

KAMAN

Rotor Tips

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Rotor Tips

Volume VI Number 9

ON THE COVER

"Driver's-eye view" of HH-43 crew giving assistance after simulated highway accident. A story on the MAST program begins on the opposite page. Cover by E. M. Enders, Service Publications. (USAF photo)

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HH-43B USED IN

MILITARY

ASSISTANCE for

SAFETY in

TRAFFIC

The first Det 15 mission of the long weekend that pre-saged the 14.1 hours of rescue work to follow was flown late Friday, 4 September 1970, by Maj Elmer L. O'Banion, pilot; Capt Robert K. Stuart, copilot; SSgt Jessie C. Spruiell, and Sgt Weldon L. Shelton, helicopter mechanics. Major O'Banion and the HUSKIE crew flew in, around, and through the storm that was to converge on the Phoenix area later in the day. The Public Health Officer from Sells, Ariz., requested emergency evacuation of a man with acute appendicitis because the roads to Tucson and Phoenix were washed out due to the storm in the area. Major O'Banion and crew successfully navigated through darkness, heavy rain and mountainous terrain and delivered the patient to Sky Harbor Airport, where he was off-loaded to an awaiting ambulance. Two sorties for 2.7 hours.

More Calls For Help

The bulk of the weekend activity started at 1800 on 5 September when an urgent plea was received from the Arizona Highway Patrol for a helicopter to evacuate four people stranded in a "dry wash" by flood waters in a canyon 30 miles north of Phoenix. The HH-43 crew, consisting of Maj Richard R. Cowles, pilot; Maj Ralph L. Gaede, copilot; TSgt William L. Dean, medical technician; and Sgt Shelton, helicopter mechanic, readied the helicopter in minimum time but were unable to take off due to the fierce storm that was lashing the Phoenix valley—the worst in 14 years. Lightning had knocked out the Luke GCA and the Luke Weather Radar. This added to the dilemma.

In the last issue, Rotor Tips reported on MAST missions flown by Det 15, Luke AFB, Ariz., and Det 22, Mountain Home AFB, Idaho. Additional missions flown by Det 15 when flood waters swept many Arizona highways are described below by 1st Lt David E. Buchholz from the ARRS detachment at Luke. Eleven persons were saved and numerous evacuations made during the Labor Day weekend. Following, Capt Gary Dietze of Det 22 furnishes a recap of the MAST concept and photographs taken during an exercise conducted by the detachment in conjunction with the program.

Two more calls were received urging the helicopter to proceed north to the rescue site but the storm continued. Finally the runway lights and the rotating beacon came into view. The rain continued but now the first cloud deck could be seen at 100 ft.

Forty-Two Airlifted To Safety

The Base Weather Station advised that Albuquerque radar had sighted intense thunderstorms 40 miles west moving toward Luke AFB and points north. After discussing the conditions, the crew elected to get airborne and make an attempt to fly north to the scene where the visibility was reportedly one mile. Base weather was calling 100 scattered and 4000 broken. However, as the helicopter climbed through the 100 foot cloud deck, multiple cloud layers obstructed penetration to the east. The clouds continued to converge and move in on the HH-43, forcing the crew to fly the gauges. The highway patrol was notified that the weather made it impossible to proceed. The crew spotted a hole in a 100 foot cloud layer directly over the base and made a descent through it. The Luke Command Post had just received another call for assistance in evacuating 13 families from an old auxiliary field nine miles NW of Buckeye, Ariz. During the ensuing five hours, 42 people were airlifted to safety. (*continued next page*)



Love That HUSKIE—Left to right, A1C Wayne Kleckler, John Plumley and Timothy Cunningham, stationed at Luke AFB, admire the rescue techniques of a Det 15, 42nd ARRSq, helicopter crew. One such crew rescued the three Labor Day weekend, after their car plunged into a river which had washed away the roadbed. The rescue was one of many performed by Luke crews in the aftermath of a storm which ravaged Arizona that weekend. (USAF photo by A1C Mike Johnson)

Three Airmen Rescued

Just moments later, after refueling at Luke AFB, a life and death call was received from the Maricopa County Sheriff's Office. Three airmen were perilously situated on top of a Volkswagen stuck in the middle of the rampaging New River which, at times, was completely inundating the small vehicle. Fears were raised that the vehicle would soon tip over and the men would be lost. Clouds and rain still obscured the rescue site NE of the base where the main impact of the storm was. The decision was made to launch and attempt to make the rescue. Fortunately, the HH-43 was able to proceed to the area and pick out the flashing red lights of the sheriff's cars through the rain and murk. However, the power lines that were known to be in the near vicinity did not appear until the helicopter was directly overhead. After making an approach down stream of the automobile and power lines, the helicopter inched its way toward the men who were huddled together on top of the car. The power lines spanned the river and were just adjacent to the car; the rain and black night decreased depth perception to near zero. The pilots hesitated to get closer to the wires but sight of the men cowering just out of reach urged them onward. Suddenly, the helicopter was over the men and the wires and blades were still intact. The pickups could be made if only a hover reference could be established—the landing light did not provide a clear glimpse of the river bank. No hover references were at hand when the pilot lost sight of the men under the HUSKIE and the helicopter rocked perilously close to the wires. Finally, by a coordinated effort between the two pilots switching control back and forth with occasional glimpses of the land, the pickup of the three men was completed.

Eight Teenagers Saved From Death

During the pickup, another urgent life or death call was received from the County Sheriff stating that eight teenagers were missing near the base of the Sierra Estrella mountain range close to the Salt River. The HH-43 again plunged into the darkness and rain. By now most of the crew had been up for almost 24 hours and all were approaching the maximum flying time. A new crew was called but the pleas of the sheriff again dictated that an immediate attempt to find the youngsters must be made.

The floodwaters in the desert were unbelievable. New bridges were being torn loose and many people had already drowned. The weather was so fierce near the suspected rescue site that the crew could not see the mountains. The HUSKIE descended until the ground was clearly in sight when another call was received stating that the eight teenagers had been sighted in the middle of the Salt River hanging onto a flimsy bush. The sheriff believed that as soon as the bush let go the youngsters would be carried downstream by the torrent.

The crew was once again guided to the scene by the flashing lights on the police car. As before, the pilots knew that one slip or one moment of "rocky" hovering might cause the immediate drowning of one of the youngsters if they slipped from the hoist sling during pickup. Repeated efforts from the pilots over the loud hailer instructing the desperate children on how to get into the sling were only partially heeded. Thoughts of survival must have overwhelmed common sense and some of the children were hanging onto the bear paws and ripping off the FM antenna. The lack of stable visual references due to the ram-

pant waters, and poor visibility made a low hover imperative. Again as in the earlier pickups, conditions required unorthodox hovering techniques between the two pilots. In the ensuing 5 to 10 minutes the eight children were miraculously hoisted to safety and the exhausted, bedraggled crew returned to Luke AFB at the break of a new day.

Locate Missing Patrol Car

When the HUSKIE landed at Luke AFB, Capt Jay W. Hansen, pilot; Captain Stuart, copilot; Sgt George H. Bohl, helicopter mechanic; and SSgt Gregory F. Sutherland, medical technician; were waiting to assume the rescue vigil and depart on another rescue mission. A highway patrolman was missing northeast of Phoenix. A police officer familiar with the area was picked up to assist in the search. The crew flew 25 miles north of Phoenix and back tracked to the missing patrolman's known position. During the search they noticed that the Sycamore Canyon bridge had been torn from its foundation and destroyed. Since the route had produced negative results thus far, the crew flew down stream from the bridge where the copilot spotted an overturned patrol car. The wind conditions were unknown so the aircraft commander made an approach to a hover upstream from the wreckage and hover taxied slowly down the canyon to an area in front of the wrecked vehicle. The patrolman was still wedged in the car and was identified as the missing officer. The helicopter and crew returned to Luke AFB.

Women Medevaced

Shortly after refueling at Luke AFB, the crew was notified that two women needed medevac from Sunflower, Ariz., approximately 40 miles northeast of Phoenix. An HH-43 launched at 1015L. As a weather warning calling for severe thunderstorms in the area was valid at the time, the HUSKIE crew requested King 44, an HU-16 from the 302nd ARRSq, also airborne, to fly as cover ship in order to check on weather along the route and to act as a communications relay station. The HH-43 flew to Papago AAF and picked up a highway patrolman. While at Papago, the crew was notified that one of the women was a cardiac patient and that there was a possible need for oxygen. The HUSKIE then flew to Sunflower and landed in a deep, narrow canyon, the bottom of which was surrounded by high tension power lines and 150 foot trees at a close proximity to the landing site. The crew onload the cardiac patient and the other woman, who was severely arthritic. The HH-43 pilot took off from the extremely restricted area and delivered the patients to Papago AAF. The rescue helicopter then returned to Luke AFB.

MAST REPORT FROM DET 22

On 1 September, Det 22, 42 ARRSq, Mountain Home AFB, Id., and Det 15, 42 ARRSq, Luke AFB, Ariz., commenced a MAST test program under the direction of the Chief of Staff Air Force in conjunction with the Department of Transportation and the Department of Health, Education and Welfare. As of 6 Nov, Det 22 has successfully completed four missions and been credited with three saves under the MAST program.



Training Mission

SSgt Jerry Hibner, medic, in front, and SSgt Eusebio Cantu, fireman, deplane and rush to assist "accident victim" after Pedro 01 lands at accident site. In middle left photo, Capt Frank Andreus, co-pilot, looks on as Capt Albert Tollefson, center, aircraft commander, assists Sergeant Hibner bandage Capt Gary Dietze who played the part of the accident victim. Captain Dietze is also an aircraft commander.



MAST, Military Assistance to Safety in Traffic, is a program for using military helicopters and other resources to aid the civilian community. This test program will determine the feasibility of applying the skills and techniques learned in Viet Nam to aiding civilian traffic accident victims. In addition, military resources can be applied in aiding other civilians either lost, ill or in need of medical help or evacuation.

So far, Det 22's missions have not involved traffic accident victims, we have evacuated a gold miner suffering from a heart attack, a hunter suffering internal injuries after being thrown from a horse, a woman suffering from acute bronchitis and, most recently, a hunter suffering from a bullet wound.

This program differs from National Search and Rescue operations in that it puts the mission control on a local level thereby improving our response time to emergencies. Here at Mountain Home AFB all request for assistance under this program must come through, and be approved by, the Idaho State Police and 67th Tactical Reconnaissance Wing Command Post.



Simulated accident victim is carried to HH-43 prior to evacuation. Left to right are Captain Tollefson, Idaho State Police Patrolman Del Foster, Sergeant Cantu, State Police Lieutenant Burns and Sergeant Hibner. (USAF photos)



In October, Det 22 conducted a MAST Exercise to test the workability of our plans and operating instructions. A simulated automobile accident "occurred" in Bruneau State Park. The "accident victim" (Capt Gary Dietze, a detachment aircraft commander) suffered a simulated traumatic amputation of the left arm and an abdominal wound exposing the intestines. Pedro 01 and crew scrambled from



A staff member of the Elmore Memorial Hospital at Mountain Home directs Pedro 01 to landing zone near hospital. "Accident victim" is then offloaded. Left to right are SSgt Gerard Bucknall, helicopter mechanic; a member of the hospital staff; Captain Dietze, on stretcher; another hospital staff member; Captain Tollesen and Idaho State Police Commissioner Mills. (USAF photos)

the base 10 miles away. The crew gave first aid for the simulated wounds and evacuated the "victim" to the Elmore Memorial Hospital in the town of Mountain Home.

— MARINE PILOT RECEIVES KAMAN AWARD FOR SEA VALOR —

"I am proud and happy, as a member of the helicopter community, to be one pilot you consider a worthy representative of my fellows in the field of helicopter aviation."Thus 1stLt Joseph P. Donovan, USMC, expressed his appreciation at being selected to receive the 1970 Frederick L. Feinberg Award. In a recent letter to Jack G. Anderson, president of Kaman Aerospace, Lieutenant Donovan also mentioned that the honorarium which accompanied the award was a welcome surprise that arrived in time to buy a "lot of baby accessories" for his recently born "number two son."

