ARMY AVIATION MATERIEL ISSUE

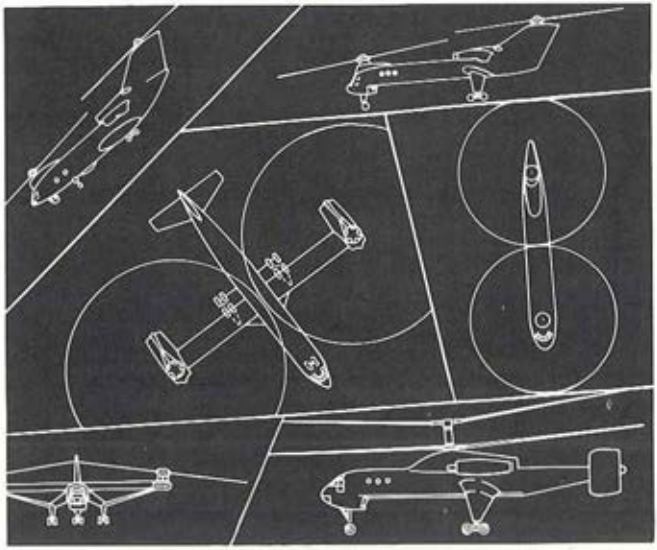
Army Aviation

AUGUST 31, 1969

FOE FLUSHER

(See back cover . . .)

Introducing the HLHS



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by CHANDLER EVANS

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VOLUME 18, NUMBER 8

ARMY AVIATION MATERIEL ISSUE

AUGUST 31, 1969

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ARMY AVIATION is published monthly by Army Aviation Publications, Inc., with Editorial and Business Offices at 1 Crestwood Road, Westport, Conn. 06880. Phone (203) 227-8266. Second class postage paid at Westport, Conn. Subscription rates for non-AAAA members: 1 year $3.50, 2 years $6.00 to CONUS and APO addresses only; add $7.00 per year for all other addresses. The views and opinions expressed in the publication are not necessarily those of the Department of the Army. Publisher, Arthur H. Kesten; Managing Editor, Dorothy Kesten; Subscription Fulfillment, Beryl Beaumont. Exclusive articles pertinent to any Army aviation subject, except industry, AAAA, unit, or major command articles, are reimbursible at the rate of three cents to five cents per word for the first 2,000 words published.

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OUR AIRCRAFT INVENTORY

By Major General JOHN L. KLINGENHAGEN, Director of Army Aviation, OACSFOR, DA

THE news media have provided a great deal of visibility to a few of the types of aircraft in our current inventory. Because of the unprecedented news coverage of military operations in Vietnam, the *Huey* has received worldwide recognition as the workhorse of the Army Aviation fleet.

Yet, I suspect that the general public is unaware of the variety of aircraft in our inventory. In this inventory issue we show the old as well as the new and the experimental Army aircraft. Looking at the older aircraft will probably create a little nostalgia for the old aviators and the new aviators will better understand the genealogy of our current fleet of beauties.

I'm confident that we all share a sense of pride in this aircraft line up. These are the tools of our trade and the parade of aircraft through these pages is a review of the history of Army Aviation.

Perhaps more revealing of the growth of Army Aviation than the improvements in types of aircraft is the increase in the size of the fleet. Twenty years ago the total inventory was a little over 1,200 aircraft, of which less than 100 were rotary wing. Ten years later, the fleet had grown to almost 6,000 and the ratio of fixed to rotary wing had shifted to 50-50.

Now, after ten more years, which included such spectacular events as the *Howze Board*, the testing and establishment of the airmobile divisions, and the aviation buildup in Vietnam, the fleet has swelled to more than 12,000 aircraft, of which the great preponderance is helicopters.

Four changes . . .

Each year has brought some change to the inventory – either to the number of aircraft or to the types. This year at least four changes should be noted. The *AAFSS*, personified in the AH-56A *Cheyenne*, is still a very firm requirement for the Army. Although the production contract was terminated in May, the nine existing AH-56 aircraft will remain in the inventory and will be used in the continuing R&D work. Until such time as an *AAFSS* goes into production, the AH-1 *Cobra* and the armed UH-1B/C's will fill our gunship requirements.

The OH-58 *Kiowa* became the latest member of the inventory with the acceptance of the first aircraft in July. Initial production aircraft are scheduled for testing and evaluation. Deliveries to the field will probably begin in October of this year.

The OV-1D *Mohawk* will be our next addition and we should receive

AIRCRAFT INVENTORY

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the first production aircraft in September of this year. This aircraft, with its improved sensors and performance, combines the capabilities of the OV-1B and C. As with the *Kiowa*, the first several aircraft will be used for testing and deliveries to the field (training base) are forecast to begin in November.

Finally, the old warhorse, the CH-21 *Shawnee*, will be phased out this month. The parade continues.

A farewell

New Subject: I am taking this opportunity to say goodbye to *Colonel Russ Bonasso* who retired the end of this month after 27 years of outstanding service. By way of a farewell, I want to outline a few of the many things he has done for Aviation Safety since he became Director of USABAAR a little over a year ago.

Soon after becoming Director he realized that the plans and programs which he envisioned for USABAAR required that the organization be expanded and restructured. He therefore set about to tailor the organization to perform the kind of Aviation safety management which he had visualized. Colonel Bonasso reorganized USABAAR, greatly increased the personnel strength, expanded the accident reporting and data system, and otherwise increased the capacity of the organization for managing the Army Aviation safety program.

The fully-automated management information system which he has initiated and which should be operational by next year is designed to support not only USABAAR, but *all* Army agencies concerned with research, development, and procurement of Army aircraft and related support systems as well as the training base.

Recognizing the need for and importance of keeping the Army informed of the causes of non-combat aircraft losses, he developed plans for an expanded education program designed to emphasize the capabilities and limitations of aircrews and aircraft. This program began with accident prevention presentations for the students at the C&GSC and it is planned that such instruction will continue at Leavenworth, at the Army War College, and at the Branch Service Schools for Career Course students.

Of benefit to all

One of his most far-sighted programs will contribute to the research and development of Army aircraft and related systems. Through this program, pertinent data retrieved from accident reports and investigations will be compiled, analyzed, and stored for eventual use by aircraft research and development agencies. In this fashion our accident experience can be made to influence the design of safer Army aircraft.

With these programs and others, Colonel Bonasso has laid the foundation for a greatly improved Aviation safety program which will benefit all of us and for which we owe him our thanks.

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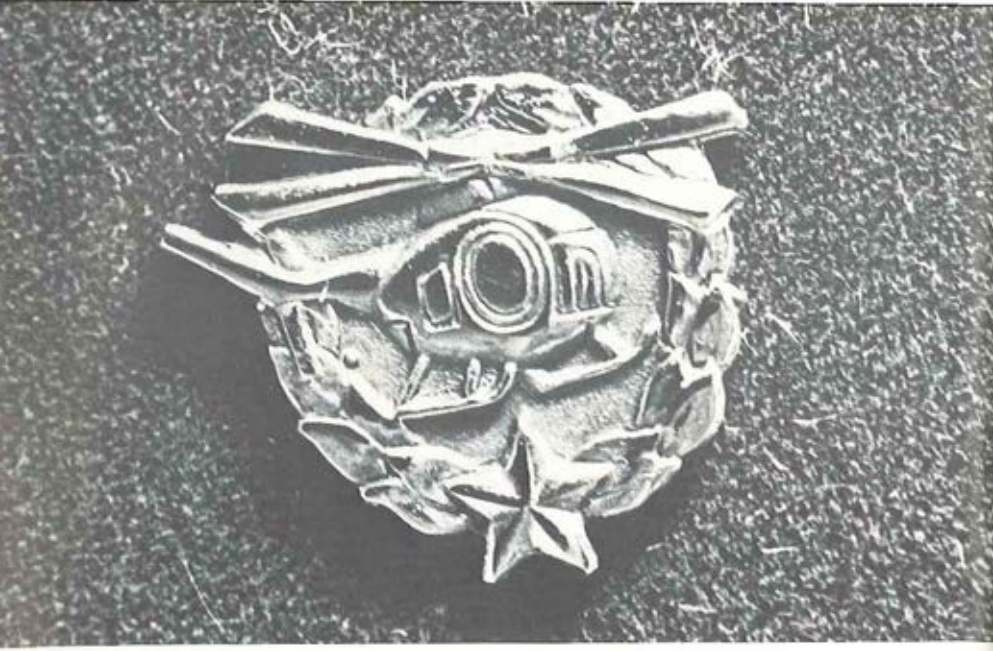

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AVSCOM In Transition

By Major General JOHN NORTON, Commanding General, U.S. Army Aviation Systems Command

ALL other factors being equal, victory goes to the Army with the greater mobility.

An oversimplification, perhaps, but this basic thinking has resulted in the multi-billion dollar Army aviation program and given the U.S. Army the greatest mobility in the history of mankind.

This thinking also explains the formation and growth of the Army Aviation Systems Command (AVSCOM), with headquarters in St. Louis, Missouri, and seven field activities across the nation.

$2 billion-plus

AVSCOM is a $2 billion-plus per year complex manned by approximately 10,000 military and civilian personnel.

The inherently high cost of an aviation program has necessitated continuing studies with the aim of reorganizing AVSCOM to meet the revolutionary needs of Army Aviation.

The widespread use of costly, sophisticated equipment demands the best possible life-cycle systems management, and we must make bigger strides toward that goal.

While I was in Vietnam with the 1st Cavalry Division, it became obvious to me that the extremely rapid rate of development in air mobility had resulted in the field outpacing its logistical base.

To avoid any misunderstanding, I

want to state emphatically that AVSCOM has an outstanding support record in Vietnam. In attaining this record, however, our resources have been overextended in some areas.

Consequently, our purpose in reorganization has been to build a flexible organization that can meet field demands without overtaxing these resources, particularly the people. They have made the system work and have kept it working, often at the expense of their own personal well being.

In building for the future, we are seeking the optimum in systems management, plus maximum flexibility to meet any foreseeable situation.

A look at the growth of Army Aviation in the last few years will emphasize the need for a systems command approach to its problems.

Fleet of 12,000

Today, the Army is operating more than 12,000 aircraft, with rotary-wing outnumbering fixed-wing about four to one. Dollar value of this fleet is approximately $3 billion. Another 4,000 aircraft are on contract for future delivery. The Army also supports an additional 2,000 Army-type aircraft used by its sister services and 28 foreign nations.

At present, there are approximately 21,500 rated Army Aviators and that one-time rarity, a Master Army Aviator, is seen in increasing numbers.

The flying hour program for Fiscal Year 1969 was approximately 6.5 million hours, the equivalent of more than 1,000 round-trips to the moon.

The helicopter, once considered an ungainly aircraft, has come into its own. In Fiscal Year 1965, the flying hour program was split 50/50 between fixed and rotary wing aircraft. Now helicopters lead their more prosaic cousins by a five-to-one flying hour margin.

The global mission

During this same four-year period of time, the number of aircraft supported overseas has expanded from about 1,500 to more than 5,000. This global mission has increased the need for a flexible, efficient life-cycle management organization with a *single* point of responsibility. We are entering a period when we must do more with less; every dollar spent must get every bit of mileage possible.

In a recent article in the *Journal of the Armed Forces,* Lieutenant Colonel John R. Galvin said: "*The most important single consideration involving the success or failure of air mobility — past, present and future — is organization.*" This applies to the systems support command as well as to the field.

As Army Aviation has evolved through the years from a small observation fleet of Cubs, used for artillery fire direction and similar missions, AVSCOM has evolved from a small field service office of the Chief of Transportation to its present status. The Command was once merely an expeditor, charged with seeing that Army Aviation business was handled by its sister services. When the

(Continued on Page 18)

THE HUEY TUG

HUEY TUG

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AVSCOM IN TRANSITION

(Continued from Page 15)

responsibility for Army aircraft reverted to the Army, including the entire life cycle management process, AVSCOM grew by leaps and bounds.

Reorganization

When I first arrived in St. Louis, I was surprised at the number of directorates and offices reporting directly to the Commanding General. There were obviously far too many for any single individual to keep track of, given the complexity of the organization and its mission. Consequently, I chartered Wendell E. Maulding, my special assistant, to head a management study group to plan and build a more flexible, efficient organization.

The initial study – and it is not yet finished – had been underway about a year when we began to implement the actual reorganization.

To get the widest mix of talent and thinking we have made use of management consultants from both industry and local universities. They have worked as members of the AVSCOM Board, our top-level planning group for future requirement planning.

The "Systems" concept

One outcome of the reorganization is to emphasize the "Systems" concept. Our life cycle management, designed on the systems concept, has the manager looking at the overall system and not at just the bits and pieces.

Another major step was to group the operating and administrative directorates and offices under Deputy Commanders.

Colonel Delbert L. Bristol, a graduate of the "*Class before the first,*" is Deputy Commander for Research, Engineering and Data. He is responsible for the entire scope of aviation research, development and engineering, including research at the Aviation Materiel Laboratories (AVLABS), Fort Eustis, Virginia, and engineering flight testing at the Aviation Systems Test Activity (ASTA), Edwards AFB, California. His personnel provide engineering support and guidance as long as an aircraft is in the system.

Newly assigned as Deputy Commander for Acquisition is Colonel Donald L. Jersey, who has served with AVSCOM in every grade from captain through colonel. Like Colonel Bristol, he is a Master Army Aviator. He is responsible for procurement, production, and product or quality assurance. Under his guidance are plant offices at Bell, Hughes, Lockheed, and Grumman.

Colonel Benjamin S. Silver, until recently Chinook Project Manager, is Deputy Commander for Logistics Support. As the title implies, he is responsible for supporting aircraft in the field with spare parts, maintenance guidance, technical assistance and for computing future requirements. His field activity is the Aeronautical Depot Maintenance Center (ARADMAC), Corpus Christi, Texas, which overhauls turbine engines and aircraft.

Another "early bird" in Army aviation is Colonel J. Elmore Swenson, Deputy Commander for Administration and Resources Management. This graduate of the first formal class of Army Aviaitors also wears another hat, that of Chief of Staff. Under him are personnel management, comptroller, installations and services, information, and other support and staff functions.

These deputies report to me through Brigadier General John P. Traylor, Deputy Commanding General. With General Traylor's completion of rotary wing flight training this fall, all of the Command Group will be rated aviators.

Strong "mix"

We have made a deliberate effort to have a strong mix of rated, combat experienced officers and career logisticians. It will pay great dividends through the broad range of experience and skills it will provide in key positions.

On the civilian side of the house, we have recruited people from many parts of the country representing every branch of the Armed Forces through former or reserve military service. They include ex-service pilots, mechanics, and technicians. A number of the nation's major colleges and universities are represented among our engineers and other professional people.

Many of these people have become familiar to personnel in the field, both in CONUS and overseas. We have a large number of technical representatives deployed around the world. A number of personnel are hired on a contract basis, although the majority are Federal employees. All technical representatives are selected on the basis of experience and training. They are on hand to solve problems in the field, or to see that assistance is readily obtained from the responsible AVSCOM element.

On-the-spot!

We have a group of "quick reaction" professionals in various fields who keep a bag packed and their passports ready. All they need is an urgent requirement and they are enroute to the spot.

Some of our officers have been serving six-month tours in Vietnam with the AMC Customer Assistance Office after which they rotate to AVSCOM and an officer here replaces them in the field. I'm proud of the service this Command has given and will continue to give the field.

Our New Equipment Training (NET) teams have introduced the OH-6A *Cayuse*, AH-1G *Cobra*, U-21 *Ute*, and the CH-47B/C *Chinook:* the OH-58A *Kiowa* is next. These teams are composed of manufacturer's representatives and DA military personnel who have received extensive factory training. They teach the operation and maintenance of the new equipment to aviators and mechanics to fill the gap until CONARC schools can provide sufficient trained personnel to meet field requirements.

By working more closely with other units of the Army Materiel

Command, especially the Army Electronics and Weapons Commands, we aim to insure that weapons and electronics subsystems are compatible with the aircraft. Obviously, if any part of the overall system doesn't function properly, the aircraft cannot do its job.

Ready availability

Reports from the field are studied by AVSCOM engineers to determine what engineering changes may be required, either in the design or in the equipment. Our supply and requirements personnel seek to insure ready availability of parts and other equipment through constant checks on usage factors and timely provisioning.

We store the bulk of our repair parts inventory in four Army depots: Sharpe at Lathrop, Calif., New Cumberland, Pa., Red River at Texarkana, Tex., and Atlanta at Forest Park, Ga.

We have our own version of the World War II *Red Ball Express* in operation. A seven-day-week, 24-hour-day operation gets 80% high priority items to Saigon within five to seven days from the time they are ordered.

