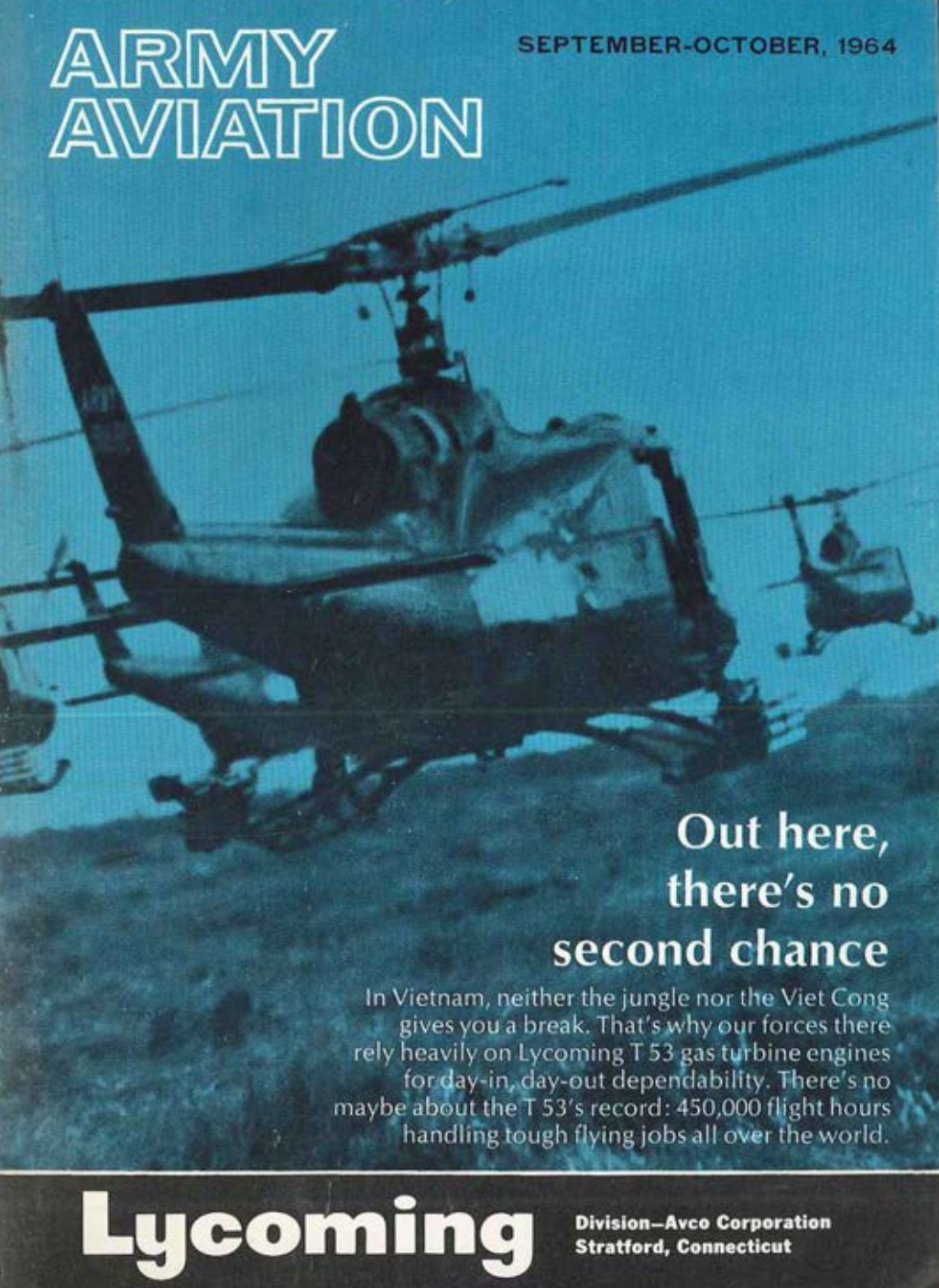


ARMY AVIATION

SEPTEMBER-OCTOBER, 1964



Out here, there's no second chance

In Vietnam, neither the jungle nor the Viet Cong gives you a break. That's why our forces there rely heavily on Lycoming T 53 gas turbine engines for day-in, day-out dependability. There's no maybe about the T 53's record: 450,000 flight hours handling tough flying jobs all over the world.

Lycoming

Division—Avco Corporation
Stratford, Connecticut



Chinook

PROGRESS



U.S. ARMY CH-47A CHINOOK HELICOPTERS



United States Army CH-47A Chinook helicopters played an important role in the Army's air mobility test exercise, Air Assault II, that took place in North and South Carolina.

Designed and produced by The Boeing Company's Vertol Division, the Chinook carried out such vital missions as resupply of front line troops, transport of fuel for air and ground vehicles in the forward areas and transport



PARTICIPATE IN AIR ASSAULT II MANEUVERS

of troops and artillery with crews and ammunition.

Shown above is a formation of 22 Chinooks during the Air Assault II operation. This helicopter armada is capable of transporting on a single mission over 308,000 pounds of cargo or almost 1,000 troops.

Taking part in Air Assault II, a maneuver to evaluate air mobile techniques with a division size unit, were the 11th Air Assault Division and the 82nd Airborne Division. The

82nd Airborne were the "aggressors" and the 11th Air Assault Division mission was to repel their attack and take offensive action using newly devised air mobile tactics.

Units of the 11th Air Assault Division using the CH-47A Chinook include the 228th Assault Support Battalion and the Provisional Helicopter Company of the 10th Air Transport Brigade.

BOEING

VERTOL DIVISION

ARMY AVIATION

VOL. 13-NUMBER 9
SEPT.-OCT., 1964

WELCOME
TO
AAAA
MEMBERS



ON October 19, Army Aviation Ass'n members and National Regional, and Chapter officers and delegates will gather at the Shoreham Hotel in Washington, D.C., on the occasion of the Sixth Annual Meeting of the AAAA.

To those who attend the Meeting, I extend my warmest greetings and my best wishes for a memorable gathering of long time friends. The good fellowship that has characterized all AAAA activities - whether National, Regional, or local - has been a source of considerable satisfaction to those charged with the direction of the organization.

Our 1964 Meeting is again enhanced by the dividend of follow-on dating with the Annual Meeting of the Association of the U.S. Army, dating that will provide early AAAA attendees with the opportunity to meet and hear the top leaders of the U.S. Army. It promises to be a most rewarding convention!

Darwin P. Gerard
President
AAAA

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7 LEAGUE ARMY BOOTS: SIZE CV-7A

American turbine know-how and Canadian experience in STOL aircraft development have produced the CV-7A BUFFALO utility transport for the Army.

- Two General Electric T.64 turbo-engines & Hamilton Standard propellers.
- World-wide self-deployment capability.
- STOL performance from unprepared 1000 ft. strips.
- Carries 5½ tons or 41 troops.

Developed under U S/Canadian cost sharing program, the CV-7A exemplifies international co-operation in trade and defence.



One of the four CV-7A BUFFALO now flying, over the International Border at Niagara Falls.

THE DE HAVILLAND  AIRCRAFT OF CANADA LIMITED
DOWNSVIEW ONTARIO

MILESTONES

OCTOBER, 1964

NASSA SYMPOSIUM

The National AeroSpace Services Association will hold its 7th Annual Army Aviation Contract Symposium, November 30, at the International Inn, Washington, D.C. Key Army and industry leaders will exchange ideas on aircraft maintenance and flight training accomplished under Army contract. Principle Army speakers will be Maj. Gen. Clifton F. von Kann, and Brig. Gen. John J. Tolson.

CONTRACT TRAINING

Ross Aviation, Inc., has received an Army contract to conduct rotary wing instrument training at the U.S. Army Aviation School. About 540 rotary wing pilots will be trained by the Tulsa, Okla. contractor during the balance of FY 65, with the first class starting in February, 1965. The Bell 47G-3B-1 will serve as the Army's helicopter instrument trainer. Until USAAVNS receives its full complement of 60 new 47G's, the training will be conducted in modified UH-1B's.

ONE MILLION!

Total operating time for all Lycoming T53 gas turbine engines passed the million mark in October, this total exceeding that of any other turbine engine in the 1,000-3,000 shp power range. A high proportion

of the operating time has been under adverse environmental conditions of extreme heat and cold.

PERMANENT STRUCTURE

Braman Hall, a one-story, six-classroom building to train organizational mechanics at USAAVNS, was dedicated October 29 to Sp4 Donald L. Braman, who was killed in Vietnam on January 2, 1963.

