

18.5" aft of datum at 4000 lb
21.75" aft of datum at 4470 lb

- (6) For all powers of engines
9.8" aft of datum at 2800 lb or less

Aft Limit: 25.4" aft of datum
(Straight line variations between points given)

Empty Weight C.G. Range: None.

Datum: Wing leading edge.(C.G. positions of items of equipment etc. are given in brackets; a plus (+) sign preceding the figure indicates aft of datum and a minus (-) sign forward of datum).

Levelling means: Fuselage upper longerons and bulkhead in cargo area.

- Maximum Weights:
- (1) With 225 HP engine
3550 lb (Standard Category)
3970 lb (Agricultural Category) (take off only)
 - (2) With 240 HP engine
3740 lb (Standard Category)
4175 lb (Agricultural Category) (take off only)
 - (3) With 250 HP engine
3830 lb (Standard Category)
4280 lb (Agricultural Category) (take off only)
 - (4) With 260 HP engine
3900 lb (Standard Category)
4360 lb (Agricultural Category) (take off only)
 - (5) With 285, 300 or 310 HP engine
4000 lb (Standard Category)
4470 lb (Agricultural Category) (take off only)

Number of seats: One (-2.2) (See items 405 and 412 for additional seats)

Maximum Cargo: 1500 lb (+20.8) to (+63.8) (applies only to aircraft without hopper but with items 611 and 615)

Maximum Hopper Capacity: 1600 lb (structural limit) (+35.5)
1850 lb (structural limit) (+35.5) with item 625(A)
2140 lb (structural limit) (+35.5) with item 625(B)
(Maximum aircraft weight including cargo or hopper load shall not exceed the maximum weight specified above.)

Fuel Capacity: Two wing tanks, 19.5 imp. galls each (+9.8). Total usable 36.5 imp. galls (+9.8)

Oil Capacity: 2.5 imp. galls. (-63.2)

Control Surface Movements: Elevator (Chord line measured with airplane level):
 Nose down 20° Nose up 5°
 Elevator tab (measured with respect to elevator):
 Trailing edge down 3.5° (Elevator 5° Nose up)
 Trailing edge up 9.0° (Elevator 20° Nose down)
 Rudder: Right 30° Left 30°
 Ailerons: Down 10° Up 25°
 Flaps: Down 40°

Serial Numbers Eligible: One and up

Required Equipment: In addition to the pertinent required basic equipment specified in CAR 3, the following items of equipment must be installed:

 (1, Basic O-470-E Engine, 103A, 105AB); or (2, 112, 103B, 105AB, 620); or (3, 112, 103B, 105AB, 620); or (4, 113, 105ABD, 621); or (5, 114, 105C, 621, 623); and 201, 202, 403, 404, 611, 612, 614, 615, 618(A) or (B).

II - Model FU24A Approved 2.2.67

Engine: Continental O-470-E (see items 112, 113, 114, 115, 116 and 117 for optional engines)

Fuel: 80/87 Minimum grade aviation gasoline. O-470-E only (See Items 112, 113, 114, 115, 116 and 117 for other engines)

Engine Limits: For all operations, 2600 RPM (225 HP)

Airspeed Limits: Maneuvering V_P 111mph (96 kts) CAS
 Max. structural cruising V_{NO} 131mph (114 kts) CAS
 Never exceed V_{NE} 165mph (143 kts) CAS
 Flaps extended V_F 90mph (78 kts) CAS

C.G. Range: Forward Limit:
 (1) With 225 HP engine:
 15.2" aft of datum at 3550 lb
 18.3" aft of datum at 3970 lb

 (2) With 240 HP engine:
 16.6" aft of datum at 3740 lb
 19.7" aft of datum at 4175 lb

 (3) With 250 HP engine:
 17.3" aft of datum at 3830 lb
 20.4" aft of datum at 4280 lb

- (4) With 260 HP engine:
 17.8" aft of datum at 3900 lb
 21" aft of datum at 4360 lb
- (5) With 285, 300 or 310 HP engine:
 18.5" aft of datum at 4000 lb
 21.75" aft of datum at 4470 lb
- (6) For all powers of engines
 9.8" aft of datum at 2800 lb or less

Aft Limit: 25.4" aft of datum
 (Straight line variations between points given)

Empty Weight C.G. Range: None.