Doing the bookkeeping for the Command is a commercial-type sophisticated computer operation. It keeps track of supply levels, orders stock, writes contracts for low dollar value items, maintains a history of each item including prices and sources, and performs supply control studies and many other responsive and economical functions.

An idea of the size of our "shopping list" may be obtained from the following: Programmers once figured that if the entire contents of our Master Data Record were printed out by the computer, a continuous run of 397 hours would be required, printing 1,100 lines per minute. This would give us about 12 tons of paper, or a stack about the height of a 22-story building. If stretched in a straight line from our building in downtown St. Louis, it would reach to Terre Haute, Ind.

Steady improvement

We are seeking and adopting where we can use the best practices of modern industry. Our thinking and planning is toward the future. We intend to keep improving our organization and its operations in every way possible.

I think that Lieutenant General Harry W. O. Kinnard's recent comment on Army Aviation, "*This is not the end; it is the beginning*," expressed the feeling of AVSCOM. Army Aviation will continue to expand in the future to develop its potential under all conceivable conditions. We at AVSCOM are doing our best to keep abreast of this growth, so that the logistical base will be ready to meet any and all demands placed upon it.

For you in the field, we will try to provide the best support you have ever had. And for the taxpayer, and those of us interested in the management side, it will mean the most efficient life-cycle systems management that we can develop.

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FIXED WING

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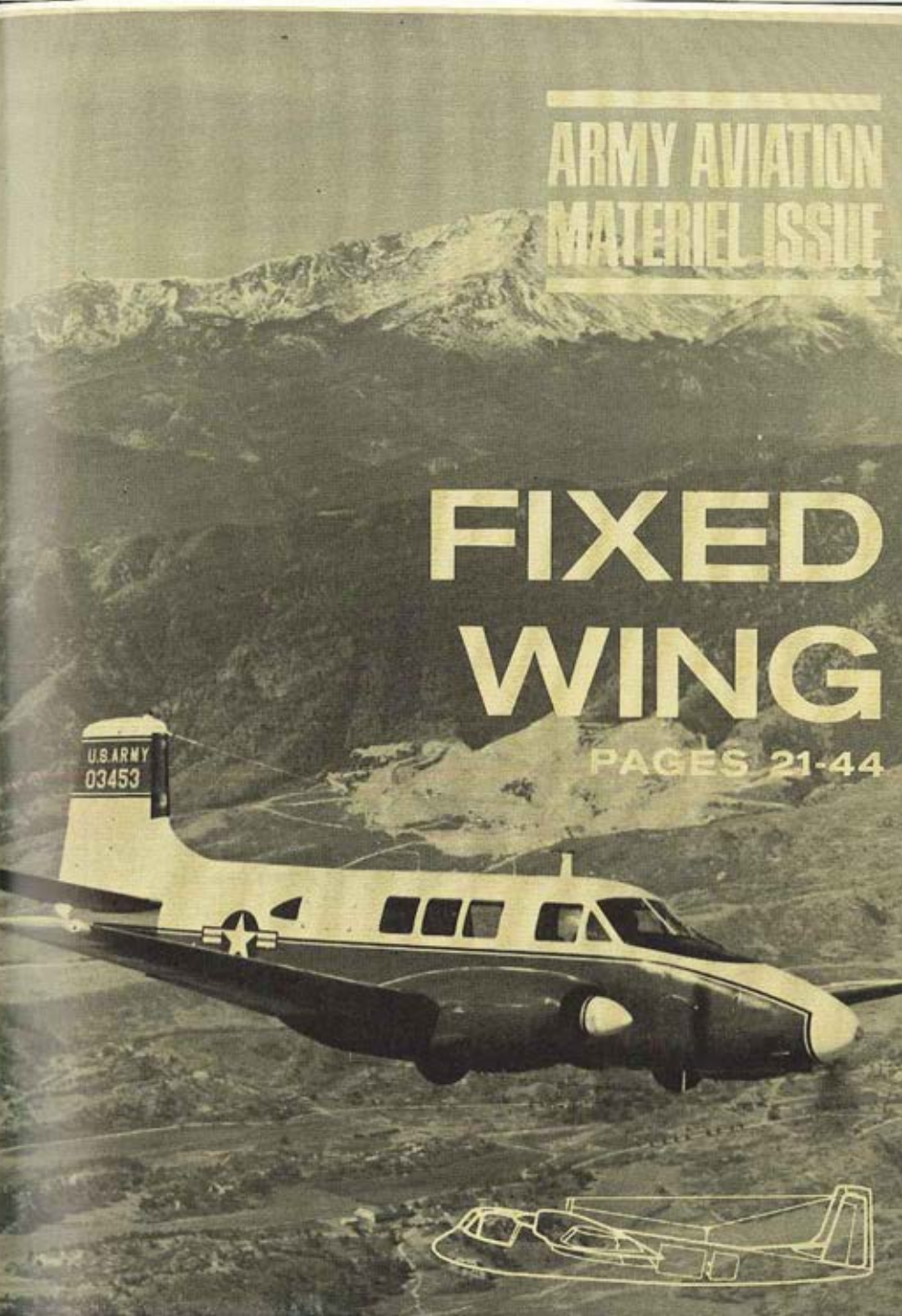


L-1 VIGILANT

Two-place observation/reconnaissance airplane. Vultee-Stinson.

ENGINES

One Lycoming R-680-9 engine of 295 hp.

PROPELLERS

Hamilton-Standard constant speed propeller, 8 ft. 6 in. diameter.

SPECIFICATIONS

Gross weight: 3,325 lb.

PERFORMANCE

Cruise speed: 114 mph. Service ceiling: 14,000 ft. Max. range: 275 st. mi.

REMARKS

This aircraft was originally designated the O-49. The procurement was handled by the Army Air Corps. All models had flaps and slots. Originally 142 L-1s were purchased off-the-shelf and 182 A models were obtained later. Procurement of all other models was negligible.

L-2

Two-place observation/reconnaissance airplane. Taylorcraft.

ENGINES

One Continental O-170-3 engine of 65 hp.

PROPELLERS

Sensenich two-bladed fixed pitch wooden propeller, 6 ft. diameter.

SPECIFICATIONS

Gross weight: 1,300 lb.

PERFORMANCE

Cruise speed: 96 mph. Service ceiling: 10,050 ft. Max. range: 265 st. mi.

REMARKS

During the period 1941 through 1944, the Army procured 1,942 L-2s. This metal framed, fabric covered aircraft was originally designated the O-57. The L-2 was procured in the A through M models, all models having 65 hp. except the L model, which was 50 hp.

L-3

Two-place observation/reconnaissance airplane. Aeronca.

ENGINES

One Continental O-170-3 engine of 65 hp.

PROPELLERS

The A model had a Freedman-Burnham ground adjustable, two-bladed propeller with aluminum hub. The B & C models had a Sensenich fixed pitch wooden propeller.

SPECIFICATIONS

Gross weight: 1,300 lb.

PERFORMANCE

Cruise speed: 87 mph. Service ceiling: 7,750 ft. Max. range: 190 st. mi.

REMARKS

The L-3 was a fabric covered, metal frame airplane, originally designated the O-58. A total of ten models were purchased. All were tandem, except the F and G models, which had side by side seating. Largest procurement was in 1942 when 875 were purchased. The following year 490 entered the Army inventory with a total of 1,464 ultimately procured.

L-4 CUB

Two-place observation/liaison aircraft. Piper Aircraft Corp., Lock Haven, Pa.

ENGINES

One Continental O-170-3 piston engine of 65 hp.

PROPELLERS

Two-bladed Sensenich fixed-pitch wooden propeller.

SPECIFICATIONS

Span: 35 ft. 4 in. Length: 22 ft. 4 in. Height: 6 ft. 7 in. Empty weight: 658 lb. Gross weight: 1,220 lb.

PERFORMANCE

Max. speed (SL): 87 mph. Cruise speed (SL): 75 mph. Service ceiling: 9,300 ft. Max. range: 190 st. mi.

REMARKS

From the initial procurement in 1942 until 1945, 9,404 L-4s were delivered to the Army. Ten models were purchased. All were tandem except the E and F models. While the L-2, L-3, and L-4 were all officially referred to as "Grasshoppers", the civilian name "Cub" stayed with the L-4.

L-5 SENTINEL

Two-place observation/reconnaissance airplane. Vultee-Stinson.

ENGINES

One Lycoming O-435-1 engine of 185 hp.

PROPELLERS

Sensenich fixed pitch two-bladed wooden propeller, 7 ft. 1 in. Diameter.

SPECIFICATIONS

Gross weight: 2,020 lb.

PERFORMANCE

Cruise speed: 100 mph. Service ceilinp: 15,800 ft. Max. range: 420 st. mi.

REMARKS

The L-5 had a metal frame fuselage, wood and metal airfoil structure, and was fabric covered. Originally used only by the Army Air Corps, it was designated the O-62. Army Liaison pilots operated these aircraft from 1945 and during the first months of the Korean hostilities. The "drop" rear seat permitted cargo or litter carrying capabilities. A total of 3,975 L-5s were delivered between 1942 and 1945.

L-6

Two-place observation/reconnaissance airplane. Interstate.

ENGINES

One Aircooled O-200-5 engine of 102 hp.

PROPELLERS

Two-bladed U.S. Propeller made fixed pitch propeller, 6 ft. 4 in. diameter.

SPECIFICATIONS

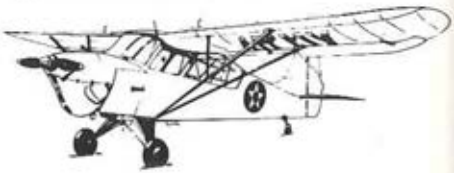
Gross weight: 1,650 lb.

PERFORMANCE

Cruise speed: 87 mph. Service ceiling: 12,100 ft. Max. range: 692 st. mi.

REMARKS

This fabric covered aircraft was known commercially as the S-1B Cadet. Its original Army Air Corps military designation was the O-63.



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L-13

Three-place Observation / reconnaissance airplane. Consolidated Vultee.

ENGINES

One Aircooled XO-425-5 engine of 245 hp.

PROPELLERS

Two-bladed variable pitch propeller, 8 ft. 6 in. diameter.

SPECIFICATIONS

Gross weight: 2,900 lb.

PERFORMANCE

Cruise speed (SL): 106 mph. Service ceiling: 15,000 ft. Max. range: 488 st. mi.

REMARKS

Although the Army Ground Forces tested two of these aircraft in 1945, the L-13 was not accepted at that time. Later, the AGF did procure the L-13 and by June, 1951, there were 43 of this model in the Army inventory. The L-13 could carry two litters in place of the rear passenger seats. Production prototypes had folding wings, but these models were not procured by the Army.

L-14

Three-place observation airplane with med-evac capability. Piper Aircraft Corp., Lock Haven, Pa.

ENGINES

One Lycoming O-290-3 piston engine of 130 hp.

PROPELLERS

Two-bladed Sensenich model 76 JB 44 propeller.

SPECIFICATIONS

Span: 35 ft. 10 in. Length: 23 ft. 3 in. Height: 7 ft. Empty weight: 1,100 lb. Gross weight: 1,800 lb.

PERFORMANCE

Max. speed (SL): 117 mph. Cruise speed (SL): 104 mph. Service ceiling: 14,500 ft. Max. range: 345 st. mi. Endurance: 3.5 hours.

REMARKS

The Army Ground Forces procured five L-14s and cancelled an order for 845 more on VJ Day. The airplane had long landing gear and a litter carrying configuration.

L-15 SCOUT

Two-place observation airplane. Boeing.

ENGINES

One Lycoming 0-290-7 engine of 125 hp.

PROPELLERS

Two-bladed variable pitch propeller.

SPECIFICATIONS

Gross weight: 2,216 lb.

PERFORMANCE

Cruise speed (SL): 86 mph. Service ceiling: 12,500 ft. Max. range: 217 st. mi.

REMARKS

This was a production prototype that was never produced in quantity. Twelve YL-15s were procured by the Army between 1947 and 1949. The aircraft used spoilers instead of ailerons and full flaps. The Observer was seated backwards.

L-16

Two-place observation/reconnaissance airplane. Aeronca.

ENGINES

One Continental 0-190-1 engine of 95 hp.

PROPELLERS

Two-bladed McCauley fixed pitch metal propeller, 6 ft. 1 in. diameter.

SPECIFICATIONS

Gross weight: 1,300 lb.

PERFORMANCE

Cruise speed (SL): 81 mph. Service ceiling: 14,500 ft. Max. range: 252 st. mi.

REMARKS

This metal frame, fabric covered aircraft was the military version of the Aeronca "Champion". The L-16 was the most inexpensive aircraft ever purchased by the military. The initial date of Army procurement was in 1948, with a total of 609 eventually being delivered. The L-16 was used extensively in the early part of the Korean conflict.

L-17 NAVION

Four-place utility/liaison airplane. Ryan (North American).

ENGINES

One Continental O-470-7 engine of 205 hp.

PROPELLERS

Two-bladed Hartzell variable pitch metal or plastic propellers, 7 ft. diameter.

SPECIFICATIONS

Gross weight: 3,050 lb.

PERFORMANCE

Cruise speed (SL): 121 mph. Service ceiling: 10,900 ft. Max. range: 592 st. mi.

REMARKS

Three models of the L-17 were procured by the Army. The "A" models (185 hp.) were first purchased in 1947 with the inventory high point of 42 being reached in 1951. The "B" and "C" models (205 hp.) were purchased in FY 1949 with 196 "B"s and 35 "C"s being inventory highs in 1949. The Navions were turned over to Army flying clubs when they were phased out of service.

L-21

Two-place observation/liaison aircraft. Piper Aircraft Corp., Lock Haven, Pa.

ENGINES

One Lycoming O-290-D piston engine of 125 hp.

PROPELLERS

Two-bladed Sensenich fixed pitch metal propeller.

SPECIFICATIONS

Span: 35 ft. 4 in. Length: 22 ft. 3 in. Height: 6 ft. 8 in. Empty weight: 935 lb. Gross weight: 1,500 lb.

PERFORMANCE

Max. speed (SL): 120 mph. Cruise speed (SL): 110 mph. Service ceiling: 16,000 ft. Max. range: 300 st. mi. Rate of climb: 1,000 fpm.

REMARKS

Since initial delivery date in 1951, the Army procured 150 A models and 69 B models. This metal-frame fabric-covered airplane was used mainly as a trainer. The B model saw extensive use in the Far East. The L-18C, purchased for MDAP, was the same as the L-21 except that it had a 90 hp. Continental engine.

O-1 BIRD DOG

Two-place liaison, observation aircraft. Cessna Aircraft Company, Wichita, Kansas.

ENGINES

One Continental O-470-11 piston engine rated at 213 hp.

PROPELLERS

McCauley fixed-pitch two-bladed metal propeller.

SPECIFICATIONS

Span: 36 ft. Length: 25 ft. 10 in. Height: 7 ft. 4 in. Empty weight: 1,614 lb. Gross weight: 2,430 lb.

PERFORMANCE

Max. speed (SL): 115 mph. Cruise speed (SL): 100 mph. Cruise speed, 10,000': 106 mph. Service ceiling: 1,850 ft. Max. range: 592 st. mi. Endurance: 4.67 hours. Rate of climb: 1,040 fpm.

REMARKS

The TO-1D is the instrument trainer version of this aircraft and is structually stronger. It has a variable-pitch propeller and an instrument panel in the rear, which may be enclosed for hooded flight. The O-1E encorporates the redesigned structural changes of the TO-1D. The O-1F is a modified TO-1D with its rear instrument panel, VOR, and UHF radios removed, and bomb shackles and a VHF radio installed.

L-25

One-place experimental aircraft. McDonnell Aircraft Corp., St. Louis, Missouri.

ENGINES

One Continental R-975-19 engine.

ROTOR SYSTEM

Single three-bladed rotor and two-bladed pusher propeller.

SPECIFICATIONS

Empty weight: 4,277 lb. Gross weight: 5,505 lb.

PERFORMANCE

Max. speed (SL): 195 mph. Service ceiling: 11,800 ft. Max. range: 368 st. mi.

REMARKS

The Army procured two L-25 aircraft from McDonnell for state-of-the-art research. This was the only aircraft given three separate designations. It was also called the XV-1 and the XH-35.

LC-126

Four-place utility aircraft. Cessna Aircraft Company, Wichita, Kansas.

ENGINES

One Jacobs R-755-11 direct drive engine of 300 hp.

PROPELLERS

Hamilton Standard constant-speed metal, 7 ft. 9 in. diameter.

SPECIFICATIONS

Span: 36 ft. 2 in. Length: 27 ft. 4 in. Height: 8 ft. 3.5 in. Empty weight: 2,250 lb. Gross weight: 3,350 lb.

