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FI-9-246

BACKGROUND INFORMATION Contact: Maston M. Jacks

FAIRCHILD INDUSTRIES AC-119 GUNSHIP USAF DESIGNATIONS: AC-119G AND AC-119K

To meet an Air Force requirement, Fairchild Industries modified 52 C-119 transport aircraft into gunships under the designations AC-119G and AC-119K. Both models are now operating in Vietnam where the concept of arming large transport aircraft for interdiction and suppression of enemy ground attacks has proved very effective. The gunship's advantages are long endurance and capability to carry a large load of equipment, sensors, guns and ammunition needed to locate and attack enemy material and personnel such as trucks, storage areas and troops.

The first series of 26 AC-119G aircraft retain two Wright R3350-89B engines and are fitted with four side-firing 7.62 miniguns, a pallet-mounted airborne illuminator light set in the left rear of the aircraft, a light intensifying night observation system in the left side of the aircraft forward of the wing, a LAU 74/A flare launcher mounted in the right rear fuselage, 60-kva auxiliary power unit, pilot gunsight, analog gunfire control computer system, and armor for protection of crewmen in the cockpit and gundeck area.

The 26 AC-119K aircraft additionally are fitted with two General Electric J-85 auxiliary jet engines rated at 2,850 lbs. thrust each

AC-119 GUNSHIP BACKGROUND INFORMATION (CON'T)

which provide improved performance, lessened take-off roll and increased payload. The AC-119K carries all the equipment of the AC-119G plus two 20-mm cannon, forward looking infrared sensor, side and forward looking radar and additional navigation and communications equipment.

In Vietnam, the AC-119G designation is "Shadow"; the AC-119K designation is "Stinger".

WEIGHTS AND PERFORMANCE - AC-119K

WEIGHTS

Weight empty	58,282 lbs.
Basic operating weight	60,955 lbs.
Max payload	4,838 lbs.
Max T-O weight	80,400 lbs.
Max landing weight	80,400 lbs.

PERFORMANCE (at max T-0 weight)

Max level speed at 10,000 feet	217
Max cruising speed at 10,000 feet	190K with jets, 150K w/o
Stalling speed, wheels and flaps down	88K
Rate of climb at S/L, one engine out	900' per minute
Service ceiling, one engine out	23,500
T-O run	1,580
TO to 50 feet	1,820
Landing over 50 feet	1,245
Range with max payload	1,720



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BACKGROUND

FACT SHEET

An eight-man Air Force team has completed an intensive 60-day combat evaluation of AC-119 gunships used for night interdiction and attacks against enemy ground troops in South Vietnam and concluded that the converted Flying Boxcars "are very effective and reliable."

Secretary of the Air Force Robert C. Seamans, Jr., and Chief of Staff J. P. McConnell discussed the gunship role of the reconfigured C-119 Flying Boxcar in recent testimony before the Senate Armed Services Committee.

Secretary Seamans said, "C-119s are useful for gunship operations.

One (Air Force Reserve) unit has already been converted to that role

and is serving in Vietnam. It has been so successful in this new mission
that we plan to convert one more such unit."

General McConnell told the committee, "Our existing night and adverse weather capabilities for detecting, tracking and destroying ground targets will be greatly increased as the AC-47 gunships are augmented by AC-130 and AC-119 gunships."

General McConnell said the improved sensors and fire control systems of the new gunships are proving very effective.

The Air Force concept of arming large transport aircraft, equipping them with sensors for night operations, and using them for interdiction and attacks against enemy ground forces has been one of the most effective innovations of the Vietnam war. The first was the AC-47 Dragonship, which was armed with three side-firing 7.62 mini guns.

The advantage of the gunships is large load carrying and long endurance. They are the first Air Force aircraft designed for the close support mission which are large enough to carry all the equipment and sensors needed.

The C-119s were converted into gunships by Fairchild Hiller
Corporation's Aircraft Service Division at St. Augustine, Florida, in
one of the quickest transformations in Air Force history.

The contract to produce 52 gunships was awarded in February, 1968.

The first was delivered in May. A squadron has been operating in Vietnam since early 1969.

Warner Robins Air Materiel Area, Robins AFB, Ga., has had management responsibility and the program has had the highest procurement authority to insure accelerated production.

