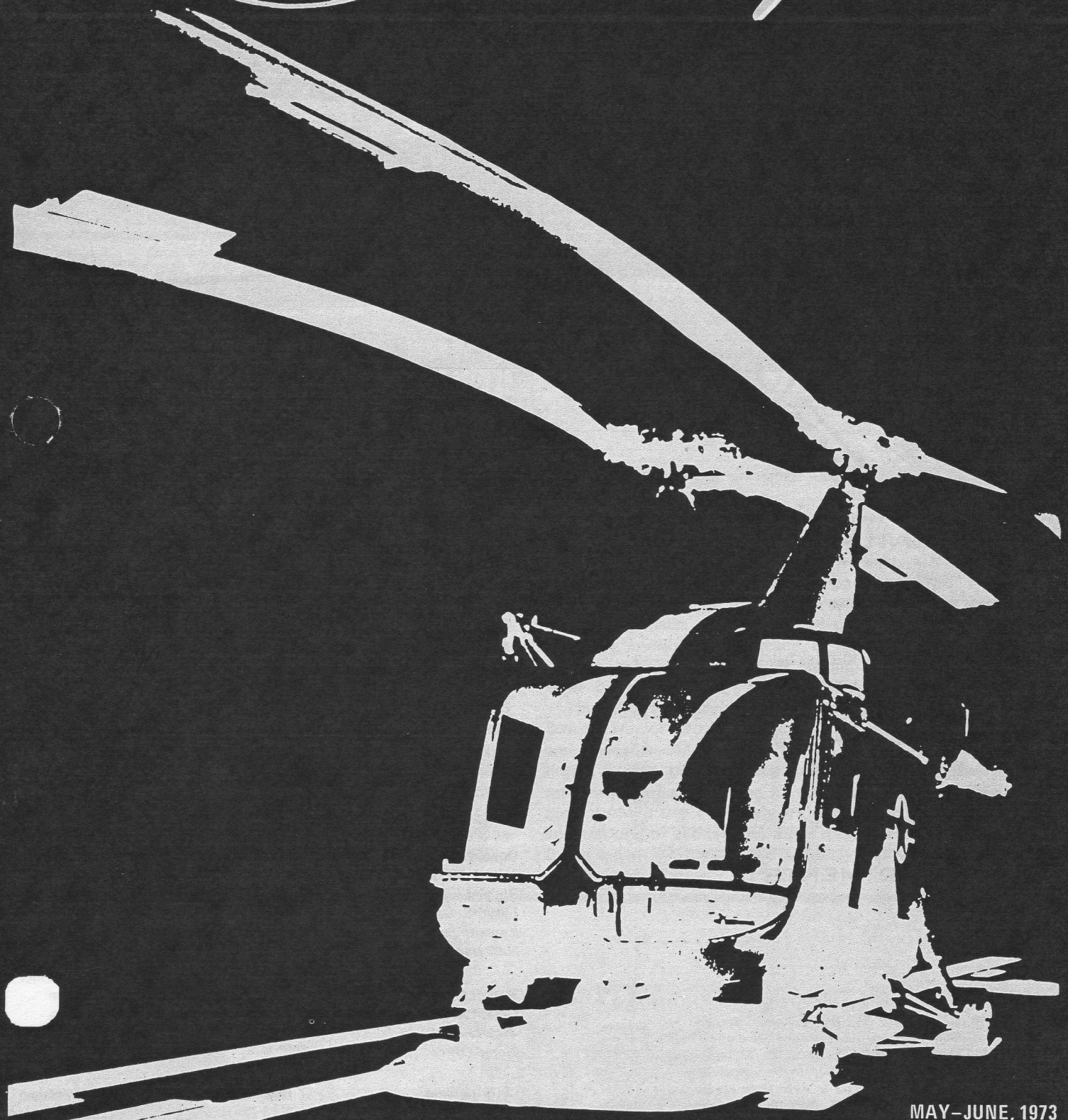
KAMAN

Rotor Tips



MAY–JUNE, 1973

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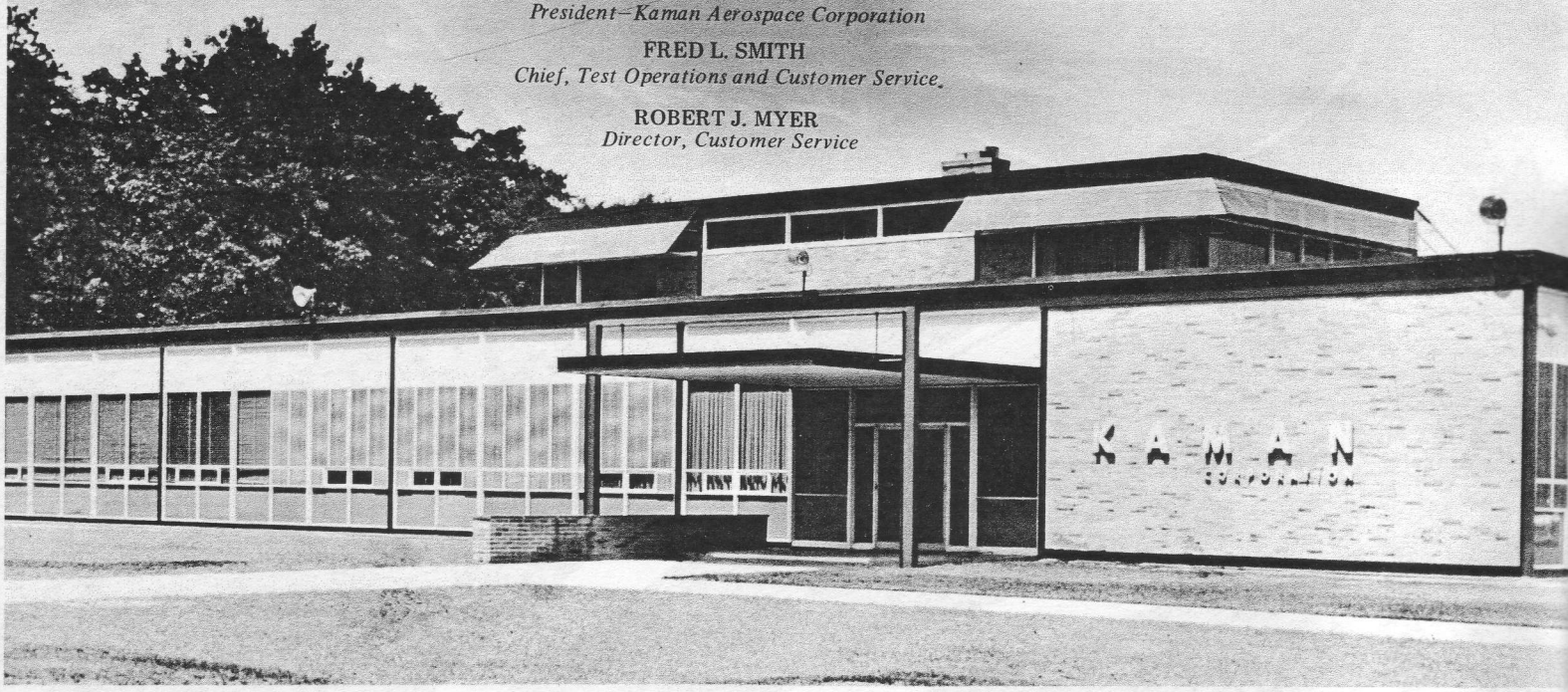

Rotor Tips

Everett F. Hoffman *Editor*
Barbara R. Thompson *Editorial Assistant*

Volume VII No. 10

FEATURES

DEPARTMENTS

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ON THE COVER

This unusual "ink drawing" of an HH-43 HUSKIE on the line was the result of a bit of darkroom magic performed by Kaman Photo Lab Technician Bill Murray. To achieve the desired result, a contact print was India inked in certain areas and then used as a negative while making a second contact print. This, in turn, was used as a negative to make a third print, and so on.

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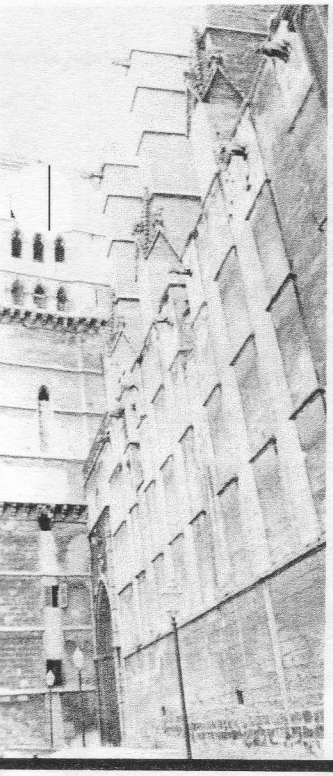
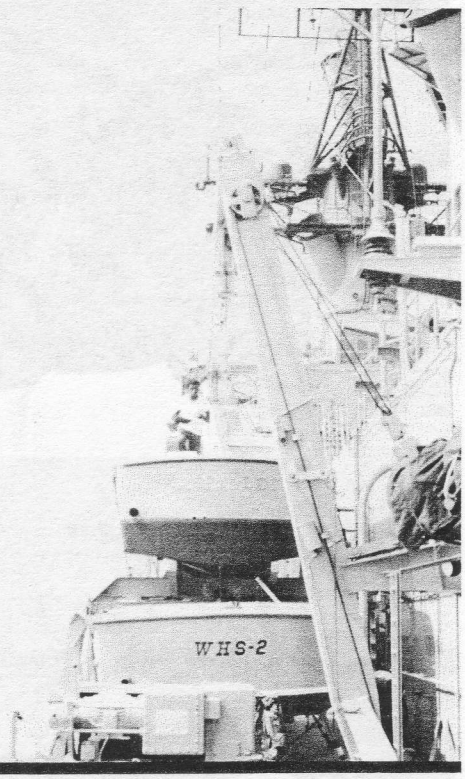




PHOTOGRAPHS TAKEN WHILE ABOARD THE USS WILLIAM H. STANDLEY FURNISH

MED CRUISE MEMORIES

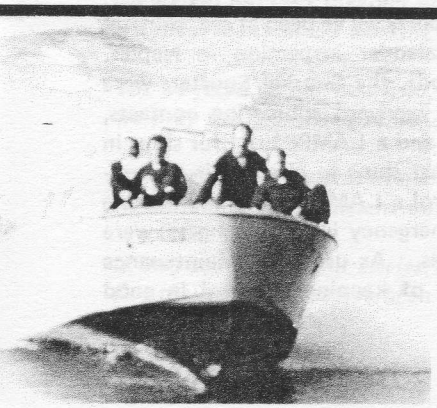
FOR AE1 WILMER 'BUD' PRICE OF HSL-30's LAMPS DET TWO

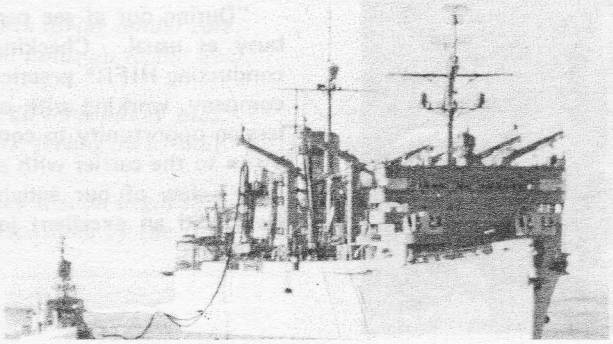
Periodically, LAMPS detachments from Helicopter Antisubmarine Squadron (Light) Thirty, NAS Lakehurst, N. J., deploy aboard ships like the USS William H. Standley, a guided missile frigate, for service with the U. S. Sixth Fleet in Mediterranean waters. Similar detachments from HSL-31, NAS Imperial Beach, Calif., are regularly deployed to WestPac for duty with the U. S. Seventh Fleet. Last year two HSL-30 detachments also served in this area.

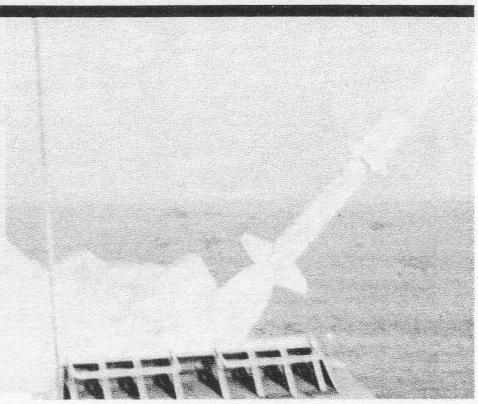
Detachments from both squadrons are comparatively small—12 to 20 men—but the use of the SH-2D's LAMPS helicopters they fly and maintain while deployed has extended the ships' capabilities immeasureably during the six to nine month "cruises." Accounts of these missions appear periodically in the Rotor Tips' "LAMPS Activities" column.