PERFORMANCE

Max. speed (SL): 180 mph. Cruise speed (SL): 135 mph. Cruise speed, 10,000': 165 mph. Service ceiling: 19,800 ft. Max. range: 900 st. mi. Endurance: 4 hours. Rate of climb: 1,200 fpm.

REMARKS

In 1950, five LC-126B's were purchased by the USAF for the Army National Guard. The Army issued a contract in 1952 for 63 LC-126C's for use in such varied missions as search and rescue, light cargo transport, and instrument training.

T-37

Two-place jet trainer. Cessna Aircraft Company, Wichita, Kansas.

ENGINES

Two Continental J-69-T-9 turbo jets developing 1,840 lbs. thrust.

SPECIFICATIONS

Span: 33 ft. 10 in. Length: 29 ft. 4 in. Height: 9 ft. 5 in. Gross weight: 6,600 lb.

PERFORMANCE

Max. speed: 408 mph at military power 21,730 rpm, 35,000 ft. Cruise speed: 368 mph at normal power 20,700 rpm at 35,000 ft. Service ceiling: 39,200 ft. Max. range: 796 st. mi. Endurance: 2.8 hrs. Rate of climb: 3,200 fpm.

REMARKS

This aircraft is procured by the U.S. Air Force as a primary jet trainer. Three T-37s were loaned to the Army in 1958 for the purpose of evaluating the use of high speed, high performance aircraft for long range artillery adjustment and observation as well as low altitude, high speed flight.

G-91

One-place tactical/reconnaissance jet fighter. Fiat Aviation Div., Turin, Italy.

ENGINES

Two GE J85-13 engines of 4,078 lb/ thrust each, with after-burner.

SPECIFICATIONS

Span: 29 ft. Length: 39 ft. 3 in. Height: 14 ft. 5 in. Empty weight: 8,380 lb. Gross weight: 19,070 lb.

PERFORMANCE

Max. speed (SL): 715 mph. Operational ceiling: 27,600 ft.

REMARKS

In 1961, the U.S. Army received the loan of three of these NATO fighters to be used for test and evaluation as a high speed, high performance observation aircraft. Testing was discontinued after two of these jets were lost in separate accidents.

T-37

CV-2 Caribou

Tactical transport STOL aircraft. De Havilland Aircraft of Canada, Ltd., Downsview, Ontario.

ENGINES

Two Pratt & Whitney R2000-7M2 engines of 1,450 hp each.

PROPELLERS

Hamilton Standard three-bladed metal variable pitch.

SPECIFICATIONS

Span: 95 ft. 8 in. Length: 72 ft. 7 in. Height: 31 ft. 9 in. Empty weight: 16,920 lb. Gross weight: 28,500 lb. Places: Crew of two and 32 passengers or 14 litters plus 8 troops.

PERFORMANCE

Max. speed (SL): 216 mph. Cruise speed (SL): 170 mph. Cruise speed, 7,500' at 50% power: 182 mph. Service ceiling: 27,500 ft. Max. range: 1,400 st. mi. Rate of climb: 1,575 fpm.

REMARKS

Since initial procurement in November 1959, the Army brought 173 Caribou into its inventory. According to the joint Army-Air Force agreement of April 1966, the Army released all CV-2 Caribou aircraft to the U.S. Air Force.

CV-7 Buffalo

Tactical transport STOL aircraft. De Havilland Aircraft of Canada, Ltd., Downsview, Ontario.

ENGINES

Two GE T64-10 turbo-prop engines of 2,850 shp each.

PROPELLERS

Hamilton Standard three-bladed metal reversible pitch, 165 in. diameter.

SPECIFICATIONS

Span: 96 ft. Length: 77 ft. 3 in. Height: 28 ft. 7 in. Empty weight: 22,864 lb. Gross weight: 41,000 lb. Places: Crew of two and 41 passengers or 35 Paratroopers or 24 litters and six troops.

PERFORMANCE

Max. speed (SL): 267 mph. Cruise speed (SL): 253 mph. Cruise speed, 5,000': 277 mph. Service ceiling: 31,000 ft. Max. range: 529 st. mi. Rate of climb: 2,050 fpm.

REMARKS

The Buffalo is a larger turbo-prop version of the CV-2 Caribou. Since April 1965, four prototypes have been built under a U.S.-Canadian production-sharing agreement.

OV-1 MOHAWK

Two-place observation/surveillance airplane. Grumman Aircraft Engineering Corp., Bethpage, L.I., New York.

ENGINES

Two Lycoming T53-L-15 turbines of 1,100 shp each.

PROPELLERS

Hamilton Standard three-bladed reversing and feathering, 10 ft. diameter.

SPECIFICATIONS

Span: 42 ft. Length: 41 ft. Height: 12 ft. 8 in. Gross weight: 12,675 lb.

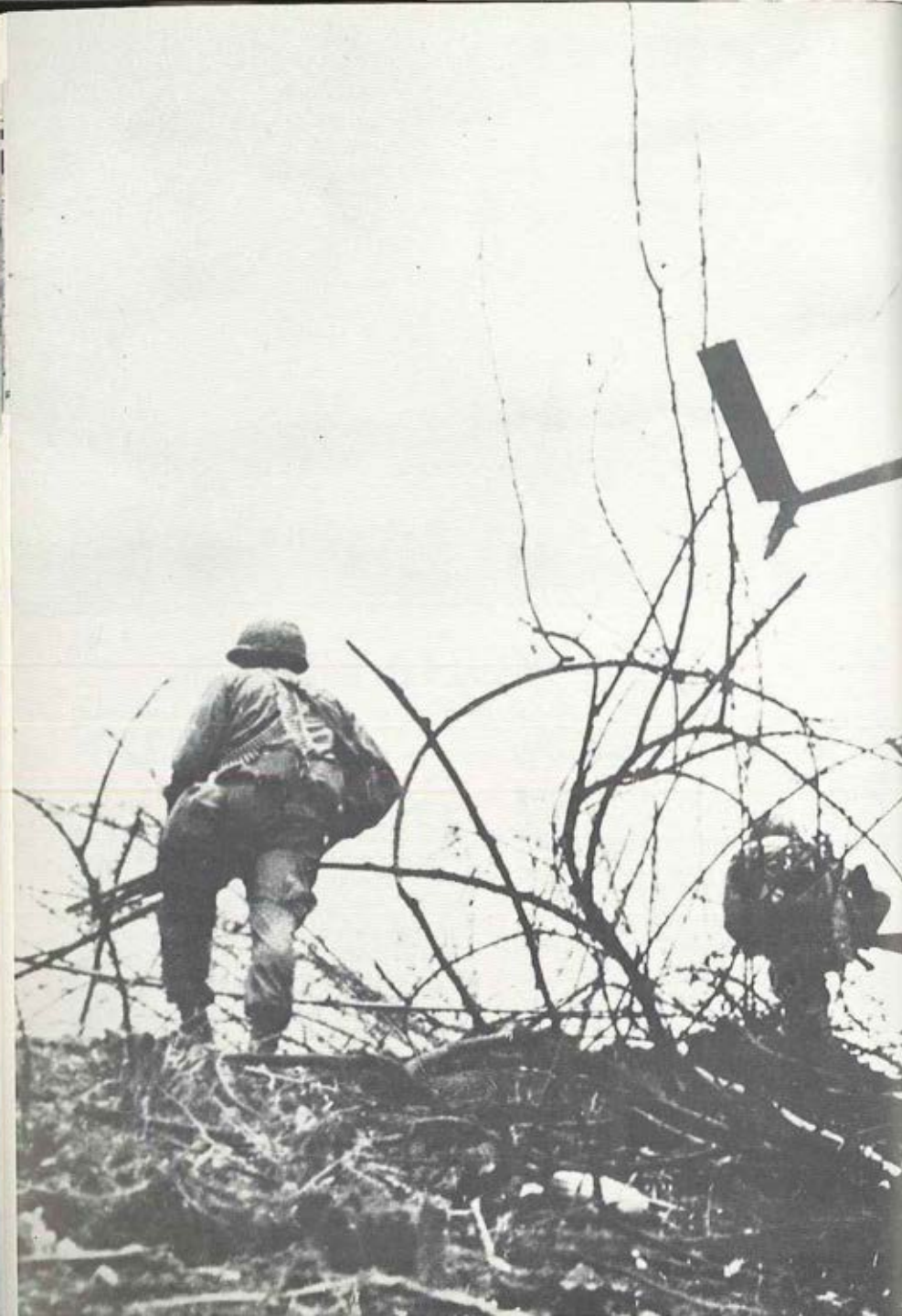
PERFORMANCE

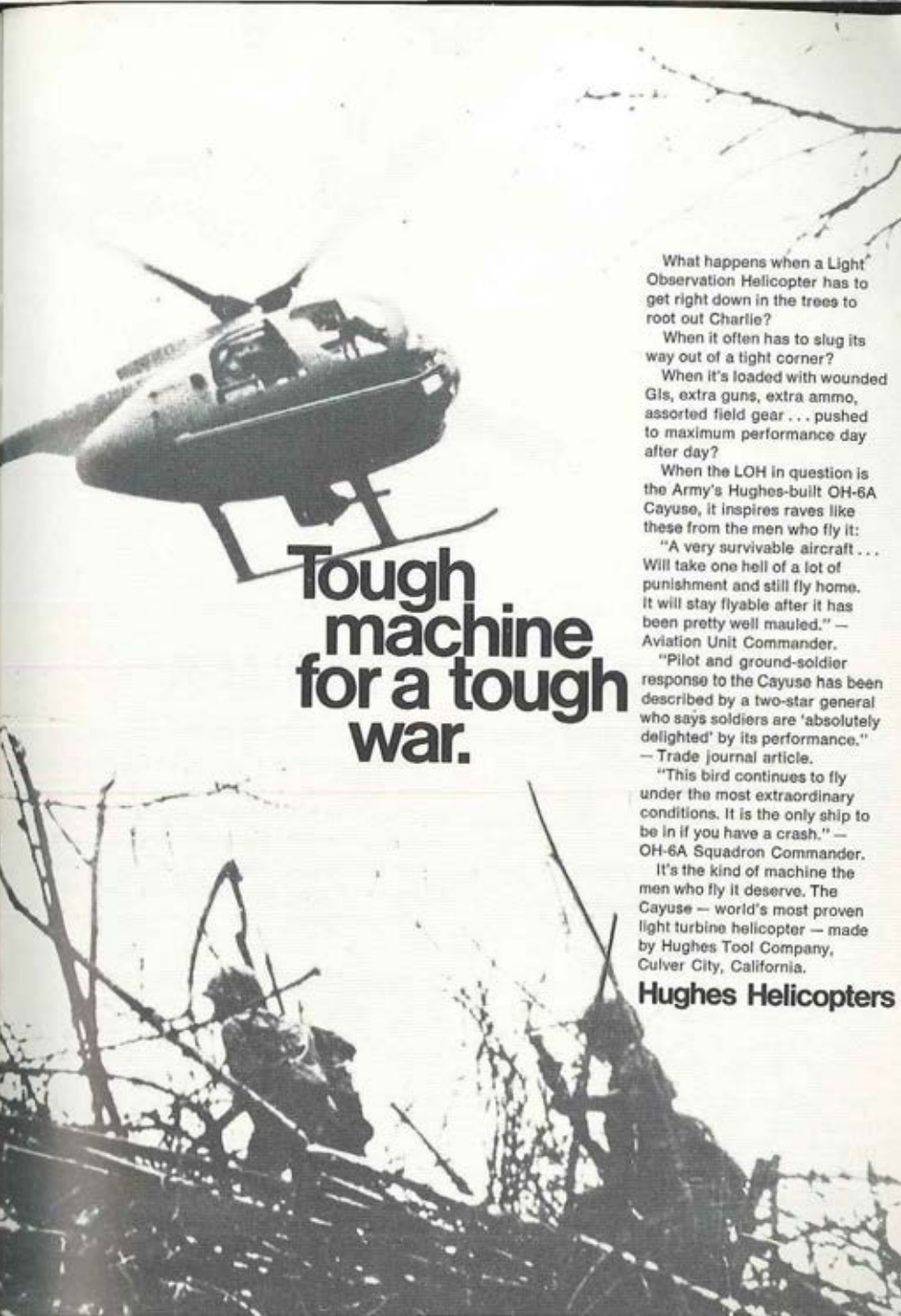
Max. speed (SL): 325 mph. Cruise speed (SL): 207 mph. Service ceiling: 33,000 ft. Max. range: 774 st. mi.

REMARKS

Three basic configurations of the Mohawk have been produced—the "A" for visual and photographic; the "B" for visual, photographic, and side-looking radar (SLAR); and the "C" for visual, photographic, and infrared. The electronic equipment varies with each model, resulting in changes in gross weight, performance, and cost. First Mohawk deliveries were made to the Army in 1960.

Designed to operate from small, unimproved fields, the Mohawk features a 55-knot stall speed and short takeoff and landing capabilities similar to the Army's single engine observation aircraft. Its bugeye cockpit canopy provides exceptional visibility to its two-man crew.





Tough machine for a tough war.

What happens when a Light Observation Helicopter has to get right down in the trees to root out Charlie?

When it often has to slug its way out of a tight corner?

When it's loaded with wounded GIs, extra guns, extra ammo, assorted field gear . . . pushed to maximum performance day after day?

When the LOH in question is the Army's Hughes-built OH-6A Cayuse, it inspires raves like these from the men who fly it:

"A very survivable aircraft . . . Will take one hell of a lot of punishment and still fly home. It will stay flyable after it has been pretty well mauled." — Aviation Unit Commander.

"Pilot and ground-soldier response to the Cayuse has been described by a two-star general who says soldiers are 'absolutely delighted' by its performance." — Trade journal article.

"This bird continues to fly under the most extraordinary conditions. It is the only ship to be in if you have a crash." — OH-6A Squadron Commander.

It's the kind of machine the men who fly it deserve. The Cayuse — world's most proven light turbine helicopter — made by Hughes Tool Company, Culver City, California.

Hughes Helicopters

U-10 HELIO COURIER

Six-place STOL utility aircraft. Helio Aircraft Corp., Bedford, Mass.

ENGINES

One Lycoming GO-480-G1D6 developing 295 hp.

PROPELLERS

Hartzell three-bladed constant-speed, 96 in. diameter.

SPECIFICATIONS

Span: 39 ft. Length: 31 ft. Height: 8 ft. 10 in. Empty weight: 2,037 lb. Gross weight: 3,600 lb.

PERFORMANCE

Max. speed (SL): 170 mph. Cruise speed (SL): 150 mph. Cruise speed, 10,000': 164 mph. Service ceiling: 16,500 ft. Max. range: 1,100 st. miles. Endurance: 14 hours. Rate of climb: 1,125 fpm.

REMARKS

Originally designated the L-24, the Helio Courier was an "off-the-shelf" purchase in 1963 for operational testing and evaluation. Twenty U-10s have been procured through FY 1965. Purchased for use by U.S. Army Special Forces Groups.

U-1A OTTER

Eleven-place utility STOL aircraft. De Havilland Aircraft of Canada, Ltd., Downsview, Ontario.

ENGINES

One Pratt and Whitney R-1340-59 piston engine developing 600 hp.

PROPELLERS

Hamilton Standard three-bladed metal variable pitch.

SPECIFICATIONS

Span: 58 ft. Length: 41 ft. 10 in. Height: 12 ft. 7 in. Empty weight: 4,431 lb. Gross weight: 8,000 lb.

PERFORMANCE

Max. speed (SL): 153 mph. Cruise speed (SL): 120 mph. Cruise speed, 5,000': 138 mph. Service ceiling: 17,400 ft. Max. range: 580 st. mi. Rate of climb: 735 fpm.

REMARKS

Since the initial procurement in March 1955, the Army has purchased 205 Otters. The U-1A is one of the few service aircraft to retain its original designation.

U-6 BEAVER

Six-place utility aircraft. De Havilland Aircraft of Canada, Ltd. Downsview, Ontario.

ENGINES

One Pratt & Whitney R-985 AN-1, -3, -39, -39A engines of 450 hp.

PROPELLERS

Hamilton Standard two-bladed metal variable pitch.

SPECIFICATIONS

Span: 48 ft. Length: 30 ft. 4 in. Height: 10 ft. 5 in. Empty weight: 3,000 lb. Gross weight: 5,100 lb.

PERFORMANCE

Max. speed (SL): 156 mph. Cruise speed (SL): 125 mph. Cruise speed, 5,000': 130 mph. Service ceiling: 20,000 ft. Max. range: 690 st. mi. Endurance: 8 hours. Rate of climb: 850 fpm.

