DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

A24WE
Revision 5
FAIRCHILD
C-119G-3E

March 1, 1983

TYPE CERTIFICATE DATA SHEET NO. A24WE

This data sheet, which is part of Type Certificate No. A24WE, and limitations under which the product for which the Type Certificate was issued meets the airworthiness requirements of the Civil Air Regulations.

Type Certificate Holder — Hawkins and Powers Aviation, Inc.
Greybull, Wyoming.

I - Model C 119G-3E (Restricted Category) Approved 20 March 1972

Engines
(a) 2-Wright R-3350-89, -89A, or -89B and
(b) 1 Westinghouse J34-WE-36 or J34-WE-34 jet engine

Fuel
For (a) 100/130 minimum grade aviation gasoline
For (b) JP-3, JP-4 or 100/130 aviation gasoline

Engine limits

(a) Wright R-3350-89, -89A, -89B, Fuel Grade 115/145
2900 rpm (3500 hp) Take-Off (5 minutes) Low Blower
2600 rpm (2600 hp) Sea Level (Low Blower) METO)
2600 rpm (2400 hp) 10,000 ft. Alt. (High Blower)
2600 rpm (2400 hp) 14,000 ft. Alt. (High Blower)
2400 rpm (1780 hp) 20,000 ft. Alt. (High Blower)

Wright R-3350-89, -89A, -89B Fuel Grade 100/130
2900 rpm (3420 hp) Take-Off (5 minutes) Low Blower Wet
2600 rpm (2600 hp) Sea Level (Low Blower)
2300 rpm (1560 hp) 10,000 ft. Alt. (High Blower)

Low blower power settings at METO power and lesser powers are the same as 115/145 fuel settings except that RICH mixtures are used.

Aircraft with R3350-89 and -89A engines are equipped with automatic spark advance electrical systems and the engine is equipped with a low tension automatic spark advance ignition system. Aircraft with R3350-89B engines are equipped with manual spark advance electrical systems and the engine is equipped with a low tension manual spark advance ignition system.

(b) Westinghouse J-34-WE-36 or J-34-WE-34 (Using JP-3 or JP-4 or 100/130 grade aviation gas)

Ratings
J-34-WE-36:
Maximum Continuous Static Thrust, 3000 lbs., 12,000 rpm, at Sea Level
Take-off Static Thrust (5 Minutes) 3,400 lbs., 12,500 rpm, at Sea Level
J-34-WE-34:
Maximum Continuous Static Thrust, 2,650 lbs., 11,800 rpm, at Sea Level
Take-off Static Thrust (5 Minutes 3,250 lbs., 12,500 rpm, at Sea Level

RPM (12,500 rpm @ 100%)
Take-off: 101% - (5 Minute limit)
Max. Cont: 96% (J34-WE-36)
94.4% (J34-WE-34)

EGT
Start: 850°C (5 seconds maximum)
Take-off: (See engine log)
Maximum Continuous: (See engine log)

Minimum Oil Pressure

Starting	Indication within 30 seconds
Idle	10 psi
64%	40 psi
100% rpm	85 psi

Propellers

Aeroproducts A644FN-C2 or Hamilton Standard Hydromatic 43H60-603, (See Note 3)

Airspeed limits

Vne - Never exceed 225 mph (195 knots)
Vc - Structural Cruising 203 mph (176 knots)
Va - Maneuver 187 mph (162 knots)
Flaps or gear extended 161 mph (140 knots)
Max. speed aerial delivery
Doors open 150 mph (130 knots)

C.G. range

At all weights
Fuselage station 318.3" to Fuselage Station 335.2" aft of datum, (See Handbook of Weight and Balance, T.O. 1-1B-40, for location of stations.)

Datum

Fuselage station 0 (103.8" forward of jig point fitting on front jack pad.)

Leveling means

Eye bolt at cabin ceiling station 310 for plumb bob suspension to crossline plates under cargo floor between stations 310 and 333.

Maximum gross weight (Aft cargo doors on)

72,500 lb. (take-off) and 69,970 lb. (landing)

Max. zero fuel wt.

61,637 lb. (Outer wing tanks to be full before fuel is added to inner wing tanks. Inner wing tank fuel is to be used first.)

Minimum crew

Limited to the flight crew and number of persons essential to perform the special purpose operation.