Initiated by Kaman Aircraft Corporation, forerunner of Kaman Aerospace, the Feinberg Award is given annually by the American Helicopter Society to a helicopter pilot for outstanding achievement in rescue, flight and test develop-

ment of new aircraft or general high level of performance in operational flying during the preceding calendar year.

Lieutenant Donovan was honored for "courage, superior airmanship and unwavering devotion to duty in the face of great personal danger."

While serving as a pilot with Marine Medium Helicopter Squadron 364 in Vietnam, he launched as wingman in a flight of two transport helicopters assigned to emergency medical evacuation of a seriously wounded Marine. When the section leader's aircraft experienced mechanical difficulties and returned to base, Lieutenant Donovan continued the mission.

Approaching the area, he dispatched his gunships to destroy a hostile rocket launching site. Upon landing to embark the casualty, he was wounded by fragments from hostile grenades and mortar rounds which also severely damaged his helicopter and caused it to vibrate violently. Nonetheless, he delivered the wounded marine to the nearest medical facility and, after receiving medical attention himself, launched a second emergency medical evacuation mission. Entering an extremely hazardous area, without gunship support, he picked up several wounded men. He then embarked upon a third mission and brought 10 more wounded men to safety.

Lieutenant Donovan, stationed with the Third Marine Aircraft Wing at El Toro, California, earned during his short time in the Marine Corps, two Navy Cross Medals, a Silver Star Medal, two Distinguished Flying Cross Medals and 35 Strike/Flight Air Medal Awards.



1stLt Joseph P. Donovan, right, already highly decorated for Vietnam heroism, is presented the Frederick L. Feinberg Award by Gen Lewis W. Walt, assistant Marine Corps commandant.

The Award was established several years ago by Kaman to honor the memory of the late Frederick L. Feinberg, a helicopter test pilot. Each recipient's name is engraved upon the memorial and he also receives a cash award and medallion. The memorial is displayed in the Smithsonian Institution.

MEET "FIREBIRD II"

By Cliff Packard
Program Manager



Firebird II—Truck Mounted—A winterization kit is available which makes the Firebird self sufficient in any weather to -20°F.

Kaman Aerospace is introducing "Firebird II," a portable fire-fighting kit for use by ground firefighters. The new kit, which becomes highly maneuverable when mounted on a truck or trailer, evolved directly from the airborne Kaman-produced Fire Suppression Kit (FSK), but has twice the capacity. The FSK has been widely used during the last 11 years by the Air Force for Local Base Rescue work in conjunction with the HH-43 HUSKIE.

A big "first aid" fire extinguisher, Firebird II's purpose is to extinguish or suppress fires before the larger fire department equipment arrives. It has no motors or pumps or moving parts. Response is immediate—15 seconds. It is anticipated that Firebird II will be used primarily by airports, industrial plants, marinas, and highway rescue units where mobility and availability are of primary importance in "snuffing out," reducing or controlling a potentially large blaze.

Firebird II becomes an "all-weather extinguisher" with the installation of a kit which protects it against ice, snow and temperatures down to -20°F.

Crash rescue is the primary mission of HH-43's attached to Air Force LBR units. Many times, the recovery of aircrewmen from a downed aircraft depends upon suppression of the resulting fires. In other cases the FSK is used to "foam down" the immediate area as a precautionary measure to prevent a fire, thereby saving repairable aircraft. Kaman pioneered in the development of the helicopter-firemen team concept. The helicopter, after delivery of the FSK and firemen to the crash site, again becomes airborne and uses the down draft from the helicopter rotor blades to provide cooling air for the firemen and assists them in opening a path to the survivors.

Many improvements have been incorporated in the FSK during the 11 years that Kaman has been supplying Fire Suppression Kits. These improvements have been designed into the Firebird II. The most obvious of these is the hard hose and reel on the current FSK. It is no longer necessary to deploy all the hose before expelling foam.

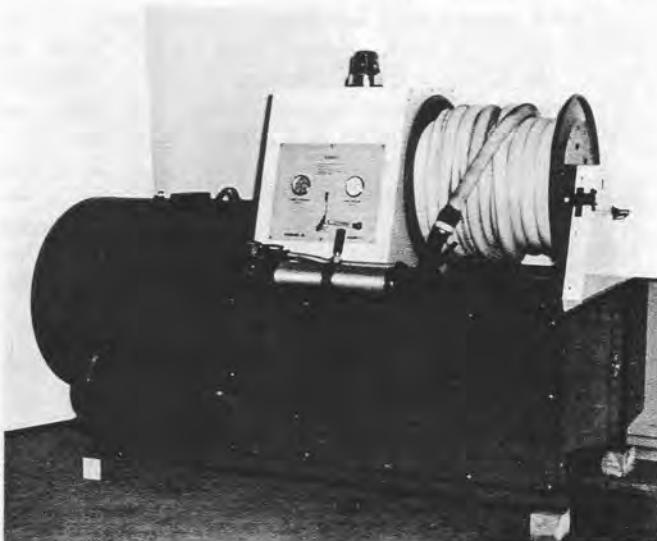
Firebird II has twice the capacity of the FSK. It produces 1300 gallons of foam and is designed for easy mounting on a 3/4-ton pick-up truck (6000 lbs. gross vehicle weight).

Firebird II holds 150 gallons of water, nine gallons of foam concentrate and has 100 feet of reel-mounted, 1½ inch non-collapsible fire hose. Rate of discharge is 100 gallons per minute.

Firebird II can use either 3M's "Light Water" or 6% protein foam to produce 1300 gallons of fire fighting agent. If high expansion foam, such as Rockwood's Jet X foam is used, a 13,000 gallon output is realized from 2¼ gallons of concentrate.

Firebird II is also designed to dispense water alone. A single selector valve shuts off the foam concentrate

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Firebird II—Pallet Mounted—The water tank on the left holds 150 gallons which with 9 gallons of foam concentrate produces approximately 1300 gallons of foam. A single centrally located control actuates the kit. The selector valve to the right selects foam or water only.



SEASPRITE ACTIVITIES

Quick Pickup By Lemoore Unit

A pilot who ejected from his crippled aircraft and landed in a lettuce field was picked up a few minutes later by a UH-2C crew from the SAR Unit at NAS Lemoore, Calif. The helicopter landed in the field and the survivor walked aboard. He was returned to the air station nine minutes after ejecting.

Below are photographs taken by Lt L. L. Duncan, USN, during another mission flown by the Lemoore SAR Unit. A report appeared in the preceding issue of Rotor Tips but the photos were not available at that time.

Two Marine officers whose aircraft crashed in an enclosed canyon at 11,300 feet were rescued from the foreboding area by a UH-2C crew consisting of Lt J. E. Bookout, Lt M. R. Sutton and HN3 E. A. Collins. The survivors had been unable to move from their almost inaccessible position due to the snow....it had clearly been a job for a helicopter.

The three photographs clearly portray the rescue area and awesome mountain range looming above it. The last photo was taken from the crash site, looking back and down at the only way for the rescue helicopter to fly in and out of the canyon.

Det 38 Praised By Rescuer

"The performance of the plane guard helo was excellent. I owe my life to the aircrewman who entered the water and freed me from my entanglement...."

Thus a rescued pilot described a UH-2C rescue mission carried out on a black, overcast night by HC-2's Det 38 aboard the USS Shangri-la. Members of the SEASPRITE crew were Lt C. M. Hartwell, pilot, Lt(jg) T. W. Black, copilot, ADJ2 R. R. Hughes and ADJAN D. L. Dicataldo.

The downed pilot ejected when his aircraft suddenly lost power. His chute opened just prior to impact with the water and then, he said, he felt as if he were being dragged along the hull of the ship as it passed over him. He became entangled in the shroud lines and blacked out. Se-

conds later the UH-2C arrived overhead and Aircrewman Dicataldo leaped into the dark water to his aid.

"I swam over to him and asked if he was all right," Dicataldo said. "He said that he couldn't move his legs. I knew by his voice that he was in shock." The aircrewman then dove under water and began the difficult task of cutting the survivor free from the entangling lines. The pilot was finally freed and then placed on the rescue seat and hoisted to the SEASPRITE. For 15 minutes Dicataldo had worked tirelessly under extremely difficult circumstances to aid the pilot—enough adventure for one night, but Dicataldo was to have still another.

As he swam in the dark sea and watched the rescuer being hoisted to the helicopter he suddenly felt a tug at the back of his life vest. Dicataldo makes no bones about being "scared"—aircrewmen have braved sharks, sea snakes and other frightening creatures in their rescue work—but then he found to his relief that this particular "denizen of the deep" was one of the frogmen from the plane guard destroyer. The ship had sent the swimmer to assist the helicopter crew, if necessary. Several days later, another downed pilot was rescued by a UH-2C crew from Det 38. The survivor, who ejected seven miles from the ship, was picked up a short time later and returned to the Shangri-la. Only 15 minutes earlier he had launched from the carrier. Manning the SEASPRITE were Lt Jerry Bonner, Lt Dave Dinniedie, AE2 Eugene Hansen and AMS3 Kenneth Rafanan.

Night Medevac Made By Det 60

An emergency night medevac from a destroyer to the USS Saratoga was carried out by a HH-2D crew from HC-2's Det 60. The detachment is deployed aboard the giant carrier. Despite the blackness and rolling seas, the transfer of the patient, a sailor with appendicitis, was made without incident. Manning the SEASPRITE were LCdr Brandt Beck, pilot; Lt(jg) Ken Sorrenson, copilot; and ADJ3 Burl Swanson, first crewman. Also aboard was a corpsman from the Saratoga's medical department.

(continued on page 15)





HC-4 Presented Safety Award

HC-4, NAS Lakehurst, N. J., recently received a CNO Safety Award for flying more than 5,000 accident-free hours during Fiscal Year 1970. The Naval Aviation Safety plaque was presented to the squadron by VAdm R. L. Townsend, COMNAVAIRLANT.

During the presentation, Admiral Townsend noted that HC-4 was the only east coast squadron entirely equipped with single-engine UH-2A/B SEASPRITE helicopters, and that they operated from small platforms on 59 different non-aviation ships. He termed the safety record "remarkable." Admiral Townsend pointed out that since April, 1968, the squadron has flown more than 13,000 hours and made more than 8,000 shipboard landings. Capt W. B. Barrow, Jr., COMFAIRNORVA, accompanied the admiral for the presentation.

During the 12-month period in FY 1970, HC-4 provided helo detachments for 19 non-aviation ships and select Atlantic Fleet carriers operating from the coast of Vietnam, and east to the Black Sea, and from the North Atlantic to the Caribbean. The squadron's 5,000-plus hours also represents over 18,000 accident-free landings.

Delivery of twin-engine HH-2D's to HC-4 began recently.

Congratulations—VAdm R. L. Townsend congratulates the officers and men of HC-4 for being a winner of the CNO Safety Award for Fiscal Year 1970. The Naval Aviation Safety plaque was presented to the squadron for flying 5,000 accident free hours. Seated, left to right are, Capt J. S. Roth, NASL commanding officer; Capt W. B. Barrow, COMFAIRNORVA, and Cdr E. W. Hille, HC-4 commanding officer. (USN photo)

LCdr Turner Takes Over HC-7 Det Cubi

LCdr Charles W. Turner has relieved Cdr Billy C. Lambert as Officer in Charge of HC-7 Detachment Cubi, R.P. Lieutenant Commander Turner reported to HC-7 from duty with HS-1 in Key West, Fla. Commander Lambert will report for duty under instruction at the Navy's Post-graduate School in Monterey, Calif.

Lieutenant Commander Turner served with VU-10 in Guantanamo Bay, HS-1 in Key West, HT-8 at Ellyson Field, Pensacola, Fla., HS-3 in Norfolk, Naval Aviation Safety School at the University of Southern California, Commander Utility Wings Pacific Fleet Staff and Commander Naval Air Forces Pacific Fleet. He also served with HS-10 and HS-2 at Imperial Beach, Calif., before returning to HS-1.

HC-4 Makes 1st Night Carrier Rescue

HC-4 recorded its first night carrier rescue in the squadron's history while one of its detachments, Det 16, was on a cruise aboard the USS Lexington. The majority of HC-4 cruises are aboard non-aviation ships.

