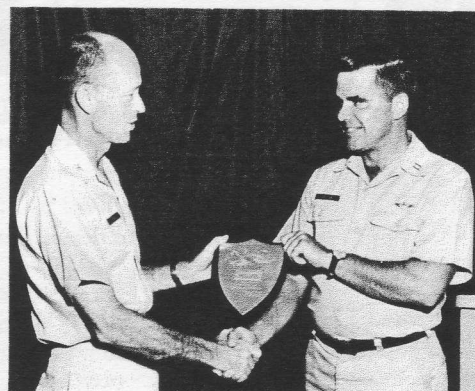
	Issue Date		
H-2 AIRFRAME CHANGE 58, AMEND 1 - OIL COOLER BLOWER INSTALLATION; Replacement of Flexible Blower Drive Shaft Assembly	6 April 1966	NAVWEPS 17-15CR-9 - Technical Manual, Operation and Service Instructions with Illustrated Parts Breakdown, GYRO MOTOR TEST PANEL	1 April 1966
NAVWEPS 01-260HCA-2-2 - Handbook Maintenance Instructions, AIRFRAME GROUP	15 October 1962	NAVWEPS 17-15KL-12 - Technical Manual, Operation, Service and Overhaul Instructions with Illustrated Parts Breakdown, ALTITUDE CONTROLLER TEST PANEL	1 April 1966
changed	15 January 1966	T.O. 1H-43(H)B-2 - Technical Manual, MAINTENANCE INSTRUCTIONS, HH-43B and HH-43F HELICOPTERS	15 February 1963
NAVWEPS 01-260HCA-2-8 - Handbook Maintenance Instructions, INSTRUMENTS	15 January 1964	changed	23 December 1965
changed	15 March 1966	T.O. 1H-43(H)B-3 - Technical Manual, STRUCTURAL REPAIR, HH-43B and HH-43F HELICOPTERS	15 December 1961
NAVWEPS 01-260HCA-4-2 - Illustrated Parts Breakdown, DRIVE SYSTEMS	15 October 1962	changed	7 January 1966
changed	15 February 1966	T.O. 1H-43(H)B-4 - Technical Manual, ILLUSTRATED PARTS BREAKDOWN, HH-43B and HH-43F HELICOPTERS	16 March 1964
NAVWEPS 01-260HCA-4-3 - Illustrated Parts Breakdown, UTILITIES	1 April 1964	changed	9 February 1966
changed	15 February 1966	T.O. 1H-43(H)B-5 - BASIC WEIGHT CHECKLIST and LOADING DATA, HH-43B and HH-43F HELICOPTERS	3 April 1964
NAVWEPS 01-260HCA-4-4 - Illustrated Parts Breakdown, RADIO AND ELECTRICAL	15 October 1962	changed	17 February 1966
changed	15 February 1966	T.O. 1H-43(H)B-579 - INSTALLATION OF SELF SEALING MAIN FUEL CELLS, HH-43B HELICOPTERS	2 May 1966
NAVWEPS 01-260HCA-4-5 - Illustrated Parts Breakdown, FURNISHINGS	15 October 1962		
changed	15 April 1966		
NAVWEPS 17-15CR-8 - Technical Manual, Operation and Service Instructions with Illustrated Parts Breakdown, BRUSH TENSION TEST SET	1 April 1966		