Fuel capacity

3624 Gal. total - 2 outboard fuel tanks 855 Gal. each (+354.5) - 2 inboard fuel tanks 457 Gal. each (+354.5)

Oil capacity

120 Gal. total - 2 nacelle tanks 60 Gal. each (+338.4)

Applicable Serial Nos. (AF)
51-2662 thru 51-8030
51-8098 thru 51-8168
51-17365 thru 51-17367
52-6000 thru 52-6003
53-8069 thru 53-8132

109 Gal. total - 2 nacelle tanks 54.5 Gal. each (+338.4) (Includes any AF C-119G Serial No. except those listed above.)

Manufacturer Serial Nos.
10676-10678 10870-10872
10735-10738 10905-10908
10773-10776 10942-10945
10823-10825 10954-10957
10859-10861 10992-10994

Cargo capacity

See T.O. 1C-119G-1 Section V

Control surface movements (see Sec. VIII T.O. 1C-119G-2-1, Page 8-4)	Aileron	Up	24° ± 1°	Down	12° ± 1°
	Flettner Tab	Up	17° + 4° -2°	Down	30° +6° - 2°
	Trim Tab	Up	15° ± 1 1/2°	Down	12° ± 1 1/2°
	Elevator	Up	24 1/2° ± 1/2°	Down	20 1/2° ± 1 1/2°
	Spring Tab	Up	17° + 0° -5°	Down	24° + 2° -0°
	Trim Tab	Up	12° ± 2°	Down	22° ± 2°
	Rudder	Right	25° + 2° -0°	Left	20° + 2° - 0°
	Spring Tab	Right	5° ± 1°	Left	5° ± 1°
	Trim Tab	Right	10 1/2° ± 1°	Left	10 1/2° ± 1°
	Wing Flaps		Take-off	Down	15°
			Landing	Down	40°

Serial Numbers eligible

Air Force Serial Nos.	Manufacturer Serial Nos.
51-2662 thru 51-8168	For aircraft exported and
51-17365 thru 51-17367	returned to United States.
52-6000 thru 52-7884	10676 - 10678
52-5840 thru 52-5954	10735 - 10738
53-8069 thru 53-8156	10773 - 10776
53-3137 thru 53-3193	10823 - 10825
53-3201 thru 53-3216	10859 - 10861
53-7836 thru 53-7884	10870 - 10872
	10905 - 10908
	10942 - 10945
	10954 - 10957
	10992 - 10994

Certification basis

FAR 21.25(a)(2) effective 5 October 1969
Restricted Type Certificate issued 20 March 1972
Application for Type Certificate dated 10 February 1972
FAR 21.25(b)(1), (2), (3), and (7) effective through Amendment 21-47, dated July 31, 1978.

Production basis

None - Prior to original airworthiness certification of each aircraft, FAA personnel must perform an airworthiness inspection determining condition for safe operation and determine that the applicant has conducted a satisfactory flight test.

Equipment

The basic required equipment as prescribed in the applicable Airworthiness Regulations (See Certification Basis), must be installed in the aircraft for certification. In addition, an FAA approved Airplane Flight Manual Supplement dated 20 March 1972 (or a subsequent approved revision) is required in addition to the operating limitations specified in Section V of T.O. 1C-119G-1.

NOTE 1. Current weight and balance report and loading instructions for Model C-119G-3E aircraft must agree with Section V of T.O. 1C-119G-1.

NOTE 2. A. This approval applies to:

(1) Basic Fairchild Airplane with modifications described in Hawkins and Powers Drawing Lists HPA 2000 or HPA 3000 dated 16 March 1972, or subsequent approved revisions.

Hawkins and Powers Drawing List HPA 3000 may not be incorporated unless Drawing List HPA 2000 is incorporated.

(2) Airplane certified for special purposes of
Agricultural Operations
Forest and Wildlife Conservation
Aerial Surveying
Carriage of Cargo

Aircraft must be modified to Hawkins and Powers Drawings No. HPA-140 dated June 4, 1979 for the special purpose of carrying fish and fish industry related cargo.

Aft cargo doors must be on the aircraft.

Operation over densely populated areas is limited to the requirements of the approved Airplane Flight Manual Supplement dated 24 February 1973.

B. In addition to the operating limitations in this data sheet, area, economic, passenger other appropriate operating limitations in accordance with FAR 21.25 shall be shown on placards or listing accessible to the pilot.

C. The following placard must be displayed in front of and in clear view of the pilot:

"This airplane must be operated as a restricted category airplane in compliance with the operating limitations stated in the form of placards, marking, and manuals."

D. Red radial line required on airspeed indicator at 195 knots (225 mph).

E. Carriage of hazardous materials is prohibited unless compliance is shown with the applicable regulations in the Code of Federal Regulation 49, Part 175.

NOTE 3. The hydromatic propeller 43H60-603 and integral oil controls are installed in accordance with Air Force T.O. 1C-119-688, August 1, 1971 and supplement. The associated U.S. Air Force Flight Manual is: Technical Order 1C 119 L-1.

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