Datum: Wing leading edge.(C.G. positions of items of equipment etc. are given in brackets; a plus (+) sign preceding the figure indicates aft of datum and a minus (-) sign forward of datum).

Levelling means: Fuselage upper longerons and bulkhead in cargo area.

- Maximum Weight:
- (1) With 225 HP engine
 3550 lb (Standard Category)
 3970 lb (Agricultural Category)
 - (2) With 240 HP engine
 3740 lb (Standard Category)
 4175 lb (Agricultural Category)
 - (3) With 250 HP engine
 3830 lb (Standard Category)
 4280 lb (Agricultural Category)
 - (4) With 260 HP engine
 3900 lb (Standard Category)
 4360 lb (Agricultural Category)
 - (5) With 285, 300 or 310 HP engine
 4000 lb (Standard Category)
 4470 lb (Agricultural Category)

Number of seats: Two (-2.2) See item 405 for additional seats)

Maximum Cargo: 1500 lb (+20.8) to (+63.8) (applies only to aircraft without hopper but with items 611 and 615)

Maximum Hopper Capacity:	1600 lb (structural limit) (+35.5) 1850 lb (structural limit) (+35.5) with item 625(A) 2140 lb (structural limit) (+35.5) with item 625(B) (Maximum aircraft weight including cargo or hopper load shall not exceed the maximum weight specified above.)
Fuel Capacity:	Two wing tanks, 19.5 imp. galls each (+9.8). Total usable 36.5 imp. galls (+9.8)
Oil Capacity:	2.5 imp. galls. (-63.8)
Control Surface Movements:	Elevator (Chord line measured with airplane level): Nose down 20° Nose up 5° Elevator tab (measured with respect to elevator): Trailing edge down 3.5° (Elevator 5° Nose up) Trailing edge up 9.0° (Elevator 20° Nose down) Rudder: Right 30° Left 30° Ailerons: Down 10° Up 25° Flaps: Down 40°
Serial Numbers Eligible:	One and up
Required Equipment:	In addition to the pertinent required basic equipment specified in CAR 3, the following items of equipment must be installed: (1, Basic O-470-E Engine, 103A, 105AB); or (2, 112, 103B, 105AB, 620); or (3, 112, 103B, 105AB, 620); or (4, 113, 105AB, 621); and 201, 202, 406, 407, 611, 612, 614, 615, 618(A) or (B).

Specification Pertinent to All Models

Certification Basis:	Type Certificate No. A-3 New Zealand Civil Aviation Regulations 1953 as amended by Amendments Nos. 1-10 inclusive. New Zealand Civil Airworthiness Requirements Part II Sub-section C-10 current on 1 March 1966. U.S. Civil Air Regulations Part 3 amended to May 16, 1953 Aircraft with Item 613 not fitted do not comply with US Cars, Part 3, Para 3.120, Section F. N.Z.D.C.A. Letters 61/34/10 4 April 1966 to Air Parts (NZ) Ltd, and 5 May 1966 to Air New Zealand.
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Production Basis: None. Prior to original certification of each aircraft, CAD officials must make a detailed inspection for workmanship, materials and conformity with approved technical data and a check of flight characteristics. Kit built aircraft must be inspected by a CAD official during all phases of construction as found necessary by the official.

Equipment: A plus (+) or minus (-) sign preceding the weight of an item of equipment indicates net weight change when that item is installed.

Propeller and Propeller Accessories (except de-icing equipment)

