TYPE-CERTIFICATE

DATA SHEET

EASA.IM.A.081

for

750XL

Type Certificate Holder:
PACIFIC AEROSPACE Ltd

333 Airport Road,
Hamilton 3282,
New Zealand

For models: 750XL

SECTION A: 750XL

ADMINISTRATIVE SECTION

Section A: 750XL

A.I. General

1.	a) Type:	750XL
	b) Model:	750XL
	c) Variant:	---
2.	Airworthiness Category:	Normal
3.	Type Certificate Holder:	PACIFIC AEROSPACE Ltd (see Note 5) 333 Airport Road, Hamilton 3282, New Zealand
4.	Manufacturer:	PACIFIC AEROSPACE Ltd (see Note 5) 333 Airport Road, Hamilton 3282, New Zealand
5.	Certification Application Date:	
	5.1. to CAA NZ	25-Jan-2000
	5.2. to EASA	22-Oct-2004
6.	CAA New Zealand Type Certification:	TC A-14, dated 23-Jul-2003
7.	EASA Type Certification Date:	12-Apr-2006

A.II. Certification Basis

1.	Reference Date for determining the applicable requirements:	22-Oct-2004
2.	(Reserved)	
3.	(Reserved)	
4.	Certification Basis:	As defined in CRI A-01, latest Issue, and below
5.	Airworthiness Requirements:	CS-23, Initial Issue
6.	Requirements elected to comply:	None
7.	EASA Special Conditions:	CRI A-5, Parachuting CRI F-1, Protection from the effects of HIRF CRI F-2, Protection from the direct effects of lightning strike CRI F-3, Protection from the indirect effects of lightning strike CRI A-MMEL Master Minimum Equipment List
8.	EASA Exemptions:	None
9.	EASA Equivalent Safety Findings:	CRI C-2, Airspeed Limitations
10.	EASA Environmental Standards:	ICAO Annex 16, Volume 1, Part 2, Chapter 10 ICAO Annex 16, Volume 2, Part 2, Chapter 2

A.III. Technical Characteristics and Operational Limitations

1. Type Design Definition: Set of drawings according to Master Drawing Index, PAL Drawing No.11-00001-1 or later EASA approved (see Note 3)

2. Description: Single-turbo-propeller engine, 2 seats (see NOTE 4), low wing airplane,aluminium and steel structure, fixed tricycle landing gear, normal empennage

3. Equipment: Equipment list, POH, Section 6.3

4. Dimensions:

Span	12.80 m (42 ft)
Length	11.84 m (38.1 ft)
Height	4.04 m (13.3 ft)
Wing Area	24.88 m² (267.8 ft²)

5. Engine Type: Pratt & Whitney PT6A-34

5.1 Engine Type Certificate: Transport Canada Type Certificate E-6 (see Note 2)

5.2 Engine Limits:

Power Setting	Torque psi	Max ITT °C	Gas Gen RPM % Ng	Prop RPM % Np	Oil Press psi	Oil Temp °C	Shaft Horse-Power
Takeoff	64.5 (2)	790	101.6	91.2	85-105	10-99	750 (31°C)
Maximum Continous	54	740	101.6	91.2	85-105	10-99	633
Maximum Climb	54	740	101.6	91.2	85-105	0-99	633
Maximum Cruise	64.5 (2) 54	790 740	101.6 101.6	91.2 91.2	85-105 85-105	0-99 0-99	750 633
Idle	-	685	52-54	-	40	-40 - 99	-
Maximum Reverse	64.5 (2)	790	101.6	86	85-105	0-99	-
Transient	68.4 (5)	850 (3)	102.6 (3)	100	85-105	0-99	-
Starting	-	1090 (3) (4)	-	-	-	-40	-

(1) All limits are based on sea level
(2) 5 minute time limit
(3) These values are limited to two secs
(4) Starting temperatures above 850°C should be investigated for cause
(5) Time limited to 20 secs

6. (Reserved)