CV-7A DEMONSTRATION

The CV-7A Buffalo recently demonstrated its capabilities at Fort Belvoir before top Army officials, including Secretary of the Army Stephen Ailes. The STOL aircraft can carry 41 combat troops, 21 litter patients, or five tons of cargo. Powered by GE T64 turbo engines, each developing 2,850 ESHP, the Buffalo design features a 274 mph speed, an operating range of 1,880 n.m., and 1,580 cu. ft. of space.

CHINOOK PROGRESS

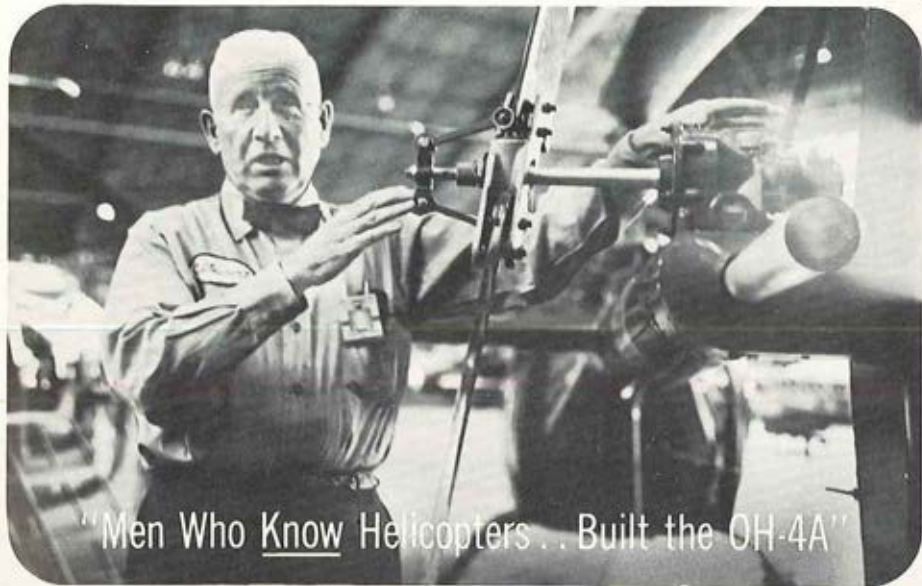
Over 70 CH-47 Chinook helicopters were in Army service as of late September, 1964. During this period the Chinooks have logged a total of 11,947 flight hours.

"ON STATION"

The Army Aviation Detachment for Antarctic Support is now operating at McMurdo Station, Antarctica. The crews have been trained in cold weather and mountain survival techniques. Their first project will provide assistance and transportation to engineers of the U.S. Geological Survey as they map uncharted mountainous regions in the David Glacier area of Victoria Land. The detachment will return to Fort Eustis in March.

STEWART: "I've seen a lot of improvement in helicopter maintenance since I worked on the company's first ship back in 1942. After working with the OH-4A for the past year, I know that all of the advancements we have put into our LOH have made this the easiest ship to keep flying we've ever built. 'Murphy-proof' features make it practically impossible to assemble wrong, and rigging is really easy. We thought some of our previous models were easy to keep 'up', but this one is even easier."

CLARENCE STEWART — Automotive and aircraft mechanic since 1920, Stewart came to Bell as service trainee in 1942, appointed field mechanic in 1946, crew chief in 1947. Has served as assistant foreman of Experimental Flight Department since 1951, maintaining initial test models of advanced Bell designs such as XV-3, XH-40, and OH-4A.



"Men Who Know Helicopters... Built the OH-4A"

WORLD
STANDARD
bell
MILITARY & COMMERCIAL HELICOPTERS

h BELL
HELICOPTER
COMPANY

FORT WORTH, TEXAS

A DIVISION OF BELL AEROSPACE CORPORATION

A **textron** COMPANY



Lawson Army Air Field, Ft. Benning, Ga., (above) as is seen in a photograph taken by the new Fairchild 70mm panoramic surveillance system during recent operational flight tests. Designated the KA-60 by the Army, the forward firing system recently was installed by Fairchild in the nose of Mohawk OV-1 aircraft. The camera scans through 180 degrees to furnish an extreme wide angle view. (Fairchild)

HILLER-HUGHES TO BID

First production of the Army's new Light Observation Helicopter (LOH) -- "the jeep of the air" -- will be procured on a multi-year, fixed-price, competitive bid basis, according to an October 29 Army announcement.

The Hughes Tool Company's Aircraft Division, Culver City, Cal., and the Hiller Aircraft Company, Palo Alto, Cal., have been selected after competition to bid on this procurement. Prices will be solicited from the two companies for 714 aircraft with deliveries to begin in FY 65 and to continue through FY 67.

The LOH is basically a two-place helicopter with sufficient additional space to carry at least 400 pounds or two other passengers. The LOH is expected to be a reliable, easily maintainable turbine-powered helicopter capable of performing the

primary tactical mission of visual observation, target acquisition, battlefield reconnaissance and command control.

NEELY JOINS VERTOL

Brig. General Robert B. Neely, USA-Ret. (lower left), has joined The Boeing Company's Vertol Division and will be located in Munich to coordinate Vertol's interests in Western Europe. A USMA graduate and Master Army Aviator, Neely served as Commandant of the Transportation School and ACofS, Logistics, Strike Command, prior to his retirement.



Neely



Hammarstrom

HAMMARSTROM CITED

Lt. Colonel Arthur F. Hammarstrom (lower right), former Chief of the Aviation Division, First U.S. Army, and presently attending the USAAVNS prior to reporting to a Vietnam assignment in January, '65, was presented a Certificate of Achievement for "exemplary and faithful service" for his management of the aviation resources within First U.S. Army during July, '62-Oct., '64.

said the mech to the engineer...

HERE'S A GIMMICK: THIS TEENY TOOL BOX--ALL THAT'S NEEDED TO KEEP THE LOH FLYING.

THAT IS A COLORFUL WAY TO EXPRESS RELIABILITY AND MINIMUM MAINTENANCE, BUT IN DESIGNING THE OH-5A OUR CRITERION FOR THOSE QUALITIES IS "COST EFFECTIVENESS."

1.



SPECIFICALLY: WHEN YOUR TRANSMISSION AND ROTOR SYSTEM, WHEN THE HEART OF YOUR HELICOPTER IS STILL ASKING FOR MORE AFTER THE VERY FIRST 1000 HOURS--THAT'S REAL EVIDENCE OF FUTURE COST EFFECTIVENESS IN SERVICE.

BUT I HAVE TO FEEL IT. I'M OUT IN THE BOONIES. MUCK UP TO HERE. SWEAT. SHIP HAS ANOTHER MISSION RIGHT NOW. I HAVE TO BE A MAN OF SPECIFICS, NOT LOGISTICS.

SPECIFICALLY THEN: THE OH-5A PROVED ITS RELIABILITY AND TBO SUPERIORITY IN ITS VERY FIRST 1000 HOURS OF FLIGHT--RIGHT OFF THE BAT, RIGHT OUT OF THE SHOP.

2.



I STILL DON'T FEEL IT! TELL ME ABOUT INSTANT SERVICE ACCESSIBILITY STUFF--LIKE I DON'T HAVE TO BE AN OBSTETRICIAN TO REMOVE AN ENGINE, OR A WATCHMAKER TO HANDLE A ROTOR HEAD WHEN THE RAIN IS DRIPPING DOWN MY BACK AND THE REDS ARE IN THE NEXT PADDY.

OH-5A ENGINE, CONTROLS AND ROTOR HEAD ARE FULLY EXPOSED BY SLIDING BACK ONE COLLING. ITS SEMI-RIGID ROTOR IS CLASSICALLY TOUGH AND SIMPLE. EASIER MAINTENANCE AND LESS OF IT. THE OH-5A IS MADE FOR THE JUNGLE, NOT THE NURSERY.

3.



I FEEL IT! I FEEL IT! (-BY THE WAY, IS IT ALL TRUE?)

INDEED IT IS. (YOU ADVERTISING AGENCY PEOPLE ARE ALL SO CYNICAL...)

5.