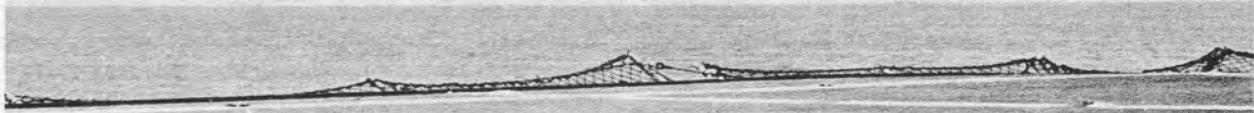
On the night of the rescue, Lt Mike W. Kessock, Lt Barry R. Geise, ADJ3 Richard L. Bauske and AMSAN Gary L. Wilson were aboard "Scooter 51," a UH-2, when they saw a bright flash from the carrier. They assumed it was just another cat shot until tower CTV-16 confirmed an A-7 jet pilot had taxied over the side. His ejection was successful. Until then, the helicopter had been grinding around the "angel" pattern for two hours. The UH-2 headed for the general pickup area where the ship had dropped night flares, then directly for the survivor who had marked his position with a strobe light and survival flares. Lieutenant Kessock began his Doppler instrument approach only to find that the equipment was giving him wrong information. He quickly decided on a manual approach—a difficult night flying feat which required the best efforts of each man.

With landing and flood lights on "full bright," Scooter 51 hovered directly over the downed pilot. Smoke from the many flares made the pickup that much more difficult. But from that point on, things ran like clockwork. The fishpole boom was extended and the rescuee hoisted safely aboard. The night rescue was the first for three of the crew. For Petty Officer Bauske, it marked his second carrier rescue.





MEET OUR "MISS BESSY"



By the officers and men of HC-5's Det 101 in tribute to "the smoothest and most dependable UH-2B that anyone in the crew has been associated with....we never had reason to doubt her, and feel sure that we never will."

"Miss Bessy," a UH-2B attached to Commander Amphibious Forces Seventh Fleet, has maintained a perfect flying record in over 340 flight hours. The aircraft, which is operated by the officers and men of Helicopter Combat Support Squadron Five's Det 101, presently has met every commitment since assuming the role of "flagship helo" in March 1970. During this period, Det 101 has operated from many flight decks and is currently aboard the USS Paul Revere (LPA-248).

The role of flagship helo is a particularly difficult one since appearances are often almost as important as availability. The UH-2B has been repainted without the benefit of a hangar or shore facility, and the interior of the aircraft has also been refinished. All of this has been done by Det 101 while serving in an operational status.

*USN photographs by
PHAN Clarence Shields and
PHAN Joe Rizzi, USS Paul Revere*

Miss Bessy has become a world traveler during this time, and visited most ports in WESTPAC. She has flown in almost all of these as well, and has become a familiar sight to all from Singapore to Japan.

Det 101 hasn't let Miss Bessy's travels affect her sea going performance. She has flown from every type of flight deck since assuming the role of flagship helo. Miss Bessy currently has made over 580 shipboard landings with Det 101, over 95% of which have been aboard non-aviation ships.



Det 101 personnel, kneeling, left to right, AN Jack Groves, AE1 Marvin Johnson, crewleader; ADJ3 George Duke, AMS3 Sandy Howarth. Standing, Lt(jg) Jim O'Brien, assistant officer-in-charge, ATR3 Ron Conley; AE2 Robert Smith; ADJ2 Larry Waggoner, AME3 Ron Pittman, Lt Don Ham, officer-in-charge.



At left, secured by his safety belt, AN Jack Groves, aircrewman, places locking pin in landing gear. Below, UH-2 gently lowers toward deck. In right seat is Lt Don Ham, Lt(jg) Jim O'Brien occupies the left seat.



Above, as wheels touch down, ATR3 Ron Conley, starboard, and AME3 Ron Pittman, port, begin their "chock runner" duties. At right, pilots prepare for shutdown as Petty Officer Conley and Airman Groves stand by. AE2 Robert Smith is bending over to further secure the helicopter. Below, overall view of USS Paul Revere with Det 101's "Miss Bessy" coming aboard.



New Commander for 3rd ARRGp

Col George C. Pinyard has replaced Col Frederick V. Sohle, Jr., as Commander of the 3d ARRGp based at Tan Son Nhut AB.

Colonel Sohle has been reassigned as vice commander of the 61st Military Airlift Support Wing, Hickam AFB, Hawaii. Colonel Pinyard was formerly commander of the 31st ARRSq, Clark AB, R. P. He began his tour in rescue in 1951. Assigned to the 39th ARRSq, Ashiya AB, Japan, he flew 35 combat missions during the Korean Conflict.

From April 1955 to April 1960, he served with the 1707th Flying Training Squadron as operations officer and commander followed by two years as chief of weapons system division at West Palm Beach AFB, Fla., and Brookley AFB, Ala. After graduating from the Command and Staff College he was assigned to the 79th ARRSq, Andersen AFB, Guam, where he served as operations officer. Returning in July 1964, he was stationed at Hq ARRS, Orlando AFB, Fla., as chief of command and control division.

During World War II he flew 56 combat missions in the B-26 Invader in the European theater.

A command pilot, Colonel Pinyard's decorations include the Distinguished Flying Cross, Air Medal with 12 Oak Leaf Clusters, Meritorious Service Medal, Air Force Commendation Medal with 2 Oak Leaf Clusters and the Croix de Guerre with Palm.

Det 13 Rescues Three

An HH-43 Pedro crew rescued three U. S. Army soldiers stranded in four-foot deep flood waters three miles from Phu Cat AB in the Central Highlands. The crewmembers rushed to the scene about 9:45 a.m. after a U. S. Army

Southeast Asia

convoy truck overturned on Highway 1 near the base, dumping its 15 passengers into the flood waters that resulted from the heavy rains that had struck Vietnam.

The passengers were just a few among the many persons affected by the massive floods which left Phu Cat looking like an island in the middle of a huge lake. All the passengers were able to scramble to safety except the three, who were carried downstream by strong currents. They finally managed to hang onto a clump of trees in a section of the water that was about four feet deep. Since they could only be gotten out by a helicopter with a hoist, Army gunships in the area requested help from the 38th ARRSq Detachment 13 at Phu Cat.

"It took us five minutes to get to the area," said Capt Richard L. Oliver, pilot of the rescue helicopter. "We had to hover approximately 30 feet in the air. There was rain and the winds were gusting up to 20 miles per hour."

"The flooded area was on the edge of a village," added Capt Charles W. Vickrey, the copilot. "Although there were many spectators around, it seemed to be relatively secure."

The medical technician, Sgt John M. Coffey, was lowered to assist the soldiers. "They seemed to be okay—a little cold and slightly scared, but nothing else," he said.

The effort took about 15 minutes, and the crew, which included SSgt James B. Reed, evacuated the three to the 12th USAF Dispensary where they were treated and released.

◆ DET 13, 38th ARRSQ, PHU CAT AB, RVN ◆



First row, left to right, are A1c Willie J. Dotson, SMSgt Paul K. Koonce, maintenance supervisor; SSgt Alfred R. Smoldon, Sgt William R. Carrell, SSgt Jerry W. McCutcheon, A1c George W. Hemingway, SSgt Robert L. Burke, SSgt Bernie D. Blocker, Sgt Marion W. Faircloth, SSgt Robert E. Morris. Second row, Sgt Stephen L. Stover, Sgt Michael W. Back, SSgt John W. Markle, MSgt David L. Lancaster, Maj Oger J. Ven Dange, SSgt Bruce A. Wark, Sgt Richard L. Anderson, Sgt John W. Beavers, Capt Richard L. Oliver, Capt Charles W. Vickrey, Maj Allan L. Gruer, detachment commander. Third row, A1c Carl E. Cooper, A1c David R. Hatcher, Capt Aram Paquin, SSgt Stephen W. Ottgen, Sgt Michael R. Manfred, A1c Bradford L. Leopold, SSgt James B. Reed, Jr., Capt Bruce W. Staples, and Capt Lorenzo M. Crowell, Jr. (USAF photo)

NCO Turns HH-43 Into Control Tower



TSgt James B. Dodd controls Bien Hoa AB air traffic from an ARRS HH-43 Pedro helicopter. (USAF photo by SSgt David Spaner)

Air traffic controller TSgt James B. Dodd recently averted a possible disaster when power failed in the control tower at Bien Hoa AB a few weeks ago. The noncommissioned officer jumped aboard an HH-43 from Det 6, 38th ARRSq, which operates from the base and directed air traffic from the rescue helicopter until power was restored.

"My first reaction when the power went," Sergeant Dodd said, "was to gain some kind of control over the traffic we had at the time." The NCO explained that he had been aware that a power outage had been scheduled for the day, but he hadn't counted on the breakdown of the power generator and its backup.

Sergeant Dodd, chief controller for the 1877th Communications Squadron, asked for an HH-43 Pedro helicopter for support. "I went down from the tower to ask the Pedros for help because no phones were working. We immediately took off and started controlling the traffic. By using the helicopter radios, we finally gained control," he said.

Power was returned after about 30 minutes, but the sergeant's problems weren't over. As soon as he got back into the control tower, the backup generator failed again. "This time," Sergeant Dodd explained, "it was for a little over an hour. They had to completely replace our backup generator. I got down to the rescue detachment again and took to the air. Unfortunately this hit us when we had most of our traffic coming in and going out."

Bien Hoa Air Base handles about 28,000 landing and departure operations per month. During the emergency, Sergeant Dodd controlled about 175 operations. The sergeant said that he has had to do this before in his career as an air traffic controller. He said, "That was my fifth trip flying in the helicopter for that purpose."

Capt Raymond F. Hunter, the rescue detachment operations officer, was on duty at the time the sergeant asked for helicopter support. Captain Hunter said, "We launched immediately and acted as the control tower with Sergeant Dodd in the left seat and myself in the right seat. I was very much impressed with the way Sergeant Dodd handled the situation."

"When we launched," Captain Hunter continued, we had two dozen airplanes in the pattern with nobody to talk to. They were at a complete loss as to what to do. Sergeant Dodd began issuing instructions from that point on and in about five to ten minutes he had the situation under control. I had known of the pressures under which these people worked but I had never experienced it firsthand. The flow of traffic was very smooth after the sergeant got on the scene."

Night Medevacs Made By Det 8

Three Vietnamese nationals who had been wounded in a night firefight were evacuated to the hospital by an HH-43 crew from Det 8, 38th ARRSq, Cam Ranh Bay AB. The trio, two men and a boy, had been treated at the Maritime Naval Facility after being taken there aboard a Vietnamese Navy "Swift Boat." Further medical attention was needed, however, and the Pedro crew responded.

Capt Peter F. Dineen set the rescue helicopter down on the unlighted helipad and the wounded, along with a Navy doctor, were taken aboard. Soon afterward the patients were delivered to the 483rd USAF Hospital. Others manning the Pedro were 1st Lt Harold I. Visnick, copilot; TSgt Arthur G. Esteban, crew chief; and SSgt Eugene E. Cramer, medical technician.

In another night flight, a Det 8 crew evacuated a U. S. Army soldier from unlighted Dong Ba Thin Army Airfield. The injured man had been taken there after suffering serious internal injuries in a vehicle accident. The mission was hampered by the unprepared landing site. The only visual means Capt Michael P. Bolline, the HH-43 pilot, had of locating the landing area was a single flashlight operated by one of the men on the ground. The soldier was taken to the 483 USAF Hospital. With Captain Bolline on the flight were Capt Bruce W. Staples, copilot; Sergeant Cramer, medical technician; and Sgt Larry K. Fisher, helicopter mechanic.

Air-Ground Rescue Teamwork At Phan Rang

Air Force ground and air rescue crews at Phan Rang AB showed their capability for reacting quickly recently when an F-100 Super Sabre crashed on landing. A1c James W. Hallock reported the crash and then drove his 12-ton foam-discharging fire truck to the spot where the downed aircraft was resting off the taxiway. He parked his vehicle and ran to see if the pilot was still inside—there was no fire, but he had his asbestos fire suit on "just in case." The pilot had scrambled to safety so Airman Hallock checked the cockpit to make sure all the aircraft systems were shut off.

