DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

T00006LA
Revision 2
Aero Union Corporation
P3A
P3B

September 15, 2008

TYPE CERTIFICATE DATA SHEET NO. T00006LA

This data sheet which is a part of Type Certificate No. T00006LA prescribes the 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 Ave.
Chico, CA 95973

I. Model P3A, P3B (Restricted Category) Approved April 29, 1999.

Engines: 4 - Allison T-56-A-10W

Fuel: Commercial aviation turbine fuels conforming to ASTM Specification No. D 1655-62T (Jet A), -66T (Jet A-1), Jet B types, or commercial equivalents of MIL-T-5624, grade JP-4 or JP-5.

Lubricating Oil: Synthetic oil conforming to Allison Specification EMS-35, MIL-L-7808 or MIL-L-23699.

Engine Limits: Static, Standard Day, Sea Level:

	Turbine Inlet Temp.	H.P.	Oil Temp
Takeoff (5 min.)	971° C Max	4300	100° C Max
Maximum Continuous	932° C Max	3950	90° C Max

Propeller and Propeller Limits: 4 - Hamilton Standard hydromatic propellers
Hub 54H60-77, Blade A7121B-2

Diameter: 13 ft. 6 in.
2% reduction allowable for repair

Constant speed propeller, full feathering and reverse pitch.

Single rotation, four blade assembly with governing speed setting 1020 rpm (13820 erpm). Propeller assembly is complete with spinner, feathering and reversing provisions, constant speed control, negative torque control, synchrophaser.

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Propeller and Propeller Limits (Cont'd)	Blade Angles		
	Feather	86.65 ±- .10°	
	Low-pitch stop (min. flt idle)	9.5 + .5° - 1°	
	Ground idle, beta	- 7°	
	Reverse	- 14° ± .5°	
	Propeller Oil - Complies with MIL-H-5606B, MIL-H-83282		
Airspeed Limits	(Knots IAS at 100% RPM)		
	V_{MO} (Maximum operating)	367K	At Sea Level
	See NAVAIR 01-75PAA-1		
	V_A (Maneuvering)	275K	
	V_B (Turbulent air penetration)	220K	
	V_{FE} (Takeoff and Approach)	190K	
	V_{FE} (Landing)	170K	
	V_{LO} (Landing gear operation)	190K	
	V_{LE} (Landing gear extended)	300K	
	V_{LL} (Landing light extended)	260K	
C.G. Range	Aft of datum, landing gear extended, MAC (sta.) 16% (572.89) to 29% (594.82) at 60,000 lbs. 20% (579.64) to 32% (599.88) at 97,500 lbs. 22% (583.01) to 32% (599.88) at 105,000 lbs.		
	Straight line variation between points given		
Empty Weight C.G.	572.89 to 594.82 (16% to 29% MAC)		
Datum	573.7 inches forward of jig points (white circled screws) located .75 inches outboard of wing station 65 joint, 2.5 inches aft of leading edge joint.		
Maximum Weights	Max Takeoff Wt.: 105,000 lbs.		
	Max Landing Wt.: 105,000 lbs.		
	Max Zero Fuel Wt.: 83,500 lbs.		
Leveling Means	Plumb bob leveling suspension fitting is located in the cabin ceiling at station 723 on the center-line. The leveling grid is directly below the plumb bob fitting under the floor.		
Minimum Crew	Two (2): Pilot, Co-pilot		
Passengers	None, limited to the flight crew and number of persons essential to operations.		
Fuel Capacity	Tanks 1 & 4: 1606 US gallons each Tanks 2 & 3: 1671 US gallons each Total fuel: 6554 US gallons		
Oil Capacity	Four nacelle tanks (Arm 492.0). Capacity for each tank 8.65 gallons.		
Cargo Capacity	None		

Maximum Operating Altitude	24,000 ft.
Control Surface	Aileron: (Measurements at inboard end of aileron at trailing edge)

	Up	Down
Boost On:	15 7/32 (± ½")	10 ½ (± ½")
Boost Off (Manual):	5 3/8 (± ½")	6 (± ½")

Elevator: (Measure elevator travel from top inboard edge of elevator above force link tab hinge.)

	Up	Down
Boost On:	14 ¼ (± ¾")	7 (± ½")
Boost Off (Manual):	6 (± 1")	5 ¼ (± 1")

Rudder: (Measure from trailing edge of vertical stabilizer to lower end of rudder trailing edge)

	Left	Right
Boost On:	27 (±3/4")	34 5/16 (± 3/4")
Boost Off (Manual):	17 (± 1")	17 (± 1")