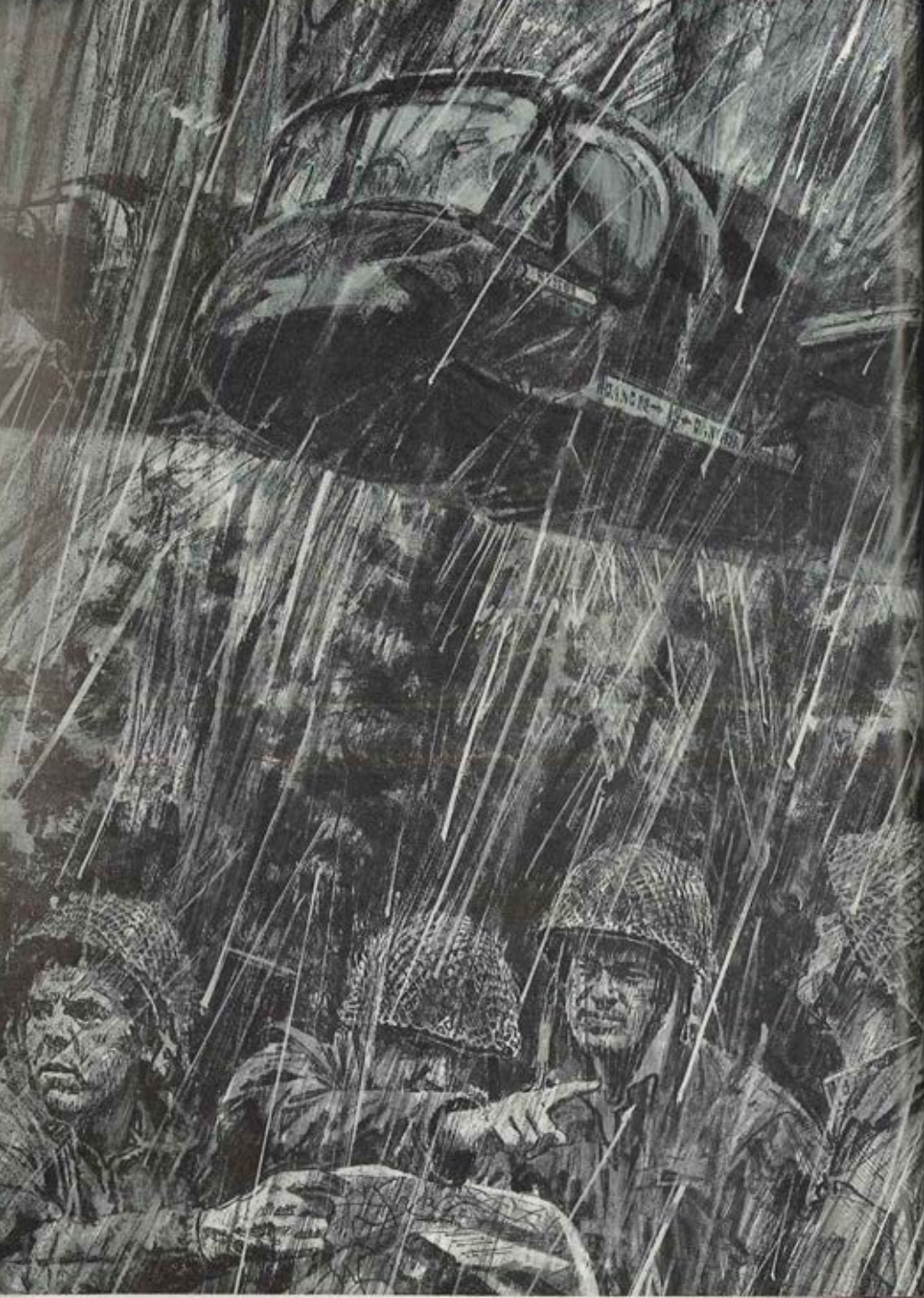
4.



OH-5A

FIRST THINGS FIRST. Years of designing, developing, building, testing, delivering and servicing light observation helicopters for the U.S. Army taught Hiller technicians that mission capability, reliability and ease of maintenance must be at the top of the LOH characteristics list. That's where the Army put them. That's where the OH-5A has them.

HILLER
AIRCRAFT COMPANY, INC.
PALO ALTO, CALIF. WASHINGTON, D.C.
SUBSIDIARY OF FAIRCHILD STRATOS CORPORATION



Visual Links

Tactical Teammates

Working as a team, two all-weather Army Mohawks comprise a surveillance system of great tactical use to the battlefield commander.

First, the OV-1B Mohawk observes enemy action from well behind battle lines, via long-range, side-looking radar. Once the OV-1B has indicated the need for more precise informa-

tion, the other half of the team—the OV-1C—takes over. It penetrates the forward edge of the battle area at treetop level, for closeup visual, photographic or infrared target identification.

Both aircraft provide a responsive airborne surveillance system, operative under day or night all-weather conditions.

GRUMMAN AIRCRAFT ENGINEERING CORPORATION • Bethpage, Long Island, N. Y.





The many faces of the PT6

The Pratt & Whitney Aircraft PT6 powers more fixed wing and rotary wing aircraft than any other engine in its class. Selection of the PT6 (T74) by so many discriminating customers is overwhelming evidence that this engine offers more than any other in its class. The PT6 is remarkably quiet, immune to foreign object ingestion, and available off the production line! Throttle response is immediate and the free turbine allows selection of varying engine and propeller speeds for most efficient operation. Thoroughly tested and FAA Certified, the PT6 is backed by the world-wide United Aircraft organization. When you begin with the PT6 you begin with *experience* and proven dependability.

United
Aircraft

OF CANADA LIMITED

ONCE again the time has come to gather at the Annual AAAA Meeting in Washington. This year marks at least one change from the recent past in that we convene in the Shoreham Hotel just around the block from the Sheraton-Park. I'd like to take this opportunity to welcome you to the festivities and to add my hopes for a successful meeting.

There has been no lack of activity since my last newsletter, but I do not have much to pass on in the form of status reports. Rather, I would like to discuss a few subjects in a rather informal manner in hopes of providing you with a little more rationale behind some of the things that are going on in Army aviation and stimulating a little more thought in certain areas.

My discussion will touch on several somewhat unrelated subject areas. These subjects are some which I feel should receive your attention, and I am sure they have generated considerable thought among Army aviators for quite a while.

R/W INSTRUMENT TRAINING

The helicopter's most important contribution to the Army is in improving tactical mobility. Its full

potential will not be realized, however, until it is habitually flown in support of the ground soldier whenever the mission dictates - not only during good weather but also during instrument flight conditions. It is under poor weather conditions that we may well gain the greatest tactical advantage. It is obvious that this capability cannot be achieved unless our helicopter pilots are instrument qualified.

To reach the Army's goal of having all rotary wing aviators capable of tactical IFR operations, the Army Aviation School is increasing the program for helicopter instrument training. The rotary wing training program for initial entry students is being changed this year to include eight weeks of instrument training. As additional aircraft become available, the curriculum will be expanded to a full twelve-week helicopter qualification course.

In the future, all initial entry rotary wing graduates will be instrument qualified. In addition to the expanded initial entry program, input of rated aviators to the separate Helicopter Instrument Flight Course has been increased from 100 to 320 a year. This course, however, is not the sole answer to qualifying the existing backlog of

WELCOME TO AAAA!

By BRIG. GEN. JOHN J. TOLSON
DIRECTOR OF ARMY AVIATION, OACSFOR

non-instrument rated Army aviators. Much must be done at unit level to reach the Army's goal of 100 per cent instrument qualifications.

It seems to me that the extent to which units are training helicopter instrument pilots varies widely. There is no doubt that a unit instrument training program requires the use of a sizable percentage of available personnel, aircraft and time. It is also realized that these are the very resources that always seem to be short when it comes to meeting daily operational and training requirements.

However, an effective training program can be integrated into the overall unit training program and even conducted concurrently with certain operational missions. Many units already have such a program and have found that it not only improves individual pilot proficiency and qualification, but it contributes directly to overall unit readiness.

Priority must be given initially to training those pilots who occupy cockpit seats. As time and resources permit, the program can be continued to qualify all unit aviators. I believe that efforts in this direction will pay dividends far beyond the work involved.

DIVISION AVIATION OFFICER

In the ROAD Division organization, the aviation battalion commander wears two hats: commander and staff officer. It seems to me that, in some organizations, the functions and responsibilities of Division Aviation Officer are receiving a great deal less emphasis than those

of battalion commander. On the other hand, in other units the aviation battalion commander wears his staff hat a large part of the time in loosely supervising division aviation activities.