Meanwhile, others had responded to the airman's alert. Additional ground firefighting and crash rescue equipment arrived on the scene and an HH-43 from Det 1, 38th ARRSq, the Phan Rang LBR unit, hovered overhead. Capt Peter J. Connelly landed and TSgt James F. Butler, medical technician, and Sgt Ralph Reed, fireman, were dispatched to see if they could aid. The downed pilot was examined by Sergeant Butler and then taken to the hospital in the HH-43. Others aboard the helicopter were Capt Lawrence R. Klingbail, copilot; SSgt Donald W. Bruns, flight engineer; and SSgt Jerry L. Ball, firefighting specialist.

An HH-43 Pedro from Phan Rang AB rescued the crew of a U. S. Army gunship that crashed five miles south of the central Vietnam air base recently, injuring the two crewmen. The Army gunship crashed in a swampy area along a

line of rice paddies in Ninh Thuan Province, about 160 miles northeast of Saigon in Military Region 2.

Within minutes of the initial scramble call, the four-man Pedro crew from Det 1, 38th ARRSq at Phan Rang was airborne and on the scene, responding to the request for aid. Capt Roger K. Coffey, HH-43 pilot said, "We spotted Capt Kerry P. Kicklighter, a FAC (forward air controller) with the 21st Tactical Air Support Squadron, orbiting the crash site in his O-2 Super Skymaster. With his help, and an assist from another Army helicopter from the 192d Assault Helicopter Company, we found the downed chopper on a small mound in the rice paddies. The crew had moved about 100 yards away from the wreckage."

The Pedro commander continued, "The injured crewmen were knee-deep in water and there was no place nearby dry enough to land because of the swamp, so we hovered about 10 feet off the ground while the flight engineer, MSgt William F. Pell, lowered a rescue device to them on our hoist cable. We made one hoist drop for each of the two crewmen, and got them aboard without a hitch."

SSgt James W. Holden, the rescue medical technician on board, examined the injured crewmen while the Pedro flew the men to the 35th USAF Dispensary at Phan Rang. Both Army aviators were admitted to the dispensary for emergency treatment and further observation.

This was Captain Coffey's first rescue as a Pedro aircraft commander in Vietnam, and he recalled, "It was exciting and satisfying to be able to help someone, but all-in-all it was a pretty straightforward mission without any serious complications."

The entire rescue operation took only 25 minutes from the scramble call to delivery at the dispensary's helipad. Copilot on the mission was Capt Mike H. Nelson.

Det 4 Aids Crash Victims

An HH-43 Pedro crew launched in "minimum weather conditions"—heavy rain, low ceiling, scud, thunderstorms and lightning—after an EB-66 crashed two miles short of the runway at Korat AB, Thailand. A few minutes later a landing was made and the injured crewmen from the downed aircraft were being placed aboard the rescue helicopter. Five of the six survivors had suffered compression fractures of the spine. Three flights to the crash site were made. Afterward, Pedro was credited with being "the only piece of rescue equipment capable of reaching the crash site due to the heavy rain and resulting mud."

Other members of the HH-43 crew, all from Det 4, 38th ARRSq, were Maj John A. Tyson, pilot; Capt Marvon D. McLaughlin, copilot; SSgt Gerardo Ramos, medical technician; SSgt Keith L. Moser and Sgt Marshal Richmond, Jr., firefighters.

Bien Hoa Det Saves Eight

Eight U. S. Army troops were rescued by an HH-43 Pedro crew recently after their Army helicopter crash-landed in a flooded rice paddy two miles southwest of Bien Hoa AB. The rescue effort was "expedited because the area was suspected of being hostile," said Maj Elmer Funderburk, Jr., commander of the rescue helicopter.

The flooded rice paddy prevented Major Funderburk from landing and expediency prevented the use of the hoist to haul all eight troops to safety aboard the Pedro. "We hovered with the right landing gear resting on top of the levee," Major Funderburk said.

1000 HOUR PILOTS

The names of two Air Force and three Navy pilots were added recently to the list of 1,000-hour-plaque recipients. The plaques are awarded by Kaman Aerospace to pilots logging 1,000 hours in helicopters produced by the company. Recipients are: HH-43 — Capt Merrill C. Hiscock, Det 11, 43rd ARRSq, Laughlin AFB, Texas; Capt Gary N. Beson, 76th MAS, Charleston AFB, S. C. H-2's — LCdr H. T. Buckley, CVT SAR Det, NAS Pensacola, Fla., Lt Jerald A. Bonner, Det 38, HC-2, NAS Lakehurst, N. J., and Lt Lloyd L. Duncan, SAR Det, NAS Lemoore, Calif.

Sgt James W. Warf, helicopter mechanic, assisted four troops aboard and remained behind while the Pedro made the first shuttle to the air base. The second group and the Pedro mechanic were returned to the base 15 minutes later. Other members of the Det 6, 38th ARRSq, that participated in the rescue were Capt John C. Troolin, copilot; and SSgt Glenn A. Mumpower, medical technician.

In another Det 6 mission, an HH-43 flown by Capt Roy M. Litzen, scrambled recently to rescue an injured Republic of Vietnam Air Force (VNAF) A-1 Skyraider pilot. The A-1 had crashed near the base while attempting an emergency landing.

Captain Litzen's copilot on the mission was Capt John W. Mack, and the medical technician on board was Sergeant Mumpower. The VNAF fighter had crashed slightly more than one mile from the east end of the runway here. Captain Litzen, describing the mission afterward, said, "The tower called us, saying that an A-1 was coming in with engine trouble and that it was losing altitude but it appeared that it would make the field here. Then we were notified that he had crashed. It took us about 45 seconds to get airborne after that."

"In about two minutes we were at the crash site," the captain continued. "There was too much underbrush and the terrain was too rough for us to land. We put the medical technician down and Sergeant Mumpower placed the injured pilot on the forest penetrator and brought him back up into the aircraft."

Sergeant Mumpower added that when they got to the accident site, "it looked at first like the pilot was in good condition, but we found he was unable to get into the harness by himself. I was deployed and quickly checked him for any type of injury. We got him back to the helicopter and I treated him for shock and applied dressings to his open wounds. After we picked up the pilot it only took us about six minutes before he was being treated at the Long Binh Hospital."

For Captain Litzen this was his seventh such rescue in more than 20 months of Vietnam service. He previously had been assigned to the Pedro rescue unit at Cam Ranh Bay AB.

Medevac By Myrtle Beach Det

A five-year-old girl suffering from possible brain damage was medevaced from Myrtle Beach AFB, S. C., to Charleston AFB by an HH-43 crew from Det 8, 44th ARRSq. Enroute oxygen was administered to the critically-ill patient and she was attended by two physicians and an anesthetist.

Maj Harold Pickering was pilot on the mercy flight. Others aboard the HUSKIE were Capt James W. Albright, Sgt Randy L. Luke and Capt Norman Shorr.



START



COMING UNDER CONTROL



OUT-1½ MINUTES

(continued from page 7)

tank. It was anticipated that for some types of Class A fires or wash down jobs it might be more advantageous to use just plain water.

Firebird II, in addition to a 150-gallon water tank, and a nine-gallon foam concentrate tank, has a standard compressed air bottle and the necessary valves, regulators, and proportioning devices.

In operation, a single valve in the high pressure air line charges both the water and foam concentrate tanks. Approximately 15 seconds after opening the air valve, foam or water is available at the nozzle. Because the hose is non-collapsible, only the required length need be unreeled. An adjustable hose reel brake is provided to prevent overrun.

In recent testing at Kaman facilities, the Firebird II was used on an 870 gallon, 2000 square foot, JP-4 fuel spill

(continued from page 8)

Adak SAR Unit Medevacs Hunters

A petty officer who suffered gunshot wounds in the foot while on a hunting party was evacuated by a UH-2B from the SAR Unit at NS Adak, Alaska. The injured man was located at the bottom of a steep ravine which had mountains at both ends. Lt Randall H. Miller jettisoned 900 pounds of fuel to ensure that, with the light wind conditions, he could get in and out of the hazardous landing area. A near vertical approach was used and rotor blade clearance with the steep walls of the ravine was constantly checked. The landing was made without incident and the wounded man placed aboard the SEASPRITE. He was bleeding profusely and had entered shock. Ten minutes later he was transferred from the helicopter to an ambulance. Manning the UH-2B with Lieutenant Miller were Lt Anthony P. Masslofsky, copilot; ADR3 Geen M. Larson, crewman, and HM1 Charles A. Schacht, corpsman.

A few weeks later the UH-2C recently assigned to the Adak SAR Unit was called upon when two officers failed to return from an extended hunting trip. The SEASPRITE began searching from the point where the missing men had left their vehicle. The pilot, LCdr Kenneth L. Sterling, followed the most logical path the hunters would have taken and the helo checked many old abandoned buildings from the days of U. S. Army occupation in 1942. The two res-

cuees were found in one where they had taken shelter after displaying an emergency survival panel. A landing was made on the tundra and the two were taken aboard. One had injured his foot thus preventing a "walk out." Others aboard the UH-2C were Lieutenant Masslofsky, copilot; and ADR2 Glenn M. Larsen and ATN2 Will J. Greufe, crewmen.

Det 66 Saves Sailor

A sailor who fell from the USS America while unloading pallets from a fork lift, was back aboard the carrier 10 minutes later thanks to the prompt action of a UH-2C crew attached to HC-2's Det 66.

Lieutenant Stephen S. Hoxie and his crew dashed for the helicopter as soon as the "man overboard" alarm sounded and the sailor was located a minute after liftoff. He was stretched out on a pallet which had also gone over the side when he lost his balance. The survivor, who was suffering from shock and minor injuries, did not move as the helicopter hovered overhead, so AN Gary L. Kaufman was lowered from the UH-2C to assist him. The recovery was made without incident. Others manning the UH-2C were LCdr Philip F. Duffy, the copilot; and AMS3 William D. Adams, the other crewman.

HUSKIE HAPPENINGS



A few months ago an HH-43B from Det 6, 47th ARRSq, Kadena AB, Okinawa, saved five swimmers who were being swept out to sea. Gratitude and appreciation for the action of the HUSKIE crew—Maj Alma L. Williams, Capt Robert M. Garlow and SSgt John H. Hazzard—are expressed in the following letters received afterward by the detachment.

"Commander, Det 6, 47th ARRSq

1. At approximately 1315 hours on 14 August 1970, your unit responded to an emergency call for assistance in averting a disastrous situation at Onna Point, Okinawa. Two swimmers in this area were observed to be in difficulty because of the heavy sea and severe undertow. Four men from this section attempted to rescue the swimmers by means of a long rope but three also got into difficulty. The fourth man then went for help.
2. The adept and immediate response elicited by Det 6, 47th ARRSq, personnel saved the life of one man from this section and averted injury and possible death to the other four individuals.
3. The undersigned as well as their families wish to express their personal gratitude for your squadron's timely action which, without doubt, prevented a more serious and possibly fatal accident from occurring.

Loyal P. Evans, Jr., SMSgt
Kenneth F. Gibbons, MSgt

Bryan F. Strickler, TSgt
Donald J. Jahoda, SSgt

"Commander, Det 6, 47th ARRSq

I want to add my gratitude for this recent rescue. I am well aware of the immediate reaction by your unit to all emergencies, and it is a pleasure to have your Detachment on Kadena. Please extend my commendation to all of your personnel.

Thomas L. Murphy, Colonel, USAF, Commander
Kadena Air Base"

2800-Mile Flight—Posing for commemorative photograph after delivery of HH-43F to George AFB, Calif., are, left to right, Col Walter T. Steves, commander, 479th Combat Support Group; Col Earl J. Archer, Jr., commander, 479th Tactical Fighter Wing; Maj James L. Wissert, Det 12 commander, and SSgt Robert E. Crites, also from Det 12. With Major Wissert and Sergeant Crites on the HH-43F ferry flight was Capt Robert A. Sheppard from Det 17, 42 ARRSq, Davis-Monthan AFB, Ariz.

Det 12 Receives First HH-43F In U. S.

Det 12, 42 ARRSq, George AFB, Calif., chalked up a couple of "firsts" as 1970 drew to a close. The detachment became the first local base rescue unit in the United States to receive an HH-43F and was also the first unit to ferry a HUSKIE 2800 nautical miles across the country.

The HUSKIE, HH-43B serial number 59-1556, was redesignated an "F" after being fitted with the more powerful T53-L-11A engine at Kaman's Bloomfield, Conn., facility. At the present time, HH-43F's are operational in Southeast Asia, Iran, Burma and Morocco. Those in Southeast Asia, in addition to the new engine, are outfitted with special equipment including armor plating.