AC-119 production has been accomplished in two phases. Phase I covered the production of 26 AC-119G models which retained the Flying Boxcar's original two piston engines. It was armed with four side-firing

7.62 mini guns, given a fire control system and equipped with a variety of sensors, a flare launcher and illuminator.

While production was underway on Phase I, work started simultaneously on Phase II to convert the other 26 aircraft into four-engine AC-119K models. The K models have two J-85 jet engines augmenting the power of the two Wright R-3350 piston engines. They are armed with six side-firing guns, including two 20 mm cannon and four 7.62 mini guns, and carry additional sensors.

The pod-mounted jet engines of the AC-119K provide significantly higher load lifting capability and greatly improved takeoff, flight and landing performance. With the jets, the AC-119K can take off in less than 2,500 feet at more than 77,000 lbs. gross weight with a payload of more than 17,000 lbs., nearly double the former normal load. Its rate of climb is greatly increased even with one piston engine out. In flight, it has greater endurance and a marked increase in speed.

In Vietnam, the AC-119s are assigned to the 71st Special Operations Squadron, a unit of the 14th Special Operations Wing. Airmen have given a new name, "The Shadow" to the camouflaged gunships to describe their night operations.

The C-119 Flying Boxcar was the principal cargo and troop carrier transport of the Korean war. More than 1,000 were built between 1948 and 1955.

1. Name of Company: Fairchild Hiller Corporation

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2. Name of System (or number):

AC-119G Gunship

AC-119K Gunship

3. Nature of System:

Air-To-Ground

4. Brief Description of System:

To provide a continuous moving aerial deployment of ordnance in an approximately circular path around a ground target.

- 5. Manufacturer's Contribution to System
 - a. Fairchild Hiller holds prime contract with Air Force Logistics Command.
 - b. Contract specifies design and modification of C-119G aircraft to provide platform for the weapons system as well as the integration of the various ordnance, fire control, sensor and navigational subsystems into the design of the overall system.
 - c. Major subsystem/equipment elements which comprise the Gunship system are presented in Table I.

- Probably this information can only be obtained from the manufacturer of the specific equipment/subsystem. A significant number of these equipments/subsystems are incorporated into the AC-47 Gunship and AC-130 Gunship.
- 7. See (6) above.
- 8. See (6) above.
- 9. AC-119 Gunship Development History
 - a. First design studies in Fall 1966. Unsolicited proposal submitted to USAF in August 1967. Contract awarded February 1968. Contract called for delivery of 26 AC-119G Gunship and 26 AC-119K Gunship units. Major difference in the two platforms was the addition of a General Electric J85 jet engine installed in a pod under each wing on the K model. The AC-119K also incorporated two 20-mm cannon.
 - b. The first AC-119G Gunship was delivered 19 May 1968 The first AC-119K Gunship was delivered 15 October 1968.
 - c. & d. Contract was awarded by Air Force Logistics
 Command and administered by Warner Robins Air
 Materiel Area.

10. Production Plans

a. & b. All 52 Gunships have been delivered, the last of which was delivered in June 1969.

11. Number of Systems (As of June 1969)

	Ordered	Delivered
AC-119G Gunship	26	26
AC-119K Gunship	26	26

12. Please refer to Subsystem/Equipment Listing, Table I.

The following divisions within the Fairchild Hiller Corporation held various program responsibilities: Aircraft Division, Aircraft Service Division, Republic Aviation Division, Stratos Western. 13. Military Users & Locations

71st Special Operations Squadron 14th Special Operations Wing Hqs: Nha Trang, Vietnam

Also operating locations at:
Phan Rang
Tan Son Nhut

- Please refer to attached article from 23 September 1968 issue of Aviation Week & Space Technology
- 15. See (14) above
- 16. Not releasable at this time.
- 17. Applicable specifications:

AC-119G 68WRNEA-13-C-119 AC-119K 68WRNEA-14-C-119

- 18. Refer to Special Test/Check-Out Equipment Listing, Table II.
- 19. Special Simulators.

Simulator-SUU11A/B 33-90017-1 Fairchild Hiller Corp.
Aircraft Division
Hagerstown, Md.