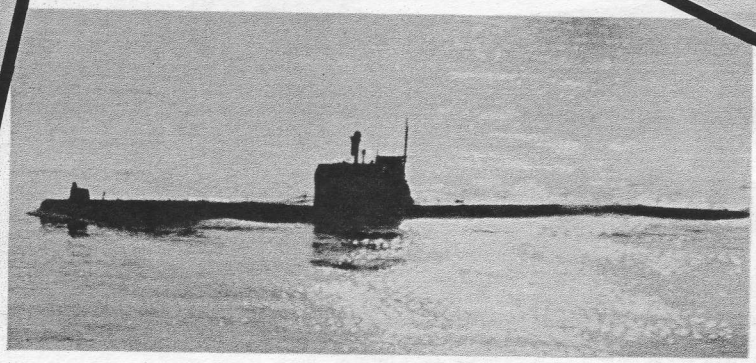
The photographs appearing on this and the following pages were taken by AE1 Wilmer 'Bud' Price of HSL—30's LAMPS Det Two, while deployed aboard the Standley. They show not only the SH-2D engaged in LAMPS operations from the ship, but some of the sights a Navyman would record with his camera: in-port tours, his ship, refueling at sea and other Fleet activities, visits from HSL-30 shipmates deployed aboard other vessels, friendly porpoises, missile launchings and, of course, the numerous Russian ships and submarines encountered almost daily while on patrol.

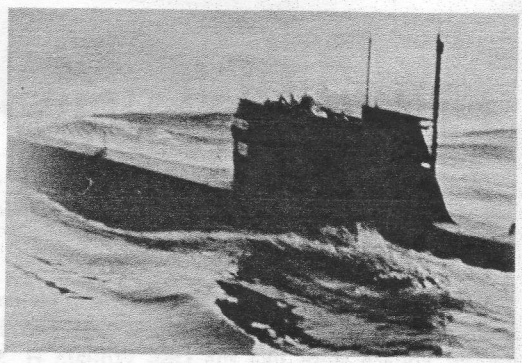
The following excerpts from the HSL-30 magazine, "The Scooter News," provide some insight into the activities—and thoughts—of personnel from a typical detachment during a med cruise. Each detachment usually uses a pseudonym when reporting its activities in the magazine. Since LAMPS Det Two's primary mission was the locating and tracking of submarines, a job it did exceedingly well, it was called: *"Dozen and one half Dirty Snorkel Snuffers."*





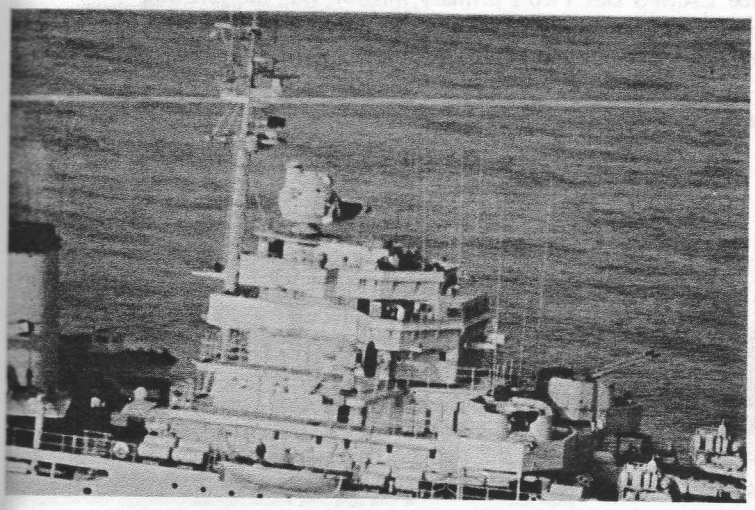






The "Snorkel Snuffers" one and all

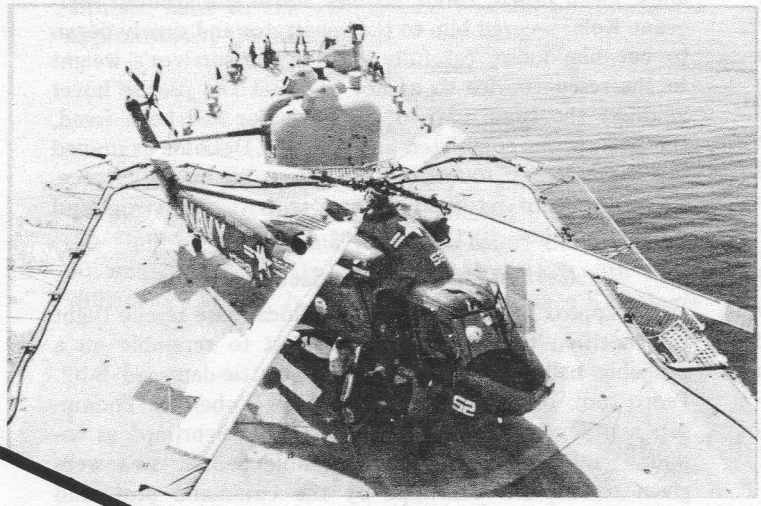
Lt John Wright, Officer-in-Charge, Lt Mike McNeil, Lt(jg) Jack Smith, Lt(jg) Bob Carson, AMH1 Al Adams, AECS J. J. Ford, ADJ1 Roger Kay, AW1 Bob Stanton, AW2 Ralph Kahmer, AT2 Larry Sheldon, AX3 Jeff Conlon, AEAN Sam Barr, AE1 Wilmer (Bud) Price, AT1 Homer Barrs, AMS2 Leon Sauls, ADJ2 Loren Horton, AW3 Ron Mitchell, AE3 Joe Pierce.

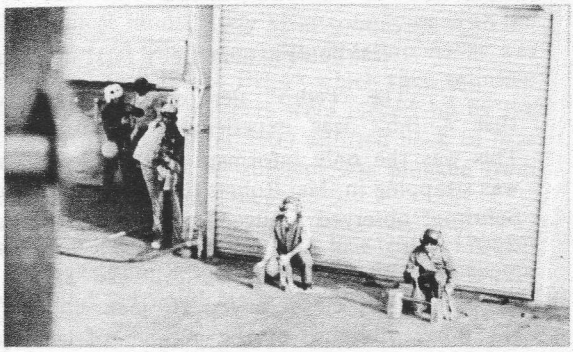


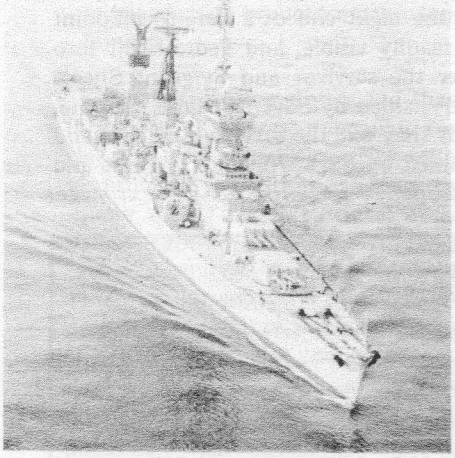
"Since arriving in the Med we have 'hit' the following ports: Rota, Spain; Cannes, France; Carfu (Greek Island); Mersin, Turkey; Athens, Greece; Naples, Italy; and Palma Mallorca. Right now we're on our way to Barcelona, Spain. Of course, between ports we've been at sea, snuffin' snorkels, and we did a calendar inspection in Naples.

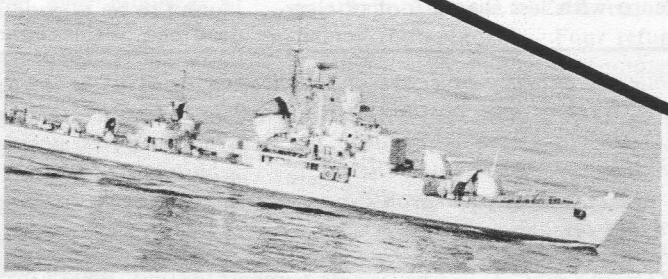
"During our at sea periods, the Snorkel Snuffers were busy as usual. Checking wayward submarine contacts, conducting HIFR* practice and a LAMPS brief for ships in company, working with other ships to give all air controllers an opportunity to control a LAMPS Helo, and making a run to the carrier with emergency leave passengers, were only a few of our activities. As usual the Maintenance Dept. did an excellent job of keeping the bird in good condition.

*In-Flight Refueling









"In conclusion for this installment, here are a few bars of the Snorkel Snuffer's Song:

Oh we got our gear together in the middle of the Med;
We spent many hours working instead of being in bed.

Yes we fixed up our new helo, with loving tender care;
We pray she lasts many miles, and holds up to the wear.

We're ready for the Ruskies, and all their nukey subs;
While submerged in distant waters, feeling oh so snug.

If they sail around our circles, they'll soon begin to suffer;
For they'll know they've been discovered by the Dirty Snorkel Snuffer!

"Old acquaintances were renewed with the LAMP Det 6 during a brief Rota visit. It's always great to see friends. Needless to say, each Det was trying to outdo the other's sea stories.

"What!! Time to go to sea again? Well, better close for now, but first, a Happy Thanksgiving from all the Snorkel Snuffers!

(Continued on page 20)

B-52 SURVIVORS RESCUED BY HH-43's

In separate missions, both at night, HH-43 crews from the LBR Flight, 40th ARRSq, at Nakhon Phanom RTAFB, Thailand, rescued B-52 crew members who had bailed out of the giant bombers. An HH-43 crew from Det 7, 40th ARRSq, at Da Nang Afld., also rescued downed airmen from a battle-damaged B-52. Following are reports on the three incidents:

Nakhon Phanom Det's First Mission

. . . .The "Pedro" alert crew was notified at 2105L that a B-52 was experiencing an inflight emergency. This was the only information available and as the crew was strapping in, Maj Robert R. Reeves and Capt George E. Schrimpf observed a huge fireball south of the base. At 2107 Pedro was airborne and began to receive signals. Two HH-53's and a CH-53 followed Pedro to the impact area and all deployed to pick up the crew from the B-52. Because of the number of helicopters in the area, the survivors had difficulty in distinguishing among the aircraft when they attempted vector procedures for a pickup. Major Reeves used the distinctive floodlights of the HH-43 to nullify this problem.

The first survivor was picked up by SSgt Ricky C. Sheets as hoist operator and was helped aboard and examined by the med tech, Sgt Harold D. DeLoma. At that point, Sgt Frederick Thomas, crewchief, spotted another victim suspended in the tall trees that dotted the pickup area, and directed Pedro to a hover near that individual, the B-52 navigator. The survivor was severely entangled in his chute harness and appeared to have shroud lines wrapped around his neck. Major Reeves decided to lower SSgt Michael J. Kolar on the forest penetrator to try and free the crewmember. Approach to the survivor was made very slowly, with Captain Schrimpf and Sergeant Sheets giving directions to safely move Pedro with less than a foot of clearance from the trees. As Sergeant Kolar was approaching the survivor on the hoist, the interphone system failed and emergency hand signals were utilized between Sergeant Sheets and Major Reeves.

The navigator did have several shroud lines and his lowering device around his throat and was hanging at a 45-degree angle, head down, about 20 feet above the ground. Sergeant Kolar secured him to the penetrator and slowly began to cut him loose, carefully shifting the survivor's weight to the rescue device so as not to upset the precise hover amongst the trees. When the navigator had been freed, the pickup was completed and Sergeant DeLoma examined the survivor and found him uninjured by his experience. At 2140 Pedro returned to base with two survivors and transferred them to the awaiting ambulance.

Nakhon Phanom Det's Second Mission

At approximately 2340. . . .the local base rescue flight was notified by base Command Post to scramble on a probable bailout by the crew of a battle-damaged B-52. Pedro took off immediately with Capt Robert D. Thompson as aircraft commander and Captain Schrimpf as co-pilot. Initial vectors to the possible bailout area were given to Captain Schrimpf by the command post, and while following these, Pedro was notified by the tower that the B-52 crew was starting to eject. Almost immediately thereafter beeper signals were heard and Pedro homed in on them.

Soon after,the pilot of the downed B-52 came up on his survival radio and gave his position, so Captain Thompson directed him to light the night end of a flare to pinpoint his location. It was readily visible, and Pedro went into a 70 foot hover over the survivor and Sergeant Sheets made the hoist recovery, aided by SSgt Ronald T. Jerome, crew chief. As soon as they had the survivor on board and secured, he was examined by SSgt William B. Powers and found to be in good shape. . . .*(Continued on next page)*

While the primary objective of a Helicopter Anti-Submarine Squadron (Light) is the locating, tracking and possibly, the killing of undersea craft, numerous other tasks are also carried out by such a squadron. The wide range of these activities was revealed in the March issue of "THE LAMPLIGHTER," published by HSL-31, NAS Imperial Beach, Calif. In noting the squadron's anniversary in the "C. O. Speaks" column, Cdr D. P. Myers told personnel:

"HAPPY BIRTHDAY HSL-31. . .I have some numbers for you. What have you done this past year? You have deployed, over 250 strong, with the Fleet covering the Pacific Ocean in Ocean Escort Ships, Guided Missile Frigates, Cruisers and an Oceanographic Survey Ship, and embarked on a half dozen other types as the need arose. The training of 59 pilots and flight instructors, 86 aircrewmen and 253 maintenance men has been another of your major chores. These tasks, account for the bulk of the 8400 aircraft flight hours you logged; and the over 115,000 man hours of maintenance to accomplish it is by far your greatest effort. Incidental to this you trained over a thousand men from other units in the operation and handling of helicopters and taught aircrew rescue swimming to 300 others. During this one year from March 1972 to March 1973 your numbers have increased to 566 and you have welcomed and bid farewell to nearly half your squadron-mates. The turnover has been 261 people transferred, released to inactive duty or retired. Two hundred twenty four of you have been promoted in this year and 41 elected the Navy as a further step in their career, through reenlistment. You are a high spirited and physically fit group of Americans that consistently offers the low numbered side of the score sheet to your opponents. First in Football, Volleyball, Golf, Softball and Bowling. . .and Aerobics (how do you play aerobics?). A new squadron, and a well organized one, documents its progress and your one-year file of serialized correspondence is 1,447 in number, representing your ideas and accomplishments duly recorded."