7. Propeller:

7.1 Propeller 1

7.1.1 Propeller Type: Hartzell Propeller Inc. Type HC-B3TN-3D/T10282NS+4 or Hartzell Propeller Inc. Type HC-B3TN-3D/T10282NSK+4 (installed by modification PAC/XL/0615)

7.1.2 Propeller Type Certificate: FAA Type Certificate P15EA (see Note 2)

7.1.3 Settings: constant speed,
Low Pitch at 30º Station: 18.5° ± 0.5º
Feathered: 86.3° ± 1.5º
Maximum Reverse: -8.1° ± 0.5º

7.1.4 Diameter: Maximum Diameter: 2692 mm / 106 in
Minimum Diameter: 2692 mm / 106 in

7.2 Propeller 2

7.2.1 Propeller Type: Hartzell Propeller Inc. Type HC-E4N-3P/D9900 (installed by modification PAC/XL/0453)

7.2.2 Propeller Type Certificate: FAA Type Certificate P10NE (see Note 2)

7.2.3 Settings: constant speed,
Low Pitch at 30º Station: 19.3° ± 0.1º
Feathered: 89.5° ± 0.5º
Maximum Reverse: -10.0° ± 0.5º

7.2.4 Diameter: Maximum Diameter: 2540 mm / 100 in
Minimum Diameter: 2540 mm / 100 in

8. Fluids:
8.1 Fuel: Refer to POH, Section 2.5
8.2 Oil: Refer to POH, Section 2.5

9. Fluid capacities: Four structural wing tanks

9.1.1 Fuel Capacity up to Serial Number 185 (excluding Serial Number 177)

Tanks	Total capacity	Unusable	Usable
Front Left Tank (includes sump tank)	284 litres, 499 lbs 75 U.S. gallons	10 litres, 18 lbs 3 U.S. gallons	274 litres, 481 lbs 72 U.S. gallons
Front Right Tank	293 litres, 515 lbs 77 U.S. gallons	10 litres, 18 lbs 3 U.S. gallons	283 litres, 497 lbs 74 U.S. gallons
Rear Left Tank	142 litres, 249 lbs 37.5 U.S. gallons	0	142 litres, 249 lbs 37.5 U.S. gallons
Rear Right Tank	142 litres, 249 lbs 37.5 U.S. gallons	0	142 litres, 249 lbs 37.5 U.S. gallons
Total	861 litres, 1512 lbs 227 U.S. gallons	20 litres, 36 lbs 6 U.S. gallons	841 litres, 1476 lbs 221 U.S. gallons

9.1.2 Fuel Capacity for Serial Number 177, and 186 and further
(modification PAC/XL/0448 embodied)

Tanks	Total capacity	Unusable	Usable
Front Left Tank (includes sump tank)	183.4 litres, 323 lbs 48.4 U.S. gallons	3.4 litres, 6 lbs 0.9 U.S. gallons	180 litres, 317 lbs 47.6 U.S. gallons
Front Right Tank	182 litres, 320 lbs 48.1 U.S. gallons	2 litres, 3.5 lbs 0.5 U.S. gallons	180 litres, 317 lbs 47.6 U.S. gallons
Rear Left Tank	461.3 litres, 812 lbs 121.9 U.S. gallons	13.3 litres, 23.4 lbs 3.5 U.S. gallons	448 litres, 788 lbs 118.3 U.S. gallons
Rear Right Tank	461.3 litres, 812 lbs 121.9 U.S. gallons	13.3 litres, 23.4 lbs 3.5 U.S. gallons	448 litres, 788 lbs 118.3 U.S. gallons
Total	1288 litres, 2267 lbs 340.3 U.S. gallons	32 litres, 56 lbs 8.5 U.S. gallons	1256 litres, 2210 lbs 331.8 U.S. gallons

9.2 Oil: Total: 8.7 Liters

10. Air Speeds:

Never exceed speed, V_{NE}	170 KIAS
Maximum structural cruising speed, V_{NO}	140 KIAS
Design Manoeuvring Speed, V_A, V_O	
7500 lbs (3402 kg)	131 KIAS
6500 lbs (2948 kg)	122 KIAS
5500 lbs (2495 kg)	112 KIAS
4500 lbs (2041 kg)	101 KIAS
Flap Extended Speed, V_{FE}	
Flaps 20°	130 KIAS
Flaps 40°	120 KIAS