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|----|-----|--|---------------------------------|
| 1. | (A) | Propeller - Hartzell, constant speed, hub model HC-82XF-1B, blade model 8833 65 lbs (-89.2).
(Eligible only on Continental O-470-E engine).
Diameter: Maximum 88 in., Minimum allowable for repairs 86 in.
No further reduction permitted.
Pitch setting at 30 in. Sta.: Low 10.5°, high 27.0° | (-89.2) |
| | (B) | Propeller governor, Woodward No. 210065H. 4 lbs | (-82.2) |
| 2. | | Propeller - Hartzell, hub model HC-92ZF-1B1, blade model 8847, including governor installed per FAC dwg 244383* (Eligible only on Continental O-470-M or O-470-N engine)
Diameter: Maximum 88 in., minimum 88 in.
Pitch setting at 30 in. Sta.: Low 12.0° High 24.4° | Use actual weight change |
| 3. | | Propeller - McCauley model 2A36C18/90M-4, including governor installed per FAC Dwg. 244384* (Eligible only on Continental O-470-M or O-470-N engine)
Diameter: Maximum 86 in., minimum 84 in.
Pitch setting at 36 in. Sta.: Low 10°, High 22.3° | Use actual weight change (89.2) |
| 4. | | Propeller - McCauley model D2A36C33/90M-2 including governor installed per FAC Dwg. 244394 (eligible only on Continental IO-470-D engine)
Diameter: Maximum 88 in., minimum 84 in.
Pitch setting at 36 in. Sta.: Low 8.4°, High 22.3° | Use actual weight (-89.2) |
| 5. | | Propeller - McCauley Model 2A36C43/100R-10 including governor installed per SFC Dwg. 244393* (Eligible only on Continental GIO-470-A engine)
Diameter: Maximum 90 in., minimum 88 in.
Pitch setting at 36 in. Sta.: Low 11.3°, High 25.0° | Use actual weight (-91.2) |

- 6. (A) Propeller - McCauley model D2A34C58/90AT-4 (eligible only on Continental IO-520-F engine)
Diameter: 86 in. Max 84 in Min
Pitch setting at 34 in. Sta.: Low 8°, High 25° Use actual weight change (-89.2)
- (B) Propeller governor, Woodward No. 210458 3.5 lb (-82.2)

Engine and Engine Accessories - Fuel and Oil System

- 101. Starter, Delco-Remy # 1109471 14 lbs (-54.2)
- 102. Carburetor air filter, Air Maze No. P-1A 1 lb (-49.2)
- 103. (A) Carburetor - Air intake system (less filter) (SFC Dwgs. 244300*, 244319* 244322* applicable to O-470-E engine only) Use actual weight
- (B) Carburetor - air intake system (less filter) (SFC Dwgs. 244300*, 248142* applicable to O-470-N and O-470-M engine only) Use actual weight
- 104. Delete.
- 105. Fuel pump installation - Either of following Adel electric booster pumps connected in series with one Romec Model RD7430-2 engine-driven fuel pump.
 - (A) Adel model 28470-3 per FAC Dwg. 244855*
 - (B) Adel model 20113 per FAC Dwg. 244820* 4 lbs (+9.8)
 - (C) One Weldon Tool Co. style "J" Part no. 8001-B Fuel booster pump connected in series with engine driven pump per SFC Drawing 244887* (eligible only with Item 114 engine installation). Use actual weight
 - (D) One Weldon Tool Co. style "J" Part No. 8001-A fuel booster pump connected in series with engine driven pump per SFC drawing 244891 (eligible only with item 113 engine installation).
- 106. Delete.
- 111. Unusable fuel (see NOTE 1 for definition) 18 lbs (+9.8)
- 112. Engine - Continental O-470-M or O-470-N, installed per FAC Dwg. 248142* and FAC E.0. 691, 701, 702, 703, 706, 707, 714, and 715. Item 2 or 3 is required in lieu of Item 1. Use actual weight change
Fuel - 91/96 minimum grade aviation gasoline.
Engine Limits: For all operations, 2600 RPM (240 HP)

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|------|--|-------------------|
| 113. | <p>Engine - Continental IO-470-D installed per FAC Dwgs. 248162, 284161 and 244395, including E.O.'s 836, 837, 852, 853, 855, 857 through 865, 867 and 874. Item 4 is required in lieu of Item 1, 2 and 3. Item 621 is required.
 Fuel: 100/130 min. grade aviation gasoline.
 Engine Limits: For all operations, 2625 RPM (260 HP).</p> | Use actual weight |
| 114. | <p>Engine - Continental GIO-470-A installed per SFC drawing 248165*, Item 5 is required in lieu of Item 1, 2, 3 or 4. Items 621 and 623 are required. Eligible on FU24 only.
 Fuel: 100 minimum grade aviation gasoline.
 Engine Limits: All operations 3200 RPM (310 HP)</p> | Use actual weight |
| 115. | <p>Engine - Continental IO-470-G installed per Aero Engine Services Ltd Modification AES/11.
 Fuel: 91/96 minimum grade aviation gasoline
 Engine Limits: For all operations 2600 RPM (250 HP)</p> | Use actual weight |
| 116. | <p>Engine - Continental IO-520-A installed per Air Parts (NZ) Ltd Modification AP/9.
 Fuel: 100/130 minimum grade aviation gasoline.
 Engine Limits: For all operations 2700 RPM (285 HP)</p> | Use actual weight |
| 117. | <p>Engine - Continental IO-520-F installed per Air Parts (NZ) Ltd Modification AP/11.
 Fuel: 100/130 minimum grade aviation gasoline.
 Engine Limits: Max. Continuous 2700 RPM (285 HP)
 Take off 2850 RPM (300 HP)</p> | Use actual weight |