Since ROAD Divisions have not yet received a full complement of TO&E aviation equipment, pilots and aircraft, many undoubtedly have placed the few assets on hand into the division aviation battalion. In this situation, of course, the Aviation Officer's role of commander demands almost all of his time. However, as assets continue to increase, many of the division aircraft will be organic to major subordinate units of the division. It is, then, that his staff officer hat will begin to press more heavily on the commander's head.

WHICH HAT TO WEAR?

It is obvious that a great deal of attention must be devoted to commanding the aviation battalion. For assistance in his staff job, however, the commander can no longer turn to a separate division aviation staff section. There is, of course, the position space for the assistant aviation officer who provides the continuous liaison to the division staff in the absence of the aviation officer/battalion commander. He usually locates himself and a few borrowed aviation personnel from the battalion in the Division Tactical Operations Center. In the absence of the Division Aviation Officer, he provides the aviation input for estimates, plans and orders of the division commander.

When the aviation battalion commander puts on his staff hat, he transposes himself into actions af-

fecting the aircraft and pilots of other commanders. Here he treads in a challenging field. He himself is a major unit commander, and yet he must "... exercise staff supervision over technical and flight aspects of administration, training, safety and operations of Army Aviation units." He, in fact, may be directed to "... assume operational control of aviation units under control of the command." His staff function will certainly be no easy task and, indeed, will be given a wide variety of flavor when various command personalities are considered. However, difficulties notwithstanding, he has this staff responsibility to enter into the aviation business of other commanders. He must be up to date on the problems, state of training and equipment status of the division artillery aviation section, the aviation sections of each of the three brigades and the air cavalry troop of the cavalry squadron.

"IMPARTIALITY" NEEDED

He must also be familiar with the aircraft maintenance capabilities and problems of the division support command. He will indeed be required to recommend their priority of work - often placing his own battalion in competition with other aviation units of the division. This division of attention requires a good man - one who "wears two hats" with impartiality.

The only conclusion is the inevitable fact that the division aviation officer/aviation battalion commander cannot slight either function. However, this is not a singularly unique position in the division as the Division Signal Officer/Signal Bat-

AWARDS DISPLAY

The four national awards of the Army Aviation Association - including the Hughes Trophy presented annually to the "Outstanding Aviation Unit" - will be on display at the President's Reception to be held in the Registry Room of the Shoreham Hotel, Washington, D.C., on the evening of November 19.

talion Commander and the Division Engineer/Engineer Battalion Commander have been doing this successfully for years.

EMERGENCY FREQUENCIES

The problem of excessive use of the emergency radio frequencies, 243.0 mc and 121.5 mc, has been the subject of recent discussions between the Department of the Army and the Federal Aviation Agency. On the basis of complaint statistics, Army aviators have a reputation for proper radio procedure and frequency use, but I am sure that we can improve our performance in this regard. The majority of improper uses of emergency frequencies have been the result of impatience on the part of some aviators.

Some examples are: reverting to emergency frequency because of improper receiver tuning; use of emergency frequency in an attempt to obtain taxi or clearance instructions; and use of emergency frequency to re-establish contact with the Center Controller when the aviator is unable to get a response on

the assigned communications channel.

These are but a few typical examples of improper use of emergency frequencies which negate the purpose for which these channels are assigned. No one needs to be reminded that these frequencies are for bona fide emergency use. They should be jealously guarded as clear channels in order that they will be readily available in the event that an emergency does arise.

If each of us, prior to using a guard channel, can satisfactorily answer the question, "Is my situation really an emergency or am I just taking the line of least resistance?", then the problem of abuse of the emergency frequencies will be licked. Again, let's keep these channels clear for their intended use. They will then be available for all of us when and if we really need them.

CH-54 FLYING CRANE

In spite of my introductory remarks, I do have one progress report to make.

The first group of Army aviators have just completed their flight training in the Army's largest helicopter, the CH-54 Flying Crane. The CH-54 qualified aviators, Captains T. S. Clark and D. M. Vosel and CWOs A. L. Gajan, J. R. Oden and C. A. McVey, are all assigned to the 10th Air Transport Brigade (Test), Fort Benning, Georgia.

The 20-hour flight program, conducted for the Army by the Sikorsky Aircraft Division at Stratford, Connecticut, consisted of day and night flying and included the use of aft-facing controls, towing, and lifting

external loads utilizing both the single point and the four point sling suspension systems. In the accomplishment of this training, the CH-54 was available for 21 of the 22 scheduled training dates and flew 80 hours per month.

The second group of 10th Air Transport Brigade (Test) aviators to accomplish CH-54 training at Stratford, CWOs D. Blackenship, A. Mills, and R. Lane, ferried the first CH-54 to Project TEAM in mid-September.

Four of the six CH-54 Flying Cranes being procured by the Army will be delivered to Project TEAM by October 1964 to participate in the airmobile testing. These Flying Cranes, presently capable of lifting a 10-ton payload, are being assigned to the 478th Flying Crane Company, 44th Air Transport Battalion of the 10th Air Transport Brigade (Test). The 478th Flying Crane Company is commanded by Captain J. D. Ferette and the 44th Air Transport Battalion Commander is Lt. Colonel F. Shaw.

PERSONNEL

At this writing, Lt. Colonel Ed Nielsen is completing four years with the Directorate and departs shortly for assignment with the Army Concept Team in Vietnam. Ed has served in a number of capacities in our Materiel Division and has been chief of the division since last March. We hate to see him go but know that he will continue to do a fine job for Army aviation in his new and challenging assignment.

We have welcomed Lt. Colonel "Buck" Buchanan to the Directorate. He is working in the Operations, Training, and Safety Division.

Solar Titan gas turbine APU makes the CH-47A Chinook helicopter completely independent of ground support

Solar's potent, rugged *Titan*® T-62 gas turbine generates electric and hydraulic power aboard the Army's new Boeing-Vertol CH-47A Chinook helicopter. The lightweight, compact *Titan* turbine-powered unit makes it possible to start or service the Chinook anywhere in the world without ground support equipment.

Although it develops 80 hp, the Solar *Titan* gas turbine weighs just 61 lb and is only 25 inches long and 12½ inches in diameter. It has been qualified to military specifications. *Titan* gas turbine APU's may be equipped with alternators, generators, hydraulic pumps, pneumatic

compressors or any combination of these units.

Solar *Titan* gas turbines are currently used to supply power aboard a number of advanced Army, Navy, Air Force and Marine Corps helicopters, including Boeing and Vertol's CH-46A, Sikorsky's CH-3C, CH-53A and Flying Crane. Other *Titan* turbines drive easily portable ground power and checkout units. For more information about the *Titan* gas turbine, write Solar, a Division of International Harvester Company, Dept. M-167, San Diego, California 92112.



80 hp Solar Titan gas turbine

SOLAR



A Division of International Harvester Company





NEW FROM LOCKHEED:

**The first helicopter that's
a stable weapons platform**

Lockheed's rigid rotor helicopter is an ideal weapons platform—easy to bring on target, easy to *hold* on target, designed to absorb recoil and automatically maintain position.

What's responsible for such rock-steady performance? The gyroscopic action of the rigid rotor. And Lockheed research found the way to make the rigid rotor practical by combining it with a unique control gyro. That's why the pilot can fly the Lockheed helicopter hands off. And because he flies the control gyro rather than the rotor, he gets control input response of 0.2 second—no black boxes required. Small wonder the rigid rotor helicopter



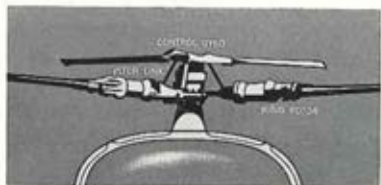
A compound version of the rigid rotor helicopter shown in composite photo is now in test flight.

can so easily out-maneuver all other helicopters.

There's another real advantage to the rigid rotor: its mechanical simplicity means 30% fewer parts, cuts maintenance to a minimum.

Lockheed is now applying to the rigid rotor helicopter the broad experience in airborne weaponry it has gained from developing systems for an historic line of military aircraft. Result: a revolutionary approach to airborne weapons systems. *Lockheed-California Company, Burbank, California: A Division of Lockheed Aircraft Corporation.*

LOCKHEED



Control gyro is the secret of the rigid rotor helicopter's control and maneuverability. It responds instantly to pilot's input, changing pitch of rotor blades. Automatically compensates for wind gusts or weapons recoil.



*Navy's
A-7A light attack aircraft*



*Army's
Lance missile*



*tri-service
XC-142A V/STOL transport*



*Army's
XM-561 vehicle*

What's new in Defense? Take a look.

*from LTV
with proficiency*

LTV
LING-TEMCO-VOUGHT, INC.