Maj James L. Wissert, Det 12 commander, headed the ferry crew which accepted the George AFB "F" at Kaman. Other crewmembers were Capt Robert A. Sheppard from Det 17, 42 ARRSq, Davis-Monthan AFB, Ariz., copilot, and SSgt Robert E. Crites, a helicopter mechanic from Det 12. The crew departed Bradley International Airport, Conn., on Oct 20th and—12 days and 2800 nautical miles later—arrived at the California base. The trip, which traversed 18 states and the District of Columbia, is the longest HUSKIE ferry flight on record. It took 37.9 hours flying time at an average of 70 nautical miles per flying hour for the entire trip.

Field elevation at George AFB is 2800 feet and summer temperatures often exceed 110° F. The F-model HH-43 will vastly improve Det 12's ability to perform its mission, both fire suppression and rescue and recovery, especially during the summer months.



DET 4 HONORED BY MAC



Flight Line Presentation—Front row, left to right, Capt Cecil A. Jessee, SSgt Charles Hudson, TSgt Raeford L. Eaker, Alc Barry C. Sheets, TSgt Jerry L. Cody, SSgt George E. Hubbard, SMSgt Tonie H. Dean. Standing Maj Delmar G. Worsech, Col Alexander S. Sherry. Rear row, SSgt Robert B. Dudley, MSgt Lloyd H. Martin, Sgt Walter T. Woodward, SSgt Charles F. Hill, Alc Ronald J. Hunsinger, MSgt Edward E. Hawley, Maj Ronald L. Haglund, Maj Gerald L. Petty. (USAF photo)

Det 4, 44th ARRSq, Keesler AFB, Miss., was awarded the MAC Maintenance Trophy recently after being selected the "best LBR Maintenance Detachment of the year." Presentation of the coveted trophy was made to Maj Delmar G. Worsech, detachment commander, by Col Alexander S. Sherry, commander of the 44th ARRSq, Robins AFB, Ga.

The annual award recognizes "outstanding productivity, excellent aircraft appearance/condition, and other maintenance accomplishments." Selection of Det 4 indicates "dynamic leadership, superior management of resources, and complete dedication to duty by all personnel."

During the period of recognition, Det 4 was visited by the MAC Maintenance Standardization Evaluation Team (MSET), Rescue Headquarters Inspector General (ARRSIG), and Staff from the 44th ARRSq. The maintenance section received an excellent rating from the MSET Team and an overall satisfactory rating from the IG and 44th Staff. Also during this period, the Base Quality Control Section performed two 180-day activity inspections which resulted in a satisfactory and an excellent rating. Throughout the year the Detachment Maintenance Section has functioned in an "outstanding manner" with a continuing 90 percent operational ready rate for the HUSKIE.

Major Dreibelbis Honored

Maj Ryland Dreibelbis, now with the 37th ARRSq at Da Nang AB, Vietnam, received one of AFA's highest awards—The Citation of Honor—for a rescue he performed in February 1969.

Major Dreibelbis was an HH-43 pilot with Det 12, 42nd ARRSq, George AFB, Calif., when he picked two downed Navy A-1E pilots and an Air Force pararescueman off the face of Mt. Kaweah, a 13,800-foot peak near Mt. Whitney, Calif. The major brought his chopper within inches of the mountainside while fighting gusts from 20 to well over 50 knots to hoist the men to safety.

Luke Detachment Rescues Hiker

A four-man HH-43 crew from Det 15, 42nd ARRSq, Luke AFB, Ariz., rescued a Scottsdale man recently after he fell into a canyon near Cave Creek and was partially crushed by a man-sized boulder.

The detachment received the call for help from the Maricopa County Sheriff's Department about 2 p.m. "The accident victim's wife had reported she and her husband were hiking in an isolated section of the mountains north of Scottsdale," said Maj Elmer L. O'Banion, det commander. "Her husband, while climbing up a ledge, had fallen backwards and landed about 15 or 20 feet on the surface below. A boulder, which had come loose, landed on top of him. They needed to get him out of there and into a medical facility, but the sheriff's department did not have the equipment to expedite the evacuation."

Within an hour after being called, the Det 15 crew was at the accident site and had picked up the injured man's wife. "We picked her up so she could show us where her husband was located," Major O'Banion said. "It was a lucky thing we took her with us because when we flew up the ravine, we realized this area was quite isolated."

"Her husband was lying in the bottom of a pit right at the mouth of a canyon and the walls were about 15 to 20 feet high," recounted the major. "It would have been almost impossible to find him without her assistance because he was not able to move around. Since he was located in a hole that wasn't much over 20 to 30 feet across, we made a hoist pickup of the man, using a Stokes litter lowered from the helicopter," he continued. "We proceeded with him and his wife to Good Samaritan Hospital in Phoenix."

The rescued man was treated for a broken arm, possible broken back and shock. HH-43 crew members included Major O'Banion, pilot; Maj Richard R. Cowles, copilot; Sgt John M. Visnesky, crew chief; and TSgt Peter J. Lee, medical technician from the 58th USAF Hospital.

ANDERSEN DET MAKES FIVE RESCUES



Rescue Crew—Members of the Det 12 HH-43B crew which made five saves in one evening discuss their rescue experiences. Left to right are Capt Allan C. Spitler, copilot; TSgt William P. Tracy, pararescue technician; Maj Thomas F. Madden, aircraft commander; and Sgt Richard C. Spencer, flight mechanic. Not present for the picture was Sgt Emory D. Mitchel, firefighter. (USAF photo by A1C Mike Hereford)

Det 12, 47 ARRSq, Andersen AFB, Guam, chalked up five rescues in one evening last fall. Three separate flights were logged by the detachment's HH-43 in completing the rescues.

The first episode began with a report that a boat was foundering offshore and in danger of being smashed on the reef with its three passengers.

The Det 12 alert crew flew to the scene and rescued two men from the boat. The owner of the vessel elected to remain aboard in an attempt to save it.

Shortly after taking the boatmen to Andersen and returning to their operations section, the HUSKIE crew received two more emergency calls. One was to pick up the owner of the boat; the second, to pick up two airmen lost in the jungle between Pati Point and CE Beach.

The overwater rescue proved hazardous because of the darkness but was completed successfully. A search then began for the two lost airmen. The cigarette lighter they used as a beacon was spotted by the HH-43 crew and the two were directed to go to a small clearing while the helicopter returned to Andersen to drop off the boat owner and refuel.

The HUSKIE's third rescue flight was completed when the airmen were picked up and taken back to the base.

Davis-Monthan Crew Saves Driver

An HH-43 crew from Det 17, 42nd ARRSq, Davis-Monthan AFB, Ariz., responded to a call for assistance from the Pima County Sheriff's Department—a pickup truck had left a mountain road and plunged down a 300 foot, 60 degree incline. Ground parties had carried the injured driver to within 150 feet of the highway but were unable to proceed because the entire slope was loose gravel. The accident victim had suffered hip, skull and rib fractures as well as cuts and abrasions.

Manning the rescue helicopter were Capt Robert A. Sheppard, the pilot; Capt John P. Smariga, copilot; Capt P. I. Monheit (MC), flight surgeon; and Sgt Terence M. Riley, medical technician. Attempts to lower the Stokes litter at the accident scene were aborted due to the lack of lateral control of the helicopter caused by strong updrafts. Captain Monheit and the litter were off loaded on a nearby hill and then the flight surgeon made his way on foot to the accident victim.

Captain Sheppard returned to the accident site and this time hovered the HH-43 downwind and high enough to keep the rotor blades just clear of the sharp incline. The litter was hoisted to the HUSKIE without incident but bringing it into the cabin was difficult. A landing was made in a nearby valley so that the copilot could assist the medic in securing the rescuee inside the aircraft. The HUSKIE then picked up the flight surgeon and headed for the Tucson Medical Center. The rescuee was given medical aid during the flight which was slightly delayed due to thunderstorms in the area which had to be circumnavigated.

In describing the rescue afterward, a spokesman for the Sheriff's Search and Rescue Squad called the helicopter pickup "the finest, most miraculous that I've ever seen. The surgeon and flight people did a fantastic job."

Wounded Hunter Evacuated By Det 22

A hunter suffering from a gunshot wound in the leg was evacuated from the steeply sloping side of West Warrior Mountain by an HH-43B crew from Det 22, 42nd ARRSq, Mountain Home AFB, Idaho. The HUSKIE crew located the accident victim near a large rock protrusion halfway up the mountain. The slope, rocks and tall pine trees ruled out a landing. Snow on the ground, the steepness of the mountain and the victim's condition precluded moving him up or down the mountain to a site where the HUSKIE could safely land.

Capt Gary A. Dietze made a hover out of ground effect over the valley to check the power required, then a power available check was made before the site was again approached. The approach was made and the HH-43 held in a 50 to 60-foot hover over the wounded hunter. Rotor clearance was about 15 feet from the trees and only five feet from the rock protrusion. Maneuvering the Stoke's litter on 50-feet of cable, and delay in getting the victim in the litter and hoisted aboard, necessitated a hover for approximately 10 minutes in the confined area. Once the victim was aboard, takeoff was accomplished by "sliding down" parallel to the face of the mountain at tree top level until translational lift was encountered.

On the way to the hospital antishock treatment was given and compresses placed on the hunter's wound. With Captain Dietze on the hazardous mission were Capt James L. Woolace, copilot; SSgt Gerard J. Bucknall, helicopter mechanic and hoist operator; and Sgt Christopher L. Boyd, medical technician.

Det 10 Saves Two In Mountain Missions

A hunter who suffered serious injuries after a fall into a rock crevice on Mount Ciaurlec, Italy, was saved by an HH-43 crew from Det 10, 40th ARRWg, Aviano AB. The rescuee was located at the bottom of a 40-foot hole which was only two feet wider than the Stokes litter which was required due to the nature of the hunter's injuries. He had suffered a broken pelvis and ribs and was bleeding internally. In order to get the litter into the confined space, it was necessary for the HUSKIE pilot, Maj William F. Cunningham, Jr., to maintain a "very exact hover" in a confined space which was exposed to gusty winds caused by the surrounding mountains. The rescue site was located at 4,000 feet on a steep slope. With Major Cunningham on the hazardous flight were Capt James F. Bauer, copilot; SSgt Wiley T. Sanford, medical technician; and SSgt Elmer E. Tankersley, helicopter mechanic.

Several days later the rescuee's two daughters and son presented a bouquet of flowers to Col Thomas A. Barr, 40th Tactical Group commander, to thank the base for its assistance. Appreciation was also expressed to the helicopter rescue crew.

In a similar mission, another civilian was evacuated from a ledge at the 5,000-foot level on Mount Piancavallo five miles from Aviano. The rescuee was suffering from a broken leg and also had several broken bones in his foot which caused heavy external bleeding. He was located on a ledge which was completely inaccessible to a ground vehicle. To make the pickup, Capt Darvan E. Cook was required to hover the HH-43 for 15 minutes within a few feet of the mountain ledge in a 15-knot wind while the litter basket was lowered and raised. Also manning the HUSKIE were Capt Bauer, copilot; and Sgt Darrell E. Hollingshead and Sgt Hardy L. Brewington, firefighters.

Kwang Ju Det Aids ROK Soldiers

The lives of seven Republic of Korea Army men were saved by an HH-43B crew recently after a Korean Army truck careened over a 100-foot embankment on Mu Dong San Mountain. An eighth passenger in the truck was fatally

injured. Flights in the HUSKIE were made to the accident site by members of Det 10, 47th ARRSq at Kwang Ju AB. The first two flights brought the four most seriously injured men and a walking patient to the base. Then the remaining men were evacuated.

Sgt Curtis T. Herrin, pararescueman, remained at the accident site throughout the operation, administering intravenous injections to the unconscious men who were in shock. Sgt Michael P. Budke, another pararescueman, continued the injections on the return trips. Piloting the HUSKIE was Maj Robert O. Schuppe. The copilot was Capt Richard W. Shupp.

Korean Boy Saved By Det 11 Crew

A hazardous HH-43 mission involving a night flight over water and then mountainous terrain was credited with saving the life of a seven-year-old boy who had fallen from a cliff. The accident occurred on an island 34 miles off the Korean coast.

