

TYPE CERTIFICATE DATA SHEET No A-10

This data sheet, which is part of Type Certificate No A-10, prescribes conditions and limitations under which the product for which the Type Certificate was issued meets the airworthiness requirements of the New Zealand Civil Aviation Rules.

Type Certificate Holder : **Pacific Aerospace Ltd**
Hamilton

Transferred on 12/12/06 from: **Pacific Aerospace Corporation Ltd**
Hamilton

I - Model CT/4 Airtrainer (Acrobatic and Normal Categories). Approved 29/11/72 (See Note 6)

Engine	S/N 001 -Continental IO-360-D or IO-360-H. (See Note 9) S/N 002 -Continental IO-360-D.		
Fuel	100/130 minimum grade aviation gasoline.		
Engine Limits	For all operations : 2800 rpm full throttle (210 hp).		
Propeller & Limits	Hartzell BHC-C2YF-1B/7663 A-0. Diameter 76 in max., 72 in min. Static rpm at full throttle 2800. Governor model Woodward F210452.		
Airspeed Limits (CAS)	Never Exceed	207 kt	
	Design Cruising	147 kt	
	Manoeuvring	146 kt	
	Half flap	100 kt	
	Full flap	85 kt	
C.G. Range	Fwd Limit	30.2 in AOD)All
	Aft Limit	33.8 in AOD Acrobatic)Weights
		36.0 in AOD Normal)
Empty Weight C.G. Range	None.		
Maximum Weight	S/N 001 – 2400 lb. S/N 002 - 2350 lb.		
Number of seats	Three (two at +38.5in and one at +71.5in).		
Fuel Capacity	45 Imp. gallons (+30.0 in).		

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Oil Capacity	8.3 Imp. quarts (-27.5 in).		
Control Surface Movements	Flaps	down 30°	
	Ailerons	down 10.5°	up 16.5°
	Elevator	down 15°	up 25°
	Rudder	right and left 30°	
Serial Numbers Eligible	001 and 002 (See Note 7)		
Drawing List	001 ; NZAIL drawing 07-01010-1 002 ; NZAIL drawing 07-01010-2		
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, a system providing audible stall warning must be installed.		
Certification Basis	Part 23 of the Federal Aviation Regulations effective 1 February 1965 and amended by 23-1 to 23-10 inclusive. Application for certification dated 26/7/71.		
Flight Manual	N.Z. CAA Approved Flight Manual AIR 2422.		
Datum	Station 50.0 in - Plate with etched line on fuselage side.		
Levelling Means	Lateral	- jig-located nut-plates at station 153.0 in.	
	Longitudinal	- jig-located nut-plates at stations 110.0 in and 125.0 in.	

II - Model CT/4A Airtrainer (Acrobatic and Normal Categories). Approved 18/2/74
(See Note 6)

Engine	Continental IO-360-H.										
Fuel	100/130 minimum grade aviation gasoline.										
Engine Limits	For all operations : 2800 rpm full throttle (210 hp)										
Propeller & Limits	Hartzell BHC-C2YF-1BF/F7663 A-0. Diameter 76 in max., 72 in min. Static rpm at full throttle 2800. Governor model Woodward B210680, F210452 or F210992.										
Airspeed Limits (CAS)	<table> <tr> <td>Never Exceed</td><td>207 kt</td></tr> <tr> <td>Design Cruising</td><td>147 kt</td></tr> <tr> <td>Manoeuvring</td><td>146 kt</td></tr> <tr> <td>Half flap</td><td>100 kt</td></tr> <tr> <td>Full flap</td><td>85 kt</td></tr> </table>	Never Exceed	207 kt	Design Cruising	147 kt	Manoeuvring	146 kt	Half flap	100 kt	Full flap	85 kt
Never Exceed	207 kt										
Design Cruising	147 kt										
Manoeuvring	146 kt										
Half flap	100 kt										
Full flap	85 kt										

C.G. Range	Fwd Limit	30.2 in AOD)All
	Aft Limit	33.8 in AOD Acrobatic)Weights
		36.0 in AOD Normal)
Empty Weight C.G. Range	None.		
Maximum Weight	2400 lb.		
Number of seats	Two (+40.7 in). See Flight Manual supplements for optional seating.		
Fuel Capacity	45 Imp. gallons (+30.0 in).		
Oil Capacity	8.3 Imp. quarts (-27.5 in).		
Control Surface Movements	Flaps	down 30°	
	Ailerons	down 10.5°	up 16.5°
	Elevator	down 15°	up 25°
	Rudder	right and left 30°	
Serial Numbers Eligible	003 to 077 (See Note 7)		
Drawing List	003 to 004 ; NZAIL drawing 07-01010-3 005 to 026 ; NZAIL drawing 07-01010-4 027 to 063 ; NZAIL drawing 07-01010-5 064 to 077 ; NZAIL drawing 07-01010-7		
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, a system providing audible stall warning must be installed.		
Certification Basis	Part 23 of the Federal Aviation Regulations effective 1 February 1965 and amended by 23-1 to 23-10 inclusive. Application for certification dated 26/7/71.		
Flight Manual	N.Z. CAA Approved Flight Manual AIR 2422.		
Datum	Station 50.0 in - Plate with etched line on fuselage side.		
Levelling Means	Lateral	- jig-located nut-plates at station 153.0 in.	
	Longitudinal	- jig-located nut-plates at stations 110.0 in and 125.0 in.	

