

**DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION**

A32NM Revision 2 USDA Forest Service P-3A April 26, 2011
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TYPE CERTIFICATE DATA SHEET NO. A32NM

This data sheet which is a part of Type Certificate No. A32NM 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	USDA Forest Service 2 nd Floor, SW Wing 201 14 th Street SW Washington DC 20090-6090
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I. Model P-3A (Restricted Category), Approved January 31, 1990

Engines	4 Allison turboprop T-56-A-10W
Fuel	Commercial aviation turbine fuels conforming to ASTM Specification No. D 1655-59T, types Jet B, Jet A-1, Jet A, or commercial equivalents of MIL-T-5624, grade JP-4 or JP-5.
Lubricating Oil	Synthetic oil conforming to Allison Specification EMS-35 or MIL-L-7808
Engine Limits	Static, Standard Day, Sea Level:

Turbine Inlet Temp	H.P.	Oil Temp
Takeoff (5 minutes) 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 13ft. 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, and electrical ice control.
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Blade Angles	
Feather	86.65 ± .10°
Low-pitch stop (min. flt idle)	9.5 ± .5° - 1°
Ground idle, beta	-7°
Reverse	-14° ± .5°

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Propeller Oil	MIL-H-5606B																											
Airspeed Limits (knots IAS)	<table border="0"> <tr> <td>V_{MO} (Maximum operating)</td> <td>367 knots</td> <td>at sea level</td> </tr> <tr> <td colspan="3">See NAVAIR (01-75PAA-1)</td> </tr> <tr> <td>V_A (Maneuvering)</td> <td></td> <td></td> </tr> <tr> <td>V_B (Turbulent air penetration)</td> <td>220 knots</td> <td></td> </tr> <tr> <td>V_{FE} (Takeoff & Approach)</td> <td>190 knots</td> <td></td> </tr> <tr> <td>V_{FE} (Landing)</td> <td>170 knots</td> <td></td> </tr> <tr> <td>V_{LO} (Landing gear operation)</td> <td>190 knots</td> <td></td> </tr> <tr> <td>V_{LE} (Landing gear extended)</td> <td>300 knots</td> <td></td> </tr> <tr> <td>V_{LL} (Landing light extended)</td> <td>260 knots</td> <td></td> </tr> </table>	V_{MO} (Maximum operating)	367 knots	at sea level	See NAVAIR (01-75PAA-1)			V_A (Maneuvering)			V_B (Turbulent air penetration)	220 knots		V_{FE} (Takeoff & Approach)	190 knots		V_{FE} (Landing)	170 knots		V_{LO} (Landing gear operation)	190 knots		V_{LE} (Landing gear extended)	300 knots		V_{LL} (Landing light extended)	260 knots	
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Heated Windshield	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 240 knots.																											
C.G. Range	See Figure 1-82, NAVAIR 01-75PAA-1																											
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.																											
MAC	168.7, leading edge 545.9 inches aft of Datum																											
Maximum Takeoff Weight	127,500 lbs																											
Maximum Landing Weight	91,320 lbs																											
Maximum Zero Fuel Weight	71,584 lbs.																											
Leveling Means	Plumb-bob leveling suspension fitting is located in the cabin ceiling at station 723 on the centerline. The leveling grid is directly below the plumb bob fitting under the floor.																											
Minimum Crew	Pilot and Co-Pilot																											
Passengers	None, limited to the flight crew and number of persons essential to operations.																											
Fuel Capacity	See NAVAIR 01-75PAA-1																											
Oil Capacity	Four nacelle tanks (ARM 492.0) Capacity for each tank 8.65 gallons.																											
Cargo Capacity	None																											
Maximum Operating Altitude	30,000 ft.																											
Control Surface Movements	See NAVAIR 01-75PAA-2-2																											
Serial Numbers Eligible	US Navy Bureau Numbers: 150510, 150513, 151361, 151369, 151372, 151385, 151387, 151391																											
Certification Basis	14 Code of Federal Regulations (CFR) part 21 § 21.25 (a) (2) and (b) (2). CAR Part 4B as effective Oct. 1, 1959. FAR 21.50 (b), 25.571 and 25.1529 to Amendment 25-96 as effective March 31, 1998 (see Note 3). Type Certificate No. A32NM issued 29 June 1990 for the special purpose of forest and wildlife conservation under FAR Part 91.																											
Production Basis	None - Prior to original certification of each aircraft, an FAA representative must perform an inspection for workmanship, materials, and conformity with the approved technical data. All applicable Technical Orders affecting airworthiness must be accomplished.																											

- (a) Incorporation of all applicable NAVAIR Technical Directives which affect airworthiness and which are not already covered by AAS-ALS-07-001.
- (b) Inspect all wing joints between planks for sealant deterioration and repair as necessary

NOTE 7

Aircraft approved under this type certificate can only be used for the special purpose of forest and wildlife Conservation which includes the aerial dispensing of liquids.

NOTE 8

The FAA representative responsible for the issuance of Restricted Airworthiness Certificates shall make NOTE 4 part of the operating limitations issued with the Airworthiness Certificate.

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