11. Maximum Operating Altitude: 20,000 feet

12. Operational Capability: Day & night VFR
for appropriate equipment is installed and operating correctly
Refer to approved POH, Section 2.2

13. Maximum Masses:

Take-off	3402 kg (7500 lb)
Landing	3232 kg (7125 lb)

14. Centre of Gravity Range:

14.1 For Serial Numbers XL101 to XL185 (without XL177)

Fwd limit : 2.55 m (100.46 in) aft of datum at 1909 kg (4209 lbs)
2.62 m (103.18 in) aft of datum at 2558 kg (5639 lbs)
2.83 m (111.55 in) aft of datum at 3402 kg (7500 lbs)

Aft Limit : 3.19 m (125.6 in) aft of datum at all weights

Straight line between points given.

14.2 For Serial Number XL177, and XL186 and further (modification PAC/XL/0448 embodied)

Fwd limit : 2.60 m (102.18 in) aft of datum at 1909 kg (4209 lbs)
2.66 m (104.90 in) aft of datum at 2558 kg (5639 lbs)
2.88 m (113.27 in) aft of datum at 3402 kg (7500 lbs)

Aft Limit : 3.17 m (124.60 in) aft of datum at all weights
Straight line between points given.

15. Datum — Station 0.00 (2.545m (100.21 in) forward of wing leading edge)

16. Levelling Means

Longitudinal	Two bolts on fuselage upper longerons forward of LH main door
Lateral	Top of inner wing main spar

17. Control System Deflections

Elevator relative to tailplane :	Up	30°
	Down	8.5°
Elevator tab relative to tailplane :	Up	10.5°
	Down	27.5°
Rudder relative to fin :	Right	25°
	Left	20°
Rudder tab relative to rudder :	Right	13°
	Left	13°
Ailerons relative to wing :	Up	23°
	Down	9.5°
Ailerons tab relative to ailerons :	Up	15°
	Down	20°
Flaps relative to wing :	Up	0°
	Take-off	21°
	Landing	40°

For all control surfaces except flaps, a tolerance of ± 0.5° is applied.
A tolerance of ± 1° is applied to the flaps in the up and take-off positions, and +1°/ -0° in the landing position.

18. Minimum Flight Crew: 1 (Pilot)

19. Maximum Seating Capacity: 2 (incl. Pilot) (See Note 4 for additional seating)

20. Wheels and Tyres

20.1 Nose landing gear		
	Wheel base	3.17 m (10.5 in)
	Tire	8.50 x 6 in
20.2 Main landing gear		
	Track	3.68 m (12.1 in)
	Tire	8.50 x 10 in, or 29 x 11.0 - 10 (for PAC/XL/0387 embodied)

21. Baggage / Cargo Compartments

Cargo operations are allowed only if PAC modification PAC/XL/0208 or other EASA approved restraint system is installed.

Compartment Station 2.08 m (82 in) aft of datum to 2.92 m (115.0 in)	544 kg (1200 lbs)
Compartment Station 3.00 m (118.0 in) aft of datum to 4.22 m (166.0 in)	544 kg (1200 lbs)
Compartment Station 4.22 m (166.0 in) aft of datum to 6.10 m (240.0 in)	363 kg (800 lbs)

A.IV. Operating and Service Instructions

1. Pilot Operating Handbook (POH)

   For serial numbers 101 up to 185 (without 177 and 121)

   Doc. No. AIR2825, at revision 3, approved by NZCAA on 9 April 2006, or later approved revision

   For serial number 177

   Doc. No. AIR2825, at revision 3, approved by NZCAA on 9 April 2006, or later approved revision
   with Flight Manual Supplement No. 94 included

   For serial number 186 and further

   Doc. No. AIR3237, at initial issue, approved by NZCAA on 06-Dec-2012, or later approved revision

2. Aeroplane Maintenance Manual (AMM)

   Maintenance Manual PAC 750XL rev 3 of March 2004 with Chapter 4 “Airworthiness limitations” EASA approved dated 5 April 2006 and following revisions

A.V. Operational Suitability Data

Master Minimum Equipment List (MMEL) — Document No. 750XL-MMEL-EASA, EASA approved initial issue or any later approved revision.