F. G. Weber, Supervisor, Service Publications

1000-Hour Pilot Awards



Lt Paul M. Hoffman, USNR, of NATC Patuxent River, Md., recently qualified for the 1000-hour award while flying in a UH-2 SEASPRITE. The award is presented by Kaman Aircraft to pilots logging 1000 hours in helicopters produced by the company. Several Air Force officers, all HH-43 HUSKIE pilots, have also qualified for, or received, the plaque. In top photo, Capt Edward Williams, right, of Det 15, WARRC (MAC), Luke AFB, Ariz., is congratulated by Capt David E. Allen, detachment commander, after logging his 1000th hour. In left photo, Col Donald E. Matthews, commander, AARRC, presents a 1000-hour plaque to Capt Leonard N. Buck of Det 4, AARRC (MAC), Ramstein AB, Germany. In right photo, Capt Ramon M. LeFevre, Det 15, EARRC, Patrick AFB, Fla., receives a plaque from Col Lucian A. Dade, Jr., commander of EARRC. Captain LeFevre logged his 1000th hour while serving in Vietnam. Two other officers who also qualified several months ago and are now attached to Det 7, EARRC (MAC), Seymour Johnson AFB, N. D. will also receive plaques. They are Capt Floyd R. Lockhart and Capt Robert L. Gardner. Another recipient is Capt Larry C. Evans of Det 2, CARRC (MAC), Minot AFB, N. D. He qualified while on duty with the 31st ARRSq, Clark AB, P.I. (USAF photos)



Report From The 31st ARRS

HH-43B crews attached to the 31st ARRSq, Clark AB, P.I., continue to add to their steadily growing list of rescues and evacuations, many of them made under hazardous conditions. Following are the latest to be reported:

On a night mission, flown over rugged mountain terrain in rain and with marginal ceilings, an HH-43B crew from the 31st airlifted a urology specialist, attached to the USS *Repose*, from Cubi Point NAS to the hospital at Clark. The specialist, LCdr Channault, arrived at the hospital in time to assist at a midnight operation which saved the life of a Marine suffering from a critical kidney wound. Capt James L. Wissert was RCC on the hazardous flight, Capt Kenneth W. Dotson was copilot; SSgt Charles A. Sullivan, medical technician; and A2c Albert T. Nakamura, crew chief. An HH-43B crew also airlifted frozen blood from the USS *Repose* to the hospital to save the life of another Marine who was reacting to whole blood. Crew members were Capt David J. Wege, RCC; Captain Dotson, copilot; and Sergeant Sullivan, medical technician.

An airman, close to death after an electrical shock, was evacuated from Camp O'Donnell, a communications site 15 miles from the base, by a HUSKIE crew on a training flight when the mishap occurred. Captain Wege, RCC, first landed at Clark Air Base hospital to pick up Col I. J. Stein, hospital deputy commander, Maj F. J. Dannemiller, chief of anesthesiology, and two respirators and then a few minutes later, made a steep approach to land on the camp's baseball diamond. The diamond was surrounded by numerous antennas ranging in height up to 200 feet. The airman, who had been re-

vived, was examined by the two doctors and flown to Clark for further treatment. With Captain Wege were Lt William F. Austin, copilot; TSgt Forrest W. Farley, crew chief; and SSgt Donald J. Glassford, medical technician.