REMARKS

A rugged all-purpose aircraft originally used as a civilian "bush plane", the Beaver perfoms a wide variety of Army missions. Since initial procurement in 1951, the Army has purchased 654 U-6 aircraft. L-20 was the former designation of the Beaver.

U-8D SEMINOLE

Six-place, command/liaison utility transport. Beech Aircraft Corp., Wichita, Kansas.

ENGINES

Two Lycoming GSO-480-1 engines rated at 340 hp each.

PROPELLERS

Hartzell, 3-bladed, constant speed.

SPECIFICATIONS

Span: 45 ft. 3-3/8 in. Length: 31 ft. 6-15/32 in. Height: 11 ft. 6½ in. Empty weight: 4,978 lbs. Gross weight: 7,300 lbs.

PERFORMANCE

Max. speed (SL): 212 mph. Cruise speed (SL): 179 mph (65% power). Cruise speed, 5,000 ft. (65% power): 187 mph. 10,000 ft. (65% power): 195 mph. Service ceiling: 25,500 ft. Max. range: 1,320 st. mi. Endurance: 8.2 hrs. Rate of climb: 1,585 fpm.

REMARKS

The U-8D Seminole is the military version of the Beechcraft Model 50 Twin-Bonanza. Under contract in 1960, a number of U-8Ds were modified to the RL-23D (RL-8D) configuration incorporating the APQ86 SLAR installation. A total of 206 Seminoles have been purchased from 1952 through FY 65.

U-8F SEMINOLE

Seven-place utility command/liaison aircraft. Beech Aircraft Corp., Wichita, Kansas.

ENGINES

Two Lycoming IGSO-480-A1A6 engines. 340 hp each.

PROPELLERS

Hartzell, 3-bladed, metal, diameter 93 inches.

SPECIFICATIONS

Span: 45 ft. 10 in. Length: 33 ft. 4 in. Height: 14 ft. 2 in. Empty weight: 4,987 lb. Gross weight: 7,700 lbs.

PERFORMANCE

Max. speed (SL): 212 mph. Cruise speed (SL): 181 mph. Cruise speed, 5000 ft. (65% power): 187 mph. 10,000 ft. (65% power): 196 mph. Service ceiling: 27,100 feet. Max. range: 1,272 st. mi. Endurance: 8.38 hrs. Rate of climb: 1,304 fpm.

REMARKS

The U-8F is the military counterpart of the Beechcraft Queen Air 65 executive transport. A total of 71 U-8Fs have been procured through FY 65 since the initial purchase date in 1959.

U-9 AERO COMMANDER

Five-place utility, command/liaison aircraft. Aero Commander, Bethany, Okla.

ENGINES

Two Lycoming GO-480-1 piston engines of 550 hp.

PROPELLERS

Hartzell 3-bladed variable-pitch, metal propellers.

SPECIFICATIONS

Span: 49 ft. 6 in. Length: 35 ft. 2 in. Height: 14 ft. 6 in. Empty weight: 4,475 lb. Gross weight: 7,500 lb.

PERFORMANCE

Max. speed (SL): 255 mph. Cruise speed (SL): 198 mph. Cruise speed, 10,000': 226 mph. Service ceiling: 22,900 ft. Max. range: 1,150 st. mi. Rate of climb: 1,525 fpm.

REMARKS

The first U-9 (YL-26) was obtained by the Army in 1953. Since then, three later models, the B, C, and D, have been procured in addition to a conversion of the D model to carry special electronic gear. Nine Aero Commanders (all models) were in the Army inventory as of Jan., 1965 of twenty purchased.

T-41B

Four-place, single engine trainer. Cessna Aircraft Company, Wichita, Kan.

ENGINES

One Continental IO-360 of 210 hp.

PROPELLERS

One McCauley two-bladed constant speed propeller. Diameter, 6'4".

SPECIFICATIONS

All metal, high wing, fixed gear. Span: 36'2". Length: 26'6". Height: 8'11". Empty weight: 1,255 lbs. Gross weight: 2,500 lbs.

PERFORMANCE

Max. speed: 153 mph. Cruising speed: 148 mph. Rate of climb: 910 fpm at 2,500 lbs. Service ceiling: 17,500 feet. TO 50 ft obstacle: 1,045'. LA 50 ft obstacle: 860'

REMARKS

First delivery of six T-41Bs made in November, '66, with delivery of complete 255-ship order to be made by March, '67. Off-the-shelf version of Cessna's commercial Model 172. Nav / Com equipment includes three C-1611C/AIC interphone sets, an RT-515R-1 VHF Nav/Com radio with VOR course deviation indicator, an AN/ARN-83 low freq ADF, a BEI-901C emergency VHF transceiver with a single channel on 121.5, and provisions for an AN/ARC-54 FM radio for air-to-air and air-to-ground communications.

T-42A

Four-place instrument/transition trainer. Beech Aircraft Corp., Wichita, Kan.

ENGINES

Two Continental IO-470-L engines, rated at 260 hp each.

PROPELLERS

McCauley 2-blade, metal, 78 in. diameter.

SPECIFICATIONS

Span: 31 ft. 8 in. Length: 26 ft. 7 in. Height: 9 ft. 6 in. Empty weight: 3,197 lb. Gross weight: 5,100 lb.

PERFORMANCE

Max. speed (SL): 235 mph. Cruise speed (SL): 200 mph. Cruise speed, 5,000 ft. (65% power): 210 mph. 10,000 ft. (65% power): 218 mph. Service ceiling: 19,700 ft. Max. range: 1,065 nm (with 45 min. reserve). Endurance: 7.5 hrs. Climb rate: 1,670 fpm.

REMARKS

In Feb. 1965, 55 T-42As were ordered for delivery between Aug. 65 and June 66. The T-42A is used primarily as a fixed-wing, twin-engine instrument trainer by the Army Aviation School Instrument Training Division at Fort Rucker, Alabama. The secondary mission of the airplane is the twin-engine transition of single-engine rated Army Aviators and is capable of fulfilling other military roles. The T-42A is the military counterpart of the Beechcraft B55 Baron.

U-21A

8-12 place utility tactical transport aircraft. Beech Aircraft Corporation, Wichita, Kan.

ENGINES

Two United Aircraft of Canada PT 6A-20 free shaft turbine engines of 520 hp. each.

PROPELLERS

Beech full feathering, reversible propellers. 7'9" diameter.

SPECIFICATIONS

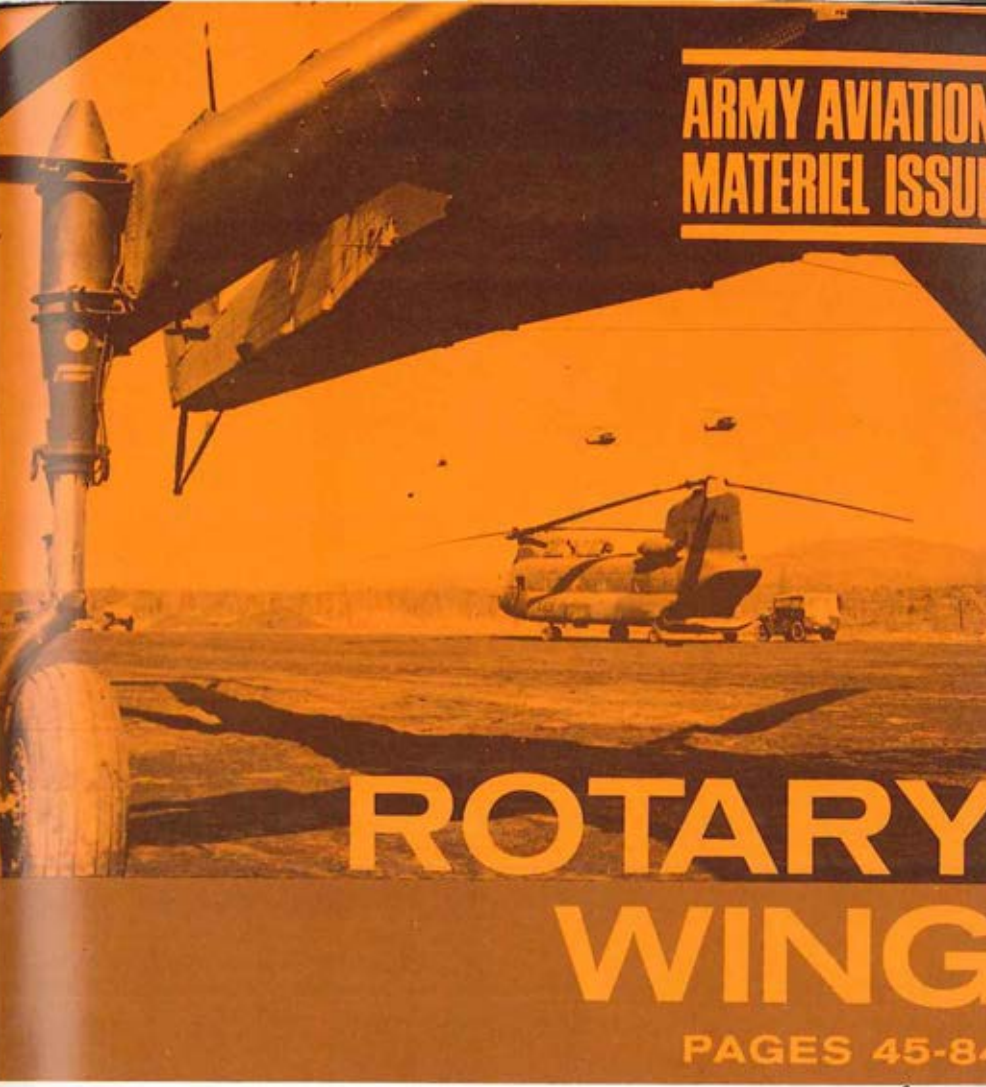
Span: 50'3". Length: 35'6". Height: 14'2". Empty weight: 6,065 lbs. Gross weight 7,700 lbs.

PERFORMANCE

Max. speed. 10,000': 225 knots. Cruising speed, 10,000': 210 knots. Rate of climb: 1,500 (SL). Service ceiling at max gross wt: 27,000. TO 50' obstacle: 1,400'. LO 50' obstacle: 2,300'.

REMARKS

Initial U-21A acceptance took place on April 16, 1967. Procured to provide support for tactical units, rather than as general administrative support mission aircraft. DA ordered 48 under a $9.8 million contract in October, 1966, with deliveries by June, 1967. Modified version of Army's NU-8F, which underwent initial user evaluation in March, 1964, as well as modified version of Beechcraft Queen Air.



ARMY AVIATION MATERIEL ISSU

ROTARY WING

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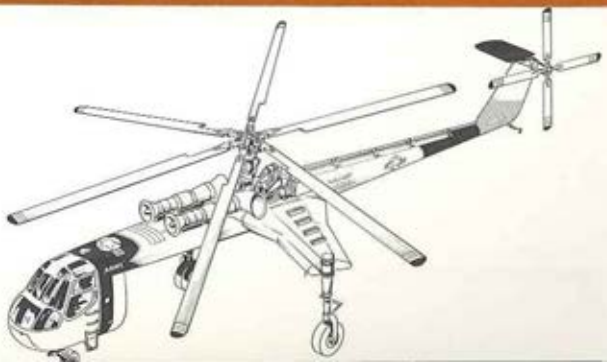

OH-13 SIOUX

Two-place observation helicopter. Bell Helicopter Company, Fort Worth, Texas.

ENGINES

One Lycoming C-435-23 piston engine of 250 hp.

ROTOR SYSTEM

Single two-bladed semi-rigid main rotor. Two-bladed metal tail rotor.

SPECIFICATIONS

Rotor diameter: 37 ft. Length: 31 ft. 7 in. Height: 9 ft. 4 in. Empty weight: 1,800 lb. Gross weight: 2,950 lb.

PERFORMANCE

Max. speed (SL): 81 mph. Cruise speed (SL): 81 mph. Cruise speed, 5,000': 88 mph. Service ceiling: 13,400 ft. Max. range: 191 st. mi.

REMARKS

The Army procured its first YR-13 in December 1946. Models procured include A, B, C, D, E, G, H, and K. See index for other OH-13 models. Since 1946, the Army has procured a total of 2,197 OH-13s of all models.

XH-15

Two-place experimental observation helicopter. Bell Helicopter Company, Fort Worth, Texas.

ENGINES

One Continental XO-470-5 turbo supercharged engine of 280 hp.

ROTOR SYSTEM

Single two-bladed rotor system, wooden blades.

SPECIFICATIONS

Rotor diameter: 36 ft. 10 in. Length: 43 ft. Gross weight: 2,700 lb.

PERFORMANCE

Max. speed (SL): 100 mph Service ceiling: 20,000 ft. No other mission data available. Only experimental work completed.

REMARKS

Because the XH-15 never became a production article, many of the parameters were never firmly established. The XH-15 was designed as a high altitude helicopter for the U.S. Air Force and was probably the first helicopter to incorporate a turbo supercharged engine.

H-16B

Research cargo helicopter. Piasecki Aircraft Corp., Philadelphia, Pa.

ENGINES

Two Allison T56-A-5 turbine engines of 2,100 shp each.

ROTOR SYSTEM

Tandem four-bladed metal fully articulated rotor system.

SPECIFICATIONS

Rotor diameter: 82 ft. Gross weight: 46,700 lb. Places: crew of three and 47 troops.

PERFORMANCE

Cruise speed (SL): 143 mph. Service ceiling: 15,600 ft. Max. range: 200 st. mi.

REMARKS

The Army procured two YH-16s for test and evaluation purposes. The second H-16 was an "A" model employing the Allison T38 turbine engine. The test project was terminated in 1956.

H-17

Heavy lift aircraft test vehicle. Hughes Tool Company, Aircraft Div., Culver City, California.

ENGINES

One TG-180 (J-36) modified gas turbine engine of 3,480 hp.

ROTOR SYSTEM

Single two-bladed metal main rotor, 130 ft. diameter and 68 in. chord.

SPECIFICATIONS

Rotor diameter: 130 ft. Gross weight: 46,000 lb. Three-place.

PERFORMANCE

Test aircraft, no performance data available.

REMARKS

This was the initial effort to produce a flying crane or heavy lift aircraft. The H-17 was a test vehicle procured by the U.S. Air Force in 1953. Evaluation data was supplied to the Army. This project was launched by the Kellett Company and later taken over by Hughes.

Solar's APU's make combat helicopt

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SOLAR

DIVISION OF INTERNATIONAL HARVESTER COMPANY

YH-18A

Four-place utility helicopter. Sikorsky Aircraft Div., Stratford, Connecticut.

ENGINES

One Franklin 0-425-1 piston engine of 245 hp.

ROTOR SYSTEM

Single three-bladed metal main rotor and two-bladed metal 5 ft. 5 in. dia. anti-torque rotor.

SPECIFICATIONS

Rotor diameter: 33 ft. Length: 35 ft. 6 in. Height: 8 ft. 8 in. Gross weight: 2,700 lb.

PERFORMANCE

Max. speed (SL): 110 mph. Cruise speed (SL): 92 mph. Service ceiling: 13,800 ft. Hover ceiling (OGE): 1,100 ft. Max. range: 305 st. mi. Endurance: 3.5 hours. Rate of climb: 1,050 fpm.

REMARKS

Four YH-18As were procured by the Army in 1950 for operational and engineering tests and evaluation.

UH-19

Twelve-place utility helicopter. Sikorsky Aircraft Division, Stratford, Conn.

ENGINES

One Curtiss-Wright (Lycoming) R-1300-3 piston engine of 700 hp.

ROTOR SYSTEM

Single three-bladed main rotor and a two-bladed metal 8' dia. anti-torque rotor.

SPECIFICATIONS

Rotor diameter: 53 feet. Fuselage length: 41 ft. 2 in. Height: 15 ft. 6 in. Empty weight 5,250 lb. Gross weight: 7,500 lb.

PERFORMANCE

Max. speed (SL): 112 mph. Cruise speed (SL): 91 mph. Service ceiling: 10,600 ft. Hover ceiling (OGE): 2,300 ft. Max. range: 360 st. mi. Endurance: 4.3 hours. Rate of climb: 1,020 fpm.

REMARKS

The UH-19 was the world's first transport helicopter and the first to be used for commercial scheduled passenger service. Since initial procurement in Nov. 1949, 355 Chickasaws have been brought into the Army inventory through FY 65.

H-24

Two-place observation helicopter. Seibl Helicopter.

ENGINES

One Lycoming 0-290-D1 engine of 130 hp.

ROTOR SYSTEM

Single two-bladed main rotor, wooden blades.

SPECIFICATIONS

Rotor diameter: 29 ft. Gross weight: 1,540 lb.

PERFORMANCE

Cruise speed (SL): 58 mph. Service ceiling: 4,300 ft. Max. range: 98 st. mi.