III - Model CT/4B Airtrainer (Acrobatic and Normal Categories). Approved 3/4/91.

(See Note 6)

Engine	Continental IO-360-HB. (See Note 8)		
Fuel	100/130 minimum grade aviation gasoline.		
Engine Limits	For all operations : 2800 rpm full throttle (210 hp)		
Propeller & Limits	Hartzell BHC-C2YF-1BF/F7663 A-0. Diameter 76 in max., 72 in min. Static rpm at full throttle 2800. Governor model Woodward B210680, F210452 or F210992.		
Airspeed Limits (CAS)	Never Exceed	207 kt	
(See Notes 10 and 11)	Design Cruising	147 kt	
	Manoeuvring	146 kt	
	Half flap	100 kt	
	Full flap	85 kt	
C.G. Range (See Note 11)	Fwd Limit (Normal and Acrobatic)	+0.767m (30.2 in) 966kg +0.813m (32.0 in) 1090kg	
	Straight line variation between points given.		
	Aft Limit (Normal) (Acrobatic)	+0.914m (36.0 in))All +0.859m (33.8 in))Weights	
Empty Weight C.G. Range	None.		
Maximum Weight	1090 kg (2400 lb). (See Note 11)		
Number of seats	Two (+1.034m (40.7 in)). See Flight Manual supplements for optional seating.		
Fuel Capacity	207 litres (+0.762m) (45.5 Imp. gallons (+30.0 in)).		
Oil Capacity	11.4 litres (-0.699m) (10 Imp. quarts (-27.5 in)).		
Control Surface Movements	Flaps	down 30°	
	Ailerons	down 10.5°	Up 16.5°
	Elevator	down 15°	Up 25°
	Rudder	right and left 30°	
Serial Numbers Eligible	078 – 096 (See note 4) CT4-097 and up.		
Drawing List	S/N 078 – 096	PAC drawing 07-01010-10	
	S/N CT4-097 and up	PAC drawing 07-01010-9	
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, a system providing audible stall warning must be installed.		

Certification Basis	Part 23 of the Federal Aviation Regulations effective 1 February 1965 and amended by 23-1 to 23-10 inclusive. Application for certification dated 26/7/71.
Flight Manual	N.Z. CAA Approved Flight Manual AIR 2408.
Datum	Station 50.0 in - Plate with etched line on fuselage side.
Levelling Means	Lateral - jig-located nut-plates at station 153.0 in. Longitudinal - jig-located nut-plates at stations 110.0 in and 125.0 in.

IV - Model CT/4E Airtrainer (Acrobatic Category). Approved 17/7/92. (See Note 6)

Engine	Textron Lycoming AEIO-540-L1B5.
Fuel	100 or 100LL octane aviation gasoline.
Engine Limits	For all operations : 2700 rpm full throttle (300 hp)
Propeller and Limits	Hartzell HC-C3YR-4BF/FC7663-2. Diameter 76 in max., 75 in min. Governor V4-3. Pitch limits at 30" station: 13.4° Low 32 ± 1° High
Airspeed Limits (CAS)	V _{NE} (Never exceed speed) 207 kt V _C (Design cruising speed) 147 kt V _A (Manoeuvring speed) 146 kt V _{FE} (Maximum flaps extended speed) Take-off configuration 100 kt Landing configuration 85 kt
(See Note 12)	
C.G. Range	Fwd Limit +0.737m (29.0 in). 998 kg +0.787m (31.0 in). 1180 kg Straight line variation between points given. Aft Limit +0.864m (34.0 in). All weights
Empty Weight C.G. Range	None.
Maximum Weight	1180 kg (2600 lb).
Number of seats	Two (+1.110m (43.7 in)).
Fuel Capacity	207 litres (+0.775m) (45.5 Imp. gallons (+30.5 in)).
Oil Capacity	15.2 litres (-0.686m) (13.4 Imp. quarts (-27.0 in)).