A SAFETY of flight condition on the UH-1, Iroquois, is a matter of great concern to the Aviation School. This condition is called "Collective Bounce", which is quite similar to a 1 to 1 vertical vibration that progresses to violent proportions. Apparently the considered primary cause is insufficient collective pitch friction. In order to minimize the probability of this type of vibration, there should be a minimum of "built-in" friction of from four to six pounds measured at the top of the collective control, with the friction device full off.

In addition, all UH-1 aircraft should be flown with a moderate amount of mechanical friction applied. The term "moderate" has as many interpretations as there are UH-1 qualified aviators. One aviator who experienced a case of severe bounce reported; "The collective friction was approximately the same as I have used in 400 hours of pilot and instructor pilot time in the UH-1. This phenomenon has never happened to me before." This point bears careful consideration.

POSSIBLE CAUSES

There are other possibilities which could contribute to this problem. As a helicopter gets older, the flight linkages become worn and there can develop an accumulation of control sloppiness in the system. Couple with this a deterioration of the collective friction lock and you have the makings of a real problem.

If one gets into this fix, how do you get out? Perhaps the best thing to do is to quote several pilot reports to better understand the var-

COLLECTIVE BOUNCE



**By Colonel Robert F. Cassidy
Assistant Commandant
U.S. Army Aviation School**

ious procedures available for recovery.

"While at normal cruise (80 knots) I intentionally started small rhythmic movements with the collective. The aircraft responded with rhythmic vibration which increased almost instantly to such intensity that I could not control or recover the aircraft from this condition. I tried to bottom the pitch completely but the vibration would continue to bounce the collective and the situation continued. I then tried increasing collective pitch, but this only gave momentary relief and then continued to get worse. I then asked the student to turn the hydraulic switch off. The student did this, and the vibration immediately dampened out."

"Upon entry into autorotation at a stagefield, collective pitch was reduced and "bounce" started at approximately full bottom pitch and continued during the power (throttle) reduction. Application of pitch combined with full throttle eliminated the bounce."

"IP noticed that the student had little or no collective friction . . . IP jiggled collective very slightly and the aircraft immediately started to bounce. Application of pitch and power did not reduce the condition, nor did reduction of pitch. IP had student friction the collective tightly and this eliminated the bounce."

"During entry to a basic straight-in autorotation, the student abruptly lowered the collective pitch and the aircraft almost immediately developed a vertical bounce. I increased power and pitch, intending to make a go-round, but this seemed to aggravate the condition so I re-

duced the pitch and re-entered autorotation, rolling the throttle to the flight idle position. The bounce gradually decreased and a normal autorotation was completed."

As can be seen, there are several ways to eliminate this vibration. Perhaps the best corrective action is to turn the hydraulic switch off. What do you do when solo and nothing else works? The only thing available to reach the hydraulic switch, with both hands on the controls, is your teeth. What a revolting development!

OFF FLYING STATUS

In the future, personnel attending the Multi-Engine Medium Transport Airplane Maintenance Course (CV-2) 1-R-672.3 will not be placed on flying status during the conduct of the course. Paragraph 4-0 9b, AR 600-106, Aeronautical Designations and Flying Status for Army Personnel, which authorizes EM undergoing training in course 1-R-672.3 to be placed on flying status, will be superseded to reflect this change.

LIAISON VISITS

A liaison visit was made by personnel of the Department of Tactics to aviation units at Fort Bragg, North Carolina, to discuss aviation training problems in the field. Personnel of the units visited (the 69th Aviation Company and the Aviation Battalion of the 82nd Airborne Division) provided first-hand information on their training and associated problems that will assist the Aviation School in preparing Army Training Programs and other related literature.

Future visits of this type will be made to several other aviation units throughout CONUS as time, funds and personnel are made available.

ALL military operations in the Republic of Vietnam are subject to restrictions posed by the terrain. South of Saigon, the capital city, the land is flat and only a few feet above sea level. Innumerable rice paddies, knee deep in mud, give the impression of a high checkerboard laced by canals and waterways of the Mekong River.

North of Saigon the flatlands give way to rugged mountains ranging six to eight thousand feet in height and covered by dense jungle. The only major road in Vietnam runs from the northern border down the coast to Saigon. Few other roads are paved, and surface traffic is vulnerable to Viet Cong ambush.

The only way to support an intensive military campaign in such terrain, is by air. Helicopter units are doing an outstanding job providing troop lifts, fire support, and medical evacuations for combat operations. The Army's specialized fixed wing aircraft have an equally important role providing heavy logistical support, liaison, reconnaissance, surveillance, and additional fire power for the field units.

Fixed wing aviation is represented in Vietnam by the Aviation Support Battalion (Provisional), commanded by Lt. Col. Robert J. Dillard. The Aviation Support Battalion organized

**BY LT JAMES FLAUGH
18TH AVIATION COMPANY
USASCV (VIETNAM)**

in May 1964, consists of the 18th Aviation Company (U1-A Otters) for light transport, the 73rd Aviation Company (O-1F Bird Dogs) for reconnaissance, the 61st Aviation Company (CV-2B Caribous) for heavy transport and the 23rd Special Warfare Aviation Detachment (JOV-1 Mohawks) for surveillance.

In addition, the 339th Transportation Company (DS), the 611th Transportation Company (DS), and the 330th Transportation Company (GS) provide maintenance support. The battalion headquarters provides the command, control and administrative supervision for the units.

18TH AVIATION COMPANY

The 18th Aviation Company was the first fixed wing unit to arrive in Vietnam. Originally stationed at Fort Riley, Kansas, the 18th pulled up stakes in January 1962 and boarded the United States Navy Ship CORE bound for the South Pacific, "destination unknown." After departing Guam on 30 January, the troops were informed that their destination was Vietnam.

The Otter Company's headquarters was set up in the seaside town of Nha Trang but her ships were promptly spread to all parts of South Vietnam to provide close support to all corps areas.

The Otter's speciality is light transport. It is capable of carrying

VIETNAM REPORT



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eight passengers or up to a ton of cargo in and out of short, unimproved strips. The 18th's ships utilized over 150 strips, some cut out of the jungle, some between rice paddies, and still others built by the French to serve the rubber plantations that dot the countryside. Into these strips go hand tools, barbed wire, pumps, generators, munitions, and medical supplies to be used by nearby Special Forces Camps or MAAG field units. Often the only contact these camps have with the rest of the world are the aircraft that come and go from these improvised airfields.

Otter crews carry American and Vietnamese, from generals to privates, to all corners of Vietnam. Vietnamese rations including live pigs and chickens, dried fish, and sacks of vegetables and rice are common loads. It is not unusual for

an Otter to go into a field with a load of supplies and return to its base with a load of medical evacuees.

The variety of loads has left the crew chiefs virtually immune to surprise. However, on one occasion an Otter hauling supplies to a Special Forces Camp was asked to wait a few minutes in order to transport a civilian to a province hospital. The patient turned out to be a woman ten months pregnant and having labor pains at two minute intervals. Upon hearing this, the crew chief blurted, "Oh my gosh, sir, what will I do if she has the baby on the airplane?"

In cases where there is no landing area near a camp, the Otters carry out resupply missions by low level paradrop. Flying two or three hundred feet above the ground, the 18th crews have developed pin-point accuracy and are able to hit very small cleared areas. In "hot" areas, particularly the Mekong Delta, Air Force fighter planes fly cover missions to protect the Otters from ground fire.

The 18th's twenty-four aircraft are on the go seven days a week. At the end of each month the flight crews find their flight time near the 90-hour mark, which is the limit set by Support Command to prevent accidents caused by fatigue. Like the air they fly in, the Otters are always available and tough to do without.

73RD AVIATION COMPANY

If you are seeking a unit with a long list of accomplishments, it would be a formidable task to top the Bird Dogs of the 73rd Aviation Company. The fact that the 73rd was the first aviation unit in Vietnam to be awarded the coveted Meritorious

ONE CHANCE!

A new AR change, Change 1 to AR 611-110, spells out that Army officers are only to be given one opportunity to complete AA flight training.

The new Army Regulation says, "The elimination from a previous course of military or military sponsored flight instruction for flying or academic deficiencies, disciplinary reason or lack of motivation precludes (the student's) entry or re-entry into the Army flight training program." Translated: You only have one grab at the AA brass ring.

Unit Citation, speaks for itself.