Serial Numbers Eligible	US Navy Bureau Numbers: 150510, 150513, 151361, 151369, 151372, 151385, 151387, 151391
Certification Basis	The certification basis is FAR 21.25(a)(2), (b)(2). Aircraft must be modified in accordance with Aero Union Master Drawing List 11700, dated 1/17/90, or later FAA approved revision, special purpose of Forest and Wildlife Conservation. Aircraft certified under this type certificate are not eligible for multiple airworthiness certification under FAR 21.187. Type Certificate T00006LA dated April 29, 1999. Application for Type Certificate dated 1/20/98.
Production Basis	None. Prior to original certification of each aircraft, an FAA representative must perform a detailed inspection for workmanship, materials, and conformity with the approved technical data, and a check of the flight characteristics.
Equipment	The basic required equipment as prescribed in the applicable Airworthiness Regulations (see Certification Basis), must be installed in the aircraft for certification. If electric windshield heat is operative, it must be used for all flight operations. Operation without windshield heat on any or all portions of the windshield is permissible provided (1) the airplane is not flown in known icing conditions, and (2) the maximum speed limit below 10,000 feet is 240K.
Note 1	A. Current weight and balance report including list of equipment included in certificated weight empty, and loading instructions when necessary, must be in each aircraft at the time of original certification and at all times thereafter.

B. The location of the center of gravity for any gross weight configuration, determined from NAVAIR 01-1B-40, Technical Manual, Weight and Balance Data, must fall within the percent of the Mean Aerodynamic Chord (MAC) shown on the Center of Gravity Table, Chart E. For information and method of calculating the airplane center of gravity, refer to NAVAIR 01-1B-40, Technical Manual, Weight and Balance Data.

C. The weight of the system (unusable) fuel and oil as defined in NAVAIR 01-1B-40, Chart E, must be included in the airplane empty weight.

D. Fuel Loading and Usage.

1. Fuel must be loaded and used to provide compliance with the "Fuel Unbalance" limitation contained in NAVAIR 01-75PAA-1 for normal fuel management procedures.

2. Phillips fuel additive PFA-55MB may be used in concentrations not to exceed 0.15 percent by volume. No fuel system anti-icing credit is allowed.

Note 2

This approval applies to:

A. Basic United States Navy P3A/P3B airplane with no major modifications except as required by Aero Union Report AUC 1137, dated December 22, 1989 or later FAA approved revisions.

B. Airplane certified for "special purpose operations" in accordance with FAR Part 21.25 with the following limitations:

1. The following placard is to be installed in clear view of the pilot:

"Restricted Category:
"This airplane must be operated as a restricted category airplane and in compliance with the operating limitations stated in NAVAIR 01-75PAA-1, and in the form of placards, markings, and manual."

"Windshield Heat"
"With windshield heat inop, aircraft is restricted to 240 KTS below 10,000 ft."

"Passengers"
"None, limited to flight crew and number of persons essential to operations".

2. Carriage of hazardous materials is prohibited unless compliance is shown with FAR Part 91 and the applicable regulations in Title 49 of the Code of Federal Regulations, Part 175.

3. Dispensation of economic poisons is prohibited.

Note 3

Latest revisions of the following documents applicable to the model aircraft are required:

A. NAVAIR 01-75PAA-1 must be available in the P3 series aircraft for all flight operations.

B. NAVAIR 01-1B-40, Technical Manual, Weight and Balance Data.

Note 4

The aircraft must be serviced and maintained in accordance with the applicable P3 manuals listed in the NAVAIR 01-75PAA-0, P3 Technical Documentations List. An inspection program prepared in accordance with guidelines outlined in FAR Part 91.409. A depot level inspection and maintenance procedure developed from the Department of the Navy's Phase Depot Maintenance program (PDM) which consists of three phases and a general. One phase and general performed at 54 mo. Intervals. Reference AUC docs: 359 thru 362.
The damage tolerance and fatigue evaluation, per FAR 25.571, will be met in accordance with FAA approved Avenger document AAS-ALS-07-001, Nov. 2007, Revision A.

Note 5

Prior to civil airworthiness certification, the owner must show that the following have been accomplished:

A. A master document of FAA Airworthiness Directives and equivalent military documents (Technical Directives, etc.) for Lockheed P3/L-188 series aircraft, Allison T-56-10 (501-D22) series engines and Hamilton Standard 54H60-77 series propellers, and applicable appliances must be prepared in Aero Union Corporation (AUC) Report No. ASD154.

B. Compliance with applicable time compliance technical orders for the aircraft, engines and propellers must be complied with IAW NAVAIR 01-75PAA-6 manual.

C. Inspection of all wing joints between planks for sealant deterioration and corrosion. Repairs will be accomplished IAW NAVAIR 01-75PAA-3 series manuals.

D. Major airframe repairs will be accomplished IAW NA 01-75PAA-3 series manuals and any other data acceptable to the Administrator.

E. Life-limited parts applicable to the military product model, including engines and/or propellers certificated as part of the aircraft, are listed in AUC Report No. ASD154.

Note 6

When operating the P3B with -10 engines, comply with P3 Local Engineering Specification #P-3/AL58-0-0060 for the engine installation.

Note 7

Goodrich Main Landing Gear Wheel P/N Approved

Part Number	Manufacturer	Physical Description
3-1267	Goodrich	Non-insert
3-1267-1	Goodrich	New Design

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