Landing Gear and Floats

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|------|---|----------------|
| 202. | <p>Nose wheel: 8,50-6 four-ply rating tire and
 8, 50-6 wheel assembly</p> | 21 lbs (-49.2) |
| (A) | <p>Goodrich Model G-3-852</p> | |
| 203 | <p>Main Landing Gear: 8, 50-6 six-ply rating tires and
 8, 50-6 wheel brake assemblies
 (3550 lb to 4000 lb max. wt.)</p> | 52 lbs (+40.8) |
| (A) | <p>Wheel assembly Goodrich Model G-3-663-M1</p> | |
| (B) | <p>Brake Assembly Goodrich Model D-2-565-1</p> | |
| (C) | <p>Extra bolts to retain brake drum to Air Parts (NZ)
 Mod. AP14</p> | |

Electrical Equipment

301.	Generator, Delco-Remy No. 1101892, 35 A	16 lbs (-56.2)
302.	Battery, Reading (Rebat) No. R33, 12 V	23 lbs (-42.2)
303. (A)	Voltage regulator Delco-Remy No. 1118892	2 lbs (-38.2)
304.	Electrical installation per SFC Dwgs. 248160* (eligible only with Item 114 engine installation)	Use actual weight

Interior Equipment

401.	Combination seat belt and shoulder harness, Air Associates Model 4465437	4 lbs (+9.8)
402.	Inertia reel. American Seating Company Model No 0-3903NN-103	2 lbs (+9.8)
403.	Instrument installation per FAC Dwg. 246107	Use actual weight
404.	Pilot's seat, AN-7505 modified per FAC Dwg. 243428*	Use actual weight
405.	Passenger seats (four place) and cover installation per FAC Dwgs. 249500*, 249506*, 249220*, E.O. 667, 249501 E.O. 680, Item 410 is required. Note: C.G. of forward two passengers is at (+30.8) and aft two passengers is at (+73.8)	Use actual weight change
406.	Instrument installation per FAC Dwg. 248150	Use actual weight
407.	Pilot seat (Dual) installation per FAC Dwg. 248144*	Use actual weight
409.	Installation - Seat, Agricultural airplane per SFC Drawing 248154, including 243154 doublers and flap controls per 248155.	Use actual weight
410.	Installation - Head rest, passenger per SFC Dwg. 249262* required with item 405	Use actual weight
411.	Installation - Rear window, passenger compartment per SFC Dwg. 243657	Use actual weight
412.	Bench type seat for pilot and passenger side by side, Dwg. No. 248170 per Air Parts (NZ) Ltd Mod. AP/15	Use actual weight (-2.2)
413.	Seat belt for passenger by side of pilot (Air New Zealand Mod. T4S 265)	Use actual weight (-2.2)