The company departed the United States on 28 May 1963 and arrived in Saigon, Vietnam on 31 May 1963. Its original mission was to provide reconnaissance and surveillance support for a single corps area, but Military Assistance Command, Vietnam (MACV) extended the mission. The 73rd now provides support to all of the Republic of Vietnam. The Company Headquarters is in Nha Trang, but it is probably the most widely dispersed unit in the country and its 32 aircraft operate from 15 separate locations, all the way from Hue in the north to Bac Lieu in the south.

WIDE UTILIZATION

Although reconnaissance and surveillance are its primary missions, the company offers wide diversification; successfully being utilized for artillery adjustment, target acquisition, command and control, message pick up, medical evacuation, radio relay, and resupply. The imagination used in the mission accomplishment has resulted in such things as pigs being strapped to bomb shackles for emergency food resupply to a Special Forces Camp, and on another occasion, a seriously wounded Vietnamese soldier was medically evacuated from a remote mountain strip while the aviator administered plasma transfusions in flight.

Regarding surveillance, the company's role cannot be understated. The only surveillance along the demilitarized zone between North and South Vietnam is accomplished by the Company's aircraft located in I Corps. No combat operation in the southern part of Vietnam close to the Cambodian Border is under-



taken without the close border surveillance offered by the sections located in the Mekong Delta area.

The various sections in support of ground operations represent the only fully integrated close support effort between air and ground elements in the country. The instant response provided to the ARVN ground commander has on numerous occasions been the difference between Viet Cong surprise and government victory. To the many Special Forces compounds, the 73rd represents a vital link to its supporting command.

In January 1964, a course of aerial observation instruction was instituted by the 73rd to train Vietnamese officers as observers. To date, over 60 Vietnamese officers and 1 NCO have graduated. The Vietnamese high command has shown a great amount of interest in the Company's program. The officers graduated by the unit have their status fully recognized by the ARVN to include diploma, aerial observer wings, and most recently, the incentive pay which specifies that applicant must have graduated from the 73rd's aerial observer school.

Over 41,000 hours of flight time have been recorded by the aviators in their first 14 months in Vietnam.

The 73rd Aviation Company may be justly proud of its accomplish-

ments. Probably the best example of the high esteem held for the unit occurred at the operations office of a section in the northern area of the country. The operations office displayed the 73rd's crest with the unit's motto, "Can Do" under it. After a series of combat support missions culminated by the emergency medical evacuation of a Special Forces sergeant, the aviators returned to the office to find the "Can Do" crossed out, and written over it was "Done."

61ST AVIATION COMPANY

In June 1963, an operation known as "Highroad" saw 18 CV-2B "Caribous" take off from McGuire Air Force Base, New Jersey, on the first leg of a flight halfway around the world. Their route took them over the Atlantic, across Spain, Italy, Greece, India, Thailand, and ended at their new home in Vung Tau, Vietnam. The extra fuel tanks that made the transoceanic flight possible were removed, and the Caribou set about proving itself equal to the conditions in Vietnam. The 61st Aviation Company had come to carry the Army's heavy loads.

Like all Army aircraft, the mission of the Caribou is close support. Using the same restricted landing areas as the Otters and Birddogs, the 61st Aviation Company moves



equipment on a large scale. The Caribou will carry 7,000 pounds of cargo and either land it or drop it anywhere within a one hundred mile radius. In their first year of operation, the 61st has provided the 4 corps areas with support carrying of 10,000 tons tons of cargo and over 100,000 passengers. Entire camps have been moved from one location to another in a matter of hours.

Recently, the 61st Aviation Company introduced resupply by Low Level Extraction (LOLEX) to Vietnam. LOLEX has been tested in the United States, but Vietnam represents its first field use.

The technique calls for the Caribou to be flown over the drop area at an altitude of about 10 feet. A drag chute attached to the bundle is deployed into the slipstream, pulling the load out of the ship through the tail hatch. The bundle is mounted on skids and slides across the ground until it comes to rest.

Speed and accuracy are the big advantages of the LOLEX operation, and it makes otherwise restricted areas, such as a stretch of narrow road, into acceptable drop zones.

The addition of LOLEX to the Caribou's capabilities is typical of the 61st Aviation Company's efforts to make their aircraft more valuable to the field units. The only complaint about the Caribou in Vietnam is that there aren't enough of them.

23RD SWAD

"Perform visual and photographic aerial surveillance in general support of the Vietnamese Army as directed by the Commander, U.S. Military Assistance Command, Vietnam."

This was the mission given to the

23rd Special Warfare Aviation Detachment (SWAD) when deployed to the Republic of Vietnam in October 1962, and this is the mission it is performing today. The 23rd SWAD is one of the unique units in Army aviation, for operational doctrine is being formulated while it performs the important task of combat support. Furthermore, the concepts, methods of employment, and the tactics developed will be the criteria for future organizations assigned the mission of battlefield surveillance in counter-insurgency warfare.

To perform its assigned mission, the 23rd SWAD is equipped with 6 JOV-1 Grumman Mohawk aircraft. Due to its comparative quietness, obtained by the use of turbo-prop engines, combined with a relatively high speed of over 200 miles per hour, the Mohawk is often over the communist Viet Cong positions before being observed. This is a major factor in detecting and identifying the enemy, and obtaining accurate and timely information for the Vietnamese ground commanders.

ON THE DECK

The 23rd SWAD uses "nap-of-the-earth" techniques, as over 90 per cent of all visual reconnaissance and observation missions are flown at altitudes of 50 to 500 feet. This tactic often places the pilot and the aircraft in a position vulnerable to enemy ground fire. Viewing the Mohawk as an unwanted guest, the Viet Cong are apt to greet it with a stream of tracers.

During a recent interrogation, a Viet Cong prisoner of war stated that the aircraft he and his companions feared the most was the Mohawk because of its many capa-

bilities - observation, artillery adjustment, and defensive fires. This statement is a tribute to the Mohawk and its pilots. It is also a positive indication of the importance of the mission they perform.

THE MAINTENANCE GROUP

Anyone who is acquainted with flying knows the technical difficulties involved in keeping a large number of aircraft in the air day in and day out. Operations in Vietnam only compound the problems. Here, maintenance isn't confined to well equipped work shops. Aviation Support Battalion aircraft are in operation all over the country. The maintenance units must send teams to any location to provide support as needed.

Much of this support is recovering downed aircraft in which Viet Cong are also interested. To them it may mean machine guns, radio equipment, or supplies. Thus, the recovery teams are likely to find themselves in a race to save a crippled ship. If the race is close the recovery team runs the gauntlet through a hail of small arms fire.

The Aviation Support Battalion asks a lot from its maintenance units, but it has a rugged group to call on.

The 339th Transportation Company (DS) came to Vietnam with the Otters in January 1962, and like the Otters, their headquarters are at Nha Trang. Their mission is to provide third and limited fourth echelon maintenance support to specified units, including half the Battalion units and several R/W companies outside the battalion.



Utilizing auxiliary jet engines and special rotor blade tips, a modified YUH-1B compound helicopter flew 236 mph on Oct. 15 near Bell's Ft. Worth plant, unofficially breaking the Russian-held world speed record of 221 mph set in 1961. (Bell photo)

As the aviation role in Vietnam grew, the 339th was joined by the 611th Transportation Company (DS). The 611th arrived in Vietnam in October 1962 and is located at Vung Tau, an old French airstrip on the northeastern edge of the delta. When the unit first arrived in Vung Tau, the airfield was all but completely destroyed. The 611th, in conjunction with its normal duties, had to rebuild most of its working areas. Now they share the third echelon work load with the 339th. Both units are supporting twice the number of aircraft they were designed to support.

The 339th and the 611th devote approximately 75 per cent of their time to aircraft maintenance and the remaining 25 per cent to recovery operations. For recovery operations, these 2 units are equipped with the CH-37 Mojave. The maintenance pilots must be both fixed and rotary wing rated, due to the wide variety of aircraft being maintained. With all the requirements of their primary mission, these men still find time to assist in medical evac-

uation and search and rescue missions.

To round out the maintenance capabilities of the Aviation Support Battalion, the 330th Transportation Company (GS) provides fourth echelon, aviation heavy maintenance. The 330th has been in Vietnam since April 1963 and they have also set up shop in Vung Tau. Their task is to support all aircraft in Southeast Asia. This support runs anywhere from minor adjustments of control systems to extensive repair of bullet damage or crash damage. In addition, the 330th processes and inspects every Army aircraft that enters or leaves Vietnam.