Because of the number of helicopters in the pickup area, a tremendous amount of attention and coordination between Captain Thompson and Sergeants Jerome and Sheets, serving as scanners, was necessary to maintain a safe operation in the trees without a visible horizon. Captain Schrimpf, while assisting in keeping a safe tree top hover for the hoist operation, was also relaying all radio traffic from King (C-130 Airborne Mission Commander) to the helicopters.

Time elapsed from sighting the survivor until he was airlifted back to the waiting base hospital personnel was approximately 15 minutes.

Det 7, B-52 Rescue Mission

The HH-43 alert crew from Det 7 scrambled in the early morning darkness after a battle-damaged B-52 ditched in the Gulf of Tonkin and the crew bailed out overwater 30 miles north of Da Nang. "Pedro 61," with 1stLt William L. Latham, Jr., as pilot and Capt Bruce K. Roberts as copilot, flew IFR to the site and joined "Covey 30," another aircraft searching for the survivors.

As it was still dark and IFR, Pedro 61 and Covey 30 flew above the dense clouds and used direction-finding equipment in an attempt to locate the downed airmen in the 15-foot, haze-covered waves below. The weather was so poor it took more than 30 minutes to localize the search area enough so that the HH-43 crew could conduct a further search, visually, from a lower altitude.

The sun had risen by this time, so Lieutenant Latham called for "survivor's smoke" and the downed airmen were spotted almost immediately after complying with the request. The forest penetrator with flotation collar was used to hoist two men to the HH-43 which then returned to base for refueling. The others were picked up by the Navy and, with one exception, later airlifted back to base in a Det 7 HH-43. Another survivor was plucked from the water by a ship 15 miles away.

Sharing in the rescue mission with Lieutenant Latham and Capt Roberts were Sgt Michael P. Parchment,helicopter mechanic, and Sgt Jesse McCoy, a medical technician.

75 Navahos Aided By HH-43 Crew

On February 28, in the late afternoon, Det 3, 42nd ARRSq, at Kirtland AFB, N. M., was notified that the U. S. Public Health Service at Zuni was in need of assistance in reaching isolated Navaho families 25 miles southeast of there. Below is a description of the HH-43 mission which brought much needed relief to 15 Indian families.

Alternate spring storms and thaws had turned all roads into deep quagmires, impossible for four-wheel-drive vehicles and tracked vehicles. Numerous Indian families living in primitive conditions and scattered over hundreds of square miles, unable to travel or communicate, had been stranded for approximately two weeks. The last communication with these people indicated numerous problems. Three young women had reached the full term of their pregnancies, and were due to deliver at any time. Several children suffering from pneumonia needed medical attention. There were numerous other chronic and acute illnesses that had been previously identified, and the ready possibility that others had developed during the recent period.

Early in the morning of 1 March, a final weather check was made and "Pedro 24" departed for Black Rock Airport, which serves Zuni. Aboard were Maj James L. Cantey, the pilot; Capt Robert M. Albers, copilot; SSgt Donald L. Layberger, helicopter mechanic; and A1c Robert J. Walker, medical technician. An enroute stop was made at Grants-Milan airport where one drum of prepositioned fuel was manually pumped aboard the aircraft. West of Grants, an overcast and fog layer hampered visual navigation, but a successful VFR descent was completed with a landing at Black Rock.

Doctor Grierson of the USPHS arrived with a large carton of medicine, and the flight continued to Ramah with Doctor Grierson assisting in the navigation. A successful landing in a school ball diamond was completed, and an additional passenger, Nancy Heino (a Navaho nurse) and 500 pounds of food were onloaded. This was the beginning of a full day of providing medical assistance and emergency food supplies to 15 familes, located in remote areas of the reservation. Approximately 75 persons received aid.

During the course of the day, eight sorties were flown with 8.8 hours of flying time logged. Some 1500 pounds of food were delivered, and medical assistance provided to approximately 30 people. One old woman was evacuated to the PHS Hospital at Zuni for care of acute dehydration. More than 20 landings were made at small remote mountain clearings. Each required exceptional care in making the approach. Four refuelings were performed in the field with minimum equipment and under difficult conditions.

Mission activity for the day terminated shortly after sunset, and Pedro 24 and crew returned to Kirtland late that evening.

A-7 Pilot Rescued

NAKHON PHANOM RTAFB, Thailand—A pilot who ejected after his A-7 flamed out was picked up shortly afterward by an HH-43 crew from the LBR Flight, 40th ARRSq, here. Manning the rescue helicopter were 1stLt George S. Tarrant, 1stLt Jack S. Ranck and Sgts Frederick Thomas, Harold D. DeLoma, Lawrence H. Crouch and Jerry L. Allen.

The Pedro crew scrambled after notification that an aircraft was flaming out. Seconds later they spotted a fireball about three miles from the base and then Sergeant Crouch saw a parachute in the trees about a mile south of the impact area. Immediately afterwards, Sergeant Allen spotted the survivor on the ground in a wooded area with 30-foot trees. Dry rice paddies were interspersed throughout the area. A landing was made in a rice paddy and the downed pilot was taken aboard and returned to base.

LAMPS Activities ....

ON THE LINE—SEASPRITE's formerly utilized primarily for SAR and utility work with the Fleet are shown at Kaman's Bloomfield, Conn., facility where they are being reconfigured to SH-2F's. As LAMPS helicopters their primary missions will be ASW (anti-submarine warfare) and ASMD (anti-ship missile defense). The secondary role will be utility/rescue plus all the many other tasks expected of a Fleet helicopter. Modifications include incorporation of Kaman's 101 rotor system for increased performance and maintainability; strengthened landing gear for the greater loads encountered when operating from destroyer decks while underway; and installation of uprated General Electric T58-GE-8F twin turboshaft engines. (Ruggiero photo)

FIRST-HAND KNOWLEDGE—Management personnel from Kaman's Customer Service and Research and Development Departments are shown in H-2 cockpit before demonstration rides in experimental test SEASPRITE. The latest 101 rotor and control changes have been incorporated in the helicopter. While in flight they discussed the H-2's reactions with the test pilot as he handled the controls. A more lenghty question and answer session followed after landing. The flights are aimed at providing management personnel with first-hand knowledge of product performance. This enhances their ability to appreciate user reaction and assist with related customer inquiries. Occupying the copilot's seat in left photo is D. W. Robinson, Director of Research and Development. With him is Al Ashley, Project Pilot, 101 Rotor System. With Assistant Chief Test Pilot Jack Goodwin are, middle photo, R. J. Myer, Director, Customer Service; right, R. L. Bassett, Manager, Customer Service; lower right, G. M. Legault, Manager, Service Engineering. (Serignese photos) *(Cont on page 20)*

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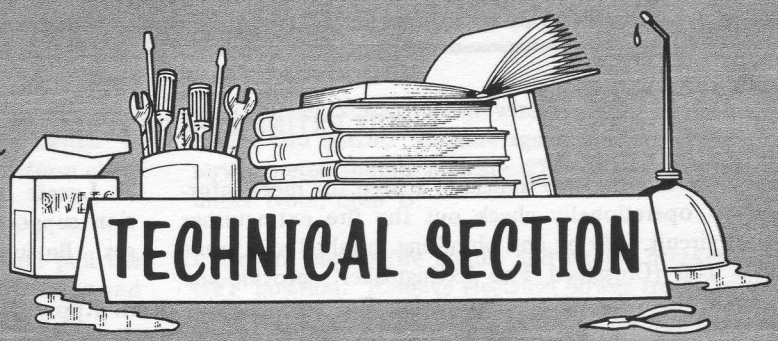

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G. M. Legault, Manager
Service Engineering

J. P. Serignese, Technical Editor

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ENGINEERING CHANGE PROPOSAL (ECP) 369

G. M. Legault, Manager
Service Engineering

Information contained in the Technical Section of the March/April 1973 issue of Kaman Rotor Tips, detailed the modifications to be incorporated by Engineering Change Proposal (ECP) 362 which creates the SH-2F model helicopter. ECP 369, Directional control improvement, is one of those modifications and the information presented here details these improvements.

Directional control system changes of ECP 369 provide more stable heading hold characteristics in the following manner:

1. Full time yaw rate damping is provided. The use of full time yaw rate damping eliminates the switching transients associated with a part time damping.

2. The yaw trim rate is cut in half to reduce yaw trim rate with boost off.

3. Directional control loads have been reduced to provide more positive control in event of hydraulic boost failure.

4. The damping afforded by the directional control rate limiter has been reduced to permit more precise control inputs.

5. The directional channel of the ASE has been made more responsive to heading and yaw rate error signals, thus improving flight characteristics for operation in close proximity to small ships.

6. Directional control margins in autorotation are increased to provide positive right directional control in autorotation.

A recent Navy message (from Naval Air Test Center, Patuxent River, Maryland)concerned with initial Qualitative Testing of ECP 369 describes the test results as follows: "Initial qualitative testing indicates ECP 369 is a significant improvement. During rapid power variations and jump take-offs in gusty wind conditions, with feet on pedals, heading control is precise with no tendency to overcontrol. In ground effect hover flying qualities are significantly improved.

Directional control margin in balanced autorotative flight is significantly greater than that reported. . .and provides adequate control for coordinated turns to the right during autorotation."

SERVICE ENGINEERS: N. L. Hankins, J. M. Nenichka, Avionics; R. J. Trella, Drive/Lube; W. J. Wagemaker, Rotor Controls/Hydraulics; H. Zubkoff, Engine/Airframe/Fuel/Utilities.

H-2

FIRE EXTINGUISHER ELECTRICAL CHECKOUT

N. L. Hankins, Service Engineer

Several field reports have indicated a need for more information to operationally check out the fire extinguisher electrical circuit. Wiring and plumbing installed as a result of AFC 155 (Crossfeed Fire Extinguisher), provide the pilot with the alternative of applying fire extinguishing agent from one or both fire bottles into either engine compartment. Prior to AFC 155, the agent in each bottle could be applied only to the engine compartment where the bottle was positioned.

The accompanying schematic is a portion of Figure 23 in NAVAIR 01-260HCA-2-8.1, dated 1 October, 1967, Changed 15 May 1972. The intent of the procedures presented here will be incorporated into applicable manuals by future Changes.

AGE REQUIRED
1. Auxiliary power unit
2. Voltmeter

WARNING

Before performing maintenance checks be sure aircraft electrical power switches are off and that battery is disconnected.

A. Locate engine fire extinguisher bottles on aft transmission support legs, and disconnect wires from the cartridges. Be sure wire terminals are clear of aircraft structure.