REMARKS

Two H-24s were procured in 1951 for operational and engineering evaluation. The aircraft was also considered for aeromedical evacuation purposes.

H-25

Eight-place utility helicopter. Piasecki Aircraft Corp., Philadelphia, Pa.

ENGINES

One Continental R-975-42 engine of 475 hp.

ROTOR SYSTEM

Tandem three-bladed rotor system.

SPECIFICATIONS

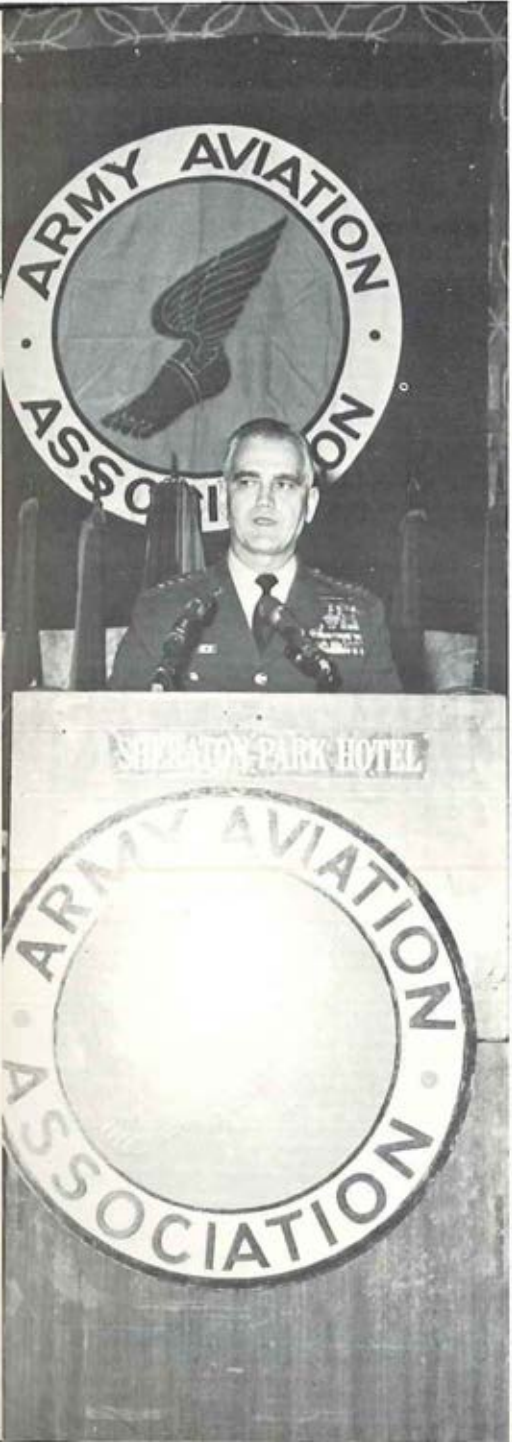
Rotor diameter: 35 ft. Gross weight: 5,500 lb.

PERFORMANCE

Cruise speed (SL): 92 mph. Service ceiling: 12,700 ft. Max. range: 357 st. mi.

REMARKS

The H-25 was developed for the Navy for rescue operations. With minor modifications, it met Army operational needs in cargo and utility missions. Fifty H-25s were procured by the Army, but were later turned over to the Navy for use.



11TH AAAA ANNUAL MEETING

SHERATON-PARK HOTEL
WASHINGTON, D.C.

WEDNESDAY, OCTOBER 15
Early Bird Reception

THURSDAY, OCTOBER 16
General Membership Meeting
President's Annual Report
Elections of National Officers
A.M. Panel Presentation
Chapter Delegates' Luncheon
(Open to General Membership)
P.M. Panel Presentation
Cub Club Reunion
President's Reception
Unit Reunions and Dinners

FRIDAY, OCTOBER 17
A.M. Panel Presentation
Honors Luncheon Reception
1969 AAAA Honors Luncheon
Diehards' Reception

OCTOBER 15 - OCTOBER 17

1969 AAAA ANNUAL MEETING

SHERATON-PARK HOTEL — **WASHINGTON, D.C.**

ADVANCE REGISTRATION

Advance registrations will be accepted Aug. 1-Oct. 6 (see coupon below). All reservations will be confirmed by mail. Registration badges and social function tickets will be available at the AAAA Registration Desk, Sheraton-Park Hotel, beginning 1:00 P.M. Monday, Oct. 13.

SOCIAL FUNCTIONS . . . GUESTS

Tickets may be purchased for guests by registrees for all social functions. Only registrees may attend AAAA and professional presentations.

Full remittance for registration and all tickets must accompany Registration Coupon.

REFUNDS FOR CANCELLATIONS

Phone cancellations of tickets will be accepted until noon, Friday, October 10. Letter cancellations should be postmarked no later than October 6.

ROOM RESERVATIONS

Write Sheraton-Park Hotel, Washington, D.C. 20008, or hotel of choice. Military rates at Sheraton-Park if in uniform or with ID active-duty card. AAAA cannot accept requests for reservations. State that you will attend AAAA meeting.

Civilian Rates at Sheraton-Park:

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1-Bedroom Suite	$40.00-$115.00
2-Bedroom Suite	$80.00-$105.00

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Detach and mail to: ARMY AVIATION ASSOCIATION OF AMERICA, 1 Crestwood Road, Westport, Conn. 06880 — Make check payable to

Enclosed please find $..... in payment of my registration for the 1969 AAAA Annual Meeting and tickets indicated below:

Function	Quantity Desired	Unit Prices **Military	Unit Prices Civilian	Amount
1. Registration	.....	$ 5.00	$15.00	$.....
2. President's Reception*	.....	$ 5.00	$15.00	$.....
3. Honors Luncheon and Reception*	.....	$ 7.50	$15.00	$.....
4. Combined Attendance (Includes 1, 2 and 3)				
Member Alone	.....	$15.00	$30.00	$.....
Member and Wife	.....	$25.00	$50.00	$.....

*Separate tickets are required for each social function.
**Includes civilian employees of the Armed Services.

NAME..... (Print or type) (Rank or title of position)

ADDRESS..... (Print or type)

THIS APPLICATION WILL BE ACCEPTED ONLY IF ACCOMPANIED BY PAYMENT IN FULL

H-26

One-place observation research helicopter. American Helicopter.

ENGINES

Two XPJ49-AH-3 tip-mounted pulse jet engines, 36 lb/thrust.

ROTOR SYSTEM

Single two-bladed teetering rotor system, blades by Prewitt.

SPECIFICATIONS

Gross weight: 810 lb.

PERFORMANCE

Cruise speed (SL): 75 mph. Service ceiling: 7,000 ft. Max. range: 100 st. mi.

REMARKS

The Army procured five YH-26s during the period 1952-1954 for engineering and operational evaluation.

H-30

Two-place observation helicopter. McCulloch Motors.

ENGINES

One Franklin 6A4-200-C6 engine o 200 hp.

ROTOR SYSTEM

Tandem three-bladed rotor system.

SPECIFICATIONS

Rotor diameter: 22 ft. Gross weight 2,000 lb.

PERFORMANCE

Cruise speed (SL): 90 mph. Servic ceiling: 12,000 ft. Max. range: 19 st. mi.

REMARKS

Two H-30s were procured by the Arm in 1952 for operational and engineer ing evaluation.

H-31

Eight-place utility helicopter. Doman Helicopters Inc., Danbury, Connecticut.

ENGINES

One Lycoming SO-580-D engine of 400 hp.

ROTOR SYSTEM

Single four-bladed main rotor system, wooden blades. Three-bladed tail rotor, wooden blades.

SPECIFICATIONS

Gross weight: 5,200 lb.

PERFORMANCE

Cruise speed (SL): 78 mph. Service ceiling: 5,700 ft. Max. range: 450 st. mi.

REMARKS

The Army procured two H-31s in 1952 for tests and evaluation. The aircraft had a completely sealed, rigid, non-articulated rotor system. The commercial designation was the LZ-5.

H-32 HORNET

Two-place observation helicopter. Hiller Aircraft Company, Palo Alto, Calif.

ENGINES

Two Hiller HR J2B Ram Jet engines of 30 lb/thrust each.

ROTOR SYSTEM

Single two-bladed metal main rotor and single two-bladed wooden tail rotor, 32 in. diameter,

SPECIFICATIONS

Rotor diameter: 23 ft. Gross weight: 1,080 lb.

PERFORMANCE

Cruise speed (SL): 70 mph. Service ceiling: 11,500 ft. Max. range: 28 st. mi.

REMARKS

The Hornet first flew in 1950, although the Army did not take delivery of the aircraft until 1956, when six were received.

H-33 (XV-3)

Two-place tilting-rotor research aircraft. Bell Helicopter Company, Fort Worth, Texas.

ENGINES

One R-985 engine.

ROTOR SYSTEM

Two two-bladed semi-rigid tilting rotors.

SPECIFICATIONS

Rotor diameter: 23 ft. Length: 30 ft. 4 in. Height: 13 ft. 7 in. Empty weight: 4,200 lb. Gross weight: 4,850 lb.

PERFORMANCE

Max. speed (SL): 150 mph. Cruise speed (SL): 130 mph. Service ceiling: 12,000 ft. Max. range: 140 st. mi.

REMARKS

The Army procured two prototypes of the H-33 in 1958. The Convertiplane achieved 100 per cent in-flight conversion of its tilting rotors in Dec. 1958, the world's first such performance by this type aircraft. Over 100 full conversions were made during tests conducted. The Convertiplane was also designated the XV-3.

H-39

Four-place utility helicopter. Sikorsky Aircraft Division, Stratford, Connecticut.

ENGINES

One Turbomeca Artouse II-XT-51-T3 turbine.

ROTOR SYSTEM

Single four-bladed articulated main rotor and metal three-bladed 6', 4" dia. anti-torque rotor.

SPECIFICATIONS

Rotor diameter: 35 ft. Length: 41 ft. 9 in. Height: 9 ft. 7 in. Empty weight: 2,105 lb. Gross weight: 3,361 lb.

PERFORMANCE

Max. speed (SL): 150 mph. Cruise speed (SL): 138 mph. Service ceiling: 17,900 ft. Hover ceiling (OGE): 15,100 ft. Max. range: 265 st. mi. Endurance: 2 hours. Rate of climb: 1,680 fpm.

REMARKS

The H-39 was basically a modified H-18 with an Artouse II gas turbine engine installed. In 1954 the Army obtained one of these helicopters to be used for operational and engineering evaluation. The H-39 set World Records in 1954 for its class for Speed: 156.1 mph and Altitude: 24,220 feet.

AH-1G HUEYCOBRA

Two-place armed helicopter. Bell Helicopter Company, Forth Worth, Texas.

ENGINES

One Lycoming T53-L-13 gas turbine of 1,400 shp.

ROTOR SYSTEM

Single two-bladed Model 540 "door hinge" main rotor, 27 in. chord. Two-bladed tail rotor, 8 ft. 6 in. diameter.

SPECIFICATIONS

Rotor diam.: 44 ft. Length: 53 ft. Height: 13 ft., 6 in. Width: 3 ft., 6 in. Weight (gross): 9,500 lbs.

PERFORMANCE

Cruise speed: 130 knots. Radius of action: 130 n.m. Rate of climb: 1,580 fpm. Payload: 3,052 lbs (fuel and ord).

REMARKS

The AH-1G, in replacing the UH-1 armed helicopter, provides increased range, endurance, and greater firepower, insuring swift reaction to the tactical situation. Its missions include search and target acquisition, reconnaissance by fire, multiple weapon fire support, and troop helicopter support. The HueyCobra was initiated by Bell Helicopterstrictly as a company project in March, 1965, with first company flight tests being conducted in September of that year. The first Army flight tests were held in November, 1965. In March, 1966, DOD authorized procurement of the AH-1G, the first helicopter designed specifically as a weapons platform. The first production HueyCobra was delivered in March, 1967, with several aircraft reaching USARV in August, 1967. The basic armament configuration calls for the TAT-102A automatic gun (7.62-mm).

CATEGORY OF AAAA MEMBERSHIP

- ☐ Active U.S. Army establishment
- ☐ U.S. Army National Guard component
- ☐ U.S. Army Reserve Component
- ☐ Other. Describe below.

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If Monthly Flight Pay is:	Annual Incentive (Flight) Pay is:	If Attained Age is under 30:	If Attained Age is 30-39:	If Attained Age is 40-49:	If Attained Age is 50 and Over:
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205	2460	43.05	49.20	61.50	73.80
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185	2220	38.85	44.40	55.50	66.60
180	2160	37.80	43.20	54.00	64.80
175	2100	36.75	42.00	52.50	63.00
170	2040	35.70	40.80	51.00	61.20
165	1980	34.65	39.60	49.50	59.40
160	1920	33.60	38.40	48.00	57.60
155	1860	32.55	37.20	46.50	55.80
150	1800	31.50	36.00	45.00	54.00
145	1740	30.45	34.80	43.50	52.20
140	1680	29.40	33.60	42.00	50.40
135	1620	28.35	32.40	40.50	48.60
130	1560	27.30	31.20	39.00	46.80
125	1500	26.25	30.00	37.50	45.00
120	1440	25.20	28.80	36.00	43.20
115	1380	24.15	27.60	34.50	41.40
110	1320	23.10	26.40	33.00	39.60
105	1260	22.05	25.20	31.50	37.80
100	1200	21.00	24.00	30.00	36.00
95	1140	19.95	22.80	28.50	34.20
90	1080	18.90	21.60	27.00	32.40
85	1020	17.85	20.40	25.50	30.60
80	960	16.80	19.20	24.00	28.80
75	900	15.75	18.00	22.50	27.00
70	840	14.70	16.80	21.00	25.20
65	780	13.65	15.60	19.50	23.40
60	720	12.60	14.40	18.00	21.60
55	660	11.55	13.20	16.50	19.80
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I certify that I am currently on flying status with a U.S. Army unit; that I am in good health at the time of making this application; that I am entitled to receive incentive pay; that no condition is known to me at this time that could result in my loss of flying status for physical reasons; and that no action is pending to remove me from flying status for failure to meet required physical standards. I authorize the Company, or Company-designated representatives, to examine all official medical records that may be pertinent to any claim that I may submit.

SIGNATURE _____ **DATE** _____

THIS COVERAGE IS ONLY MADE AVAILABLE TO AAAA MEMBERS.

PREMIUM TABLE APPEARS ON REVERSE SIDE

H-41 SENECA

Four-place observation helicopter. Cessna Aircraft Company, Wichita, Kansas.

ENGINES

One Continental FSO-526 horizontally mounted piston engine of 260 hp.

ROTOR SYSTEM

Single two-bladed metal main rotor. Two-bladed metal 7 ft. diameter tail rotor.

SPECIFICATIONS

Rotor diameter: 35 ft. Length: 42 ft. 5 in. Height: 8 ft. 5 in. Empty weight: 2,080 lb. Gross weight: 3,000 lb.

PERFORMANCE

Max. speed (SL): 122 mph. Cruise speed (SL): 95 mph. Cruise speed, 10,000': 120 mph. Service ceiling: 12,200 ft. Hover ceiling (OGE): 6,500 ft. Max. range: 310 st. mi. Endurance: 3.37 hours. Rate of climb: 1,030 fpm.

REMARKS

The Army procured ten H-41 helicopters in 1957 for high altitude operation tests and evaluation. No others were purchased.

YHC-1

28-place medium transport helicopter. Boeing Vertol Div., Morton, Pa.

ENGINES

Two T58-GE-6 turbines of 1,050 shp each.

ROTOR SYSTEM

Tandem three-bladed rotors.

SPECIFICATIONS

Rotor diameter: 48 ft. 4 in. Length: 44 ft. 7 in. Height: 16 ft. 10 in. Empty weight: 11,716 lb. Gross weight: 18,700 lb. Overload gross wt.: 21,400 lb.

PERFORMANCE

Max. speed (SL): 168 mph. Cruise speed (SL): 155 mph. Service ceiling: 13,700 ft. Hover ceiling, OGE: 6,500 ft. Max. range: 115 st. mi Rate of climb: 1,700 fpm.

REMARKS

The Army procured three YHC-1s in 1959 for tests and evaluation. Engineering and operational data obtained from this aircraft led to the development of the CH-46, the Boeing 107, and the CH-47 Chinook.

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LEFT:
Nightsun SX-16. Output, 1600 watts; weight, 25 lbs. Installation kits available for Bell 47G series and 205A(A1), Fairchild Hiller FH-1100 and Hughes OH-6A.