The importance of the maintenance role can be readily seen from the size of the maintenance capability within the Aviation Support Battalion. The 339th, the 611th, and the 330th are important and they know it. Perhaps that is why they are careful to live up to the slogan "Always in good hands."

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"**A**IRCRAFT down! S.A.R. Team report to the Operations Center immediately!"

With these words over the loud-speaker system of the 117th Aviation Company at Qui Nhon, Vietnam, a unique team of specially trained volunteers springs into action. S.A.R. stands for search and rescue. Their job is to locate the downed aircraft, secure the crash site, evacuate survivors, and aid recovery of the aircraft or its components.

Through extensive training, the members of the crack twenty-five man team, are capable of rescue recoveries from jungle, mountain, and sea. They are trained in rappelling from hovering helicopters and setting up a defensive perimeter around downed aircraft. In addition, they learn first aid, operation of ground-to-air radios, and the multitude of other needs required for rescue of personnel and recovery of downed aircraft.

Separate squads of six men each are trained according to a specific type of terrain. All members of the team are thoroughly cross-trained and able to work in jungles, mountains, or at sea.

The team is commanded by 1st Lieutenant Laurence H. Walker and works under the control of Major Virgil McGuire, commanding officer of the 117th Aviation Company.

Rappelling down a rope from a helicopter hovering 150 feet above the ground is an essential part of the training, since most of the rescues are made in areas where no landing zone is available even for helicopters.

A typical rescue for the SAR team will involve a rope slide into a jungle area, setting up a perimeter defense around the downed aircraft and rendering first aid to any injured personnel. Next, they clear an area to enable the rescue helicopter to land and evacuate the injured personnel. After this is done, they stay to protect the downed aircraft until it can be repaired and flown out or lifted out by a CH-37 Mojave. Since many of the rescues are made in areas heavily infested with communist Viet Cong, each man must be constantly alert throughout the performance of his job.

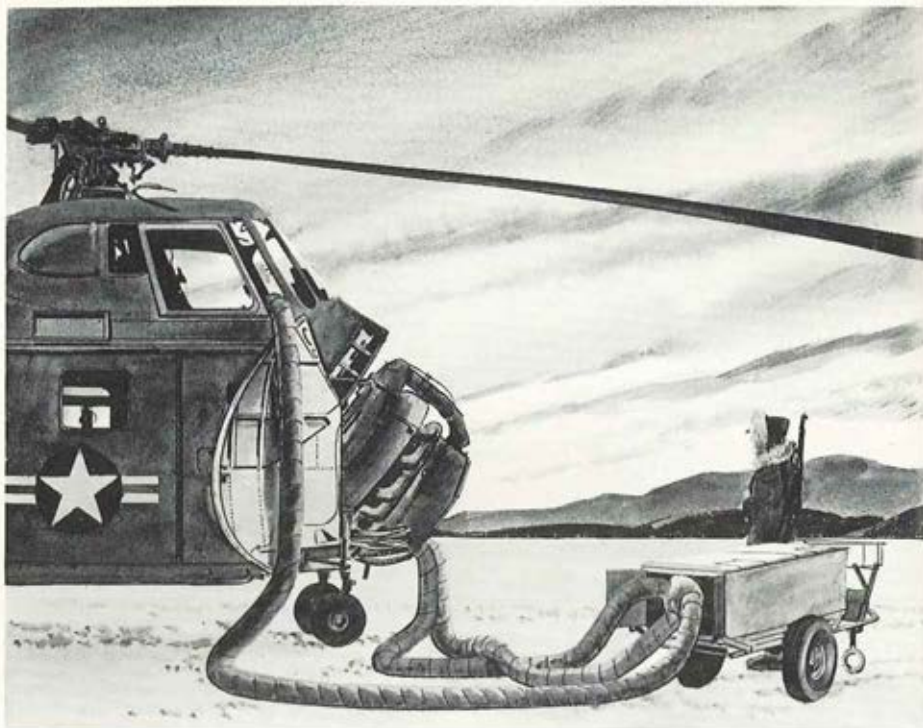
The team is also responsible for training all new arrivals to the 117th Aviation Company in ditching procedures. In conjunction with this, they demonstrate the methods used in sea rescue.

In spite of the risk and arduous training involved, there is always a waiting list of volunteers to fill slots vacated by departing team members. The spirit of the S.A.R. Team is exemplified by their motto, "Any time - any place - and fast!"

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OBITUARIES

Captain Harley Barrick, Captain Richard M. Cannon, Captain Albert D. Summers, and Chief Warrant Officer Lowell I. Farris of the 17th Aviation Company, 10th Air Transport Brigade, Ft. Benning, Georgia, sustained fatal injuries in the crash of two CV-2 Caribou aircraft on October 31, 1964.

The fatal accident followed a mid-air collision of the two Caribou near Augusta, Ga. The aircraft were involved in a low-level service mission at the time of the collision.

Captain Barrick is survived by his parents, Mr. and Mrs. Dale L. Barrick of 1500 Ridgeway Drive, Sherman, Tex., and Captain Cannon is survived by his widow, Mrs. Virginia S. Cannon of 2918 Ramsay Road, Columbus, Ga. Captain Summers is survived by his parents, Mr. and Mrs. Robert L. Summers of Low Gap, Ark.; Chief Warrant Officer Farris is survived by his widow, Mrs. Eunice F. Farris of 6061 Howell Drive, Lamesa, Calif.

AAAA FOUNDATION SOLICITS SCHOLARSHIP APPLICATIONS

The AAAA Scholarship Foundation announces the availability of \$1,500 in 1965 scholarship assistance funds for the sons and daughters of members of AAAA.

Application forms for the 1965 scholarships may be obtained by writing to the AAAA Scholarship Foundation, Inc., 1 Crestwood Road, Westport, Conn. 06882. The applications, together with a supporting financial statement, must be returned to the Foundation on or before 1 February 1965 to receive Awards Committee consideration.

ELIGIBILITY

Eligibility requirements for the awards have been minimized. The applicant must be:

The son or daughter of a member or deceased member of AAAA.

A high school graduate or senior who has made application to an accredited college or university for Fall, 1965 entrance as a Freshman, or who has been accepted for freshman enrollment in the Fall of 1965.

Unmarried and a citizen of the United States.

AREA INTERVIEWS

Following the receipt of the completed application form, the financial statement, and the required academic transcripts, the Foundation will notify the applicant to report to a group of interviewing officers selected from among the AAAA membership residing in the applicant's area. The "Report of



Brigadier General John J. Tolson, Director of Army Aviation, OACSFOR, D/A (2d from right), is shown congratulating Robert Spears, son of Lt. Colonel Leroy C. Spears (left), Chief of the Maintenance Division, Atlanta Army Depot, on his being awarded a 1964 AAAA Scholarship of \$500.00. Colonel T.L. Lyons, President of the Atlanta Chapter of AAAA and Director of Maintenance, AAD, is shown at the right. Spears competed with 41 other applicants for one of the several scholarships offered by the AAAA Scholarship Foundation, Inc. (USA photo)

Interview" serves as an important part of the documentation required for awards consideration.

The final selection will be made by the AAAA National Awards Committee, a permanent standing committee of the National Executive Board of the AAAA that has been designated by the Foundation to serve as the Foundation's judging agency. The selection will be made during the 2-14 March 1965 period with the winners to be notified no later than 15 March 1965.

Incorporated in December, 1963, the AAAA Scholarship Foundation, Inc. is a separate, non-profit educational activity created to administer scholarship assistance to members.



GUEST SPEAKERS AT FORT WOLTERS AT FORT KNOX

■ Bill Collins, military requirements representative of the Hughes Tool Company-Aircraft Division (second left), guest speaker for the October 23 Fort Wolters AAAA Chapter meeting, is shown with, from left to right, Major Melvin K. Goulding, Chapter president; Colonel Kemuel K. Blacker, Fort Wolters commanding officer; and Colonel Wayne N. Phillips, assistant commandant of the U.S. Army Primary Helicopter School. Collins spoke of Hughes' activities and presented a film on Hughes' entry in the LOH competition.



AAAA PHOTOS



■ Major General Clifton F. von Kann (left), Commanding General of the U.S. Army Aviation Center, is shown being greeted by Lt. Colonel Charles Grandelli, Aviation Officer of the U.S. Army Armor Center, prior to addressing the membership of the Bluegrass (Fort Knox) Chapter. General von Kann spoke on the present posture of Army aviation in the role of supporting the ground arms. Following the meeting, Lt. Gen. Samuel Meyers and Mrs. Meyers joined the visiting guest speaker and the membership at dinner.