414.	Modification JA/FU24/12 is required with Item 409	Use actual weight
<u>Miscellaneous (not listed above)</u>		
601.	Aerial applicator installation per FAC Dwgs. 249233*, 249245*, 249247*. Note: Item 611 is not required with this installation. The C.G. of the hopper load is at (+35.5).	Use actual weight change
611.	Cargo floor installation per FAC Dwg. 249220*	Use actual weight
612.	Two extended wing tips	
(A)	FAC Dwg. 241403 (required with aileron installation FAC Dwg. 248104)	Use actual weight
(B)	FAC Dwg. 241406* (required with item 616)	Use actual weight
(C)	FAC Dwg. 241403 (required with Item 617)	Use actual weight
613.	Two wing leading edge spoilers per FAC Dwg. 241208*	Use actual weight
614.	Cockpit ventilation and sealing	Use actual weight
(A)	FAC Dwgs. 241183, 241209, 241210, 241211, 243436, 243703, 244216*, 244218*, 244219*, 244220*, 244338*, 248131 and 248135, (required with Item 112 and O-470-E engine installation.)	
(B)	FAC Dwgs. 241183, 241209, 241210, 241211, 243436, 243703 and 249266*, (required with Item 113)	
615.	Cargo compartment control system guards per FAC Dwg. 248122	Use actual weight
616.	Friese type aileron installation per FAC Dwgs. 241100-E.0. 671, 241214*, 241215, 241216, 241217, 241218, 241219*, 241220*, 241310-E.0. 666, 241344*, 241345*, 241350*, 241515*, 248137*, 248138*, 248139*. Note: Item 612(B) is required in lieu of Item 612(A)	Use actual weight
617.	Bulged type aileron installation per FAC Dwg. 248141	Use actual weight
618.	Elevator control horn installation	
(A)	FAC Dwg. 242526*, E.0. 690	Use actual weight
(B)	FAC Dwg. 248143	Use actual weight

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|-------------|---|-------------------|
| 619. | Extension limit cables, nose gear per SFC Dwg. 249259 | Use actual weight |
| 620. | Installation - Engine Cowling removable nose per SFC Dwg. 248156 (applicable to O-470-M and O-470-N engine installations only) | Use actual weight |
| 621. | Installation - Ventilator, cockpit per SFC Dwg. 249266*, required with items 113 and 114 | Use actual weight |
| 623. | Installation - Engine Cowling per SFC Dwg. 248166* required with item 114. | Use actual weight |
| 624. | Engine Cowling installation to Air Parts Dwg. 248156 is required with items 116 and 117 | Use actual weight |
| 625. (A) | Reinforcement per Air New Zealand Modification No. T4S/261 for maximum hopper load of 1850 lb (structural limit) (See Air Parts Service Bulletin AP14 Part B) | Use actual weight |
| (B) | Reinforcement per Air New Zealand Modification No. T4S/260 for maximum hopper load of 2140 lb (structural limit) (See Air Parts Service Bulletin AP14 Part A and B) | |
| 626. | Hopper outlet box and control mechanism of approved type must be installed per modification approved separately by the DOTS, when the clam shell doors etc. per FAC dwgs 249245 and 249247 of item 601 are not installed. | Use actual weight |
| NOTE 1. (A) | Current weight and balance report including list of equipment included in certificated empty weight and loading instructions when necessary must be provided for each aircraft at the time of original certification and at all times thereafter. | |
| (B) | The fuel tank capacity includes "Unusable" fuel of 2.5 imp. Galls, which cannot be used safely in all flight attitudes. | |
| (C) | The airplane must be loaded so that the C.G. is within the specified limits at all times taking into consideration the effects of fuel and cargo released overboard. | |
| NOTE 2. | The following placards must be displayed in the locations noted: | |
| (A) | In front of and in clear view of the pilot: | |
| | 1. "This airplane must be operated as agricultural cat airplane in compliance with the operating limitations stated in the form of placards and instrument markings. All aerobatic manoeuvres, including spins, are prohibited." | |
| | 2. Caution: "Fuel tank caps must be secure before flight." | |

3. "No Smoking"
4. "Solo from left seat only." (FU24A only, not required if Air New Zealand modification T4S232/C or its approved equivalent is installed:

(B) On the side of the cockpit:

"Maximum weight and C.G. Range (for 3970 lb max. wt)

Maximum weight 3550 lb (Standard Category)
3970 lb (Agricultural Category)

C.G. Range (+18.3) to (+25.4) at 3970 lb
(+15.2) to (+25.4) at 3550 lb
(+ 9.8) to (+25.4) at 2800 lb and below
(Straight line variation between points given)

Datum: Wing leading edge"

"Maximum weight and C.G. Range (for 4175 lb max. wt)

Maximum weight 3740 lb (Standard Category)
4175 lb (Agricultural Category)

C.G. Range (+19.7) to (+25.4) at 4175lb
(+16.6) to (+25.4) at 3740 lb
(+ 9.8) to (+25.4) at 2800 lb and below
(Straight line variation between points given)

Datum: Wing leading edge"

"Maximum weight and C.G. Range (for 4280 lb max. wt)