Control Surface Movements	Flaps Ailerons Elevator Rudder	down 30° down 10.5° down 15° right and left 30°	Up 16.5° Up 25°
Serial Numbers Eligible	065, 200 and up.		
Drawing List	S/N 065 S/N 200 and up	PAC drawing 10-00001-1 PAC drawing 10-00001-2	
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, a system providing audible stall warning must be installed.		
Certification Basis	Part 23 of the Federal Aviation Regulations effective 1 February 1965 and amended by 23-1 to 23-36 inclusive, with an exemption from the requirements of 23.562. An equivalent safety finding was made for 23.905(d). See ATD letter reference 61/199/2 dated 17/7/92. An equivalent safety finding was made for 23.1305(a) and 23.1377(b). See CAA finding reference A540 P07 dated 17/8/98. Application for certification dated 4/7/91.		
Flight Manual	CAA Approved Flight Manual AIR 2632.		
Datum	Station 47.0 in - Plate with etched line on fuselage side		
Levelling Means	Lateral Longitudinal	- jig-located nut-plates at station 153.0 in. - jig-located nut-plates at stations 110.0 in and 125.0 in.	

NOTES PERTINENT TO ALL MODELS

- NOTE 1 Current weight and balance report including list of equipment included in certified empty weight, and loading instructions when necessary must be provided for each aircraft at the time of original certification.
- NOTE 2 Placards and instrument markings must be displayed in accordance with the applicable Flight Manual.

NOTE 3 Information with respect to service life limited parts is contained in the applicable Maintenance Manual under Section 05-10-1.2 Airworthiness Limitations.

The following components are life limited and must be replaced or inspected as indicated:

Model	Component	Part Number	Service Life (flight hours)
CT/4	Wing	07-10101-1/2	10,000 (See Note 5)
CT/4A S/N 003 - 004		07-10101-3/4	14,000
CT/4A S/N 005 - 026		07-10101-5/6	14,000
CT/4A S/N 027 - 063		07-10101-6/7	14,000
CT/4A S/N 064 - 077		07-10101-12/13	14,000
CT/4B S/N 078 - 096		07-10101-8/9	14,000 (See Note 4)
CT/4B S/N CT4-097 & up		07-10101-14/15	14,000
CT/4E S/N 065		10-04015-1/2	14,000
CT/4E S/N 200 & up		10-04016-1/2	14,000
All	Wing centre splice (all components)	See Dwg No 07-10100	11,000 (Must be dismantled and inspected at 8,000 hours)

These limitations may not be increased without CAA approval.

NOTE 4 CT/4B aircraft serial numbers 078 – 096 are eligible for certification under this type certificate when they have been inspected and certified for conformity against drawing 07-01010-10 by Pacific Aerospace Corporation. The service life remaining shall be assessed by calculating equivalent flight hours using the following formula:

$$\text{Equivalent flight hours} = 1.4M + C$$

Where M = RNZAF FEH (fatigue equivalent hour)
(See NZAP 6212.005-38)

C = hours of civil flight time

NOTE 5 Contact the manufacturer when this figure is reached.

NOTE 6 The Acrobatic and Normal categories stated are those of FAR 23. When certificated in New Zealand in accordance with CAR Part 21 the aircraft are eligible for an airworthiness certificate in the Standard category.

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NOTE 7 CT/4 and CT/4A aircraft are only eligible for certification under this Type Certificate when modified in accordance with PAC Service Bulletin PACSB/CT/119.

NOTE 8 An alternative engine, Continental model IO-360-H3, modified in accordance with CAA approved modification AMO 97, may be installed in accordance with CAA approved modification PAC/CT/0253.

NOTE 9 An alternative engine, Continental model IO-360-HB, may be installed in accordance with CAA approved modification PAC/CT/0169.

NOTE 10 When Modification PAC/CT/0290 is embodied in CT/4B models the Maximum Flaps Extended Speed V_{FE} (landing configuration) is increased to 91 KIAS.

NOTE 11 When Modification PAC/CT/0312 is embodied in CT/4B models the Maximum take-off weight in the Normal category is increased to 1180 kgs (2600 lbs). The following limitations are applicable:

		Acrobatic Flight	Normal flight
V_A (Manoeuvring speed)		146 KCAS	121 KCAS
V_{FE} (Maximum flaps extended speed)			
Take-off configuration		100 KCAS	100 KCAS
Landing configuration		91 KCAS	91 KCAS
Maximum Weight		1090 kg (2400 lbs) Acrobatic Flight	1180 kg (2600 lbs) Normal Flight
C.G. Range	Fwd Limit	+0.767m (30.2 in)	966 kg
		+0.813m (32.0 in)	1090 kg
		+0.864m (34.0 in)	1180 kg
	Aft Limit	+0.884m (34.8 in)	1180 kg
		+0.914m (36.0 in)	1090 kg
	Straight line variation between points given.		

NOTE 12 When Modification PAC/CT/0259 is embodied in CT/4E models the Maximum Flaps Extended Speed V_{FE} (landing configuration) is increased to 91 KIAS.

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