B. Apply 28 VDC or 115 VAC, 3-phase, electrical power to the aircraft.

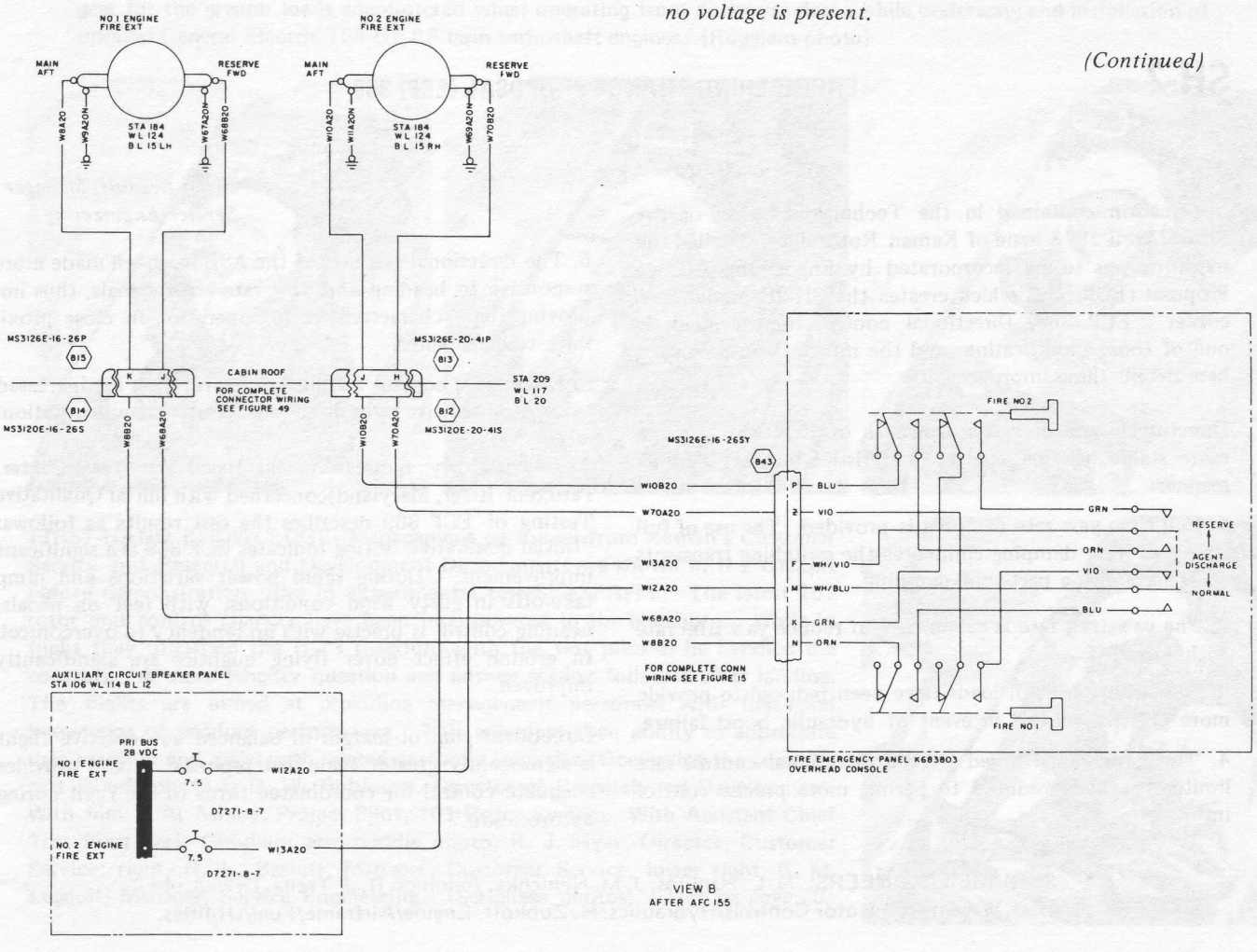
NOTE: During checkout, voltmeter ground lead should be connected to ground lead of cartridge under test. For correct wire numbers refer to NAVAIR 01-260HCA-2-8.1.

C. Push in Number One engine fire extinguisher circuit breaker. Pull Number one engine fire handle.

D. Connect voltmeter to wire W8A20 at Number One engine fire bottle. Actuate agent discharge switch to Normal; meter should indicate 27.5 VDC.

NOTE: Voltage should drop to zero when engine fire handle is pushed in and/or when circuit breaker is pulled. Check wires to other cartridges to be sure no voltage is present.

(Continued)



E. Connect voltmeter to wire W70B20 on Number Two engine fire bottle. Actuate agent discharge switch to Reserve; meter should indicate 27.5 VDC. Perform check under Note, Step D.

F. Push in Number One engine fire handle and pull the circuit breaker. Push in Number Two circuit breaker and pull Number Two fire handle.

G. Connect voltmeter to wire W10A20 at Number Two engine fire bottle. Actuate agent discharge switch to Normal; meter should indicate 27.5 VDC. Perform check under Note, Step D.

H. Connect voltmeter to wire W68B20 at Number One engine fire bottle. Actuate agent discharge switch to Reserve; meter should indicate 27.5 VDC. Perform check under Note, Step D.

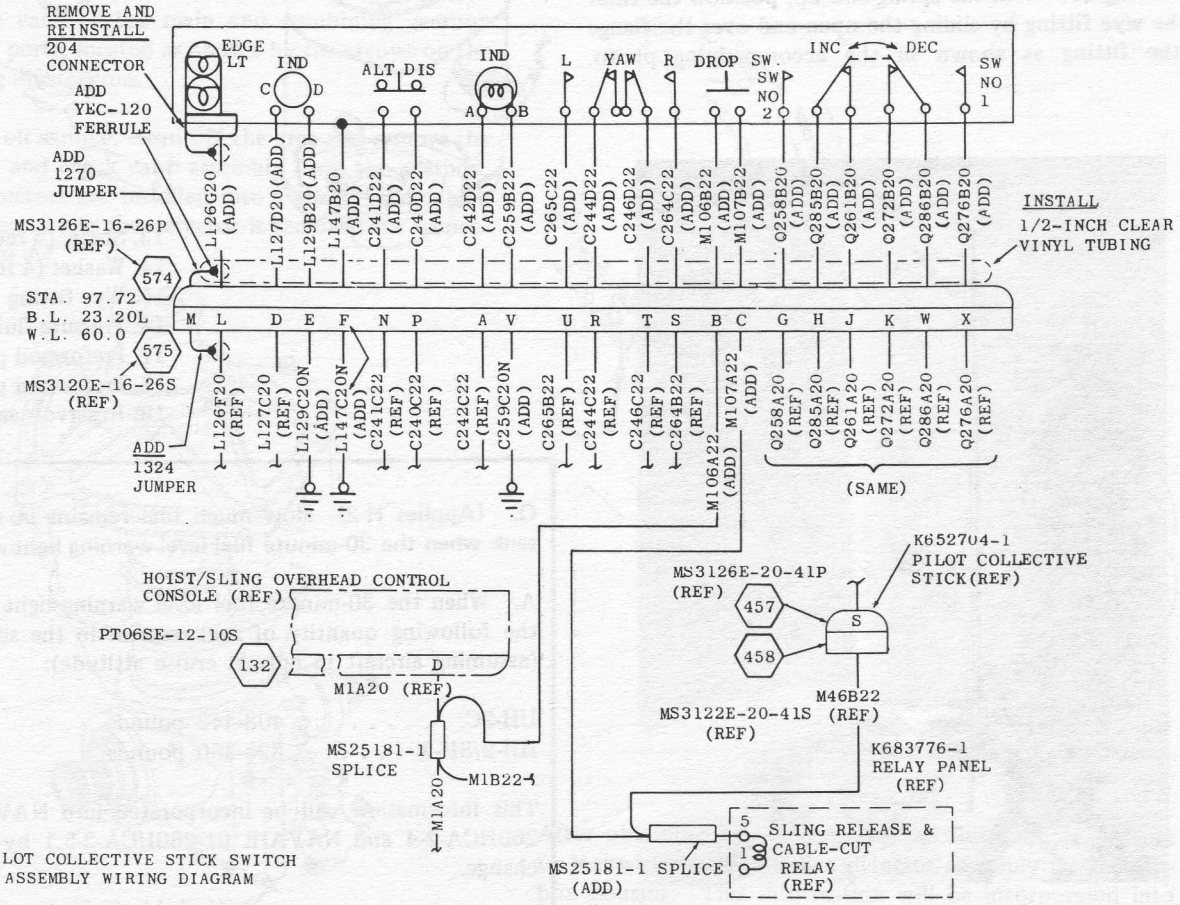
I. Return engine fire handle and circuit breaker(s) to the OFF position. Remove electrical power from the aircraft.

J. If readings are correct, reconnect all wires; if incorrect, check and repair the system wiring using applicable wiring diagram in NAVAIR 01-260HCA-2-8.1.

H-2 COPILOT COLLECTIVE STICK SWITCH BOX MODIFICATION

N. L. Hankins, Service Engineer

H-2 Airframe Change 132, Amendment 1, dated 10 June 1969, provides for an improved cargo hook system. Part of the instructions rework the copilot's collective stick switch box and installs a connector shown in the accompanying schematic. The information contained here will be incorporated into NAVAIR 01-260HCA-2-8.1 by a future change.



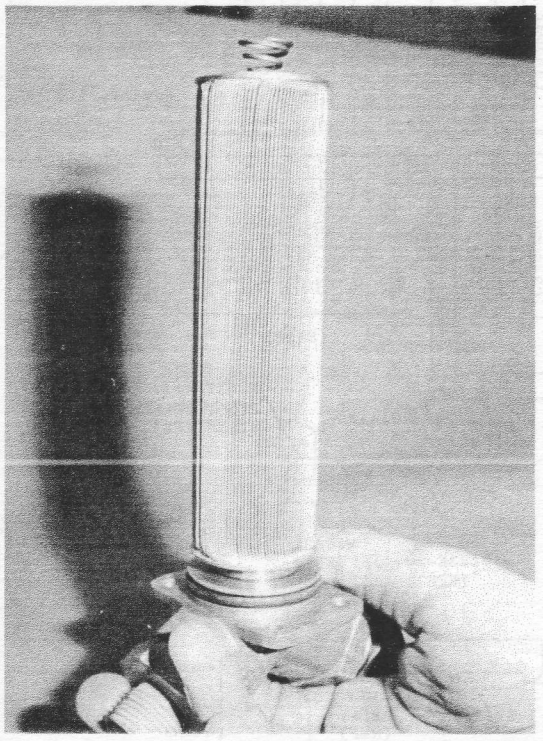
COPILOT COLLECTIVE STICK SWITCH BOX ASSEMBLY WIRING DIAGRAM

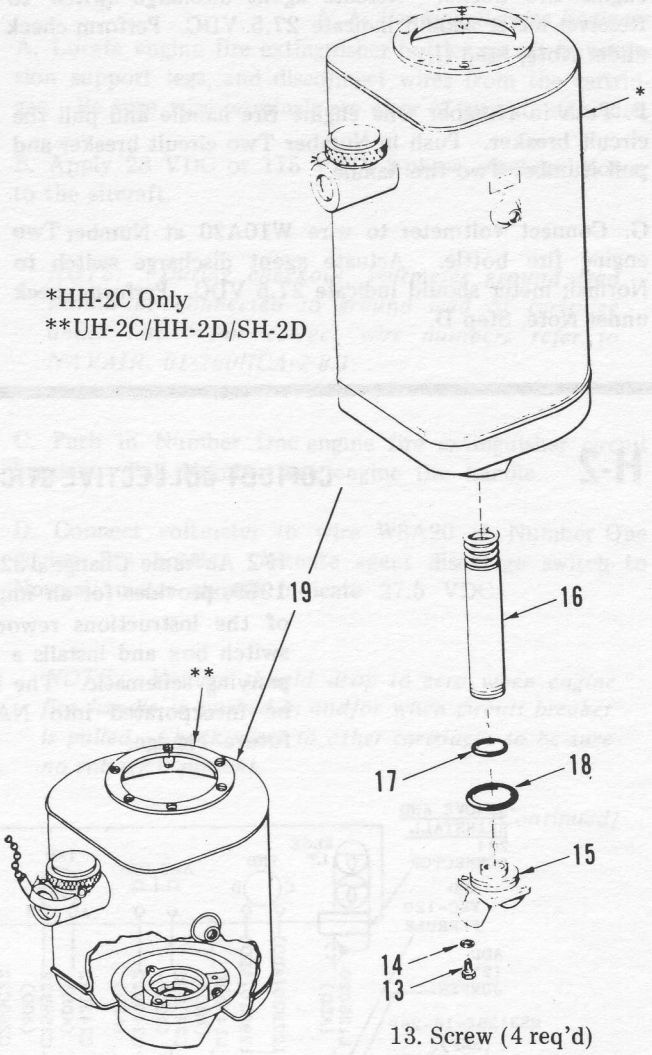
H-2 UPSIDE DOWN FILTER INSTALLATION

W. J. Wagemaker, Service Engineer

A recent report concerned the incorrect installation of a filter, AC2225E1, FSN RD1650-812-1191BH, into the hydraulic tank reservoir. Correct installation position for the filter is shown in the accompanying illustration. Note the spring is UP with the lower part of the filter about to engage the flange on the wye fitting. An incorrect installation can only occur when the filter is installed UPSIDE DOWN. When a filter is incorrectly installed and the attaching screws are tightened, the flange will crush the filter assembly, which is exactly what happened in the referenced incident. Fluid cannot circulate when a filter is installed in this manner. This occurrence again points up the need to follow the prescribed procedures. (The illustration shown is a portion of Figure 12-3 of NAVAIR 01-260HCA-2-3, dated 1 March 1972, Changed 1 July 1972.)

To install a filter, lube the packing, 17 with hydraulic fluid and place it into the groove in the open end of the filter, 16. Lube preformed packing 18 and place it onto wye fitting 15. With the spring-end up, position the filter on the wye fitting by sliding the open end over the flange on the fitting as shown in the accompanying photo.





*HH-2C Only
**UH-2C/HH-2D/SH-2D

13. Screw (4 req'd)
14. Washer (4 req'd)
15. Wye fitting
16. Pressure fluid filter
17. Preformed packing
18. Preformed packing
19. Reservoir assembly

Q. (Applies H-2) How much fuel remains in the sump tank when the 30-minute fuel level warning light actuates?

A. When the 30-minute fuel level warning light actuates, the following quantity of fuel remains in the sump tank (assuming aircraft in normal cruise attitude):

UH-2C. . . . . 408-443 pounds
HH-2/SH-2. . . . . 325-360 pounds

This information will be incorporated into NAVAIR 01-260HCA-2-4 and NAVAIR 01-260HCA-2-5.1 by a future change.