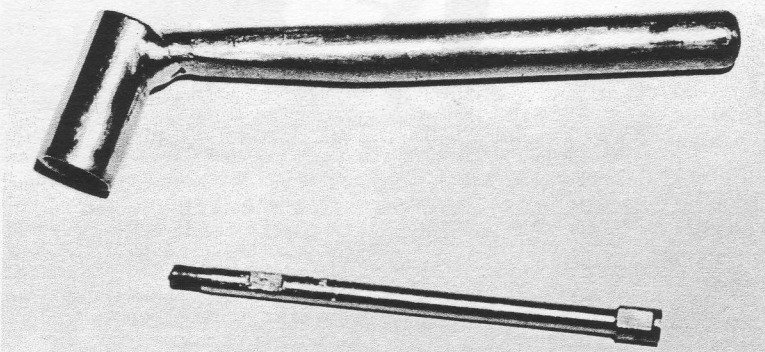
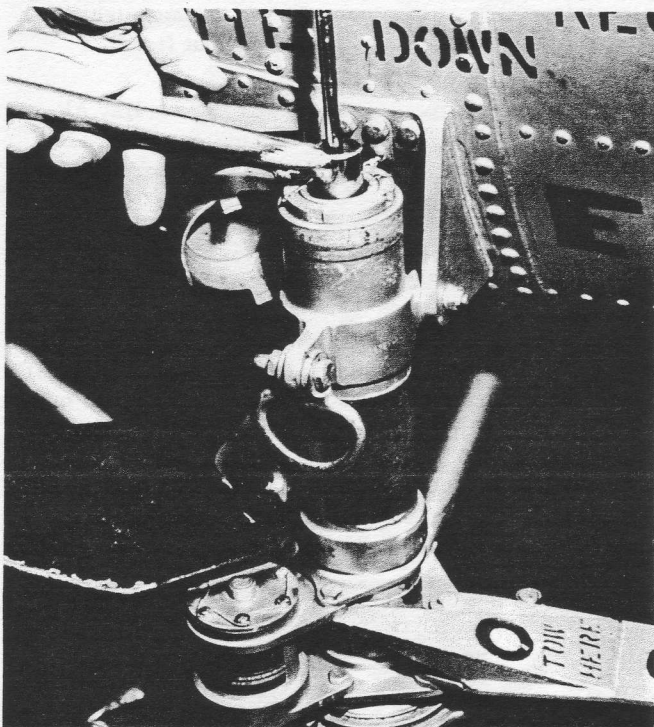
A seriously-injured jungle survival school student was evacuated from the rugged foothills of the Zambales mountains to Clark Air Base in just 35 minutes by a HUSKIE crew consisting of Captain Wissert, RCC; Lieutenant Austin, copilot; and Sergeant Sullivan, medical technician. The next day the 78-year-old Filipino mother of a Navy man suffered a heart attack and was evacuated by a 31st ARRSq crew. The HH-43B flew to Wallace Air Station, 100 miles from the base, refueled, and then picked up Maj Thomas Shepard, assistant to the commander at Wallace. The Major directed the HUSKIE crew to a small Philippine village where the helo landed in a sugar cane field. The critically-ill woman was airlifted directly to the hospital at Clark. The HH-43B returned from the extended mercy flight just four hours after being notified of the emergency by the 13th AF Joint SAR Center. RCC was Captain Dotson; Capt Joseph W. Kelly, copilot; Sergeant Glassford, medical technician; and Capt Thurman E. Tobias, flight surgeon.

Another heart attack victim, mother of a U.S. Embassy employee, was air evacuated by an HH-43B piloted by Captain Wege. A landing was made on the Embassy helipad at 1055 and the woman was delivered to the hospital at Clark 50 minutes later. Others manning the helicopter were Captain Kelly, copilot; Sergeant Sullivan, medical technician; and Capt John S. Palaika, flight surgeon.

HH-43 STRUT SERVICING TOOL

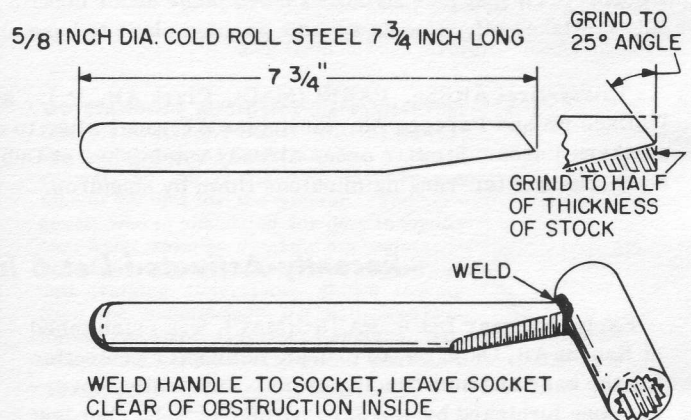
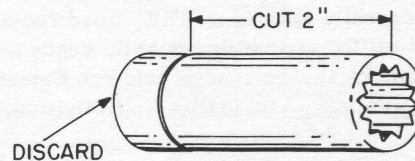
SSgt Cary W. Walton of Det 9, EARRC (MAC), Shaw AFB, S. C., devised this servicing tool to save time and lessen the possibility of "knuckle scraping" while inflating and deflating the auxiliary landing gear struts on HH-43B/F helicopters. It is estimated that the device, which can be manufactured locally, will cut labor time in half and contribute to the USAF Cost Reduction Program with a first-year savings of more than \$1423 if utilized with all the HH-43's in the MAC Command.