Maximum weight 3830 lb (Standard Category)
4280 lb (Agricultural Category)

C.G. Range (+20.4) to (+25.4) at 4280lb
(+17.3) to (+25.4) at 3830 lb
(+ 9.8) to (+25.4) at 2800 lb and below
(Straight line variation between points given)

Datum: Wing leading edge"

"Maximum weight and C.G. Range (for 4360 lb max. wt)

Maximum weight 3900 lb (Standard Category)
4360 lb (Agricultural Category)

C.G. Range (+21) to (+25.4) at 4360lb
(+17.8) to (+25.4) at 3900 lb
(+ 9.8) to (+25.4) at 2800 lb and below
(Straight line variation between points given)

Datum: Wing leading edge"

"Maximum weight and C.G. Range (for 4470 lb max. wt)

Maximum weight 4000 lb (Standard Category)
4470 lb (Agricultural Category)

C.G. Range (+21.75) to (+25.4) at 4470lb
(+18.5) to (+25.4) at 4000 lb
(+ 9.8) to (+25.4) at 2800 lb and below
(Straight line variation between points given)

Datum: Wing leading edge"

“Airspeed and load factor limitations

Never exceed speed	165mph CAS
Max. structural cruising	131 mph CAS
Manoeuvring speed	111 mph CAS
Flaps extended speed	90 mph CAS
Manoeuvring load factors	0° flaps +3.8 (Standard Cat) +3.0 (Agricultural Cat) 40° flaps+2.0 “

“Significance of Instrument Markings

Red Radial Line	Max. or Min. allowed
Green Arc	Normal operation
Yellow arc	Cautionary operation
White Arc	Flap down operating range”

“Engine and Propeller Limits, Fuel and Oil (for O-470-E Engine)

Engine - Continental O-470-E
 For all operations 2600 RPM (225 HP) max.
 Cylinder Head Temperature 525°F max.
 Propeller - Hartzell HC-82XF-1B or HCA2XF-1 with 8833 blades
 Diameter limits 88” to 86”
 Pitch setting at 30 inch station, Low 10.5°, High 27.0°
 Fuel - 80/87 minimum grade aviation gasoline
 Two fuel tanks 19.5 imp. galls capacity each
 Total usable fuel 36.5 imp. Galls
 The unusable fuel of 2.5 imp. galls total cannot be used safely in flight. The fuel gauges read zero when only unusable fuel remains in the tanks
 Oil capacity - 2.5 imp. Galls
 Oil inlet temperature 225°F max.”

“Engine and Propeller Limits, Fuel and Oil (for O-470-M or O-470-N engine

Engine - Continental O-470-M (or O-470-N)
 For all operations 2600 RPM (240 HP) max.
 Cylinder Head Temperature 500°F max.
 Propeller - Hartzell HC92ZF-1BB1 with 8847 blades
 Diameter Limits 88” max. 88” min.
 Pitch setting at 30” sta.: Low 12.0°, High 24.4°
 Propeller - Hartzell HC82XF-1B with 8433 blades
 Diameter limits 84” max. 84” min.
 Pitch setting: Low 12.5°, High 27.0°
 Propeller - McCauley 2A36C18/90M-2
 Diameter limits 88” max. 84” min.
 Pitch setting at 36” sta.: Low 10°, High 22.3°
 Propeller - McCauley model 2A36C18/90M-4
 Diameter limits 86 in. to 84 in.
 Pitch setting at 36 in. sta.: Low 10°, High 22.3°

Propeller - McCauley 2A36C31/90M-4
 Diameter limits 86" max. 84" min.
 Pitch setting at 36" sta.: Low 10°, High 22.3°

Propeller - McCauley 2A36C33/90M-2
 Diameter limits 88" max., 84" min.
 Pitch setting at 36" sta.: Low 8°, High 22.3°

Propeller - McCauley 2A36C45/90M-2
 Diameter limits 88" max., 86" min.
 Pitch setting at 36" sta.: Low 8°, High 22.3°

Fuel - 91/96 minimum grade aviation gasoline
 Two fuel tanks 19.5 imp. galls. Capacity each
 Total usable fuel 36.5 imp. galls.
 The unusable fuel of 2.5 imp. galls. Total cannot be used safely in flight. The fuel gauges read zero when only unusable fuel remains in the tanks

Oil capacity - 2.5 imp. galls.
 Oil inlet temperature 225° max."