Det 11, 41st ARRWg, Kunsan AB, responded to the call for assistance. To make the pickup from the small, mountainous island, Maj Franklin L. Chase landed the HUSKIE on a narrow beach near a fishing village. The unconscious lad and his parents were taken aboard and the helicopter returned to Kunsan.

After landing, it was determined that the tiny patient could not survive without additional medical attention. Capt Robert R. Earnest (MC), a flight surgeon and member of the HH-43 crew, recommended immediate transfer to Ascom Hospital near Inchon 95 miles away. Major Chase kept the HUSKIE at an altitude of 4,000 feet during the flight in order to clear the mountainous terrain which was hidden by darkness, haze and smoke. Thirty-knot winds were also encountered. A landing was made on a small helicopter pad near the center of the city at 11 p.m. and minutes later the boy was undergoing surgery.

Afterward, the HUSKIE crew's prompt action was credited with enabling the doctors to operate to save the boy's life. Other members of the HH-43 crew were Maj Richard P. Barr, Jr., copilot; SSgt Charles L. Barrix, helicopter mechanic and Sgt Robert C. Schmidt, pararescueman.

SECRETARY SEAMANS PRESENTS AWARD TO SERGEANT

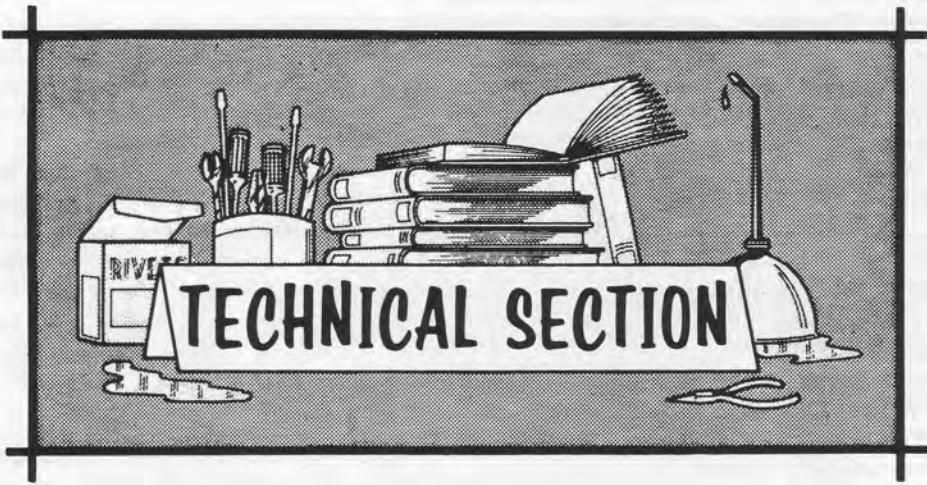
HQ ARRS, Scott AFB, Ill.—Secretary of the Air Force Robert C. Seamans, Jr., recently presented an Air Force Commendation Medal to an Aerospace Rescue and Recovery Service helicopter mechanic for saving the life of a baby.

TSgt Carless Looney assigned to Det 21, 43rd ARRSq, Ellington AFB, Tex., expertly used first aid techniques in saving 14-month-old Scott Harrell, also of Houston. The baby swallowed his tongue and stopped breathing when his five-year-old sister tripped and fell on him. The child's mother couldn't revive him.

Sergeant Looney, who lives next door to the Harrells, was aroused by another neighbor when Mrs. Harrell screamed for help. Looney found the child unconscious and applied mouth-to-mouth resuscitation. He used his index finger to dislodge the baby's tongue, allowing Scott to breath again. The baby was later pronounced in good condition by a doctor.



Rescue Ready—Technical Sergeant Looney holds the baby whose life he saved. The Sergeant's quick action reflects his ARRS training. (USAF photo)



H-2 CHIP DETECTORS

H-2

Three types of chip detectors are in use on H-2 aircraft. One, P/N A7379, will fit into the main gearbox tee fitting. The second, P/N CD41A, can be used only in the speed decreaser gearbox (SDG). The third, P/N A7400, can be used in the main gearbox, intermediate gearbox, combining gearbox (two places), and the tail rotor gearbox. The A7400 detector is used in conjunction with a check valve, P/N A7404 (together, the two parts become an assembly, P/N A7382, FSN RM4730-876-4913BH6X), shown in Photo A. The phenolic check valve allows withdrawal of the detector for inspection without loss of fluid from the gearbox. In order to activate the check valve and still provide an adequate surface to detect chips, the A7400 detector has an enlarged center stud. The arrow of index 1, Photo A, points to the hex-shaped center stud which is butting against the cone-shaped, spring-loaded phenolic check valve. As the detector, index 2, is withdrawn from the check valve, index 3, for inspection, the phenolic valve

moves forward to close off the opening and prevent fluid loss. Photo B allows comparison of the two detectors. Notice the small protrusion at the tip of CD41A; compare it with the larger, hex-shaped stud of the A7400 detector. If the A7400 detector were inadvertently installed into the SDG, it would function; however, if the CD41A were installed into any other H-2 gearbox, it could not detect chips or fuzz. The incorrect installation of Photo C shows why. Detector, P/N CD41A, has been installed into the A7407 check valve. The arrow indicates where the stud should be; because it is smaller, the stud has been completely covered by the phenolic. Consequently, the detector cannot function. This is an unacceptable situation and care should be taken to be sure an incorrect installation does not occur. A quick check with a magnet can determine if the correct detector has been installed. The CD41A detector has a steel housing; the A7400 detector has an aluminum housing. The most practical method of determining correct installation is the part number system. The CD41A detector has a part number stamped on the housing; the A7400 detector does not.

R. Trella, Service Engineer

Photo A



Photo B



Photo C



Table of Contents

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Service Reps	25
Fuel System Internal Leakage	25
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TIMELY TIPS

OIL LEAKAGE, MAIN GEARBOX OIL LINE

H-2

A report of oil leakage where the K678014-37 oil line is connected to the intermediate housing of the main gearbox could be due to improper torque on the AN815-D8 union. Sometimes, when installing the union, the wrench butts against the casting boss, thereby preventing a mechanic from obtaining the correct torque. The arrow in Photo A points out the area of interference.

A change now in process reworks the counterbore in the housing and allows for easier installation of the union. Until this change is implemented, the correct torque can be attained as follows:

1. Install the O-ring, P/N NAS1595-8, onto the AN815-D8 union.
2. Thread the D8 union into the intermediate housing.
3. Coat the exposed threads of the union with anti-seize compound.
4. Temporarily thread an AN924-D8 check nut onto the outer end of the union as shown in Photo B.
5. Use a standard socket wrench and apply 150-250 pound-inches torque.
6. Back off the check nut and proceed with installation of the K678014-37 oil line.

The combination of O-ring friction, thread friction, and the anti-seize compound allows removal of the check nut without disturbing the union. (Make sure the check nut is removed prior to installing the oil line.) For further information, refer to NAVAIR 01-260HCB-4-6, Figure 15.

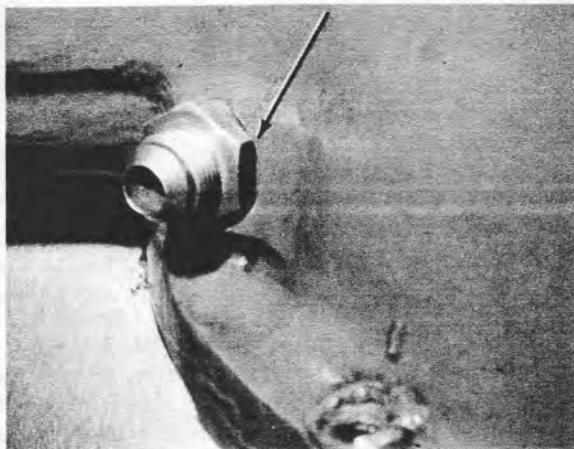


Photo A



Photo B

R. Trella, Service Engineer

ENGINE SPEED CONTROLLER OPERATING CHECK

H-2

The next regularly scheduled handbook change will affect Figure 4-19E, Engine Speed Controller Schematic and Operating Checks, which appears in NAVAIR 01-260HCA-2-6,

Changed 1 September 1969. The Operating Check portion of that figure is presented below with the approved change.

E. Noe, Field Service Representative

OPERATING CHECKS					
Apply DC Voltage To Pin	R1 Ohmmeter (ohms)	R2 Ohmmeter (ohms)	Stop to Stop Travel Time (Seconds)	Remarks	
29 vdc 6	45 ± 5	1850 ± 100	4 ± 1	Output shall be continuous with no break in circuit flow	
16 vdc 6	45 ± 5	1850 ± 100	15 Max	Same as above	
29 vdc 7	1850 ± 100	45 ± 5	4 ± 1	Same as above	
16 vdc 7	1850 ± 100	45 ± 5	15 Max	Same as above	

QUESTIONS & ANSWERS

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

Q. (Applies UH-2C; HH-2C; HH-2D) IS THERE A LIMITATION FOR CYCLING THE VARIABLE SPEED RESCUE HOIST DURING A TRAINING MISSION?

A. Yes. Recent testing of the VARIABLE SPEED hoist system reveals that continuous reeling in and out of the rescue hoist cable, particularly at high cable speeds, can result in higher than desired hydraulic oil temperature on a hot day (80° F or greater). Investigation of the oil does not reveal any evidence of breakdown or significant change in viscosity; however, because training missions require the greatest continual use of the hoist system, the following information will be recommended for inclusion into the NATOPS Flight Manual:

CAUTION

Continuous reeling in and out of the rescue hoist cable, particularly at high cable speeds, can result in excessive hydraulic oil temperature. To preclude undesirable hydraulic oil temperature during ambient temperatures in excess of 80°F, hoist training operations should be limited as follows:

Less than 100 feet of cable extended—limit to one cycle every four (4) minutes.

More than 100 feet of cable extended—limit to one cycle every eight (8) minutes.

W. Wagemaker, Service Engineer

Q. (Applies H-2) WHAT ARE THE ALLOWABLE AXIAL AND RADIAL LIMITS FOR THE OIL COOLER BLOWER SHAFT AND FAN?

A. The maximum allowable limits for oil cooler blower shaft and fan are as follows:

Blower Assy P/N	Axial Play	Radial Play
K677707-1 (HH-2C/D)	0.007-inch	0.0-inch
K677012-1 (UH-2C)	0.018-inch	0.0-inch

This information will be incorporated into applicable handbooks by a future change.

R. Trella, Service Engineer

Q. (Applies H-2) WHAT IS THE PROPER HARDWARE STACKUP FOR MAIN ROTOR CONTROL LINK, P/N K659050-5?

A. The main rotor control link, P/N K659050-5, is installed with the folding pin idler arm P/N K659153-1, and the main rotor control rod (shoe string rod), P/N K659108-3. The stackup is as shown in the accompanying illustration. (The parts listing which follows is keyed to the illustration.) The 0.005-inch minimum gap is necessary in order to prevent the fail-safe washer from damaging the control link clevis. When the thin washer is not installed and torque is applied, the fail-safe washer can be forced to contact the boss of the crank. Such an incorrect installation caused binding of the controls and the damage shown in Photo A.