RIGHT:
Nightsun FX-150. Output, 20,000 watts; weight, 160 lbs. Installation kits available for Bell UH1 series and 205A(A1). Sikorsky HH-3E, HH-53B&C, Fairchild C-123 and Lockheed C130 aircraft.

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CH-21 SHAWNEE

Cargo helicopter. Boeing Vertol Div., Morton, Pa.

ENGINES

One Curtiss-Wright R-1820-103 developing 1,425 hp.

ROTOR SYSTEM

Tandem 3-bladed rotors.

SPECIFICATIONS

Rotor diameter: 44 ft. Length: 52 ft. 7 in. Height: 15 ft. 9 in. Empty weight: 8,950 lb. Gross weight: 15,200 lb. Places: Crew of three and 20 troops or 12 litters.

PERFORMANCE

Max. speed (SL): 127 mph. Cruise speed (SL): 98 mph. Service ceiling: 18,600 ft. Max. range: 245 st. mi. Endurance: 2 hrs. 41 min.

REMARKS

Since the initial date of procurement in June 1950, the Army purchased 334 CH-21s of all models. The Shawnee was, until late 1963, the workhorse of Vietnam, when it was phased out, being replaced by the ubiquitous Huey.

ARMY AVIATION ASSOCIATION

GENERAL PURPOSES

To advance the status, overall esprit, and the general knowledge and proficiency of those persons who are engaged professionally in the field of U.S. Army aviation in the active U.S. Army forces and in the Reserve Forces of the U.S. Army.

To preserve and foster a spirit of good fellowship among military and civilian persons whose past or current duties affiliate them with the field of U.S. Army aviation.

To advance those policies, programs, and concepts of the Association of the U.S. Army, the National Guard Association, and the Reserve Officers Association that are of benefit to the AAAA membership.

SPECIFIC OBJECTIVES

Fostering a public understanding of Army aviation and arousing a public interest in this segment of the military forces.

Exchanging ideas and disseminating information pertinent to Army aviation through the media endorsed by the Association.

Inspiring Army-wide and nationwide interest in Army aviation careers.

Cementing relationships between those interested in Army aviation in the active U.S. Army forces and the Reserve Forces of the U.S. Army.

Motivating Army aviation personnel to increase their knowledge, techniques, and skills.

Maintaining historical records of Army aviation.

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An AWARDS PROGRAM in which outstanding individual and unit achievements receive National recognition.

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I wish to become a member of the Army Aviation Association of America (AAAA). I have enclosed my Membership Dues and the first-year Initiation Fee. Please start my ARMY AVIATION MAGAZINE subscription and send my membership credentials.

☐ My past or current duties affiliate me with the field of U.S. Army aviation or its allied pursuits.

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Failure to sign above invalidates this application.

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☐ Active U.S. Army establishment
☐ U.S. Army National Guard
☐ U.S. Army Reserve component
☐ Other. Describe below.

_____
_____
_____

CH-34 CHOCTAW

16-place cargo and light tactical transport helicopter. Sikorsky Aircraft Division, Stratford, Conn.

ENGINES

One Curtiss-Wright R-1820-84 piston engine of 1,425 hp.

ROTOR SYSTEM

Single four-bladed main rotor, and four-bladed metal, 9 ft. 4 in. dia. antitorque rotor.

SPECIFICATIONS

Rotor diameter: 56 ft. Overall length: 65 ft. 8 in. Height: 15 ft. 10 in. Empty weight: 7,675 lb. Gross weight: 13,000 lb. Overload gross wt: 14,000 lb.

PERFORMANCE

Max. speed (SL): 122 mph. Cruise speed (SL): 108 mph. Service ceiling: 9,500 ft. Hover ceiling (OGE): 2,400 ft. Max. range: 276 st. mi. Rate of climb: 1,100 fpm.

REMARKS

The Army procured a total of 437 Choctaws of all models through FY 65. The VH-34 version was used for VIP transport, notably as the first helicopters of the Executive Flight Detachment.

UH-1B IROQUOIS

Nine-place utility helicopter. Bell Helicopter Company, Fort Worth, Texas.

ENGINES

One Lycoming T53-L-11 turbine engine of 1,100 shp.

ROTOR SYSTEM

Single two-bladed main rotor. Two-bladed tail rotor, 8 ft. 6 in. diameter.

SPECIFICATIONS

Rotor diameter: 44 ft. Overall length: 53 ft. Fuselage length: 42 ft. 7 in. Height: 12 ft. 8 in. Empty weight: 4,523 lb. Gross weight: 8,500 lbs.

PERFORMANCE

Velocity never exceeds 138 mph. Cruise speed (SL): 110 mph. Hover (OGE): 2,-500 ft. Hover (IGE): 8,200 ft. Normal range (SL): 222 mi.

REMARKS

The Army has procured a total of 1,306 UH-1Bs from 1960 to the end of FY 65. The original Army designation, HU-1, gave rise to the common nick name "Huey". The Bell H-40 was produced as an aero-medical ambulance, but because of its versatility became an interim replacement for the piston powered cargo helicopters. (All figures listed here are based on the UH-1B at max. gross weight and with the standard rotor).

CH-37 MOJAVE

Medium cargo helicopter. Sikorsky Aircraft Div., Stratford, Conn.

ENGINES

Two Pratt & Whitney R-2800-54 piston engines of 2,100 hp each.

ROTOR SYSTEM

Single five-bladed main rotor and four-bladed metal 15 ft. dia. anti-torque rotor.

SPECIFICATIONS

Rotor diameter: 72 ft. Length: 88 ft. Height: 22 ft. Empty weight: 20,690 lb. Gross weight: 31,000 lb. Places: Crew of 3 and 36 troops or 24 litters.

PERFORMANCE

Max. speed (SL): 130 mph. Cruise speed (SL): 115 mph. Service ceilings: 8,700 ft. Hover ceiling (OGE): 1,100 ft. Max. range: 145 st. mi. Rate of climb: 910 fpm.

REMARKS

Since initial procurement in 1956, the Army has purchased 91 CH-37 Mojaves through FY 65. The Mojave is loaded through clam-shell doors in the aircraft's nose.

CH-47A CHINOOK

Medium transport helicopter. Boeing Vertol Div., Morton, Pa.

ENGINES

Two Lycoming T55-1-L-7 turbines of 2,650 shp each.

ROTOR SYSTEM

Tandem 3-bladed rotors.

SPECIFICATIONS

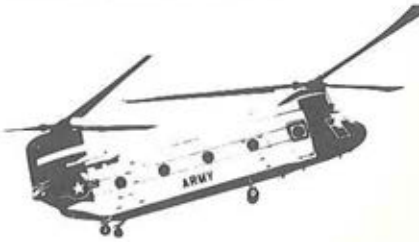
Rotor diameter: 59 ft. 1 in. Fuselage length: 51 ft. Overall length: 83 ft. Height: 18 ft. 6 in. Empty weight: 17,913 lb. Gross weight: 33,000 lb. Overload gross wt.: 38,550 lb.

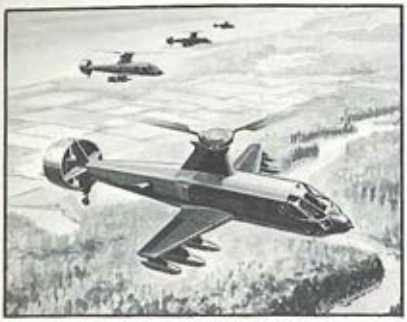
PERFORMANCE

Max. speed (SL): 178 mph. Cruise speed (SL): 164 mph. Service ceiling: 9,500 lb. Hover ceiling, OGE: 7,750 ft. Max. range: 115 st. mi. Rate of climb: 1,750 fpm.

REMARKS

Since the initial date of procuremer in 1960, the Army has added 19 Chinooks to its inventory. In 1963 th CH-47 was classified as the offici Army medium transport helicopte Armed and armored versions are no in operation in Vietnam. The Chinoo can transport a full rifle platoon of 4 combat-equipped troops.

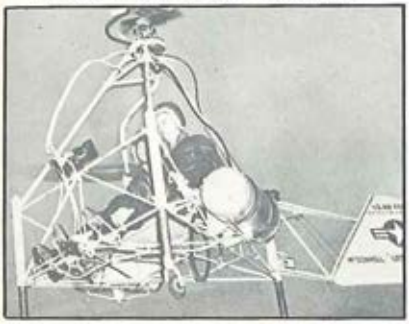




Piasecki 16H-1B Pathfinder, 1964

Kaman HOK-1, 1957

Fairchild-H



McDonnell H-20, 1952

Del Mar DH-2C Target Drone, 1966

Bell Aeros

Bell H-12

Bell Aerosystems X-14, 1959

Goodyea

Bell twin-engine UH-1D, 1966

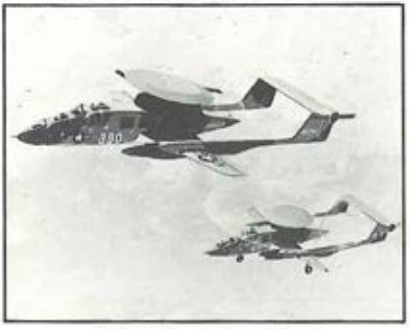
Del Mar Whirlymite, 1966

o-Porter, 1964

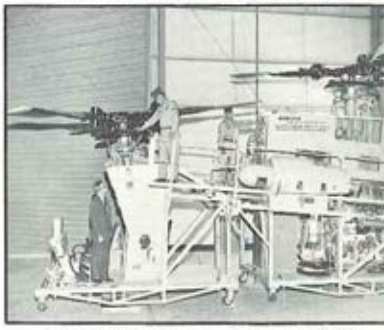
Vertol 6-engine V/STOL, 1959

Bell Winged Helicopter, 1963

Caribao, 1963



Ryan Disc-Rotor, 1966



CH-47 Composite Trainer, 1963

oplane, 1959

Canadair CL-84 Tilt-Wing, 1965

Sikorsky VH-3A, 1962

1962

Cessna L-27 (USAF), 1964

L-23 with fuel tank outriggers

CH-47B CHINOOK

Medium transport helicopter. Boeing Vertol Division, Morton, Pa.

ENGINES

Two Lycoming T-55-L-7C turbines of 2,850 shp at 16,000 rpm.

ROTOR SYSTEM

Tandem 3-bladed rotors of 60′ diameter.

SPECIFICATIONS

Fuselage length: 51′. Overall length: 99.17′. Height: 18.65′. Empty weight: 19,375 lbs. Design gross weight: 33,000 lbs (40,000 lbs. max.).

PERFORMANCE

Max. speed: 196 mph. Cruise speed: 177 mph. Service ceiling: 16,300′. Hover ceiling (OGE): 10,650′. (IGE): 14,200′. Max. range: 351 mi. Rate of climb (SL): 1,990 at NRP.

REMARKS

An advanced version of the CH-47A Chinook, the "B" Model returns improved flight performance through redesigned rotor blades and stepped up turbine engines. The 33-seat "B" made its first flight in October, 1966, and will be followed by a "C" model with yet another increase in performance.

SIOUX SCOUT

Two-place experimental armed helicopter. Bell Helicopter Company, Fort Worth, Texas.

ENGINES

One Lycoming TVO-435 turbo supercharged engine of 260 hp.

ROTOR SYSTEM

Single two-bladed main rotor 37 ft. diameter. Two-bladed metal tail rotor, 5 ft. 10 in. diameter.

REMARKS

The Scout was an extensively modified OH-13 featuring aerodynamic refinements for reduced drag, stub wings, internal fuel cells, an integrated nose gun system, mounting points for external stores, and increased maneuverability. Tests on the Scout led to concepts for design of the AH-1G. Huey-Cobra.

16H-1C

Eight-place developmental shaft compound, ring-tail helicopter. Piasecki Aircraft Corporation, Phila., Pa. 19153

ENGINES

One GE T-58-5 turbine engine, 1,500 shp.

ROTOR SYSTEM

Fully-articulated 3-bladed main rotor and a 3-bladed controllable pitch ducted tail-prop for forward propulsion and anti-torque directional control.

SPECIFICATIONS

Rotor diameter: 44 ft., Empty Weight: 4,800 lbs., STOL gross weight: 8,150 lbs., Disc Loading: 5.36 lb./sq. ft., STOL Gross weight: 10,800 lbs.

PERFORMANCE

Max. speed (SL): 207 mph, Cruise speed (SL): 187 mph @ 80% Takeoff power, Service Ceiling: 18,700 ft., Hover Ceiling (OGE): 7,800 ft., Max. Range: 450

REMARKS

Private development initially by PiAC as 16H-1 Pathfinder, it was later modified to the Pathfinder II under a joint Army-Navy contract to explore high speed.

HO-1 DJINN

Two-place observation helicopter. Sud Aviation, Paris, France.

ENGINE

One Turbomeca Palouste 4 turbo-generator.

ROTOR SYSTEM

Single two-bladed main rotor, diameter 35 ft. 5 in. Air bled from compressor is fed to blade-tip ejectors providing thrust for rotational power.

SPECIFICATIONS

Fuselage length: 17 ft. 5 in., Height: 8 ft. 7 in. Empty weight: 794 lb. Max gross weight: 1,676 lb.

PERFORMANCE

Max. speed (SL): 78 mph. Cruise speed (SL): 62 mph. Hover ceiling OGE: 4,000 ft. Hover IGE: 2,500 ft. Range: 125 st. mi. Endurance: 2 hours 15 min.

REMARKS

The Army procured three YHO-1s for engineering and operational evaluation as an observation aircraft. It was the first helicopter to receive the new HO designation.

HO-3

Two-place observation helicopter, Brantley Helicopter Corp., Frederick, Oklahoma.

ENGINES

One Lycoming VO-360 engine of 162 hp.

ROTOR SYSTEM

Single three-bladed; Brantley designed two-section blades.

SPECIFICATIONS

Rotor diameter: 28 ft. 3 in. Overall length: 21 ft. 9 in. Height: 6 ft. 9 in. Empty weight: 1,020 lb. Gross weight: 1,670 lb.

PERFORMANCE

Max. speed (SL): 100 mph. Cruise speed (SL): 90 mph. Service ceiling 9,000 ft. Hover ceiling (IGE): 4,000 ft Normal range: 250 st. mi. Rate of climb: 1,400 fpm.

REMARKS

The Army purchased five HO-5s for evaluation. The aircraft had skid gear instead of wheels.

CH-54A TARHE

Heavy lift helicopter. Sikorsky Aircraft Div., Stratford, Connecticut.

ENGINES

Two Pratt & Whitney JFTD-12A-1 turbines of 4,050 shp each.

ROTOR SYSTEM

Single six-bladed main rotor and four-bladed metal, 15 ft. 4 in. dia. anti-torque rotor.

SPECIFICATIONS

Rotor diameter: 72 ft. Overall length: 88 ft. 7 in. Height: 25 ft. 7 in. Empty weight: 18,217 lb. Gross weight: 38,000 lb. Alt. gross wt.: 42,000 lb. Crew of 3 and 2 passengers in cockpit, plus 67 troops or 48 litters in pod.

PERFORMANCE

Max speed (SL): 124. Cruise speed: 110. Service ceiling: 13,000'. Hover ceiling: 7,000' (OGE); 11,900' (IGE). Normal range: 220. Rate of climb: 1,400 fpm.

REMARKS

The CH-54 carries a 10-ton payload and is designed to carry its cargos externally. It has a rear-facing seat for the third crew member who has a clear view of the load during pickup and delivery. Delivery can be accomplished from a hover by means of a hoist. The Army CH-54 inventory also includes universal pods which serve as mobile hospitals, command posts, etc.

OH-4A

Four-place light observation helicopter. Bell Helicopter Company, Fort Worth, Texas.

ENGINES

One Allison T63 turbine engine of 250

ROTOR SYSTEM

Single two-bladed main rotor system, two-bladed tail rotor, metal, 5 ft. 2 in. diameter.

SPECIFICATIONS

Rotor diameter: 33.3 ft. Length: 38 ft. 8 in. Height: 8 ft. 10 in. Empty weight: 1,536 lb. Gross weight: 2,573 lb.

PERFORMANCE

Max. speed (SL): 135 mph. Cruise speed (SL): 111 mph. Cruise speed, 5,000': 111 mph. Service ceiling: 20,000 ft. Hover ceiling (OGE): 8,000 ft. Max. range: 283 st. mi. Endurance: 2 hrs. 35 min. Rate of climb: 1,100 fpm.

REMARKS

The OH-4A was the first of three LOH competitors to fly, taking to the air in December, 1962. Five OH-4s were delivered to the U.S. Army Aviation Test Board for tests and evaluation in January, 1964.

OH-5A

Four-place light observation helicopter Hiller Aircraft Company, Palo Alto California.

ENGINES

One Allison T63-A-5 turbine engine o 250 shp.