"Engine and Propeller Limits, Fuel and Oil (for IO-470-D engine)

Engine - Continental IO-470-D
 For all operations 2625 RPM (260 HP) max.
 Cylinder Head Temperature 460° F max.

Propeller - McCauley D2A36C33/90M-2
 Diameter limits 88" max. 84 in. min.
 Pitch setting at 36 in. sta.: Low 8.4°, High 22.3°

Propeller - McCauley D2A36C45/90M-2
 Diameter limits 88" max. 86" min.
 Pitch setting at 36" sta.: Low 8°, High 22.3°

Propeller - Hartzell HC92ZF-1BB1 or -D1 with 8847 blades
 Diameter limits 88" max. 88" min.
 Pitch setting at 30" sta.: Low 13°, High 24°

Propeller - Hartzell HCA3XF-2C with 8433 blades
 Diameter limits 84" max. 84" min.
 Pitch setting at 30" sta.: Low 9.8°, High 32.5°

Fuel - 100/130 min. grade aviation gasoline
 Two fuel tanks 19.5 imp. gall. Capacity each
 Total usable fuel 36.5 imp. gall.
 The unusable fuel of 2.5 imp. galls. Total cannot be used safely in flight. The fuel gauges read zero when only unusable fuel remains in tanks

Oil capacity - 2.5 imp. gall.
 Temperature limits 225°F max."

"Engine, Propeller, Fuel and Oil Limits (for IO-470-G)

Engine - Continental IO-470-G
 For all operations 2600 RPM (250 HP) maximum
 Cylinder head temperature 500°F maximum

Propeller - Hartzell HC92ZF-1BB1 with 8847 blades
 Diameter limits 88" max. 88" min.
 Pitch setting at 36" sta.: Low 12°, High 24.4°

Propeller - Hartzell HC82XF-1B with 8433 blades

Diameter limits 84" max. 84" min.

Pitch setting at 36" sta.: Low 12.5°, High 27°

Propeller - McCauley B2A36C45/90M-2

Diameter Limits 88" max. 86" min.

Pitch setting at 36" sta.: Low 8.5°, High 24°

Propeller - McCauley D2A36C33/90M-2

Diameter limits 88" max. 84" min.

Pitch setting at 36" sta.: Low 8.5°, High 22.3°

Propeller - McCauley D2A36C45/90M-2

Diameter limits 88" max. 86" min.

Pitch setting at 36 sta.: Low 7.5°, High 22.3°

Fuel - 91/96 min. grade aviation gasoline

Two fuel tanks 19.5 imp. gallons capacity each

Total usable fuel 36.5 imp. gallons

The unusable fuel of 2.5 imp. gallons total cannot be used safely in flight. The fuel gauges read zero when only unusable fuel remains in tanks.

Oil capacity - 2.5 imp. galls.

Oil temperature limits 225°F max."

"Engine, Propeller, Fuel and Oil Limits (for GIO-470-A engine)

Engine - Continental GIO-470-A

For all operations 3200 RPM (310 HP at 28.8" MP) maximum

Recommended Cruise 2800 RPM (233 HP at 26" MP) maximum

Cylinder Head Temperature 460°F maximum

Propeller - McCauley 2A36C43/100R-10

Diameter limits 90" max. 88" min.

Pitch setting at 36 in. sta." Low 11.3°, High 25.0°

Propeller - Hartzell HCA3XF with 2C-8833 blades

Diameter limits 88¼" max. 88¼" min.

Pitch setting at

Fuel - 100/130 min. octane aviation gasoline

Two fuel tanks 19.5 imp. galls. capacity each

Total usable fuel 36.5 imp. gall.

The unusable fuel of 2.5 imp. gallons total cannot be used safely in flight. The fuel gauges read zero when only unusable fuel remains in tanks

Oil capacity - 3.3 imp. galls.

Oil temperature limits 240°F max."

"Engine, Propeller, Fuel and Oil Limits (for IO-520-A engine)

Engine - Continental IO-520-A

For all operations 2700 RPM (285 HP) maximum

Cylinder head temperature 460°F maximum

Propeller - McCauley D2A34C58/90AT-2

Diameter limits 88" max. 86" min.