H. Zubkoff, Service Engineer

H-2 SOAP

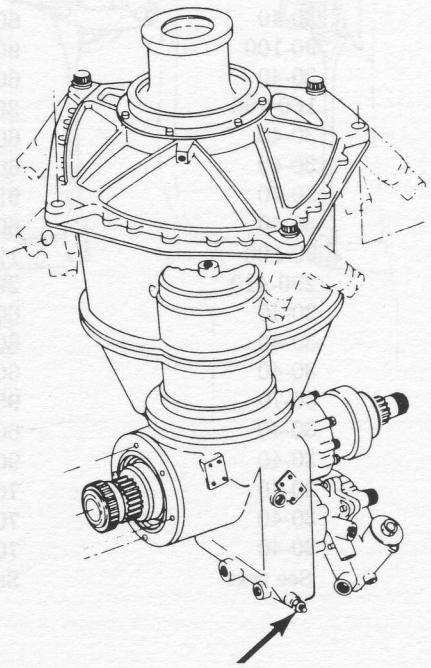
R.J. Trella, Service Engineer

Spectrometric Oil Analysis Programs (SOAP) are conducted in accordance with instructions contained in BUWEPSINST 4730.8, dated 5 June 1963. Specifically, Chapter 7, "Instructions for Taking Samples from Aircraft Oil Systems in the BUWEPS Oil Analysis Program," details how to take samples when two or more components share a common oil reservoir.

The instructions allow sampling to be taken from the common reservoir under normal or "standard" conditions. However, the paragraph titled, "Special Sampling Procedures," must be used when the oil is found to contain excessive amounts of metal and a determination must be made as to which component is contaminating the reservoir oil. Under these circumstances, the instructions direct that samples should be taken by: "removing the drain plug and catching the oil in the sample bottle." It also cautions that the area must be cleaned prior to loosening the plug and recommends a sufficient quantity of oil should be allowed to flow to flush out any accumulated sediment before filling the sample bottle.

Applying this philosophy to the H-2, and main/combining gearbox lube oil system, samples may be taken from the reservoir until an excessive amount of metal particles are discovered. At that time, it becomes necessary to take samples from each of the main and combining gearbox chip detector ports, located as shown by the arrows on the accompanying illustrations.

To obtain an oil sample, clean off the area and remove the chip detector and check valve assembly from the gearbox. (H-2 chip detectors are installed into a check valve which prevents oil loss when the detector is removed for inspection, see Photo A).



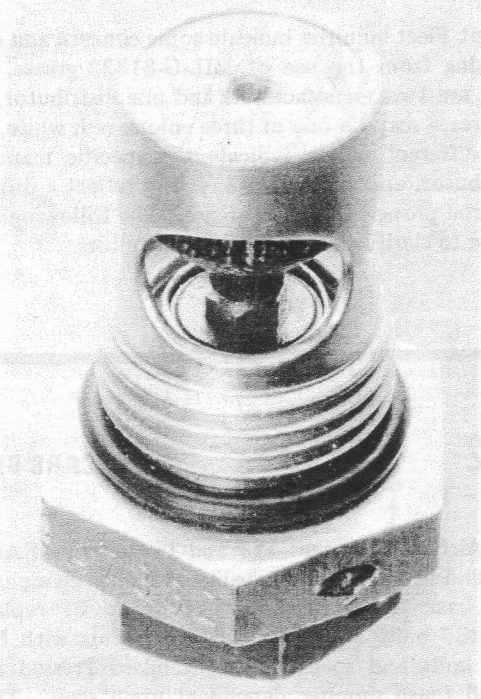
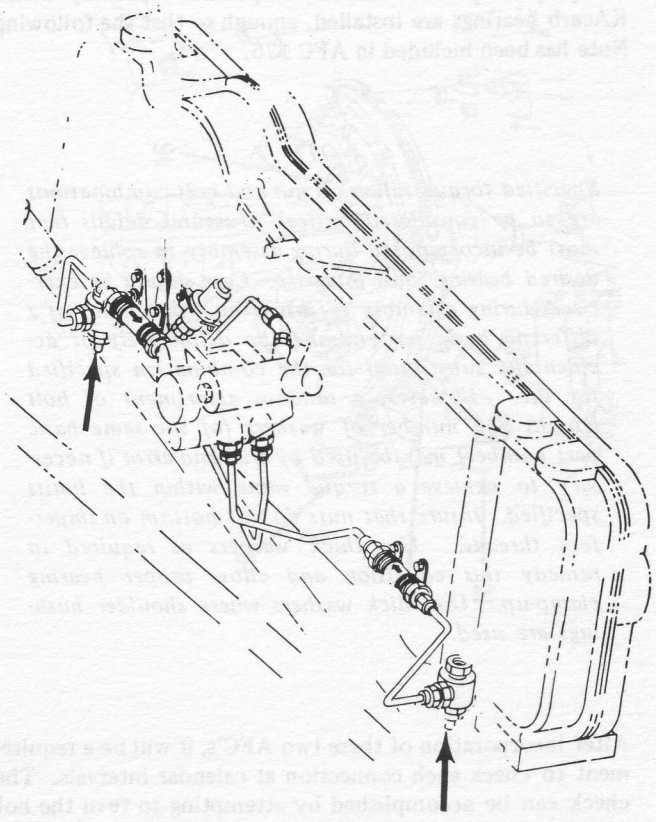


Photo A



After obtaining and/or checking the fluid sample, be sure to lockwire each reinstalled detector assembly to the gearbox housing. This information will be incorporated into NAVAIR 01-260HCA-2-4.1 by a future change.

H-2 RED/GREEN/AND WHITE GREASE

R. J. Trella, Service Engineer

Recent Fleet inquiries indicate some concern and confusion resulting from the use of MIL-G-81322 grease. Because there are two manufacturers and one distributor involved, the grease may be one of three colors: red, white, or green. The different colors indicate the specific manufacturer/distributor, and do not in any way reflect a difference in the lube properties of the grease. The following list is presented to clarify the colors and distributors.

Grease, MIL-G-81322

Manufacturer's Designation	Color	Manufacturer	Distributor
Mobilgrease 28	Red	Mobil	Same
Royco 22S	Green	Shell Oil Corp.	Royal Lube
Aeroshell grease 22	White	Shell Oil Corp.	Same

H-2 KACARB BEARING HARDWARE TORQUES

W. J. Wagemaker, Service Engineer

H-2 Airframe Changes 176 and 194 provide KAcarb bearings and new hardware capable of higher clamp-up torque. The basic hardware changes consist of replacing the NAS464 bolts and the AN310/320 nuts with NAS1304-type bolts and special nuts, Standard Pressed Steel P/N 73086 (dash number dependent upon size). The proper clamp-up torque is extremely important especially where KAcarb bearings are installed, enough so that the following Note has been included in AFC 176.

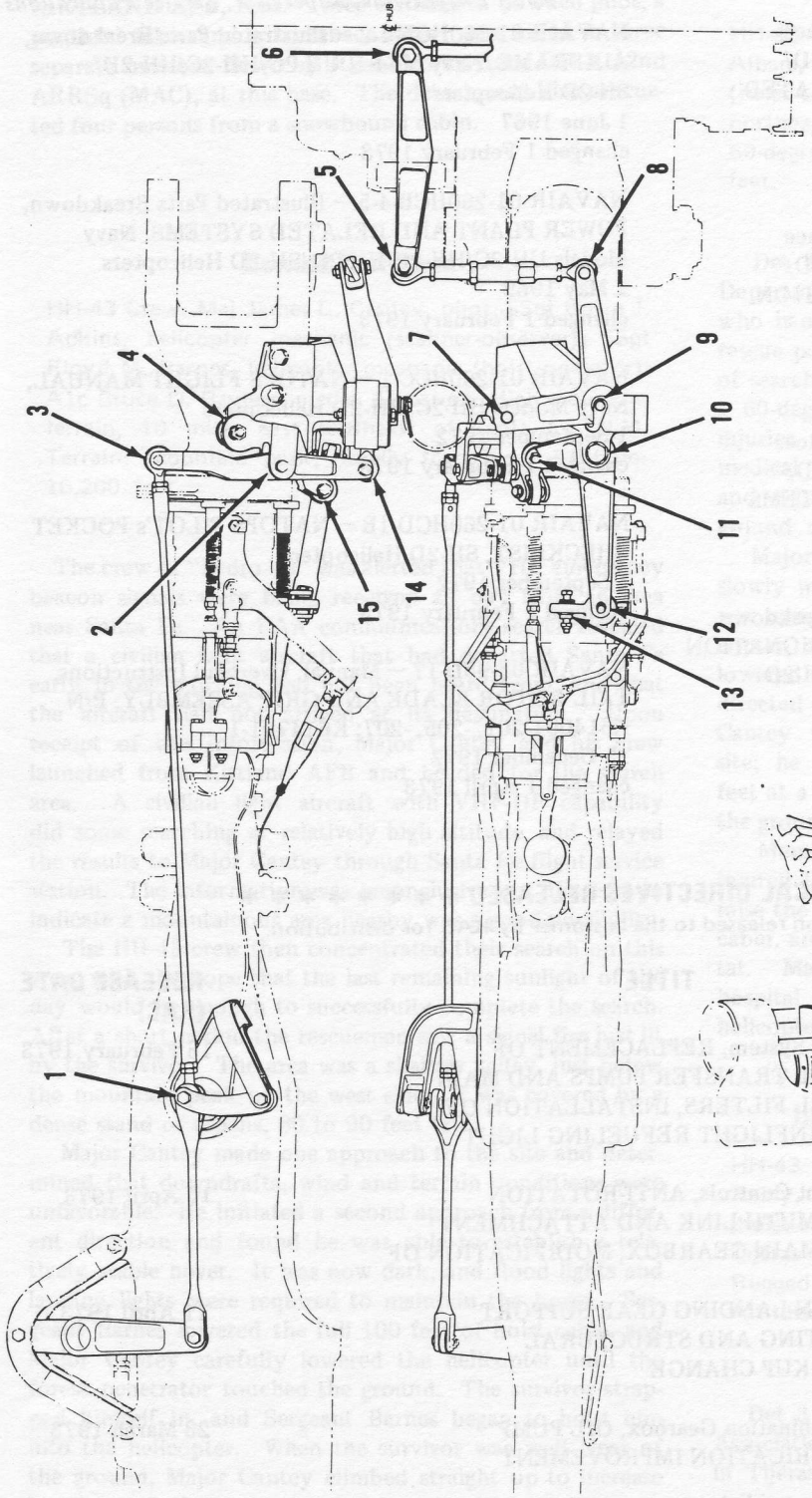
– NOTE –

Specified torque values on nut and bolt combinations are to be considered critical structural details that must be incorporated during assembly to achieve the desired bearing joint integrity. Care should be exercised during assembly to insure no other items of a different basic part number be deliberately or accidentally substituted for the combination specified for use. However, a random assortment of bolt lengths and number of washers (of the same basic part number) may be used by trial and error if necessary to achieve a torque value within the limits specified. Insure that nuts do not bottom on imperfect threads. Use thick washers as required to remedy this condition and allow proper bearing clamp-up. Use thick washers where shoulder bushings are used.

After incorporation of these two AFC's, it will be a requirement to check each connection at calendar intervals. The check can be accomplished by attempting to turn the bolt with a standard wrench. Firm resistance to the turning force indicates an acceptable connection. Bolt looseness will require disassembly and inspection of the components for wear.

The accompanying illustration and torque table indicate the locations affected and the respective torque values. Be sure to determine whether the referenced AFC is applicable. Item 20, not affected by either AFC, shows the flap control hardware. The information is presented here to provide a ready-reference for all KAcarb bearing hardware stackups in the rotating flight control system.