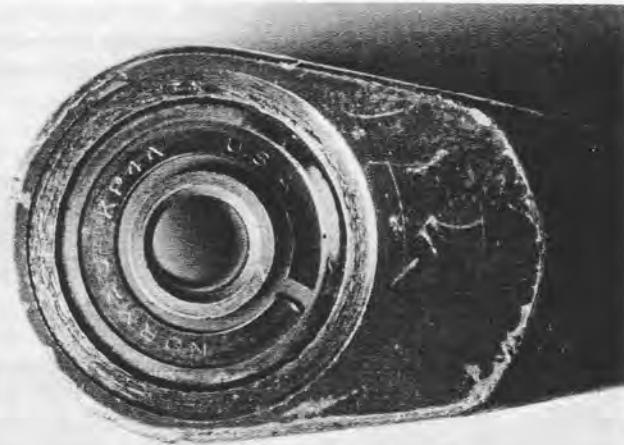


Photo A

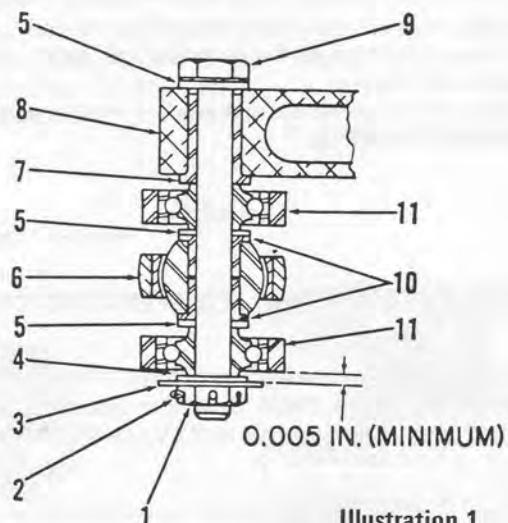


Illustration 1

1. Nut AN320-4
2. Cotter pin MS24665-152
3. Fail-safe Washer KS1411C10414
4. Washer AN960-416L
5. Washer AN960-416
6. Rod K659108-3
7. Bushing NAS77-4-61
8. Idler arm K659153-1
9. Bolt NAS464P4-32
10. Bushing K659278-11
11. Link K659050-5

W. Wagemaker, Service Engineer

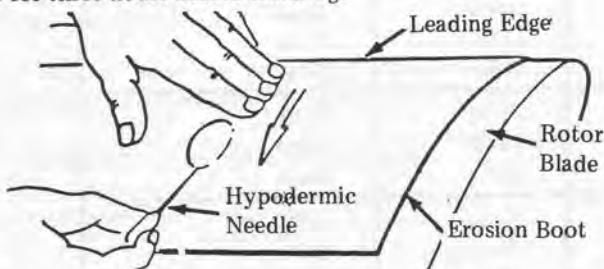
TECHNICAL SECTION

Q. (Applies HH-43) IN WHAT SIZE CONTAINERS IS ADHESIVE, A1191B PACKED? WHAT ARE THE LATEST PROCEDURES FOR ITS USE?

A. A1191B adhesive is packed as follows: quarts, 1 gallon cans, 5 gallon pails, and 50 gallon drums. The adhesive, which is used to repair rotor blade leading edge polyurethane erosion boots, can be ordered directly from the manufacturer. The address is: B.F. Goodrich Industrial Products Co., 500 South Main Street, Dept 0719, Bldg 513B, Akron, Ohio 44318.

The adhesive has two parts: blue (resin) and yellow (catalyst). When mixed in equal parts, they result in a green color indicating proper blending. The procedure which should be used to repair a blister is as follows:

First, be sure to remove the trapped air by inserting a Number 20, hypodermic needle in the aft end of the blister as shown in the accompanying illustration. Be sure the syringe is *not attached* to the needle because it will prevent air from escaping. The same holds true after inserting the needle with the mixed adhesive; deposit the adhesive, remove the syringe and leave the needle (Number 25) with the point just within the edge of the blister. Press out the entrapped air and excess adhesive, working toward the needle. Do not remove the needle. Wait 10-15 minutes and again press down the loose, blistered area while working from front to rear toward the needle (use only finger pressure). When this has been accomplished, remove the needle. The rotor blade may be moved to another location or to a blade rack but the glued area should be allowed to cure for three hours before handling.



As with most catalyst-type adhesives, A1191B should be used with care. Avoid physical contact; wash contaminated areas of skin with soap and water. Store canned adhesive away from heat; do not use near open flames, A1191B is flammable.

If the catalyst (yellow) material has jelled, it is no good and should be discarded. If one or both parts of the adhesive appears to have thickened or if there is *any* question as to the state of the adhesive, mix a small portion in the proper ratio and allow to cure. If this mixture cures within 24 hours at room temperature or within 30 minutes at 160° F, the adhesive is good and may be used. If the mixture does not cure within these times, at these temperatures, the adhesive is no good and should be discarded.

W. Wagemaker, Service Engineer

KAMAN SERVICE ENGINEERING SECTION - R. L. Bassett, Supervisor; G. M. Legault, Asst. Supervisor

Q. (Applies H-2) WHAT FUNCTION IS PERFORMED BY THE PROTECTOR ASSEMBLY, P/N KA25027-11? AT WHAT VOLTAGE SHOULD THE ASSEMBLY BE TESTED?

A. The protector assembly used in the loud hailer prevents transient voltages from affecting the amplifier's transistors. When excessive voltage attempts to reach the loud hailer, the protector assembly provides a direct path to ground, thereby causing the 15-amp fuse to blow. The zener diode (which must deteriorate in order to provide the required path) will breakdown at approximately 51 VDC. Present protector assembly test procedures specify application of less than the required voltage range. Consequently, if a protector assembly is tested at a lower voltage, the fuse will not blow, and a technician could reject the assembly because it did not perform "as advertised." To correct this situation, the next regularly scheduled change to NAVWEPS 16-45-274 (Audio Amplifier Overhaul, KA25000-1) Dated 15 July, 1965, will specify testing the protector assembly with 48-54 VDC. The approved paragraph wording is as follows:

Revise Paragraph 11-3, Step e (1) as follows:

"The voltage transient protection device may result in blowing the 15 amp fuse under any operating conditions where the DC power supply is greater than 48 VDC. The 15 AMP fuse will, under all circumstances, blow under any operating conditions for voltage supply of greater than, or equal to 54 VDC."

Revise Paragraph 11-3, Step e (2) as follows:

"Increase the DC supply from 28 VDC to 48 VDC, or until the fuse blows."

D. Delaney, Field Service Representative

Q. (Applies H-2) WHAT IS THE APPROVED METHOD FOR ORDERING ICE-GRIP TIRES FOR THE MAIN LANDING GEAR?

A. Ice-grip tires must be ordered by part number (which is the size of the tire), nomenclature, and Federal Stock Number. For example: 17.5 x 6.25-11, Type VI, 8 ply rating, Ice Grips, FSN RM2620-902-1599BH2X. The ice-grip tire may be used on any H-2 aircraft but non ice-grips (standard tires) can only be used on UH-2A and UH-2B aircraft. The two tires cannot be mixed; they should be used in like pairs because of the differences in lateral stability and stopping performance. Non ice-grip tires can be ordered as follows: 17.5 x 6.25-11, Type VI, 8 ply rating, FSN, RM2620-580-5725BH2X. (Notice the stock numbers are different and the words "Ice Grips" are used when an ice-grip tire is ordered.)

Ice grips are mandatory on twin engine aircraft because they have the lateral stiffness necessary to compensate for the increased aircraft gross weights. The non ice-grip tire is being replaced on an attrition basis. When the supply is depleted, the ice-grip tire will be standard on all H-2 Aircraft. For further information, refer to applicable handbooks and Airframe Change 54.

H. Zubkoff, Service Engineer

TECHNICAL SECTION

H-2 TBO/LIFE COMPONENTS, HARD CARDS

This chart supersedes that which appeared in the August-September-October, 1970 issue of Kaman Rotor Tips.

Many components can be interchanged among the H-2 aircraft. Because of this, some question exists as to how TBO (Time Between Overhaul) and retirement times should be handled. The following list reflects the differences between components when interchanged between Models. All hard card times shall be converted to a single entry reflecting only the time usable on that specific model air-

craft. On components coming out of Overhaul, where the aircraft model that the component will be installed on is unknown, UH-2C time should be utilized. The operating activity should then pro-rate the time according to the model aircraft upon which the component is installed. For complete information, refer to NAVAIR 01-260HCA-6 and NAVAIR 01-260HCB-6.

REVISED CHART

TBO/LIFE DIFFERENCES

Nomenclature	Aircraft Model	TBO(Hours)	LIFE(Hours)
Main Blades	A/B	None	2400
	C	None	1200
	HH §	None	800
Retention	A/B/C/HH §	800	2000
Hub	A/B	None	800
	C	None	500
	HH §	None	1000 (anticipated)
Damper	A/B/C	None	2500
	HH §	None	1250
T. R. Blade	A/B	None	3000
	C/HH §	None	2000
Inter. Gearbox	A/B	2000	None
	C	1000	None
	HH §	2000	None
T. R. Gearbox	A/B	2000	None
	C	1000	None
	HH §	2000	None
Liquid Spring (3283300)-11,-13 (3283300)-15	A/B	None	1200
	C/HH §	None	600
	A/B	None	3200
	C/HH §	None	1600
Main Gearbox	A/B	750	None
	C	360	None
	HH's	1250	None
Combining Gearbox	C	750	None
	HH's	750	None
Resolver Gearbox	C	2000	None
	HH's	2000	None

G. M. Legault, Asst. Supervisor
Service Engineering

TECHNICAL SECTION

FUEL SYSTEM; INTERNAL LEAKAGE

H-2

Inadequate internal fuel transfer and/or inadequate fuel boost can occur due to internal leakage at loose line connections or at the pump slip-joint couplings. Each time maintenance is accomplished inside fuel cells, check all line connections to be sure they are secure. Whenever boost pumps or transfer pumps are removed, visually inspect the slip-joint coupling O-rings for cuts, scuffs or deformation. If any damage is evident, replace with new O-rings.

Photo A shows an adapter, the O-rings and a coupling. The couplings used on all four pumps are identical: P/N K679117-11. (Photo B shows a typical installation.) The adapters into which the couplings are inserted, vary in length as follows:

Adapter, P/N K679118-11, 2.010 inches long. Installed in forward cell at both boost pumps.

Adapter, P/N K679118-13, 4.413 inches long. Installed in aft cell at forward right-hand sump transfer pump.

Adapter, P/N K679118-15, 3.457 inches long. Installed in aft cell at aft left-hand sump transfer pump.

Figure 28 of NAVAIR 01-260HCA-4-2; Figure 8-24 of NAVAIR 01-260HCA-2-4; and Figure 19 of NAVAIR 01-260HCB-4-5 all show an O-ring installed on the upper end and another O-ring installed on the lower end of each adapter. The lower O-ring should not be installed; affected handbooks will be corrected by a future change.

- | | |
|------------------------|-----------------------|
| 1. Adapter | 4. O-ring - MS29512-8 |
| 2. O-ring - MS29513-16 | 5. Clamp |
| Slip-joint | |
| 3. Slip-joint Coupling | |

* An O-ring (not visible in the Photo) is installed on the upper end of each adapter as follows:

on a -13 adapter, use an MS29512-8 O-ring
on a -15 adapter, use an MS29512-8 O-ring
on a -11 adapter, use an MS29512-10 O-ring

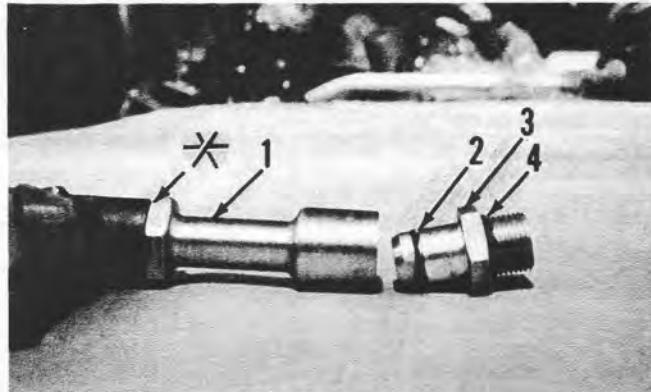


Photo A

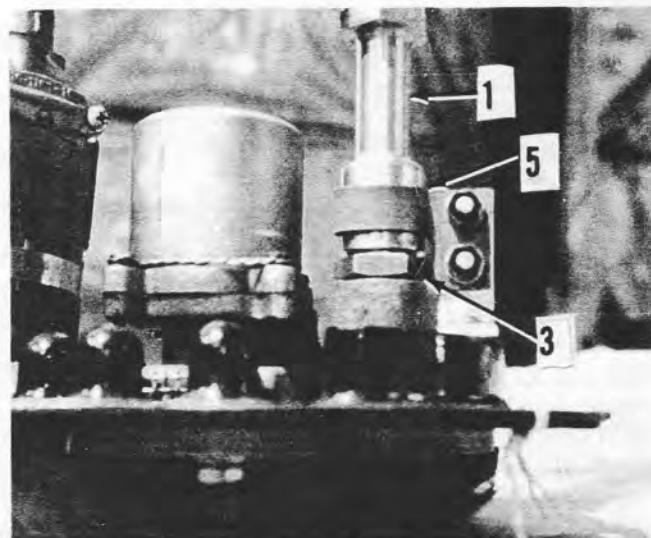


Photo B

H. Zubkoff, Service Engineer

KAMAN SERVICE REPRESENTATIVES

ROBERT C. BELISLE
NAS Atsugi, Japan

DONALD P. ALEXANDER
WILFRED L. MAGNAN
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Iran

HOMER C. HELM
NAS Pensacola, Fla.