The strut servicing tool consists of a 3/4-inch, 12-point deep-well socket (FSN 5120-242-3349) which is cut to dimension and a handle of 5/8-inch diameter cold rolled steel. The handle is welded to the top of the socket in a fashion that permits the stem of the valve (high-pressure strut inflation valve P/N MS20813-1) to protrude through the top. This tool allows the mechanic to install the valve extension and air hose at one time and eliminates the need for two or three separate operations.



Under the present method of strut servicing, the deep-well socket is inserted over the pressure control nut and a pair of vice grip pliers is then locked on the socket and used to loosen the nut. A valve stem is inserted through the square socket opening and the strut is serviced to the proper height. The nut is then tightened with the vice grip/socket combination and the valve stem removed. An alternate method is to grind two flats on the socket to accommodate an open end or adjustable wrench. Both methods involve using the socket in a manner different from its design purpose.

DEEP WELL SOCKET FSN 5120-242-3349
CUT SOCKET 2 INCHES LONG



VIEW OF FINISHED PRODUCT

PROCEDURAL USE OF TOOL

1. Remove cylinder cap and valve cap from the auxiliary landing gear strut.
 2. Insert tool into the top of the strut and engage the pressure control nut.
 3. Install the valve stem extension, P/N 7383, through the open end of the socket and attach to the valve stem. NOTE: To relieve air pressure from the struts, do not attach the pressure hose to the valve stem extension. The pressure hose should only be attached when the landing gear strut requires filling.
 4. Attach the pressure hose to the valve stem extension and pressurize. This will preclude the possibility of hydraulic fluid entering the pressure hose when the pressure control nut is loosened.
 5. Slowly loosen the pressure control nut and inflate the shock strut to the proper height. Continue servicing the shock strut as outlined in T.O. 1H-43(H)B-2.
- NOTE: Although the primary design of the tool is for the auxiliary landing gear strut, it may be also used to service the main landing gear struts.

Huskie Happenings



... On after-midnight flight, HH-43 crew from Det 3, 38th ARRSq, Ubon AB, Thailand, flies through darkness and heavy haze layers to rescue occupants of F4C who ejected from their crippled plane. HUSKIE pilot Capt Israel Freedman, RCC, uses voice signals from downed pilot as guide and picks him up in rice paddy. Copilot picked up few minutes later and treated for back injuries by A1c Reedus L. Haraway, medical technician. Others aboard rescue chopper are Capt Jay M. Strayer, copilot, and SSgt Benjamin Selph.

... HH-43B crew from Det 10, AARRC(MAC), Aviano AB, Italy, evacuates USAF NCO seriously injured in fall at remote installation. To reach area, Capt Jack D. Peak, RCC, pilots HUSKIE over mountainous territory and below 900-foot ceiling with half-mile visibility. Patient later delivered to Vicenza where Army hospital is nestled in deep valley. Capt James A. Darden, Jr., navigates during mercy mission which requires two refueling stops, five sorties and five hours and 10 minutes flying time to accomplish. TSgt Jerome M. Case, helicopter mechanic on flight. ... HUSKIE crew from Det 10 scrambles when crash alarm sounds. Two minutes later while picking up FSK, word received pilot in malfunctioning plane had ejected. Capt Robert S. Henderson, RCC of HH-43B off-loads FSK, heads toward chute, begins orbiting downed pilot and picks him up seconds after landing. Others aboard rescue helo are Captain Darden, RCCP; SSgt Richard R. Schrock and SSgt Curtis Britt, rescue specialists; A1c Trillis E. Hollyfield, medical technician.