Item	TORQUE RANGE (Pound-Inches) Before AFC176/194	After AFC176/194
1	30-40	60-180
2	90-100	90-100
3	30-40	60-180
4	160-190	365-450
5	30-40	60-180
6	30-40	60-180
7	50-70	95-180
8	30-40	60-180
9	90-100	120-180
10	290-410	290-410
11	30-40	60-180
12	30-40	60-180
13	30-40	60-180
14	50-70	95-180
15	30-40	60-180
16	30-40	90-150
17	30-40	70-130
18	30-40	70-130
19	30-40	70-130
20	See text	See text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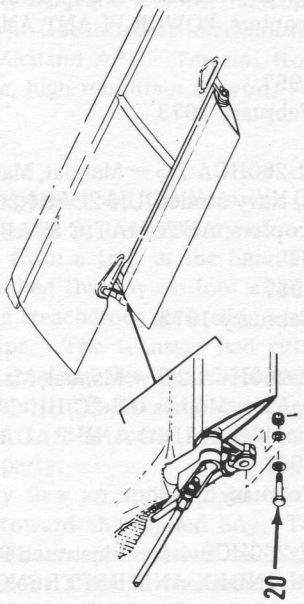
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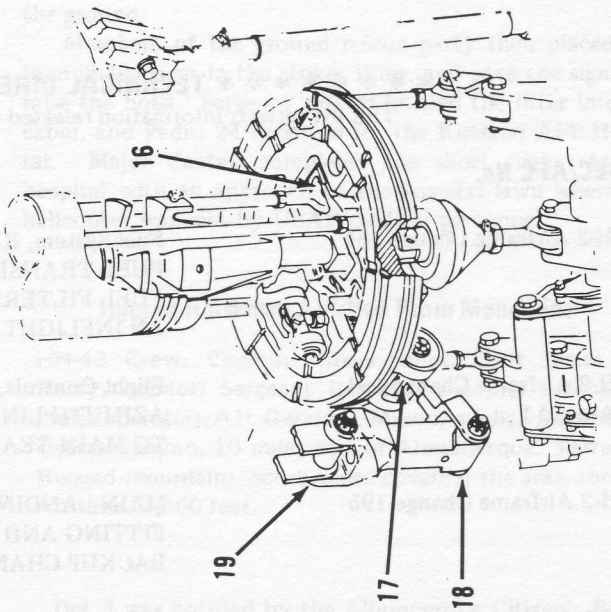
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17
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19

PUBLICATION INFORMATION

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

R. H. Chapdelaine, Supervisor, Service Publications

NAVAIR 01-260HCA-2-4 — Manual, Maintenance Instructions, Navy Models UH-2C/HH-2C/HH-2D/ SH-2D Helicopters, POWER PLANT AND RELATED SYSTEMS
1 October 1967
changed 1 February 1973

NAVAIR 01-260HCA-2-5 — Manual, Maintenance Instructions, Navy Models UH-2C/HH-2C/HH-2D/ SH-2D Helicopters, AUTOMATIC STABILIZATION EQUIPMENT
1 October 1967
changed 1 February 1973

NAVAIR 01-260HCA-2-7 — Manual, Maintenance Instructions, Navy Models UH-2C/HH-2C/HH-2D/ SH-2D Helicopters, RADIO AND RADAR SYSTEMS
1 October 1967
changed 1 February 1973

NAVAIR 01-260HCB-4-1 — Illustrated Parts Breakdown, NUMERICAL INDEX AND REFERENCE DESIGNATION INDEX, Navy Models UH-2C/HH-2C/HH-2D/SH-2D Helicopters
1 September 1972
changed 1 February 1973

NAVAIR 01-260HCB-4-2 — Illustrated Parts Breakdown, AIRFRAME, Navy Models UH-2C/HH-2C/HH-2D/ SH-2D Helicopters
1 June 1967
changed 1 February 1973

NAVAIR 01-260HCB-4-5 — Illustrated Parts Breakdown, POWER PLANT AND RELATED SYSTEMS, Navy Models UH-2C/HH-2C/HH-2D/SH-2D Helicopters
1 May 1969
changed 1 February 1973

NAVAIR 01-260HCC-1 — NATOPS FLIGHT MANUAL, Navy Models HH-2C/HH-2D Helicopters
1 September 1972
changed 1 February 1973

NAVAIR 01-260HCD-1B — NATOPS PILOT's POCKET CHECKLIST, SH-2D Helicopter
1 September 1972
changed 1 February 1973

NAVAIR 03-95D-17 — Manual, Overhaul Instructions, TAIL ROTOR BLADE AND GRIP ASSEMBLY, P/N K614001-201, -205, -207; K614701-1
15 December 1972
changed 1 April 1973

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

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

SEC/AFC No.	TITLE	RELEASE DATE (KAC)
H-2 Airframe Change 184	Fuel System, REPLACEMENT OF FUEL TRANSFER PUMPS AND MAIN FUEL FILTERS, INSTALLATION OF AN INFLIGHT REFUELING LIGHT	16 February 1973
H-2 Airframe Change 194, Amend 1	Flight Controls, ANTI-ROTATION AZIMUTH LINK AND ATTACHMENT TO MAIN GEARBOX, MODIFICATION OF	10 April 1973
H-2 Airframe Change 195	MAIN LANDING GEAR SUPPORT FITTING AND STRUCTURAL BACKUP CHANGE	11 April 1973
H-2 Airframe Change 199, Part 1	Combination Gearbox, OIL PUMP LUBRICATION IMPROVEMENT	23 March 1973
H-2 Airframe Change 199, Part 4	Combining Gearbox, OIL COOLER BLOWER DRIVE SHAFT SPLINED ADAPTER IMPROVEMENT	23 March 1973
H-2 Airframe Change 199, Part 5	Combining Gearbox, No. 1 GENERATOR DRIVE RPM DECREASE	23 March 1973
H-2 Airframe Change 205	Automatic Stabilization Equipment, ADDITION OF ASE OFF LIGHT	27 March 1973

MOUNTAIN MISSIONS FLOWN BY KIRTLAND DET

KIRTLAND AFB, N.M.—Three civilians—a downed pilot, a youthful hiker and a horseback rider—were aided in three separate missions flown by HH-43 crews from Det 3, 42nd ARRSq (MAC), at this base. The detachment also evacuated four persons from a snowbound cabin.

Downed Pilot Saved

HH-43 Crew: Maj James L. Cantey, pilot; SSgt Kevin J. Adkins, helicopter mechanic (scanner-observer); SSgt Floyd M. Barnes, helicopter mechanic (hoist operator); A1c Bruce D. Bayless, medic. Location: High mountain terrain, 10 miles east southeast of Santa Fe, N.M. Terrain: Mountain peak, heavily forrested. Altitude: 10,200 feet.

The crew of "Pedro 48" was alerted that VHF emergency beacon signals were being received all day from an area near Santa Fe. An FAA communications search revealed that a civilian light aircraft that had departed Santa Fe early in the morning had not been heard from, and that the aircraft had not arrived at its destination. Upon receipt of this information, Major Cantey and his crew launched from Kirtland AFB and headed for the search area. A civilian light aircraft with VHF-DF capability did some searching at relatively high altitude, and relayed the results to Major Cantey through Santa Fe flight service station. The information was inconclusive but did seem to indicate a mountainous area nearby was a good possibility.

The HH-43 crew then concentrated their search on this area, with the hope that the last remaining sunlight of the day would be enough to successfully complete the search. After a short period the rescuemen saw a signal fire just lit by the survivor. The area was a shallow valley, just below the mountain peak on the west side. It was covered by a dense stand of aspens, 80 to 90 feet tall.

Major Cantey made one approach to the site and determined that downdrafts, wind and terrain conditions were unfavorable. He initiated a second approach from a different direction and found he was able to establish a relatively stable hover. It was now dark, and flood lights and landing lights were required to maintain the hover. Sergeant Barnes lowered the full 100 feet of hoist cable, and Major Cantey carefully lowered the helicopter until the forest penetrator touched the ground. The survivor strapped himself in, and Sergeant Barnes began to hoist him into the helicopter. When the survivor was well clear of the ground, Major Cantey climbed straight up to increase his clearance from the trees and to get the survivor clear of them as soon as possible.

The survivor entered the aircraft, and was taken to Santa Fe Airport. He had suffered only a minor cut and a backache, but failure to find him that night might have resulted in death by exposure because he had practically no protective equipment or adequate clothing for the high mountain environment.

Hiker Medevaced After Fall

HH-43 Crew: Major Cantey, pilot; Capt Robert M. Albers, copilot; Sergeant Adkins, helicopter mechanic (hoist operator). Location: Sandia Mountains, 16 miles northeast of Kirtland AFB. Terrain: Rock slide area, 60-degree slope, high mountain canyon. Altitude: 8,500 feet.

Det 3 was requested by the Bernallio County Sheriff's Department to assist in the recovery of a 16-year-old boy who had fallen from a trail in the Sandia Mountains. A rescue party reached the boy on foot after some six hours of searching in a treacherous rock slide area at the base of a 60-degree slope. The teenager had cuts, bruises, back injuries, and internal injuries, and was in need of immediate medical attention. "Pedro 24" launched immediately, and was guided to the scene by light signals from the ground rescue party.

Major Cantey flew an approach to the site, and began slowly moving toward the injured boy. Terrain clearance was marginal, with steep slopes on both side of the helicopter, and 40-foot trees in the area. Sergeant Adkins lowered the full 100 feet of hoist cable, and very carefully directed the pilot over the survivor. At this time, Major Cantey was hovering some 150 feet above the rescue site; he gradually began lowering the helicopter, a few feet at a time, until the fully extended hoist cable touched the ground.

Members of the ground rescue party then placed the injured teenager in the stokes litter, and gave the signal to raise the hoist. Sergeant Adkins hoisted the litter into the cabin, and Pedro 24 departed for the Kirtland AFB Hospital. Major Cantey completed the short flight to the hospital with an approach to the hospital lawn where the helicopter was met by USAF medical personnel.

Injured Horseman Airlifted From Mountains

HH-43 Crew: Captain Albers, pilot; Capt James E. Reilly, copilot; Sergeant Barnes, helicopter mechanic (hoist operator); A1c Gerald C. Mixon, medic. Location: Tijeras Canyon, 10 miles east of Albuquerque. Terrain: Rugged mountains, scrub pines covering the area, rocks, Altitude: 7,000 feet.

Det 3 was notified by the Albuquerque Citizen's Radio Association (ACRA) that a man had fallen from his horse in Tijeras Canyon, and that he had a back injury from striking a rock. Rugged mountain terrain in the area eliminated the possibility of removing the survivor by conventional means. ACRA spokesmen estimated six hours time to carry the litter to a place accessible to a vehicle. The crew of Pedro 24 left the base at 1245 (MDT), hoisted the injured man to the HH-43 at 1300 MDT and five minutes later delivered him to a waiting ambulance. Maximum power had been required to hover in the high-temperature, high-altitude conditions. *(Continued on page 18)*

DET 8, 43rd ARRSq, CHOSEN "OUTSTANDING LBR DETACHMENT"

OUTSTANDING LBR DET—Rear row, left to right, Maj Harry E. Raisor, detachment commander; MSgt Jackson H. Kilgore, A1C Richard E. Westlund, A1C Carroll D. Knipe, Sgt Robert M. Hines, Capt William T. Lyon, Capt Peter F. Dineen, 1stLt Jerry P. Christiansen, 1stLt Bill J. Heitzig, 1stLt Phillip D. Deffenbaugh, SSgt Stanley E. Reeh, SSgt James V. Mars, SSgt Ronald W. Murphy, SSgt Clinton D. Neth, Sgt Ray G. Self, SMSgt Frank L. Kroupa. Front row, left to right, SSgt Nicholas F. Beaumonte, SSgt Francis M. Fisher, TSgt George D. Garrett, Sgt Robert Best, Sgt Ernest Amador, Sgt David B. Southard, Sgt Steven W. Johnson, Sgt Cecile G. Jenkin,Jr., Sgt Robert J.S. Brind, SSgt Luis Robles,Jr., Sgt James Lagalo, Sgt Steven H.Winchester. (USAF photo)

BERGSTROM AFB, Texas—Det 8, 43rd ARRSq, at this base was selected recently by the Military Airlift Command as the Air Force's "Outstanding Local Base Rescue Detachment" for 1972. The unit, affectionately known as Pedro, out-scored more than 60 other detachments in the United States and overseas to win the award for the first time.

Commanded by Maj Harry E. Raisor, Det 8 was selected on its total performance in eight categories by MAC headquarters. Categories evaluated included: aircrew upgrading and training; safety record and progress; inspector general reports; number of suggestions approved and implemented; housekeeping; number of saves credited; number of scrambles; and Maintenance Standardization and Evaluation (MSET) results.

Congratulations on Pedro's accomplishments filtered all the way from Gen Paul K. Carlton, MAC commander, to Col George A. Edwards, 67 Tactical Reconnaissance Wing Commander.

Other laudatory remarks came from squadron headquarters at Richards-Gebaur AFB, Mo., and the 39th Aerospace Rescue and Recovery Wing at Eglin AFB, Fla.

Detachment 8 first opened its doors on March 8, 1971, under the command of Major Raisor. The detachment's primary mission was to provide local base rescue coverage to the 67th Tactical Reconnaissance Wing's RF-4C Phantoms.

During Det 8's two years at Bergstrom, assigned personnel were credited with saving seven lives involving three badly burned children, two men injured in falls and two automobile accident victims. For one of their life-saving efforts, Pedro personnel were lauded by 10th District U. S. Congressman J. J. Pickle.

He said, "It is because of men like you, who respond to the need of their fellowmen, that this program (Military Assistance to Safety and Traffic, a federally funded program designed to assist public safety) is a success."

At its peak, Pedro was one of almost 120 air rescue and recovery detachments on nearly 100 bases around the world. In the last year, many detachments, including Pedro, have been deactivated by AF officials as part of a massive ARRS realignment.

Kirtland. . . *Continued from page 17*

Aid Snowstorm Victims

HH-43 Crew: Maj Alex P. Lupenski, pilot; Capt Marvon D. McLaughlin, copilot; SSgt Donald L. Layberger, helicopter mechanic (hoist operator); Airman Bayless,medic. Location: High mountain meadow, 15 miles east of Chama. Terrain: High mountain clearing, wooded area. Altitude: 10,000 feet.

The New Mexico State Police notified Det 3 that there were four people stranded by a sudden snowstorm in a high mountain cabin, 15 miles east of Chama. Four days of attempts to reach them had been futile. The area was impassable to all vehicles, even snowmobiles. Snow depth was a good five feet.

Pedro 48 launched, later landed at Santa Fe to refuel and then proceeded to Chama to pick up a guide who knew the location of the cabin. Major Lupenski then flew to the rescue site, landed in a clearing, and picked up the survivors. They were in good condition, but very low on food. With another storm approaching, rescue would have been impossible for several more days.