ROTOR SYSTEM

Single two-bladed Hiller "L" rotor b Parsons. Two-bladed metal anti-torqu rotor.

SPECIFICATIONS

Rotor diameter: 35 ft. 6 in. Empt weight: 1,370 lb. Gross weight: 2,53 lb.

PERFORMANCE

Max. speed (SL): 128 mph. Servic ceiling: 17,200 ft. Hover ceiling (OGE 12,000 ft. (IGE): 16,900 ft. Endurance 8.1 hours. Rate of climb: 1,850 fpm.

REMARKS

Five OH-5As were built for the Army to test and compare with two othe versions of the proposed LOH. The first flying model was turned over t the Army in December 1963. The OH 5A was eliminated from the LOH com petition. A modified version of the Hiller LOH is marketed as the FH-1100

OH-6A CAYUSE

Four-place light observation helicopter. Hughes Tool Co, Aircraft Div., Culver City, California.

ENGINES

One Allison T63-A-5A turbine of 252 shp (derated).

ROTOR SYSTEM

Single four-bladed main rotor and two-bladed metal anti-torque rotor, 4 ft. 2 in. diameter.

SPECIFICATIONS

Rotor diameter: 26 ft. 4 in. Overall length: 30 ft. 4 in. Fuselage length: 23 ft. Height: 8 ft. 6 in. Empty weight: 1,156 lb. Mission gross wt.: 2,163 lb. Overload gross wt.: 2,700 lb.

PERFORMANCE

Max. speed (SL): 143 mph. Cruising speed (SL): 143 mph. Service ceiling: 15,500'. Hover ceiling (OGE): 7,600'. (IGE): 9,150' Normal range: 413 mi. at 5,000'. Rate of climb (SL): 1,550 fpm. Normal fuel capacity: 400 lbs.

REMARKS

The OH-6A was the winning design of three LOH proposals tested and evaluated by the U.S. Army Aviation Test Board. The initial date of procurement for the Pawnee was May 26, 1965 with deliveries to USARV commencing in early '68. Organic to division, brigade, and battalion or equivalent units, the OH-6A is used in performing command and control, visual observation, target acquisition and reconnaissance missions.

OH-13S SIOUX

Three-place observation helicopter. Bell Helicopter Company, Fort Worth, Tex.

ENGINES

One Lycoming TVO-435-25 turbo-supercharged engine of 260 hp.

ROTOR SYSTEM

Single two-bladed metal main rotor. Two-bladed metal tail rotor, 5 ft. 10 in. diameter.

SPECIFICATIONS

Rotor diameter: 37 ft. Overall length: 43 ft. 3 in. Fuselage length: 32 ft. 7 in. Height: 9 ft. 3 in. Empty weight: 1,936 lb. Gross weight: 2,850 lb.

PERFORMANCE

Max. speed (SL): 105 mph. Cruise speed (SL): 93 mph. Cruise speed, 5,000': 92 mph. Service ceiling: 18,000 ft. Hover ceiling (OGE): 15,000 ft. Max. range: 324 st. mi. Endurance: 2 hours. Rate of climb: 1,190 fpm.

REMARKS

The Army has procured a total of 283 OH-13S models through FY 65.

HueyTug

Medium lift utility and cargo helicopter. Bell Helicopter Company, Fort Worth, Texas.

ENGINES

One Lycoming T55-L-7C gas turbine of 2,850 shp.

ROTOR SYSTEM

Single two-bladed model 540 "Door Hinge" main rotor, 27-inch chord. Two-bladed tail rotor, 9 ft. 8 in. diameter.

SPECIFICATIONS

Main rotor diameter: 50 ft. Overall length: 60 ft. 6 in. Width: 8 ft. 8 in. Height: 13 ft. 4 in. Empty weight: 5,791 lb. Max gross weight: 10,500 lb. (Internal); 14,000 lb. (External).

PERFORMANCE

Figures at maximum external weight/maximum internal weight. Cruise speed: 80 knots/140 knots. Range (SL): 145 nm/224 nm. Hover (OGE 95°F): 4,000/11,200 ft. Hover (IGE 95°F): 5,800/13,100 ft. Rate of climb (SL): 1,200/2,200 fpm.

REMARKS

The model 211 HueyTug was developed by Bell Helicopter as a company-sponsored project.

OH-23D

Three-place observation helicopter. Hiller Aircraft Company, Palo Alto, California.

ENGINES

One Lycoming VO-435-23B engine of 250 hp.

ROTOR SYSTEM

Single two-bladed main rotor, metal blades by Parsons, Hiller Rotormatic system.

SPECIFICATIONS

Rotor diameter: 35 ft. 5 in. Fuselage length: 27 ft. 9 in. Overall length: 40 ft. 8 in. Empty weight: 1,816 lb. Gross weight: 2,700 lb.

PERFORMANCE

Max. speed (SL): 95 mph. Cruise speed (SL): 82 mph. Service ceiling: 13,200 ft. Hover ceiling (OGE): 5,200 ft. (IGE): 1,250 ft. Max. range: 197 st. mi. Rate of climb: 1,050 fpm.

REMARKS

The "D" model Raven has been used mainly as the primary helicopter trainer until late 1965 when it began being replaced by the TH-55A. The OH-23 is still in use operationally in the field.

OH-23G

Three-place observation helicopter. Hiller Aircraft Company, Palo Alto, California.

ENGINES

One Lycoming VO-540 engine of 305 hp.

ROTOR SYSTEM

Single two-bladed main rotor. Two-bladed tail rotor, 5 ft. 6 in. diameter.

SPECIFICATIONS

Rotor diameter: 35 ft. 5 in. Fuselage length: 28 ft. 6 in. Overall length: 40 ft. 8 in. Height: 10 ft. 2 in. Empty weight: 1,759 lb. Gross weight: 2,800 lb.

PERFORMANCE

Max. speed (SL): 96 mph. Cruise speed (SL): 90 mph. Service ceiling: 15,200 ft. Hover ceiling (OGE): 5,800 ft. Max. range: 225 st. mi. Rate of climb: 1,290 fpm.

REMARKS

The "F" model is the same as the "G" with the following exceptions: fuselage length — 29 ft. 6 in.; four-place; and the empty weight is 1,813 lb.

TH-55A

Two-place primary trainer helicopter. Hughes Tool Company, Aircraft Div., Culver City, Cal.

ENGINES

One Lycoming HIO-360-B1A engine of 180 hp.

ROTOR SYSTEM

Single three-bladed main rotor and four-bladed metal anti-torque rotor, 3 ft. 4 in. diameter.

SPECIFICATIONS

Rotor diameter: 25 ft. 3½ in. Overall length: 22 ft. 4 in. Height: 8 ft. 3 in. Empty weight: 1,008 lb. Gross weight: 1,600 lb.

PERFORMANCE

Max. speed (SL): 86 mph. Cruise speed, 5,000': 81 mph. Service ceiling: 11,500 ft. Hover ceiling (OGE): 4,000 ft. (IGE): 6,400 ft. Max. range: 187 st. mi. Endurance: 2.5 hours. Rate of climb: 1,350 fpm.

REMARKS

The TH-55A (formerly designated the HO-2) was purchased as an off-the-shelf item after tests and evaluation by the Army. The initial date of procurement was Nov. 1964. By June 30, 1965, 257 TH-55As had been brought into the Army inventory.

UH-1C/M IROQUOIS

Nine-place utility helicopter. Bell Helicopter Company, Fort Worth, Texas.

ENGINES

UH-1C: one Lycoming T53-L-11 gas turbine of 1,100 shp. UH-1M: one Lycoming T53-L-13 gas turbine of 1,400 shp.

ROTOR SYSTEM

Single two-bladed Model 540 "Door Hinge" main rotor. Two-bladed tail rotor, 9 ft. 6 in. diameter.

SPECIFICATIONS

Rotor diameter: 44 ft. Overall length: 53 ft. Fuselage length: 42 ft. 8 in. Height: 12 ft. 8 in. Empty weight: 5,827 lb. (UH-1C); 5,110 lb. (UH-1M). Gross weight: 9,500 lb.

PERFORMANCE

UH-1C/UH-1M at max gross weight. Cruise speed (SL): 128/144 mph. Hover (IGE): 2,400/10,700 ft. Rate of climb (SL): 863/1,400 fpm. Range (SL): 300/332 mi.

REMARKS

The UH-1C was produced for the U.S. Army during the period June, 1965-November, 1967, with a total of 749 delivered. Similar to the UH-1B, the UH-1C incorporates the Model 540 "Door Hinge" 44-foot diameter, 27-inch chord rotor and increased fuel capacity to 242 gallons. The primary role of the UH-1C/M is fire support, with secondary missions of medical evacuation and administrative troop lift. When the T53-L-13 engine is installed, the designation is UH-1M.

UH-1D/H IROQUOIS

12-15 place tactical transport helicopter. Bell Helicopter Company, Fort Worth, Texas.

ENGINES

UH-1D: one Lycoming T53-L-11 gas turbine of 1,100 shp. UH-1H: one Lycoming T53-L-13 gas turbine of 1,400 shp.

ROTOR SYSTEM

Single two-bladed metal main rotor. Two-bladed metal anti-torque rotor, 8 ft. 6 in. diameter.

SPECIFICATIONS

Overall length: 53.9'. Fuselage: 44.6'. Height: 13.4'. Empty weight: 4,717 lbs. Normal gross wt: 9,500 lbs.

PERFORMANCE

Figures at max gross weight, UH-ID/H. Cruise speed (SL): 127 / 127 mph. Hover (IGE): 5,500/12,700 ft. Range (SL): 289/299 mi. Rate of climb (SL): 1,080, 1,620 fpm.

REMARKS

Since the initial date of procurement in 1961, the Army has purchased approximately 5,600 UH-1D/H helicopters to present. With the incorporation of the T53-L-13 engine, the designation of the UH-1D becomes the UH-1H. Called a "slick" by Army pilots in Vietnam, the UH-1D/H is the backbone of all airmobile operations within the combat zone.

UH-2

A compound version of the utility helicopter. Kaman Aircraft Corporation, Bloomfield, Conn.

ENGINES

One GE T58-8 turbine engine of 1,250 shp, and one GE J-85 turbojet of 2,500 lb/thrust for auxiliary propulsion.

ROTOR SYSTEM

Single four-bladed main rotor. Three-bladed tail rotor, 9 ft. 4 in. diameter.

SPECIFICATIONS

Rotor diameter: 44 ft. Length: 52 ft. 6 in. Height: 13 ft. 7 in. Empty weight: 6,100 lb. Gross weight: 8,637 lb.

PERFORMANCE

Max. speed (SL): in excess of 225 mph. No other performance figures available.

REMARKS

The UH-2 compound Seasprite was flown in 1965 under a joint Army/Navy test program to investigate the high speed potential of the Seasprite rotor system. The UH-2 compound is basically a UH-2 with stub wings and an auxiliary jet engine added.

XH-51A

Two-place research helicopter. Lockheed-California Company, Burbank, California.

ENGINES

One United Aircraft of Canada PT-6B-6 turbine engine of 500 shp.

ROTOR SYSTEM

Single four-bladed Lockheed rigid-rotor system. 6.5 ft. tail rotor.

SPECIFICATIONS

Rotor diameter: 35 ft. Fuselage length: 32 ft. 4 in. Height: 8 ft. 2 in. Empty weight: 3,100 lb. Gross weight: 4,000 lb.

PERFORMANCE

Max. speed (SL): 174-plus mph. Cruise speed (SL): 144 mph. Hover ceiling (OGE): 7,000 ft. Range: 287 st. mi. Endurance: 2.7 hr. Rate of Climb: 1,850 fpm.

REMARKS

The XH-51A was developed under a joint Army/Navy contract as a research vehicle for high performance rotary wing aircraft. The first flight of the XH-51A was in Nov. 1962. It is equipped with retractable landing gear.

XH-51A

Two-place research compound helicopter. Lockheed-California Company, Burbank, California.

ENGINES

One United Aircraft of Canada PT-6B-6 turbine of 500 shp, and one Pratt & Whitney JT-12A turbojet.

ROTOR SYSTEM

Single four-bladed Lockheed rigid rotor system. Two-bladed tail rotor, 6.5 ft. diameter.

SPECIFICATIONS

Rotor diameter: 35 ft. Fuselage length: 32 ft. 4 in. Height: 8 ft. 2 in. Wing span: 16 ft. 10.5 in. Empty weight: 3,800 lb. Gross weight: 4,700 lb.

PERFORMANCE

Max. speed (SL): 272 mph. Cruise speed (SL): 230 mph. Service Ceiling: 20,000 ft. Hover Ceiling (OGE): 2,500 ft. Range: 270 st. mi. Endurance: 4 hrs. Rate of Climb: 3,500 fpm.

REMARKS

This compound helicopter is basically an XH-51A with stub wings and a jet engine added. The aircraft was developed under an Army-sponsored program.

YUH-1B

Research compound helicopter. Bell Helicopter Company, Fort Worth, Texas.

ENGINES

One Lycoming T53-L-11 turbine engine of 1,100 shp and two J69-T27 turbojet engines of 1,260 lb/thrust each.

ROTOR SYSTEM

Single two-bladed main rotor with tapered blade tips. Two-bladed tail rotor.

SPECIFICATIONS

The aircraft is basically the UH-1B with modifications for mounting the two turbojet engines, two stub wings, and the addition of fairings around the mast and cross tubes. Rotor diameter: 44 ft. Overall length: 53 ft. Fuselage length: 42 ft. 7 in. Height: 12 ft. 8 in.

PERFORMANCE

The YUH-1B has been flown in excess of 250 mph in level flight. No other performance data available.

REMARKS

The YUH-1B was developed under a joint program by Bell Helicopter Company and the U.S. Army Transportation Research Command (TRECOM).

AH-56A CHEYENNE

Two-place high-speed compound helicopter. Lockheed-California Company.

ENGINES

One General Electric T64-GE-16 (S4C) turbine of 3,925 shp.

ROTOR SYSTEM

Single rigid rotor, 51.2′; 10.0′ tail rotor; 10.0′ pusher propeller for horizontal mode propulsion.

SPECIFICATIONS

Length: 54.7′. Height: 13.7′. Wing span: 26.7′. Empty weight: 12,282 lbs. Gross weight: 18,258 lbs.

PERFORMANCE

Max. speed (SL): 244 mph. Cruising speed (SL): 225 mph. Service ceiling: 16,300 feet. Hover ceiling (OGE) (Standard day): 9,500 feet. Max. range: 475 st. mi. Max. ferry range: 1,725 st. mi. Max. rate of climb: 3,000 fpm. Normal endurance: 3.55 hours.

REMARKS

As could be expected in an advanced program of this type, some difficulties were encountered early in the flight test phase. Solutions to the problems, however, have been determined and it is expected that the Cheyenne will again be brought to production status. The Army's Advanced Aerial Fire Support System (AAFSS) rolls back the frontier of technology in many areas. The basic aircraft concept, a compound helicopter, bridges the gap — in flight efficiency — between the helicopter rotor and the airplane wing. Flight tests to date confirm that the fully integrated weapons system is living up to the Army's expectations.

OH-58A KIOWA

Four-place light observation helicopter. Bell Helicopter Company, Fort Worth, Texas.

ENGINES

One Allison T63-A-700 gas turbine of 317 shp.

ROTOR SYSTEM

Single two-bladed metal main rotor. Two-bladed metal anti-torque rotor, 5 ft. 2 in. diameter.

SPECIFICATIONS

Main rotor diameter: 35 ft. 4 in. Overall length: 41 ft. Overall height: 9.5 ft. Fuselage width: 6.4 ft. Empty weight: 1,583 lb. Gross weight: 3,000 lb.

PERFORMANCE

Velocity never exceeds 138 mph. Hover (OGE): 9,000 ft. Hover (IGE): 13,750 ft. Rate of climb: 1,70 fpm. Range (SL with 10% reserve): 299 st. mi.

REMARKS

The OH-58A is the newest U.S. Army light observation helicopter, resulting from its selection as the Lot 2 LOH competition winner. First deliveries of the OH-58A were made on schedule to the U.S. Army in May, 1969. Presently in quantity production at Bell Helicopter Company, 2,200 + Kiowas will be delivered over a five year period. The mission spectrum of the OH-58A includes visual observation, armed reconnaissance, and command and control. (Above performance data are 2,760 lb. gross weight, without particle separator and without 5 conservative fuel flow.)