... In another mission flown by HH-43B crew from Det 10, pilot of F100 picked up from heavily wooded area six miles from base a few minutes after ejecting from crippled aircraft. HUSKIE crew just gets fire in crashed plane under control when distress signal is received from another aircraft. HH-43B takes off, escorts second disabled plane to base and then returns to F100 to finish putting out fire.

... Thirty-first ARRSq, PARRC(MAC), Clark AB, P.I., sets up helipads and fuel storage areas at John Hay AB, Wallace AS and Paredes AS, Philippine AF radar site, to service HH-43B's on rescue and evacuation missions in northern Luzon. Similar areas already established at Cubi Point NAS and Sangley Point NAS to service HUSKIES on numerous and far-ranging missions flown by squadron.

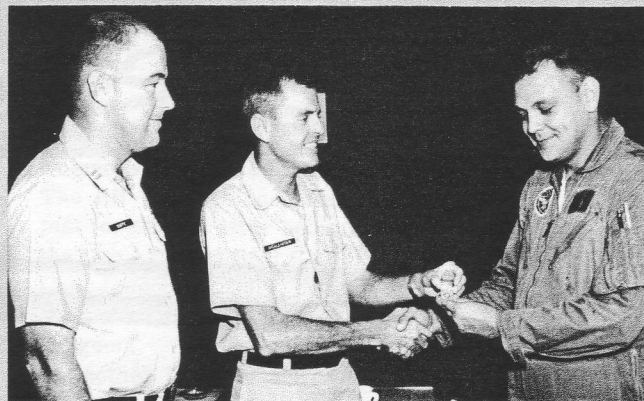
Recently Activated Det 6 In Operation At Kadena AB

Early this year Det 6, PARRC(MAC), was established at Kadena AB, Okinawa, to provide helicopter protection for the base and surrounding areas. Originally, coverage was furnished by the 33rd ARRSq at Naha, but last fall the squadron's HH-43B section began daily flights to Kadena 12 miles away to stand alert for the 18th TAC Fighter Wing. This daily routine continued for several months until Det 6 was "born" and began operating under the command of Maj Charles N. McAllister—commander of Det 9 at Osan AB, Korea, for the previous 13 months.

Det 6 has three HH-43B's assigned and is the only helicopter rescue force in the Ryukyuan Island complex. Although the unit is still undermanned in the maintenance section and lacks two of the pilots required, missions have already covered everything from medical evacuations from off-island military sites or Ryukyuan villages to water pickups of jet pilots and deployment of the FSK for aircraft emergencies. The Det 6 rescue team is shown on the opposite page.

Several visits were made by personnel from PARRC headquarters at Hickam AFB, Hawaii, to assist the new unit and a helping hand was also given by the host base. To several of those involved in the activation of Det 6, Kadena AB with its facilities is quite a contrast to another operation in which they were involved two years ago. At that time the entire HH-43B section of the 33rd ARSq deployed to a classified location in the vicinity of

Nakhon Phanom, Thailand. The rescue site was a clearing in the Thai jungle with pierced steel planking (PSP) for a runway. Drinking water had to be carted 15 miles and the troops lived on C-rations for several weeks. Despite a complete lack of any working or living facilities, the unit was operationally ready within four days and the two HH-43B crews pulled continuous alert for the entire 5-month period that the 33rd was there.