MAST
MILITARY ASSISTANCE TO SAFETY AND TRAFFIC

MT. HOME AFB, Idaho—HH-43 crews attached to Det 22, 42nd ARRSq (MAC) at this base continue their service to the community and surrounding area under the Military Assistance to Safety and Traffic (MAST) program.

A civilian who had fallen from a logging truck in a mountainous area 45 miles from the base was medevaced to the hospital by Maj Aram Paquin and his crew consisting of 1stLt Eric A. Vranek, the copilot; Capt Orie E. Kaltenbaugh (MC), a flight surgeon; SSgt John R. Ostler and TSgt Jimmy L. Ramsey, crewmen.

When the HUSKIE arrived at Featherville, Idaho, it was found that the man was suffering from a compound fracture of the right leg. Captain Kaltenbaugh placed the patient's leg in a splint and he was then airlifted to the hospital. Ground evacuation was impossible as a jacknifed semi-truck was blocking the road out of Featherville.

In another mission, an HH-43 crew from the detachment flew 72 miles to medevac a 73-year-old ranch hand with a possible broken back. Captain Kaltenbaugh examined the patient and determined that the injury was not critical. The ranch hand was placed aboard the HUSKIE and taken to the hospital at Twin Falls.

At the hospital the HH-43 pilot, Capt James L. Woolace, received a request from one of the doctors to airlift a seriously-ill patient to the Veteran's Administration Hospital in Boise. Although the man was bleeding internally and had suffered two recent heart attacks, it was decided by his doctor that airlift by helicopter was preferable to ground transportation in an ambulance. The patient was taken to the Boise hospital as requested and the HH-43 returned to the base. Other members of the crew were Major Paquin, the copilot and SSgt Richard A. Henderson, helicopter mechanic.

An HH-43 crew from Det 22 also airlifted a seriously-injured automobile accident victim from the Twin Falls Hospital to St. Alphonsus Hospital in Boise. The patient, 19 years old, had suffered a skull fracture in the accident and required specialized treatment.

In order to make the pickup at Twin Falls, Major Paquin piloted the HH-43 between trees and over telephone wires before landing on the dusk-shrouded hospital lawn. At the time of the pickup, and later on the flight to Boise, 25 to 30-knot winds were encountered.

Other members of the HUSKIE crew were 1stLt Gary A. Perkins, Sergeant Henderson, Captain Kaltenbaugh, and TSgt Alpheus L. Morrison.

Det 26 Crew Saves Woman's Life

COLUMBUS AFB, Miss.—An HH-43 crew's midnight flight from this base to the USAF Regional Hospital at Maxwell AFB, Ala., was later credited with saving the life of a critically-ill woman. The flight, through overcast and haze, was flown on instruments under complete and, at times, partial IFR conditions. The flying conditions called for extremely close coordination between Capt Gary F. Norris, the pilot and Maj Robert J. Mattson, the copilot. Crewman on the flight was MSgt Robert L. McNabb.

After delivery of the patient to the hospital, the attending physician said "the great facility and speed with which she was transported to the USAF Regional Hospital will be a deciding factor in her eventual outcome."

Later, Captain Norris and his crew learned that the patient had fully recovered. All the rescuemen are attached to Det 26, 44th ARRSq (MAC), at Columbus AFB.

Det 7, Base Firemen Team Up To Save Pilots

TORREJON AB, Spain—A good example of the close teamwork existing between the base fire department and the HH-43 crews from Det 7, 40th ARRWg (MAC), here occurred recently when a Spanish Air Force F-4 made an emergency landing, skidded along the runway and caught fire.

"Pedro 52," piloted by Capt Ronald I. Pass, scrambled and arrived at the stricken aircraft just as it slid to a stop. Due to the nearness of the base fire trucks, Captain Pass elected to maintain a hover and provide rotor wash to suppress the fire. A fire truck arrived seconds later and snuffed the fire out with foam. The HH-43 landed and discharged the alert crew: SSgt George S. Goolsby, medical technician; TSgt Esequiel Monarez, Jr., and SSgt Michael R. Sizemore, firefighters.

The two firemen assisted in removing the two pilots from the damaged aircraft and Sergeant Goolsby examined them for injuries. When it was determined they were all right, the HH-43 returned to the pad.

The mission was described as a "well executed one which greatly added to Spanish-American relations."

Andersen Det Rescues Boy, Airman

ANDERSEN AFB, Guam—A 13-year-old boy, trapped on a reef at the base of a 200-foot cliff was rescued by an HH-43 crew from Det 12, 41st ARRWg (MAC), at this base.

The site was inaccessible by foot due to the sheer cliff line and dangerous coral. Capt Robert J. Hawley piloted the HH-43 to a point off shore and then "hover moved" into the rescue site, a cove with an overhang above. He then maneuvered as close as possible to the cliff, leaving absolute minumum rotor blade clearance, and the hoist cable was lowered by SSgt Erskine E. Brewington, the helicopter mechanic. As the rotor blade clearance made it impossible to hover directly over the rescuee, Sergeant Brewington motioned to the lad to swim to the forest penetrator seat which had been lowered into the water. The boy swam the short distance to the seat and mounted it without difficulty. Captain Hawley then inched the HH-43 backwards away from the cliff face and the rescue was completed without incident.

Once the boy was aboard the helicopter he was examined by SSgt Jerry L. Milton, the medical technician, and found to be uninjured. He was taken to the Orote Point helipad and then driven home. Other members of the HH-43 crew were Sgt Daniel L. Arellano and Sgt Roy D. Phillips, firefighters. *(Continued on page 20)*

Andersen Det—*Continued from page 19*

In another Det 12 mission, an HH-43 rescued an airman caught in the breakers outside the reef near Tarague Beach. When Maj Henry L. Pierce and his crew arrived at the scene they found the swimmer lying on his back in the water as 10-foot breakers washed over him. The forest penetrator with flotation collar attached was lowered and the survivor managed to climb onto the seat, however, he was too weak to secure the safety strap. When he was brought into the helicopter, the airman was found to be suffering from exhaustion and numerous minor lacerations. He had also ingested quite a bit of salt water, was extremely nauseated and had severe cramps in both legs. The cuts were suffered when he had attempted to re-cross the coral reef to escape from the pounding waves.

The HH-43 returned to the alert pad and the rescued airman was taken to the hospital. Other crewmembers were 1stLt Jon B. Gilloon, copilot; MSgt Jackie L. Porter, pararescueman; TSgt Nelson H. Anderson, helicopter mechanic.

Medevac By Rota SAR Unit

USNS ROTA, Spain—In response to a call for assistance, a UH-2C crew from the SAR Unit here flew 75 miles to sea and picked up a seriously-injured man from a merchant vessel. The transfer from ship to helicopter was made without incident although visibility was poor and had hampered the UH-2C's efforts to locate the vessel. After the patient was hoisted aboard, Lt W. Edward Williamson piloted the helo back to Rota where an ambulance was waiting.

Other members of the medevac crew were, Lt(jg) Anthony S. Montemarano, copilot; LCdr G. A. Vasques (MC), flight surgeon; ADJC James H. Neugent and ADJ1 Donald D. Hejtmanek, rescue aircrewmen.

LAMPS Activities—*Continued from page 8*

NAS IMPERIAL BEACH, Calif.—HSL-31's LAMPS Detachment Six returned to Imperial Beach recently. The detachment was deployed on 14 August aboard USS Jouett (DLG-29) for a seven-month deploy-cruise.

Lt Joseph Denigro, Officer-in-Charge, and his crew were able to improve many LAMPS (Light Airborne Multi-Purpose System) techniques during those seven months. While deployed, the detachment was able to expand the "Multi-Purpose" aspect of the LAMPS concept, and missions were flown which included SAR, gunfire spotting, and ASW operations.

LAMPS Det Six had several opportunities to prove its usefulness as a SAR resource. By the continuous efforts of the detachment personnel to take advantage of these opportunities, the value and effectiveness of the radar equipment in the LAMPS helicopter—SH-2D—in a SAR environment is now a well established fact. Also, by using the radar equipment installed aboard the SH-2D, the pilots, while on several missions, were able to locate enemy positions which before had been undetected by higher-flying spotter aircraft. The helicopter crew was then able to call in strike aircraft, which destroyed the targets.

One of the crowning events of the deployment came after the LAMPS helo was called on to perform one of its primary missions—ASW search. After loading sonobuoys, the crew flew to the scene of the initial contact point. The pilots then began laying sonobuoys to track the contact. Working with three destroyers in the area, the ASW operator in the helo was able to maintain surveillance of the contact. This exercise proved the workability of LAMPS in a small task unit and reinforced the value of the LAMPS concept to naval surface units.

By these and many similar missions, LAMPS Det Six significantly increased the Navy's ability to effectively utilize the LAMPS weapons system to its fullest capabilities.

Memories of Med Cruise—*Continued from page 5*

"Presently the most exciting thing happening aboard Standley is our great peach seed contest. All Snuffers in good standing are required to carry a peach seed somewhere on his person at all times, except when sleeping. Anyone challenged without this seed buys the challenger a round. The other night Al Adams was challenged while in the shower by four of the 'youngsters.' Al put down his soap, turned around smiling and presented his seed firmly clenched between his teeth. Right now Chief JJ is about 46 beers in the hole. It is said that he owes LTJG "Smiling Jack" Smith 45 of them.

"From the O-in-C's stateroom sweet bliss reigns, as anticipation grows of going home to a brand new baby daughter. . . .

"Well, another month has passed and one more to go for the Snorkel Snuffers. Just about all of the crew have finally recuperated from our two weeks in Barcelona. Lots of walking, shopping, sightseeing, and especially lots of San Miguel beer made for a pretty nice time. Although there was time to check out the town, many hours were devoted to giving "52" the tender loving care she deserves. Chief J. J. can take most of the credit for that. He claims to be plumb tuckered out from thinking of things to keep everyone busy."

OUR PARTING THOUGHTS

Three weeks before Christmas and out on the Standley;
Det 2 is looking forward to being home with their Family. . .

Yes the job is now over, Just about all said and done;
We've all worked lots of hours, Many times on the run.
Oh we're all so very salty, But still full of thanks;
And ever so humble, With God in our ranks.

There's things to remember, Some thoughts not very pleasant;
We hope we've brought honor to all, Our own kind of present,
As we look forward on returning to the Squadron and going back to our shops,
We'll treasure this past deployment, With a crew that is tops.

So before we split, my good shipmates, let's say thanks again,
For a job thats well done by a crew of good men.
As years pass and time goes by, You'll become an ole Duffer,
But you'll always be a part of the Dirty Snorkel Snuffer.

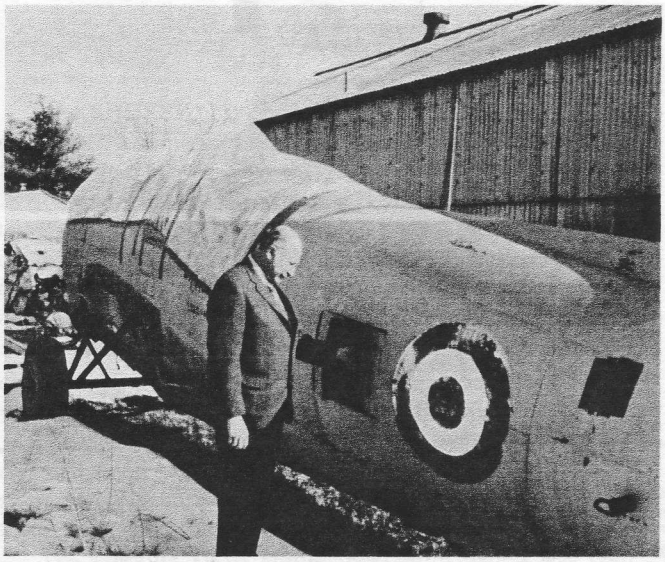
So in closing this passage won't you please have a ball,
Merry Christmas, Happy New Year, and God Bless you All.

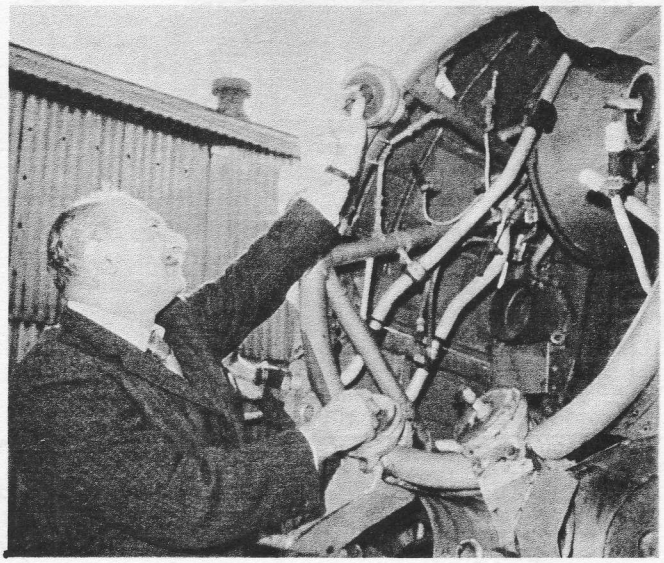
J. J. Ford

Scooter, Dec. 72

It's aviation off and on the job for Herman Zubkoff

KAC SERVICE ENGINEER RESTORES WWII FIGHTER





(Serignese photos)

Zubkoff And "Friend"

Herman "Zub" Zubkoff's name has appeared in Kaman Rotor Tips frequently during the last 11 years, either as the author of technical articles or in the Q & A and Timely Tips sections. When not at his job as a Service Engineer with Kaman's Customer Service Department, Zub may be found working to restore the "old friend" shown in the photos to its former World War II glory. When he is finished, it will be displayed with the Connecticut Aeronautical Historical Association's collection of other vintage aircraft at Bradley International Airport, Windsor Locks, Conn.