ARMY AVIATION MATERIEL ISSUE

V/STOL AND GEMS

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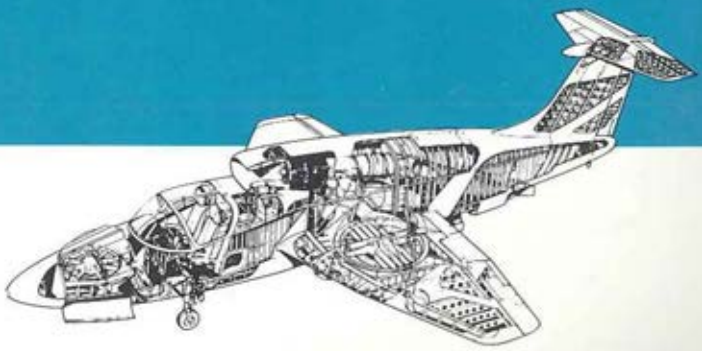


VZ-1E

Greater mobility for the individual soldier on scouting and reconnaissance missions was the object of this research vehicle by Hiller Aircraft. The flying platform was kinesthetically controlled. A ducted fan, powered by three 40 hp Nelson H-59 engines, provided propulsion and lift. The VZ-1, known as the Pawnee, weighed approximately 465 lbs.

VZ-2PH

A research tilt-wing aircraft built by Boeing Vertol that operated both as a vertical take-off and landing aircraft and as a conventional plane. The VZ-2PH aircraft completed full transition from vertical take-off to cruise and back to vertical landing in July, 1958. The interconnected propellers were powered by one T-53 gas turbine engine.

VZ-3RY

A research aircraft built by Ryan employing two propeller deflected slipstreams. Vertical flight was achieved by deflecting the slipstreams downward by means of a high-flapped wing. The propellers were interconnected and powered by a single T-53 turbine engine mounted in the fuselage.

VZ-4DA

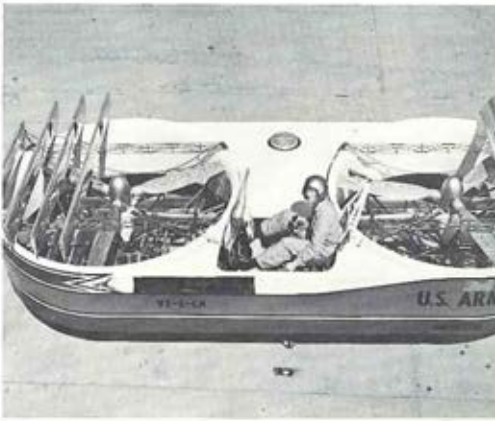
This VTOL aircraft was built by Doak with ducted propellers on the wing tips that rotated through 90 degrees to convert the plane in flight. To land, the propellers were again turned to the vertical position. The entire plane maintained the conventional horizontal attitude at all times. One T-53 turbine engine powered the interconnected ducted propellers.

VZ-5FA

A research aircraft built by Fairchild that achieved VTOL capability by deflecting the slipstream downward by means of a high-flapped wing. The four interconnected propellers were powered by a single T-58 turbine engine. NASA conducted wind tunnel and flight tests.

VZ-6CH

A single place research aircraft designed by Chrysler to explore the aerial jeep concept. Shafting from a single 380 hp reciprocating engine transmitted power to the two ducted propellers. Propulsion was obtained from a combination of vehicle nose down attitude and the rearward propeller slipstream deflection accomplished by duct exit vanes.



VZ-7AP

This aerial jeep research vehicle was originally designed and constructed by Curtiss-Wright utilizing four ducted fans. Finally the ducts were removed. The vehicle was powered by a single Artouste II turbine.

VZ-8PB

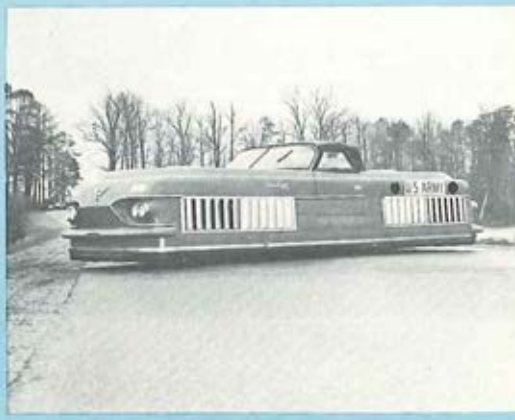
An aerial jeep research vehicle powered by two Artouste II turbine engines. Developed by Piasecki, the VZ-8PB derived lift from two 3-bladed rotors. An earlier version, utilizing a single turbine, made its first flight in 1958. The craft's low silhouette enabled it to hug the ground, fly under low bridges, between buildings or other obstacles.

VZ-9A

Designed to explore vertical take-off and landing techniques, this vehicle operated in ground effect only. Developed by AVRO Aircraft of Canada under U.S. Army and Air Force sponsorship.

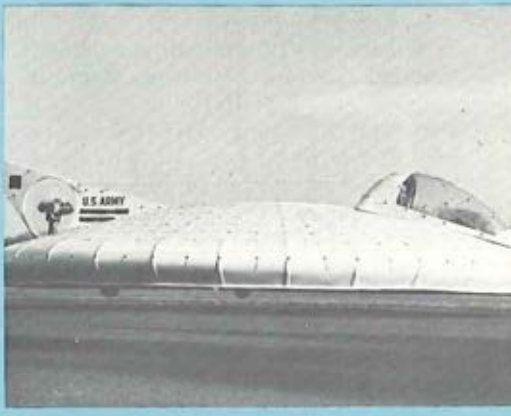
CW AIRCAR

A 4-place Ground Effects Machine (GEM), designed by Curtiss-Wright to skim 6 to 12 inches off the round at speeds up to 35 miles per hour. Two of these machines were bought "off-the-shelf" to obtain research information on basic operating principles.



PRINCETON GEM

This Ground Effects Machine (GEM) was designed and built by Princeton University under Army contract to study the GEM phenomenon and particularly the problems of stability and control.



HZ-1DE

One of several approaches to the flying platform, this research vehicle by DeLackner provided data on the unducted propeller concept for an individual lift device. A later version used metal skids as landing gear instead of the outriggers and inflated rubber bags. Power was supplied by a 40 hp Kiekhaefer Mercury Mark 55 engine.

XV-4A

Experimental VTOL aircraft. Lockheed-Georgia Company, Marietta, Georgia.

ENGINES

Two Pratt & Whitney JT-12 turbo jets of 3,200 lb/thrust each. 40% augmentation for a total of 8,300 lb/thrust in VTOL mode.

LIFT SYSTEM

The aircraft achieves vertical flight by diverting the high velocity jets from both engines through a series of nozzles and ducts into mixing chambers in the center of the fuselage and thence downward toward the ground. Bombay-type doors in the top and bottom of the fuselage open to expose the mixing chambers and nozzles.

SPECIFICATIONS

Span: 25 ft. 10 in. Length: 33 ft. Height: 11 ft. 9 in. Empty weight: 5,000 lb. VTOL gross weight: 7,200 lb.

PERFORMANCE

Max. speed (SL): 660 mph. Service ceiling: 50,000 ft. Range: 920 st. mi. Rate of climb: 18,000 fpm.

REMARKS

In mid-1966, the U.S. Air Force took over operational control of the XV-4A.

XV-5A

Experimental fan-in-wing aircraft. Rya Aeronautical Co., San Diego, Calif.

ENGINES

Two GE J85-5 turbines of 2,650 sh each.

LIFT SYSTEM

The aircraft gets its vertical lift fro downward thrust produced by tw five-foot diameter fans submerged i the wings. The fans are powered b the exhaust from the engines.

SPECIFICATIONS

Span: 29 ft. 9 in. Length: 44 ft. 6 in Height: 14 ft. 8 in. Empty weight 7,500 lb. VTOL gross weight: 12,50 lb. STOL gross weight: 15,500 lb.

PERFORMANCE

Max. speed (SL): 545 mph. Cruis speed, 30,000': 440 mph. Service ceil ing: 45,000 ft. Hover ceiling (OGE 12,000 ft. Max. range: 1,200 st. mi Rate of climb: 9,500 fpm.

REMARKS

Two XV-5As have been built under th Army program. Transition to forwar flight is accomplished by vectoring con trol vanes (louvers) mounted under th back wing fan.

XV-6A

One-place vectored thrust V/STOL aircraft. Hawker Siddeley Aviation Ltd., Kingston-Upon-Thames, England.

ENGINES

One Bristol Siddeley Pegasus engine of 15,500 lbs/thrust.

SPECIFICATIONS

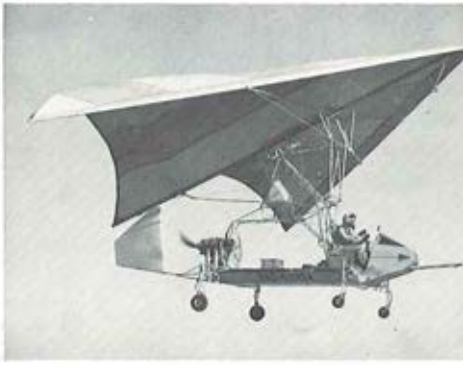
Span: 22 ft. 10 in. Length: 42 ft. 4 in. Height: 10 ft. 8 in. Empty weight: 10,180 lb. Gross weight: 17,500 lb.

PERFORMANCE

Max. speed (SL): 0.91 Mach. Cruise speed (SL): 0.89 Mach. Cruise speed, 10,000': 0.90 Mach. Service ceiling: 45,000 ft. Max. range: 1,245 st. mi. Endurance: 2.75 hours. Rate of climb: 13,000 fpm.

REMARKS

In 1961 the U.S. Army procured three of the nine XV-6As in the Tripartite Squadron and later took control of the three F.R.G. aircraft. The six XV-6As (built in Britain as the P. 1127) underwent tri-service evaluation in the U.S. in early '66. DOD does not plan a production order for the plane.



XV-8A FLEEP

One-place flex-wing utility vehicle. Ryan Aeronautical Company, San Diego, California.

ENGINES

One Continental pusher piston engine of 210 hp.

SPECIFICATIONS

Span: 33 ft. 5 in. Length: 26 ft. Empty weight: 1,029 lb. Gross weight: 2,359 lb.

PERFORMANCE

Max. speed (SL): 81 mph. Cruise speed (SL): 55 mph. Max. range: 133 st. mi.

REMARKS

The XV-8A is a light aircraft with short field landing capability designed as a simple flying truck to operate from unimproved areas. The Fleep uses wings of flexible material attached to a keel. Leading edge members form a V-shaped kite-like surface.

XV-9A

Two-place hot cycle research helicopter. Hughes Tool Co., Aircraft Div., Culver City, California.

ENGINES

Two GE YT64 gas generators.

ROTOR SYSTEM

Single three-bladed main rotor driven by blade tip propulsion.

SPECIFICATIONS

Rotor diameter: 55 ft. Fuselage length: 45 ft. Height: 12 ft. Empty weight: 8,600 lb. Gross weight: 15,300 lb. Overload gross wt.: 25,500 lb.

PERFORMANCE

Max. speed (SL): 138 mph. Cruise speed (SL): 92 mph. Cruise speed, 5,000': 92 mph. Service ceiling: 17,300 ft. Hover ceiling (OGE): 13,200 ft. Rate of climb: 2,000 fpm.

REMARKS

In September 1962, the Army procured one XV-9A aircraft for research, testing, and evaluation.

X-19

Six-place experimental V/STOL aircraft. Curtiss-Wright Corp., Wood-Ridge, New Jersey.

ENGINES

Two Lycoming T55-L-7 turbines of 2,650 shp each.

PROPELLERS

Four Curtiss-Wright plastic three-bladed 13 ft. dia. propellers cross-shafted and mounted on ends of two stub wings.

SPECIFICATIONS

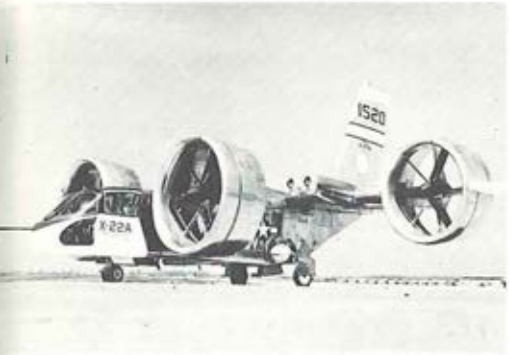
Span: 34 ft. 6 in. Length: 44 ft. 5 in. Height: 17 ft. Empty weight: 9,750 lb. Gross weight (VTOL): 13,660 lb. Gross weight (STOL): 14,750 lb.

PERFORMANCE

Max. speed (SL): 460 mph. Cruise speed (SL): 400 mph. Max. range: 520 st. miles. Rate of climb: 3,250 fpm.

REMARKS

Two aircraft were procured under a tri-service contract managed by the U.S. Air Force. One X-19 was destroyed in an accident in late 1965. No longer an active project.



X-22A

Eight-place V/STOL research aircraft. Bell Aerosystems Co., Buffalo, N.Y.

ENGINES

Four YT58-GE-8D turboshaft engines of 1,250 hp each mounted on aft wing.

PROPELLERS

Four 3-bladed Hamilton Standard, seven foot, cross-shafted propellers.

SPECIFICATIONS

Span: 39.2 feet; Length: 39.6 feet; Height: 20.7 feet; VTOL Gross weight: 16,274 lbs; max gross: 18,016; STO over 50 feet — 720 feet.

PERFORMANCE

Max. speed (SL): 322 mph. Hover ceiling: 11,000 feet. Endurance: VTOL, 2.9 hrs — STOL, 4.4 hrs; Range: VTOL, 455 n. mi. — STOL, 685 n.m.

REMARKS

Tri-service program under Navy-administered contract. Roll-out took place on May 25, 1965 with maiden hovering flight on March 17, 1966. STOL first accomplished on June 30, 1966, with first VTOL, transition to conventional flight, and return to VTOL occuring on March 1, 1967.

XC-142A

Tilt-wing, deflected slipstream, V/STOL medium transport aircraft. LTV Aerospace Corp., Dallas, Texas.

ENGINES

Four GE T64-6 turboprops of 3,080 shp each.

PROPELLERS

Hamilton Standard four-bladed fiberglass, 15 ft. 6 in. diameter, cross-shafted. Three-bladed tail rotor for longitudinal control at low speeds.

SPECIFICATIONS

Span: 67 ft. 6 in. Length: 58 ft. Height: 26 ft. Empty weight: 23,000 lb. Gross weight, STOL: 41,500 lb. Gross weight, VTOL: 37,500 lb. Places: 35.

PERFORMANCE

Max. speed (SL): 430 mph. Cruise speed (SL): 285 mph. Cruise speed, 10,000': 345 mph. Service ceiling: 25,000 ft. Hover ceiling (OGE): 6,000 ft. Max. range: 460 st. mi. Endurance: 6.5 hours. Rate of climb: 6,800 fpm.

REMARKS

Five XC-142As have been built under a tri-service developmental program with Hiller Aircraft, and Ryan Aeronautical as associate contractors.

OV-10A

Light armed reconnaissance aircraft. North American Aviation, Columbus Div., Columbus, Ohio.

ENGINES

Two AiResearch T76 turboprops of 715 hp each.

PROPELLERS

Hamilton Standard three-bladed, counter-rotating, metal, 8 ft. 6 in. diameter.

SPECIFICATIONS

Span: 30 ft. 3 in. Length: 40 ft. 11 in. Height: 15 ft. 1 in. Empty weight: 5,257 lb. Gross weight: 10,000 lb. Places: One to six, depending on configuration.

PERFORMANCE

Max. speed (SL): 305 mph. Cruise speed (SL): 218 mph. Cruise speed, 10,000': 234 mph. Service ceiling: 19,000 ft. Max. range: 1,035 st. mi. Endurance: 2.75 hours. Rate of climb: 2,100 fpm.

REMARKS

Has many configurations to fill various counterinsurgency missions. '67 deliveries under Navy-administered contract.

NU-8F

Seven-place command/liaison utility transport aircraft. Beech Aircraft Corp., Wichita, Kansas.

ENGINES

Two Pratt & Whitney PT6A-6 turbine engines rated at 550 shp each.

PROPELLERS

Hartzell, 3-blade, constant speed.

SPECIFICATIONS

Span: 45 ft. 10½ in. Length: 35 ft. 4¼ in. Height: 14 ft. 8 in. Empty weight: 5,081 lbs. Gross weight: 9,300 lbs.

PERFORMANCE

Max. speed (SL): 239 mph. Cruise (SL): 239 mph. Cruise speed, 10,000 ft.: 260 mph. Service ceiling: 27,400 ft. Max. range, 16,000 ft.: 1,470 st. mi. Endurance: 6.8 hrs.. Rate of climb: 1,900 fpm.

REMARKS

The NU-8F is a turbine powered, unpressurized U-8F. The increased speed, useful load, and range make it an excellent addition to the Army fleet. One NU-8F was procured by the Army in 1964.

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