### TYPE CERTIFICATE DATA SHEET NO. A21WE

This data sheet which is a part of type certificate No. A21WE prescribes conditions and limitations under which the product for which the type certificate was issued meets the airworthiness requirements of the Federal Aviation Regulations.

| Type Certificate Holder | Aero Union Corporation  
|-------------------------|--------------------------|
|                         | 100 Lockheed Avenue  
|                         | Chico, California 95973 |

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#### I - MODEL C-119C (RESTRICTED CATEGORY) Approved March 11, 1970

| Engine | 2 - Pratt & Whitney R4360-20 WD |
|--------|---------------------------------
| Fuel   | 115/145 Minimum Grade Aviation Gasoline |
| Engine limits | 2700 rpm (3500 hp) Take-off (5 minutes) (Rich Setting)  
|          | 2550 rpm (2650 hp) Sea Level (Rich Setting)  
|          | 2550 rpm (2355 hp) 10,000 ft. Alt. (Rich Setting)  
|          | 2550 rpm (2100 hp) 14,000 ft. Alt. (Rich Setting)  
|          | 2550 rpm (2145 hp) 20,000 ft. Alt. (Rich Setting)  |
| Propeller | Hamilton Standard 24260-611 or 619 |
| Blades | 2J17Y3-26R or 2J17AE3-26R |
| 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 | Aft of datum +318.3" to +335.2" at all Wts. |
| Datum | Fus. Sta. 0 (103.8" forward of jig point fitting on front jack pad) |
| Max. gross wt. | (Aft 71,500 lb. (take-off) and 69,970 lb. (landing) Cargo Doors On) See NOTE 1(a). |
| Max. zero fuel wt. | 62,724 lb. (Outer wing tanks to be full before fuel is added to inner wing tanks) |
| Leveling means | Eye bolt at cabin ceiling station 310 for plumb bob suspension to crosslined plates under cargo floor between stations 310 and 333. |
| No. seats | Limited to the Flight Crew & number of persons essential to perform the intended function of this operation. Cargo Handlers - must wear safety harnesses that are secured to aircraft structure during all drop operations. |
I - MODEL C-119C (RESTRICTED CATEGORY)  

(cont'd)

Fuel capacity

- 3624 Gal. total - 2 outboard fuel tanks 855 Gal. each (+354.5)
- 2 inboard fuel tanks 457 Gal. each (+354.5)
- 2 auxiliary fuel tanks in fuselage 500 Gal. each (+338.0).

Oil capacity

- 120 gal. total - 2 nacelle tanks 60 gal. each (+461.3)
- 48-319 thru 51-2584

- 120 gal. total - 2 nacelle tanks 60 gal. each (+338.4)
- 51-2587 and subsequent

Cargo capacity

See T.O. 1C-119B-5 Section III

Control surface movements

- See Sec. VIII T.O. 1C-119C-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 15° ± 1 1/2°

Elevator
- Up 24 1/2° ± 1 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°

*48-319 thru 50-161, Aileron Tab Spec. on 50-162 and subsequent is Down 12° ± 1 1/2°.

Serial Nos. eligible

- 48-319 thru 48-355
- 49-101 thru 49-199
- 50-119 thru 50-171
- 51-2532 thru 51-2584
- 51-2587 thru 51-2661
- 51-8233 thru 51-8273

II - MODEL C-119G (RESTRICTED CATEGORY) Approved September 29, 1971

Engine
- 2 - Wright R-3550-89, -89A

Fuel
- 115/145 Minimum Grade Aviation Gasoline

Engine limits
- 2900 rpm (3500 hp) Take-off (5 minutes) Low Blower
- 2600 rpm (2600 hp) Sea Level (Low Blower)
- 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)

Propeller
- Aeroproducts A6441FN-C2

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
- Aft of datum +318.3" to +335.2" at all Wts.

Datum
- Fus. Sta. 0 (103.8" forward of jig point fitting on front jack pad)
## II - MODEL C-119G (RESTRICTED CATEGORY)  
(Cont'd)

### Max. gross wt.
(Aft 71,500 lb. (take-off) and 69,970 lb. (landing) Cargo Doors On)

See NOTE 1(b).

### Max. zero fuel wt.
61,240 lb. (Outer wing tanks to be full before fuel is added to inner wing tanks)

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

### No. seats
Limited to the Flight Crew & number of persons essential to perform the intended function of this operation. Cargo Handlers - must wear safety harnesses that are secured to aircraft structure during all drop operations.

### Fuel capacity
3624 Gal. total - 2 outboard fuel tanks 855 Gal.
each (+354.5) - 2 inboard fuel tanks 457 Gal.
each (+354.5) - 2 auxiliary fuel tanks in fuselage
500 Gal. each (+338.0).

### Oil capacity
120 gal. total - 2 nacelle
Applicable Serial No.
tanks 60 gal. each (+338.4)

51-2662 thru 51-8030
51-8098 thru 51-6168
51-17365 thru 51-17367
52-6000 thru 52-6003
53-8069 thru 53-8132

109 Gal. total - 2 nacelle
Appplies to aircraft with
Manufacturer's Serial No's. listed below)
tanks 54.5 gal. each (+338.4)
52-6004 thru 52-7884
53-8133 thru 53-8156

### Cargo capacity
See T.O. 1C-119G-1 Section V.

### Control surface movements
(Applies to aircraft with Manufacturer's Serial No's. listed below)

- **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 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 Nos. eligible

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<tr>
<th>Air Force Serial No's.</th>
<th>Manufacturer's Serial No's.</th>
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<tr>
<td>51-2662 thru 51-8168</td>
<td>For aircraft exported and returned to United States:</td>
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<td>51-17365 thru 51-17367</td>
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<td>10735-10738</td>
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<td>10773-10776</td>
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SPECIFICATIONS PERTINENT TO ALL MODELS (EXCEPT WHERE NOTED)

Certification basis  
FAR 21.25(a)(2) effective 1 February 1965  
Application for Type Certificate dated 21 March 1968.

Production basis  
None.  
Prior to original certification of each aircraft, an FAA representative must perform an inspection for workmanship, materials, and conformity with the approved technical data.

Equipment  
The basic required equipment as prescribed in the applicable Airworthiness Regulations (see Certification Basis) must be installed in the aircraft for certification.

For the C-119C, an FAA Approved Airplane Flight Manual Supplement dated July 19, 1974 is required in addition to the operating limitations specified in Sec. V of T.O. 1C-119C-1.


NOTE 1.  
(a) Current weight and balance report and loading instructions for Model C-119C aircraft must agree with data on pages 16 thru 31 of Sec. III, T.O. 1C-119B-5.

(b) Instructions for Model C-119G aircraft must agree with Sec. V of T.O. 1C-119G-1.

NOTE 2.  
(a) This approval applies to:

(1) Basic Air Force Airplane with no modification other than the internal floor rollers per Aero Union Corporation Dwg. No's. 7000 & 7001 and

(2) Airplane certificated for special purpose of forest and wildlife conservation, with following limitations:

a. Aft cargo door must be "ON" aircraft.

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

(c) The following placards must be displayed in front of and in clear view of the pilot:

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

(d) Red radial line required on airspeed indicator at 195 Kts. (225 mph).

.....END.....