For those who do not recognize the "old friend" from the two photographs, it is the famous P-47 "Jug." Battered and worn after 30 years service, traveling and storage, the aircraft was returned to the United States by the Peruvian government for restoration purposes.

Zub brought to his Service Engineering job at Kaman a wealth of aviation experience. He retired from the U. S. Air Force in 1963 as a Chief Warrant Officer after 25 years service. During World War II he served with the 57th Pursuit Group, the first U. S. Army Air Corp unit assigned to the newly constructed, then Windsor Locks Air Base. It was subsequently named Bradley Field after Lt Gene Bradley, a member of the 57th, who was killed in a P-40 crash at the field.

Soon after Pearl Harbor the 57th and its P-40's joined the British Desert Air Force which participated in the North African Campaign. The 57th Pursuit Group then went on to three more years of war in Europe, including action in Italy and the invasion of France.

During this time, Zub was closely associated with the P-40 and, subsequently, with the P-47 as an Aircraft Maintenance Officer. He is very interested in seeing that his constant "companion" during part of those long war years is authentically restored down to the last detail and asks that KRT readers send any P-47 drawings, photos or other material that will help him in his self-appointed task. He may be contacted at the Connecticut Aeronautical Historical Assn., Box 44, Hebron, Ct., 06248. The material will be returned.

"I've only been fonder of one other aircraft than the P-47," Zub said, "that was my old OX-5 Alexander Eaglerock back in the 30's.

"You might say," he added, "I've been around flying machines for a number of years."

Det 14 Rescues Marine, Medevacs Villagers

TAN SON NHUT AB, RVN—Ordnance aboard a burning fighter began exploding a few seconds after the pilot of the downed plane was airlifted from the site by an HH-43 crew from Det 14, 40th ARRSq (MAC), at this base.

Several of the "Pedro" alert crew had been watching as Marine A-4's launched when one of them left the runway and burst into flames. The HH-43 flew to the area and picked up the pilot who had ejected. As the survivor was delivered to the Marine revetment area, ordnance aboard the downed aircraft began exploding.

Capt Andrew B. Comrie was pilot of the Pedro and 2ndLt Richard A. Schlais was copilot. Crewmen were SSgt Howard E. Bowers, Sgt Carl V. O'Neill and Sgt Kenneth Daniels.

In another mission, an HH-43 crew from Det 14 medevaced four wounded villagers who were injured when hung ordnance fell from a VNAF aircraft returning to base. A VNAF gunship circling the village, four miles from the base, directed Pedro into the area and remained overhead for support until the survivors were aboard. Vietnamese ground troops deployed around the village to secure the area before Pedro returned on the second sortie.

Captain Comrie was pilot on the mission and Lieutenant Schlais was copilot. Crewmen were Sgt Francisco J. Betancourt and Sgt Burney D. Williams.

HSL-31 PILOT, PETTY OFFICER HONORED

Lt Dennis Christian

ADJ1 Wayne J. Patrick

NAS IMPERIAL BEACH, Calif.—An officer and a first class petty officer from HSL-31 here have been honored by the Navy Helicopter Association. Lt Dennis Christian, recently Officer-in-Charge of HSL-31 LAMPS Detachment Two, was elected "Pilot of the Year" for 1972 by the Association; ADJ1 Wayne J. Patrick, supervisor of the squadron's Power Plant Branch, was chosen "Maintenance Man of the Year." Activities which led up to the selections are described below by the HSL-31 Public Affairs Office:

"During the past year Lieutenant Christian has continually proven himself to be an outstanding naval aviator. As Officer-in-Charge of LAMPS Detachment Two on board USS Harold E. Holt, he was instrumental in evaluating and developing the LAMPS concept. Prior to his deployment to WESTPAC, Lieutenant Christian managed to incorporate new ideas to make the LAMPS concept more effective. The refresher training program and schedule he developed will be used as the foundation for all future LAMPS/Ship Training. He was responsible for the organization and writing of the Air Department Organization Manual for Pacific Fleet LAMPS-configured ships as well as the design change recommendations that have been incorporated into all LAMPS-configured 1052 class destroyer escorts. He was instrumental in the development of an electronics emission simulator for use in LAMPS Anti-Ship Missile Defense (ASMD) training, which has been adopted for use on ESM capable surface units.

"Lieutenant Christian's work did not end here. While deployed, he used his expertise and imagination to their fullest to expand LAMPS operations in the northern Gulf of Tonkin. His helicopter detachment expanded the 'Multi-Purpose' concept of LAMPS by flying numerous missions including gunfire spotting, electronics warfare, search and rescues, and combat support. Also, Lieutenant Christian made personal presentations to all available ships in the area describing the capabilities of LAMPS.

"Through these efforts, he was to overcome many misconceptions concerning the utilization of LAMPS. Lieutenant Christian's immediate effectiveness and potential value in defining the future role of LAMPS cannot be overstated.

"Through his strong positive leadership and superb airmanship, Lieutenant Christian was the keystone for the entire LAMPS program during his deployment. The future success of the LAMPS concept will bear the imprint of his aggressive and imaginative personality. Lieutenant Christian is truly deserving to bear the title Helicopter Pilot of the Year.

◇

"ADJ1 Patrick is not only the Power Plants Branch Supervisor, he also wears the aircrew wings of a helicopter rescue aircrewman. As supervisor, Petty Officer Patrick has contributed greatly to maximum squadron operational and material readiness. Through employment of Engineering Change proposals and the Beneficial Suggestions Program, he has organized numerous changes in the H-2 aircraft to improve its maintainability. His personal initiative and professional knowledge have saved many man-hours while contributing significantly to aircraft safety.

"ADJ1 Patrick's vast mechanical knowledge, coupled with a thorough understanding of sound maintenance practices, made him invaluable at the recent Individual Material Readiness Test and Pack-up Review Conference. Petty Officer Patrick also represented the squadron at the recent T-58 Engine Service Problems Conference and assisted in revision of the engine inspection-Maintenance Requirement Cards, further demonstrating his substantial contributions to the squadron maintenance effort.

"ADJ1 Patrick is on the Kaman Aerospace Scroll of Honor for accomplishing three rescues in the H-2 aircraft and has also earned three Sikorsky "Winged S's" for personal rescues in the H-3 aircraft. His personal deportment illustrates the pride he has in himself and the United States Naval Service, and his awareness of the responsibility of the position he holds. Petty Officer Patrick is an outstanding mechanic, rescue aircrewman and naval petty officer in all respects.

"He is a superb leader, thoroughly qualified and versatile, possessing those attributes that dictated his selection for Maintenance Man of the Year.

"The men of HSL-31 are truly proud to call Petty Officer Patrick 'Shipmate.'"

CONSTRUCTION UNDER WAY OF HELO ST&E CENTER AT LAKEHURST

LAKEHURST, N. J.—Construction of a multi-million dollar test complex began recently at the Naval Air Test Facility here. Designated the Helicopter Support Test and Evaluation Center, the complex is designed for full-scale testing of shipboard helicopter landing facilities. When operational, the new center will permit complete testing of lighting, marking, deck features and recovery assist-devices using Fleet-type helicopters.

The new center will provide the capability to test helicopter support equipment ashore under conditions which will closely simulate the operational environment.

Encompassing 114 acres, the center will consist of an elevated fixed platform, a universal lighting pad, a vertical/short takeoff and landing (V/STOL) forward operating facility, ship motion simulator, and a control center.

The elevated fixed landing platform, which was constructed in 1971, features a 60 x 85 foot steel deck raised 30 feet above the surrounding terrain to simulate the flight deck of a large auxiliary ship (such as a replenishment oiler or an amphibious cargo ship). Even as military construction of the operations building and taxiways is in progress, tests are underway on this platform to evaluate the "Beartrap" and "Harpoon" type landing aids. These devices provide positive securing of the helicopter to the deck upon touchdown necessary for operations from small ships operating in heavy seas.

The universal lighting pad, a 150 x 250 foot concrete landing surface, will permit duplication of any flight deck layout in markings and lighting, so as to thoroughly evaluate all proposed designs under actual flight conditions.

The V/STOL forward operating facility consists of a 600-foot runway constructed of AM-2 aluminum matting. It represents an intermediate stage in the development of expeditionary airfields for the Marine Corps. This site will be used to test/develop equipment necessary to operate AV-8A type aircraft and helicopters in tactical environments.

In addition to these sites, a ship motion simulator is expected to become operational some time during 1975 to provide full-scale dynamic simulation of the flight deck of a destroyer-sized ship. This motion simulator will enable the Navy and other governmental agencies to more thoroughly explore the critical interface between ship's deck and helicopter dynamics throughout the launch and landing phases.

Working together with the Naval Air Engineering Center, Philadelphia, under program management of the Naval Air Systems Command, the Test Facility will gradually expand tests to include all aspects of the current and future helicopter operations in the Navy. It is anticipated that use of this new center will result in the thorough testing of all new helicopter and V/STOL support equipment prior to Navy acceptance and assignment to operational use in the Fleet.

TESTING BEARTRAP—An SH-2F LAMPS helicopter at the Naval Air Test Facility's new Helicopter Support T&E Center is shown during testing of the "Beartrap" haul-down and securing system. (USN photo)

1000-Hour Pilots

Three more names have been added to the list of approximately 500 pilots who have logged 1,000 hours each in helicopters produced by Kaman Aerospace. Latest to qualify for the 1,000-hour plaque awarded by KAC in recognition of this accomplishment are:
HH-43 — Capt Javad Deyhim of the Imperial Iranian Air Force and Maj Marion C. Faseler, 1550th Flying Training Squadron, Hill AFB, Utah.
H-2 — LCdr Stephen Tobey, SAR Unit, Naval Station, Rota, Spain.

Kaman SEALAMP

Kaman Aerospace Corporation's SEALAMP model was displayed at the Town and Country Motel, San Diego, Calif., during the 25th annual convention and reunion of the Navy Helicopter Association in March. The eight-foot model, which attracted considerable attention at the NHA event, also was displayed at the annual Naval Air Pacific ball at San Diego's Del Coronado Hotel and at HSL-31 headquarters, NAS Imperial Beach. The following month, the model was included in Kaman's exhibit at the American Helicopter Society in Washington, D. C.

At the NHA reunion, a slide presentation showing LAMPS operations completed the Kaman exhibit. During the two-day program, Bruce A. Goodale, manager of military marketing, made a detailed presentation on the development of the LAMPS program, modification and testing of the SH-2D, LAMPS operations and the advent of the SH-2F LAMPS model with increased strength landing gear and the "101" rotor system. Other Kaman participants in the program were David W. Demers, Vice President of Contracts/Marketing; Owen F. Polleys, H-2/LAMPS Program Manager; Jack C. Goodwin, Assistant Chief Test Pilot; William McLaughlin, Manager of Public Relations; and Technical Representatives Donald T. Lockridge, John J. McMahon, Richard L. Smith, NAS Imperial Beach; William Miles, NAS North Island. (Photo on back cover)

Kaman's SEALAMP Helicopter Model

Kaman Aerospace Corporation's SEALAMP helicopter model, exhibited at the Navy Helicopter Association's 25 Reunion in San Diego, represents Kaman's concept of a modern, high-performance, shipboard-qualified helicopter weapons system for Mark III LAMPS—the Light Airborne Multi-Purpose System.

Bearing a slight resemblance to the current Navy/Kaman SH-2F LAMPS SEASPRITE helicopter from which it has grown, the SEALAMP model demonstrates the installation of LAMPS prime mission equipment, including a powerful search radar, an internally-stowed magnetic anomaly detector (MAD), a launcher for active and passive sonobuoys, an ASW homing torpedo slung on a dual purpose auxiliary fuel tank mount and electronic support measures (ESM). All equipment installations are fully integrated in an aerodynamically smooth airframe for maximum system performance, reliability, maintainability and accessibility.

The model was constructed by KAC sheet metal shop personnel headed by Foreman Wes Lynn. Originally it was designed in one-fifth scale to wind tunnel tolerances of 1/5000 inch for testing the aerodynamics of the UH-2A SEASPRITE version. Since then it has undergone several modifications and modernization, like the actual aircraft. Chief among these was conversion to twin-engine configuration with the UH-2C version.

The fuselage is constructed of laminated mahogany and pine with faired polyester surfaces and fillets. The rotor hub is of machined aluminum and main and tail rotors are of wrapped aluminum. A geared 1/10 hp electric motor drives the main rotor at 25 rpm and a smaller motor with independent drive turns the tail rotor at 50 rpm. The model has two coats of filler and two coats of finish paint and especially designed decals. It weighs approximately 200 pounds.

(Story inside back cover)