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

1 - 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 Never Exceed 207 kt
Design Cruising 147 kt
Manoeuvering 146 kt
Half flap 100 kt
Full flap 85 kt

C.G. Range Fwd Limit 30.2 in AOD
Aft Limit 33.8 in AOD Acrobatic 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 +38.5 in and one at +71.5 in).

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 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.


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
- Never Exceed 207 kt
- Design Cruising 147 kt
- Maneuvering 146 kt
- Half flap 100 kt
- Full flap 85 kt
C.G. Range

Fwd Limit 30.2 in AOD
Aft Limit 33.8 in AOD Acrobatic

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.


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.
(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:
- Never Exceed: 207 kt
- Design Cruising: 147 kt
- Maneuvering: 146 kt
- Half flap: 100 kt
- Full flap: 85 kt

(See Notes 10 and 11)

C.G. Range:
- Fwd Limit (Normal and Acrobatic): +0.767m (30.2 in) 966kg
- Aft Limit (Normal and Acrobatic): +0.914m (36.0 in) 1090kg

(See Note 11) Straight line variation between points given.

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.

(See Note 13)
Pitch limits at 30” station: 13.4° Low 32 ± 1° High

Airspeed Limits
V_{NE} (Never exceed speed) 207 kt
V_{C} (Design cruising speed) 147 kt
V_{A} (Manoeuvering speed) 146 kt
V_{FE} (Maximum flaps extended speed) Take-off configuration 100 kt

(See Note 12)
Landing configuration 85 kt

C.G. Range
Fwd Limit +0.737m (29.0 in). 998 kg
+0.787m (31.0 in). 1180 kg
Aft Limit +0.864m (34.0 in). All weights

Straight line variation between points given.

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: down 30°
- Ailerons: down 10.5°, up 16.5°
- Elevator: down 15°, up 25°
- Rudder: right and left 30°

Serial Numbers Eligible
- 065, 200 and up.

Drawing List
- S/N 065: PAC drawing 10-00001-1
- S/N 200 and up: 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 23.1337(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: jig-located nut-plates at station 153.0 in.
- Longitudinal: 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:

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

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.
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 kg (2600 lbs). The following limitations are applicable:

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

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.

NOTE 13  The MTV-9-B-C/C193-58 propeller may be fitted to the CT/4E in accordance with Modification PAC/CT/0304.

NOTE 14  CT/4A aircraft may be converted to CT/4B aircraft in accordance with Modification PAC/CT/0412.

-- END --