HONORED BY MAC—Maj Charles N. McAllister, Det 6 commander, congratulates Capt Warren K. Davis, right, on receiving the pin awarded by the Military Airlift Command to pilots who have flown 5,000 accident-free hours. A congratulatory letter was also received from Gen Howell M. Estes, Jr., MAC commander. Watching is Capt Bruce B. Duffy who logged his 1000th hour in the HH-43B last Year. (USAF photo)



PLEASANT TASK—For the fourth consecutive year since its arrival at Kincheloe AFB, Mich., Det 6, CARRC (MAC), has received the Military Air Command's annual Flight Safety Award. The award is presented to units which chalk up an accident-free flying year. SSgt Clayton Groff, administrative specialist, is shown hanging the latest addition to Det 6's Flight Safety Plaque. Emphasis upon safety is carried into all areas by the unit; it has been recognized as the only one on the base in which all personnel have their cars equipped with seat belts — both front and rear. (USAF photo)



FOREIGN STUDENTS VISIT—Students from seven foreign countries who attend Tucson public schools under the American Field Service program were recently guests of Davis-Monthan AFB, Ariz. After touring the Base Fire Department and Military Aircraft Storage and Disposition Center, they visited Det 17, WARRC(MAC). Here A1c Ronald L. Berrys, a fireman attached to the detachment, explains the operation of the fire suppression kit used in the rescue of crewmen from downed aircraft. (USAF photo)



OUTSTANDING MAINTENANCE MAN—TSgt Chester E. Rainey, Det 17, WARRC(MAC), Davis-Monthan AFB, Ariz., was selected recently as the outstanding maintenance man of his unit for the quarter. The sergeant, who is scheduled for duty in Southeast Asia, was also cited for his "outstanding leadership and exceptional record" as unit training supervisor. Shown looking over the maintenance log with Sergeant Rainey is Capt Peter J. Kerrigan, left, detachment commander. (USAF photo)

DET 6, PARRC(MAC), KADENA, OKINAWA—Front row, left to right, SSgt Harry Creel, SSgt Gary Hubbard, A1c Raymond Verbeck, SSgt James Langford, SSgt Albert P. Parker, A2c Robert Jordan, A1c Gerard Bucknall, A2c Peter K. Ford, TSgt Charles D. Severns, and TSgt Alvin C. Reed, maintenance personnel. Rear row, Capt James Crabbe, RCC; Maj Charles N. McAllister, commander; SSgt Billy Riddle, A1c Robert Turner, A1c Charles Delaney, A1c Leroy Yancey, A1c Huel Wilson, A1c Daniel Gonzales, firemen: A1c Alfred Loomer, SSgt Leonard Fullerton, SSgt Leonard Watts, SSgt Francis Brown, medics; Capt Bruce Duffy, RCC; and Capt Warren Davis, RCC. (USAF photo)



KAMAN AIRCRAFT CORPORATION

SCROLL OF HONOR

1955

George, Thomas A., Civilian
Newton, W. A., Civilian

1956

Brown, Oscar, Sgt, USMC
Casper, Max, 1stLt, USMC
Corley, Ruel H., Maj, USMC
Cornwell, Charles E., Maj, USMC
Coulter, Robert G., Capt, USMC
Croze, Henry J., AD1, USN
Johnson, Tracy N., Maj, USMC
McCullough, J.P., Ens, USN
Middleton, James M., 1stLt, USMC
Nichols, Wilson R., 1stLt, USMC
Thompson, J.L., AD1, USN

1957

Baxely, Henry D., MSgt, USMC
Bryant, Carl A., SSgt, USMC
Davis, Allen D., 1stLt, USMC
Davis, William C., 1stLt, USMC
McClane, George E., Maj, USMC
Peques, Dock H., Capt, USMC
Trundy, Richard T., 1stLt, USMC