Pitch setting at 36" sta.: Low 9°, High 26°

Propeller - Hartzell EHC-A3VF-4 with V-8433 blades
 Diameter limits 84" max. 82" min.
 Pitch setting at 30" sta.: Low 9.5°, High 27°
 Fuel - 100/130 minimum octane aviation gasoline
 Two fuel tanks 19.5 imp. gallons capacity each
 Total usable fuel 36.5 imp. gallons.
 The unusable fuel of 2.5 imp. gallons total cannot be used safely in flight. The fuel gauges read zero only when unusable fuel remains in tanks.
 Oil capacity 2.5 imp. gallons
 Oil temperature limits 240°F maximum."

"Engine, Propeller, Fuel and Oil Limits (for IO-520-F engine)

Engine - Continental IO-520-F
 For all operations 2700 RPM (285 HP) max.
 For take-off (5 min. max.) 2850 RPM (300 HP) max.
 Cylinder head temperature 460°F maximum
 Propeller, - McCauley D2A34C58/90AT-4
 Diameter limits 86" max. 84" min.
 Pitch setting at 36" sta.: Low 8°, High 25°
 Fuel - 100/130 minimum octane aviation gasoline
 Two fuel tanks 19.5 imp. gallons capacity each
 Total usable fuel 36.5 imp. gallons
 The unusable fuel of 2.5 imp. gallons total cannot be used safely in flight. The fuel gauges read zero only when unusable fuel remains in tanks.
 Oil capacity - 2.5 imp. gallons
 Oil temperature limits 240°F maximum"

- (C) In the cargo compartment:
- | | | | |
|-----------------------|---------|------|------------------|
| | Max. | wt | 4000 lb max. wt. |
| | less | than | |
| | 4000 lb | | |
| 1. Max. compt. Load | 1300 lb | | 1500 lb |
| Max. load lin. Ft. | 375 lb | | 418 lb |
| Max. load per sq. ft. | 375 lb | | 386 lb |
2. All items carried in this compartment must be properly secured.

- (D) In the passenger compartments:
1. "No Smoking"
 2. "Safety belts must be fastened at all times while in flight"
- And also in the passenger compartment aft of hopper only:
3. "This compartment may be occupied only when the hopper is empty"
 4. Placard in accordance with NZCAR PT.11 C10-6.

- (E) In clear view on or adjacent to the hopper exterior the maximum hopper capacity in pounds. The maximum hopper capacity is to be determined for each particular aircraft and approved by the Director.

NOTE 3 Model FU24 and FU24A aircraft first certified after the date of issue of this Type Certificate No. A-3 are manufactured to Air Parts (NZ) Ltd Drawing List Report No. 101/24, which defined the aircraft with the IO-470-D 260 HP engine. The IO-520-A 285 HP and IO-520-F 300 HP engines are installed by approved Modification AP/9 and AP/11 respectively (See items 116 and 117).

Aircraft certified before issue of this Type Certificate and originally certified under USFAA Type Certificate No. 4A12 of NZ Type Certificate No. A-1 may be recertified under this Type Certificate (A-3) at the weights approved for the powers of the engines installed in the particular aircraft, as given in this data sheet, when modified to Drawing List Report No. 101/24 subject to the exceptions following. Departures from Drawing List 101/24 may be made where engines other than the IO-470-D and other items of equipment are installed to drawings either of the Fletcher Aviation Corporation's or the Sargent-Fletcher Companies' drawing lists, where these drawings are referred to under the appropriate headings of the equipment lists of this data sheet. The drawing serial numbers for the FAC, the SFC and the Air Parts drawing lists are the same and call up the same drawings. Those FAC and SFC drawing numbers given in the equipment lists of this data sheet, which are not also included in the Air Parts drawing list are marked by an asterisk, thus *.

The Model FU24 with the GIO-470-A 310 HP engine is eligible for a maximum weight of 4000 pounds when modified in accordance with SFC drawing List No. 24.7003A, Revision dated September 27, 1965, and operated in accordance with limitations for the 4000 lb gross weight specified in NOTE 2 of this specification. Items of Equipment required for this 4000 pound maximum weight aircraft are: Items 5, 102, 105C, 114, 202, 203, 403, 404, 611, 612, 613, 614, 615, 618(A) or (B), 621, 623.

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