. AT NEW CUMBERLAND

■ Brig. General John J. Tolson, Director of Army Aviation (second from right), was the guest speaker at a recent October 27 meeting of the Keystone Chapter of AAAA at the New Cumberland Army Depot, New Cumberland, Pa. Here, he's shown visiting before the dinner with, left to right, Col. Ramon F. D'Elosua, New Cumberland's Director for Maintenance; Col. Preston M. Motes, commanding officer; and Major Thomas H. Small, president of the Keystone Chapter. Gen. Tolson reviewed AA's contribution in Vietnam.



. AND AT ST. LOUIS.

■ Eric Petersen (standing), president of the Lindbergh Chapter of the AAAA, is shown just prior to introducing Lt. Col. John F. Sullivan (3d from left in rear), AMC Project Manager for the Army's Flat Top Aeronautical Maintenance Facility. Others shown attending the early October professional dinner meeting are Col. and Mrs. Earl Hauschultz to the left of the speaker, and Mrs. Petersen and Lt. Col. John W. Elliott, new Chapter vice president for Military Affairs. (Credit all photos on this page to U.S. Army).

MILITARY AVIATION PLACEMENT SERVICE

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■ PILOTS

LIMITED number of openings available for fixed and rotary wing pilots for Far East and Southeast Asia flight operations. Minimum requirements include ability to obtain US FAA Medical Certificate without waivers, 1,500 hours pilot time, and a CSMEL/I Certificate. UH-34 and UH-21 pilot command time preferred. For additional information on company operations, benefits, and requirements, write AAAA, Attn: Box 32, Westport, Conn. 1

■ FIXED BASE OPNS/MAINTENANCE

SENIOR AA, age 38, seeks opportunity with corp'n, avn industry, or contractor utilizing fleet of aircraft, primarily helicopters in superv'n of maint activities, or in airport or fixed base opns. Available 31 Jan '65 on retirement, 2,500 hrs flt time in single engine r/w or f/w acft. Over 8 yrs experience in dct superv'n of maint activities. FAA Coml Pilot Cert with SEL, r/w, and instrument ratings. R/w time includes 300 hrs IP in turbine-powered craft. & yrs AA maint experience & responsibility for fleets of more than 50 aircraft. For further information, contact AAAA, Attn: Box 4892, 1 Crestwood Road, Westport, Conn. 1

■ GEN'L/CHARTER AVIATION SERVICE

RETIRED Senior AA, age 42, with 3,250 hrs flt time desires pos'n in general or charter avn service in which management, flt opns, and charter or gen'l flying would be included in duties. Prefer northeastern US, but willing to relocate to southeast or Gulf Coast area. Currently employed at Friendship Int'l Airport (Baltimore) in

position in which airport management experience is being gained. 12 years avn exp in AA, most of which were in unit command, executive, staff and flight opns positions. CSEL, CMEL, hcptr; instrument and Vertol 44 type ratings. Write AAAA, Attn: Box 1122, for further information.

■ HELICOPTER PILOTS

MAJOR contractor has need for a considerable number of hcptr pilots with 1,500 hrs pilot time, f/w and r/w combined; 800 hrs of instructor time, f/w and r/w combined; 300 hrs of hcptr pilot time, if the 800 hrs of IP time was in f/w acft. These IP's must also have an FAA rotorcraft commercial, instructor rating - fixed or rotorcraft, and a flight instructor instrument rating. A previous award of a military instrument rating is an acceptable substitute for the flight instructor instrument rating. Furnish resume to AAAA, Attn: Box 5910, 1 Crestwood Road, Westport, Connecticut. 1

CHAPTER MEMBERSHIP ACTIVITIES

■ HAWAII Chapter. Get-Together & Luncheon. Lt Col Robert H. Hurst, Guest Speaker. Wheeler AFB Officers Club. 1130 hours, December 3.

■ MAINZ Chapter. Professional/social mixed dinner meeting. Lt Col Robert K. Moore, Guest Speaker. Mainz Officers Club. 1830 hours, December 5.

■ LINDBERGH Chapter. Professional & social mixed dinner meeting. Mr. Terry Clark & Mr. George Sloan, McDonnell Aircraft Corp., made F-4 presentation, accompanied by film. November 10.

■ DAVISON AAF Chapter. Business mtg to install '64-'66 officers. November 3.

CHANGING YOUR ADDRESS?

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PROGRAM

SIXTH ANNUAL MEETING

SHOREHAM HOTEL, WASHINGTON, D.C.

WEDNESDAY, NOVEMBER 18

1200 - 1800
Registration Desk Open, West Lobby
Delegate Registration, Directors Room
1500 - 1600
National Executive Board Meeting
Tudor Room
1900 - 2100
Early Birds' Gathering, Tudor Room

THURSDAY, NOVEMBER 19

0900 - 2000
Registration Desk Open, West Lobby
Delegate Registration
Directors Room
1000 - 1200
General Membership Business Meeting
The President's Annual Report;
The Election of National Officers
for the 1964-1967 Term of Office;
Presentation of Agenda Items by
Delegates and Members.
Diplomat Room
1100 - 1400
Ladies Luncheon. The Forum
1200 - 1400
Open Luncheon for General Membership.
Garden Restaurant
1200 - 1400
Chapter Delegates' Luncheon
Tudor Room
1200 - 1400
National Executive Board
Business Luncheon. Executive Room.

1415 - 1630

Presentations. Professional Session.
Diplomat Room.
1700 - 1800
Happy Hour. Tudor Room.
1700 - 1800
Cub Club Reunion. Heritage Room.
1900 - 2100
President's Reception. Regency Ballroom.
(Admission by ticket)

FRIDAY, NOVEMBER 20

0900 - 1200
Registration Desk Open, West Lobby
0930 - 1045
General Membership Business Meeting
Diplomat Room.
1000 - 1100
Escort Assembly. Caucus Room.
1000 - 1045
Press Briefing. Executive Room.
1100 - 1200
Pre-Luncheon Reception.
Ambassador Room.
1200 - 1415
Sixth Annual AAAA Honors Luncheon.
Presentation of AAAA National Awards
Regency Ballroom.
1500 - 1600
National Executive Board Meeting.
Installation of New Officers for 1964-1967.
Appointment of National
Members-At-Large. Executive Room.
1800 - 2000
Diehards' Reception. Forum. (Sponsored)

POSTMASTER: If this magazine is addressed to a member of the United States Military Service, whose address has been changed by official orders, it should be forwarded — except to overseas APO's — without additional postage.

See section 157.4 of the postal manual.

"RETURN REQUESTED" applies in those instances wherein forwarding is not permissible. The publisher requests the return of the entire issue under the "RETURN REQUEST" provisions of the postal manual.

U.S. ARMY PILOTS SET **TEN WORLD RECORDS!**

U.S. Army pilots, flying a turbine-powered Bell UH-1D Iroquois, have set 10 world helicopter records — breaking two Russian held marks. The flights were made by pilots of the U.S. Army Aviation Test Activity, Edwards AFB, Calif.

The record-setting operations were staged at Edwards and at the Fort Worth, Tex., plant of the Bell Helicopter Company over a three-week period ending Oct. 7.

The record flights were distance in a straightline: 1,348.8 miles, flown by Capt. Michael N. Antoniou; distance in a closed circuit: 1,614.6 miles, flown by Maj. John A. Johnston; 2,000-kilometer speed in closed circuit: 139.9 mph, flown by CWO Joseph C. Watts; time to climb to 3,000 meters: 2 mins., 9.6 secs, flown by CWO Emery E. Nelson; time to climb to 6,000 meters: 4 mins., 35.8 secs., flown by CWO Nelson; and time to climb to 9,000 meters: 9 mins., 13.7 secs., flown by Capt. William L. Welter, Jr.

The six foregoing records were set in Class E-1 or open class for helicopters of any weight. The following record was set in Class E-1.d for helicopters weighing from 3,858 to 6,614 pounds — 1,000-kilometer speed in closed circuit: 146.0 mph, flown by Maj. John A. Johnston.

The three following records were set in Class E-1.e for helicopters weighing from 6,614 to 9,921 pounds — Distance in a straight line: 1,348.8 miles, flown by Capt. Antoniou; distance in a closed circuit: 1,242.8 miles, flown by CWO Watts; and 2,000-kilometer speed in closed circuit: 139.9 mph, flown by CWO Watts. The ten records were claimed on six flights. All flights were observed by officials of the National Aeronautic Association.