1958

Blankenship, LeRoy I., Capt, USMC
Byrd, John M., AN, USN
Clark, Edward O., 1stLt, USMC
Davis, J.E., MSgt, USMC
Dawson, Richard B., LCdr, USN
Dunlap, John, MSgt, USMC
Duran, J.L., SSgt, USMC
Hayden, Dale L., Capt, USMC
Kannheiser, William, LCdr, USN
LaCroix, Mitchell, MSgt, USMC
Mathews, F.A., 1stLt, USMC
O'Shea, George F., 1stLt, USMC
Pautsch, Bernhart R.E., Capt, USMC
Reynolds, C.A., 2ndLt, USMC
Roberson, J.A., Cpl, USMC
Roberts, Kent L., 1stLt, USMC
Sancho, R., 1stLt, USMC
Shipley, S.E., Cpl, USMC
Stearns, Bill S., TSgt, USMC
Vachon, Joseph, Cpl, USMC
Zitnik, Robert J., Maj, USMC

1960

Baker, Donald L., SSgt, USAF
Birch, Robert C., A1c, USAF
Britts, John, Civilian
Campbell, C.B., Cdr, USN
Chider, Thomas J., Lt(jg), USN
Cochran, Howard J. Maj., USAF
Couture, Donald J., Capt, USAF
Cowden, Bert E., 1stLt, USAF
Davis, Samuel O., AD3, USN
Demming, William J., 2ndLt, USAF
Dodd, Joseph H., SSgt, USAF
Dreibelbis, R.R., 1stLt, USAF
Eckert, W.H., TSgt, USAF
Ellis, Benjamin, SSgt, USAF
Erhardt, F.J., Jr., Lt(jg), USN
Friske, John D., 1stLt, USMC
Glick, David D., Lt, USAF
Heggood, Frank, Lt, USN
Heliin, Keith L., AMH2, USN
Hern, C.R., Sgt, USMC
Hoar, S.R., MSgt, USAF
Ivey, Henry M. TSgt, USAF
Jordan, R.W., AN, USN
Lee, Ralph R., Civilian
Levi, A.L., AD3, USN
Long, Robert E., LCdr, USN
McMeen, W.C., Capt, USAF
Miller, M.M., AD1, USN
Molloy, E.R., AD3, USN
Nahrings, Frederick, A1c, USAF
Ney, H.M., TSgt, USAF
Pinson, Charles R., Capt, USAF
Prekopa, John E., AD3, USN
Price, M.B., LCdr, USN
Proto, V.M., ADR3, USN
Reuter, C.E., ADR3, USN
Roche, George, TSgt, USAF
Ross, R.E., AD3, USN
Shaeffer, John E., 1stLt, USAF
Shanley, Robert J., Lt, USN
Sims, M.D., Jr., ADC, USN
Skinner, Richard E., Capt, USMC
Stewart, Walter, SSgt, USAF
Stupka, Otto J., Lt., USAF
Weselesky, A. E., Lt(jg), USN

1959

Bierschenk, F.P., Lt(jg), USN
Catron, Leroy, MSgt, USMC
Daughtry, Joseph S., AD1, USN
Devitt, John R. AMSgt, USMC
Dunne, Donald J., Lt(jg), USN
Dussinger, George A., AEAN, USN
Gray, Louis D., AD1, USN
Greene, Harold R., Lt(jg), USN
Grimshaw, R.F., ASgt, USMC
Kearse, J. Grady, ADC, USN
Marriott, Michael J., Lt(jg), USN
McLoughlin, Howard, Lt, USN
McNally, Paul F., 2ndLt, USMC
Milicevich, Richard J., 1stLt, USMC
Miller, J.M., ASgt, USMC
Molloy, E.R., AD3, USN
Orgovan, G.W., AD1, USN
Reilly, Joseph L., LCdr, USN
Schrack, William D., AN, USN
Scott, Eddie R., Cpl, USMC
Stewart, Andrew J., AD2, USN
Turfay, J., AD2, USN
Vachon, Joseph, Cpl, USMC

THE PERSONNEL LISTED ABOVE WERE HONORED FOR THEIR PARTICIPATION IN HAZARDOUS RESCUE MISSIONS DURING THE PERIOD 1955 THROUGH 1960. THE LIFE-SAVING FLIGHTS WERE MADE IN UH-43C, OH-43D AND HH-43A/B HELICOPTERS.