A.VI. Notes

1. Serial numbers eligible: 101 and up

2. The EASA type certification standard includes that of FAA / Transport Canada TCDS based on individual EU member state acceptance or certification of this standard prior to 28 September 2003. Other standards confirming to TC/TCDS standards certificated by individual EU member state prior to 28 September 2003 are also acceptable.

3. Drawing lists used for the Type Design Definition are regularly updated and for some cases renumbered by Pacific Aerospace using the middle part of the drawing list number for identification 11-000**01**-1, 11-000**05**-1, etc.. Aeroplanes built to the different drawing list numbers are eligible for the European market only if the changes incorporatred are certified.
   This does not necessarily include the operation (for example aeroplanes conform to drawing list number 11-00005-1 might be eligible for the European market but not for IFR operation).

4. Additional passenger seating is installed in accordance with the following optional modifications:

   1. EASA.IM.A.C.01337 (PAC/XL/0193), Installation of Aero Twin Passenger Seats (requires the prior installation of PAC/XL/0107 “MK III Floor” and PAC/XL/0079 “Cabin ventilation”.

      Eight seats: Two at Station 104.34 in (2.65m)
      Two at Station 144.43 in (3.67m)
      Two at Station 178.32 in (4.53m)
      Two at Station 226.76 in (5.76m)

2. EASA 10054689 (PAC/XL0440), Installationof Aero Twin Passenger Seats with Millenium crew seats (requires the prior installation of PAC/XL/0107 “Mk III floor”, or PAC/XL/0609 and PAC/XL/0610 “Modular Floor” and PCA/XL/0019 or PAC/XL/0079 “Cabin Ventilation)

Eight seats:	Two at Station 105.34 in (2.68m)
	Two at Station 144.43 in (3.67m)
	Two at Station 178.32 in (4.53m)
	Two at Station 226.76 in (5.76m)

5. Postal address:

Pacific Aerospace Ltd
Private Bag 3027,
Waikato Mail Centre, Hamilton 3240,
New Zealand

ADMINISTRATIVE SECTION

I. Acronyms

None

II. Type Certificate Holder Record

Until 12-Dec-2006
Pacific Aerospace Corporation Ltd.
Hamilton
New Zealand

III. Change Record

Issue	Date	Changes
1	12-Apr-2006	Initial Issue of TCDS
2	03-Jul-2014	Complete TCDS reformatted using new EASA template A.II.10 Reference to Note 1 deleted (or noise values refer to EASA website) A.III.1 Applicable main drawing for type design definition clarified A.III.9 New table for enlarged fuel tank (mod. PAC/XL/0448) added A.III.14 New c.g. range for enlarged fuel tank (mod. PAC/XL/0448) added A.III.20 Alternative main tire added (mod. PAC/XL/0387) A.IV New POH (AIR3237) added A.V. Old Note 1 deleted (noise values) New Note 1 added (elegibility) New Note 3 added (type design main drawing)
3	13-Feb-2015	Complete TCDS reformatted using new EASA template A.III.7 Hartzell Propeller HC-E4N-3P/D9900 (mod. PAC/XL/0453) added A.V.4 New Note 4 added (passenger seats mod. PAC/XL/0193) A.V.5 New Note 5 added (postal address)
4	21-Mar-2016	A.II.7 Added CRI A-MMEL A.V. New section V.Operational Suitability Data added with MMEL. A.VI.4 New Note 4.2 added (passenger seats mod. PAC/XL/0440)
5	13-May-2016	A.III.5.1 Reference to PT6A-34 Transport Canada TC corrected