HORACE F. FIELD
NAS Cubi Point, P. I.

DONALD R. DELANEY
EDWARD F. NOE
NAS Lakehurst, N. J.

JACK L. KING
NORMAN M. MYERS
NAF Naples, Italy

WILLIAM C. BARR
MICHAEL T. FIASCHETTI
Home Office

DONALD T. LOCKRIDGE
WILLIAM G. WELLS
NAS Imperial Beach, Calif.

CUSTOMER OPERATIONS SECTION — ROBERT L. BASSETT, Supervisor

CURRENT CHANGES

This list reflects the latest changes to the handbooks. Consult applicable "A" page for changes issued prior to those listed below.

H-2 Airframe Change 43, Amend 4 – Electrical System, INSTALLATION OF ROTOR OVERSPEED RECORDER
7 November 1970

H-2 Airframe Change 126 – Airframe, MODIFICATION OF HORIZONTAL STABILIZER ATTACHMENT
8 December 1970

NAVAIR 01-260HCA-1 – NATOPS FLIGHT MANUAL, Navy Models UH-2A/UH-2B Helicopters
15 March 1968
changed 1 December 1970

NAVAIR 01-260HCA-1B – NATOPS PILOT'S POCKET CHECKLIST, UH-2A/UH-2B Helicopters
15 October 1966
changed 1 December 1970

NAVAIR 01-260HCA-2-2 – Manual, Maintenance Instructions, AIRFRAME, Navy Models UH-2A/UH-2B/UH-2C/HH-2C/HH-2D Helicopters
1 October 1967
changed 15 November 1970

NAVAIR 01-260HCA-2-2.1 – Manual, Maintenance Instructions, FLIGHT CONTROLS, Navy Models UH-2A/UH-2B/UH-2C/HH-2C/HH-2D Helicopters
15 June 1969
changed 15 November 1970

NAVAIR 01-260HCA-2-4 – Manual, Maintenance Instructions, POWER PLANT AND RELATED SYSTEMS, Navy Models UH-2A/UH-2B/UH-2C/HH-2C/HH-2D Helicopters
1 October 1967
changed 15 October 1970

NAVAIR 01-260HCA-2-5 – Manual, Maintenance Instructions AUTOMATIC STABILIZATION EQUIPMENT, Navy Models UH-2A/UH-2B/UH-2C/HH-2C/HH-2D Helicopters
1 October 1967
changed 15 October 1970

NAVAIR 01-260HCB-1 – NATOPS FLIGHT MANUAL, Navy Model UH-2C Helicopter
15 September 1969
changed 1 July 1970

NAVAIR 01-260HCB-4-1 – Illustrated Parts Breakdown, NUMERICAL INDEX AND REFERENCE DESIGNATION INDEX, Navy Models UH-2C/HH-2C/HH-2D Helicopters
15 November 1970

NAVAIR 01-260HCB-4-3 – Illustrated Parts Breakdown, FLIGHT CONTROLS, Navy Models UH-2C/HH-2C/HH-2D Helicopters
1 June 1967
changed 15 November 1970

NAVAIR 01-260HCB-4-7 – Illustrated Parts Breakdown, ROTORS, Navy Models UH-2C/HH-2C/HH-2D Helicopters
1 June 1967
changed 1 December 1970

NAVAIR 01-260HCC-1 – NATOPS FLIGHT MANUAL, Navy Models HH-2C/HH-2D Helicopters
1 September 1970

NAVAIR 01-260HCC-1B – NATOPS PILOT'S POCKET CHECKLIST, HH-2C/HH-2D Helicopters
1 September 1970

NAVAIR 03-40KAM-1 – Manual, Overhaul Instructions, FLIGHT CONTROL SYSTEM, Navy Models UH-2A/UH-2B/UH-2C/HH-2C/HH-2D Helicopters
15 November 1965
changed 15 November 1970

NAVAIR 03-95D-25 – Illustrated Parts Breakdown, COMBINING GEARBOX ASSEMBLY, P/N K674702-3
1 October 1970

NAVAIR 03-95D-26 – Manual, Overhaul Instructions, RESOLVER AND TACHOMETER GENERATOR DRIVE GEARBOX ASSEMBLY, P/N K674826-5, K674826-7
15 November 1970

NAVAIR 03-95D-28 – Manual, Overhaul Instructions, SPRAG CLUTCH ASSEMBLY, P/N K674709-3
1 November 1970

NAVAIR 05-10-90 – Manual, Overhaul, FREQUENCY LIMIT INDICATOR, P/N KA00125-3, KA00125-5
1 November 1970

NAVAIR 17-15KL-22 – Manual, Operation and Service Instructions with Illustrated Parts Breakdown, ELECTRIC THROTTLE SYSTEM TEST SET, P/N K604601-1
15 November 1970

NAVAIR 05-45RA-2 – Illustrated Parts Breakdown, AUTOMATIC STABILIZATION EQUIPMENT AMPLIFIER P/N 9616-10-04, K687703-1, K687703-3
1 December 1964
changed 1 February 1970

NAVAIR 05-55N-52 – Technical Manual, Overhaul With Parts Breakdown, DUAL SYNCHRO INDICATOR, P/N 42209C5A4A3
15 October 1969

NAVAIR 17-15KL-22 – Manual, Operation and Service Instructions with Illustrated Parts Breakdown, ELECTRIC THROTTLE SYSTEM TEST SET, P/N K604601-1
15 November 1970

R. H. Chapdelaine, Supervisor, Service Publications



DARFO! Detect And Remove Foreign Objects. DARFO, the continuing crusade of accident prevention through positive personnel actions. Reduce FOD by developing the good habits of trained observers.

Photo A shows the LH upper forward nacelle on a H-2. The copilot's seat is just visible. Somewhere in the Photo is a loose foreign object. Can you find it?



Photo A

Photo B is a much closer shot, from a different angle. The object is just visible but as usual, it seems to elude all but the most experienced in practicing DARFO. Can you see it?

Photo C and our two eyeballers point out the piece of neatly folded lockwire. This piece of wire, because of its proximity to the engine (see Photo A), could have caused considerable FOD and outlay of money to repair the damage.

Once again, angles and heights prove to be enemies of those who practice DARFO. Actually, the mechanic who found the wire admitted he "thought" he had safely put the wire in his pocket prior to climbing down from the aircraft. Fortunately, he checked to be sure the wire was there...when it was missing, he started to look for it.



Photo B

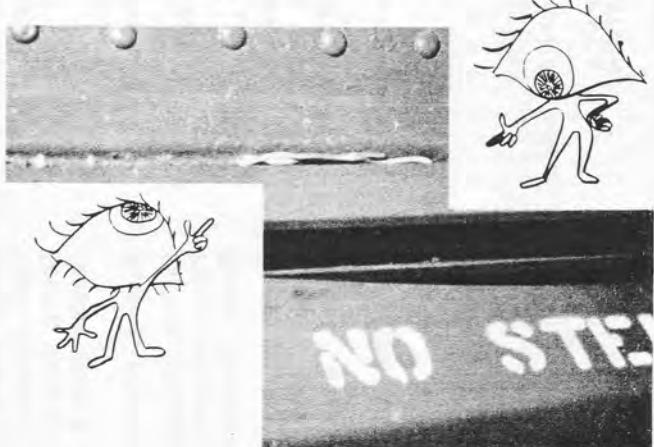


Photo C

Rotor Tips is proud to be a part of this accident prevention effort; however, it should be stressed that you, the reader, are most important to the success of DARFO.

Before closing or sealing a component, whether it be a fuse box or gearbox, practice DARFO! Detect and Remove Foreign Objects. Before leaving your shift or aircraft, inform your superiors or your relief of open areas and loose materials. Take the time to "take one last look around,"

remember, if we all do our part and practice DARFO, everyone will benefit.

Rotor Tips is looking for examples of DARFO in action. When you detect a foreign object, try and get a photo of it to send to us. If you cannot send a photo, send us the complete location and description of your find (also, your impression of how it got there)—we will try to simulate the condition here at Kaman.

We will credit the sender with the find if he desires.

SCROLL OF HONOR

1969 (Additions)

Bruce, Trelawny J., Ssgt, USAF
 Dangel, Edgar A., Sgt, USAF
 Defeo, Joseph, Ssgt, USAF
 Griffith, Rodney L., Tsgt, USAF
 Harris, Felix H., Tsgt, USAF
 Heitz, Richard H., Major, USAF
 Holley, Jackie E., Ssgt, USMC
 Hurley, Phil C., Major, USAF
 Klaes, Roger A., A1c, USAF
 Luttrell, Lonnie C., Major, USAF
 Marsh, Joseph B., Captain, USAF
 Martin, Robert O., Captain, USAF
 Mattoon, Winston G., Tsgt, USAF
 Moulton, John R., Major, USAF
 Pecotte, Fredrick P., Ssgt, USAF
 Raisor, Harry E., Major, USAF
 Sargent, James E., Sgt, USAF
 Spalt, Allen E., Captain, USAF
 Sutton, Robert, AMS2, USN

Tassie, James A., Captain, USAF
 Taylor, Willie D., Ssgt, USAF
 Tollefson, Albert E., Captain, USAF
 Trapp, Charles E., Jr., Major, USAF
 Vanbeuzekom, Avo R., Ssgt, USAF
 Voigt, David A., Captain, USAF
 Whelan, John, Lt, USN
 Wilcox, William L., A1c, USAF
 Womack, Jerry T., Sgt, USAF

1970

Andrews, George R., Captain, USAF
 Arends, Stephen R., Lt(jg), USN
 Armstrong, Rafael B., Captain, USAF
 Ashley, Al, Civilian (KAC)
 Ball, Gordon L., Tsgt, USAF
 Barr, Richard P., Jr., Major, USAF
 Barrix, Charles L., Ssgt, USAF
 Beck, Roger A., Major, USAF
 Bledsoe, Carroll H., Sgt, USAF
 Block, Charles G., Sgt, USAF
 Bohl, George H., Sgt, USAF
 Bowden, Bruce C., Major, USAF
 Brewington, Erskine E., Ssgt, USAF
 Budke, Michael P., Tsgt, USAF
 Burgess, James G., Captain, USAF
 Campbell, William B., AMS3, USN
 Chase, Franklin L., Major, USAF
 Chilson, John D., Sgt, USAF
 Coffey, John M., Sgt, USAF
 Coile, Paul R., Sgt, USAF
 Coley, D. J., AD3, USN
 Collins, Larry R., Ssgt, USAF
 Congleton, Edward D., Mssgt, USAF
 Cook, Darvan E., Captain, USAF
 Cowden, Bert E., Major, USAF
 Cowles, Richard R., Major, USAF
 Cramer, Eugene E., Ssgt, USAF
 Crawford, J. W., Lt(jg), USN
 Davis, Luther E., Ssgt, USAF
 Dean, William L., Tsgt, USAF
 Dietze, Gary A., Captain, USAF
 Dineen, Peter F., Captain, USAF
 Earnest, Robert R., Captain, USAF
 Fallows, Thomas E., Major, USAF
 Fehr, Jeffrey W., Sgt, USAF
 Foster, Francis A., Civilian (KAC)
 Gaede, Ralph L., Major, USAF
 Galidakis, John, Sgt, USAF
 Gratton, Thomas P., Tsgt, USAF
 Hahn, Albert J., AE3, USN

KAMAN AEROSPACE CORPORATION

THE PERSONNEL ABOVE WERE HONORED FOR THEIR SKILL, COURAGE AND JUDGE-MENT DISPLAYED WHILE PARTICIPATING IN RESCUE OR MERCY MISSIONS PERFORMED UNDER ADVERSE OR HAZARDOUS CONDITIONS WHILE FLYING IN KAMAN HELICOPTERS.