

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

A4NW
Revision 4
ALEXANDRIA AIRCRAFT
(EAGLE)

DW-1

May 30, 2002

TYPE CERTIFICATE DATA SHEET NO. A4NW

This data sheet, which is part of Type Certificate No. A4NW, prescribes 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	Alexandria Aircraft LLC 2504 Aga Drive Alexandria, Minnesota 56308
Type Certificate Holder Record	Eagle Aircraft Company transferred TC A4NW to Bellanca, Inc. on October 22, 1984 Bellanca, Inc. transferred TC A4NW to Alexandria Aircraft LLC on May 30, 2002

I. Model EAGLE DW-1 (Restricted Category), approved November 17, 1978

(See Note 5 for Restricted Category Airworthiness Certificate Eligibility)

Engine	Jacobs R 755 B2
Fuel	80 minimum octane aviation gasoline
Engine limits	For all operations 2200 rpm (275 hp) Max cylinder head temperature 500°F
Propeller	Grumman (Sensenich) ground adjustable Model J-5404, SR-5404, SR-5404/MA96K Pitch setting at 36 in. STA is 15.0°. Static RPM at maximum permissible throttle setting (not over 2090, not under 1990). The propeller must be indexed in the zero degree position, (Blades in line with crank throw). NOTE: Blade angle adjustment must be with $\pm 1/2$ degree allowable tolerance to result in never exceeding the maximum rated RPM at rated power in a full throttle climb at 75 mph CAS.
Airspeed limits (CAS)	Never exceed 113 mph Dive 126 mph
C.G. Range	13.5 to 18.75 aft of datum
Empty weight C.G. range	None
Datum	Landing gear axle center line.
Leveling means	Top fuselage longeron at cockpit opening.
Maximum weight	3860 lbs.

Page No.	1	2	3	4
Rev. No.	4	3	1	1

Number of seats	1		
Hopper capacity	250 U.S. gallon		
Fuel capacity	40 U.S. gallon		
Oil capacity	4.4 U.S. gallon		
Control surface movements	Aileron	Up 28°	Down 8°
	Elevator	Up 30°	Down 25°
	Rudder	Left 25°	Right 25°
	Spoilers	Up 90°	
Serial numbers eligible	DW-1-0001 <i>See Note 5 for restricted Category Airworthiness Certification Eligibility.</i>		
Certification basis	FAR 21.25(a)(1) Using the airworthiness requirement of Appendix B of CAM 8.		
Production basis	None		
Exterior finish	The wings, aileron and center section must be painted white to reflect heat.		

II. Model EAGLE DW-1 (Restricted Category), approved April 25, 1980

Engine	Continental W670-6N (R-670-4) Continental W670-6A (R-670-5) (with dual magnetos) (new, newly overhauled, or rebuilt) Lycoming IO-540-M1B5D		
Fuel	80 minimum octane aviation gasoline (W670 series) 100/130 minimum octane aviation gasoline (IO-540 series)		
Engine limits	For all operations 2075 rpm (220 hp) (W670) For all operations 2700 rpm (300 hp) (IO-540)		
Propeller	Hartzell HA 2V20-1B/V10133N (W670) Pitch setting at 30 in. sta. is 17°. Static RPM at maximum permissible throttle setting (not under 1800, not over 1950).		
	Hartzell HC-C3YR-1RF/F8468-2R (IO-540) Pitch setting at 30 in. sta. is 10.5° (lo pitch) 37° (hi pitch) Diameter: not over 82 in., not under 78 in. Hartzell 49F4-11B governor		
Airspeed Limits (CAS)	Never exceed	130 mph	
	Dive	150 mph	
C.G. range	13.5 to 18.75 aft of datum		
Empty weight C.G. range	None		
Datum	Landing gear axle center line.		
Leveling means	Underneath surface of the top wing near the wing root.		
Maximum weight	4000 lbs.		
Number of seats	1		

Hopper capacity	2082 lbs.				
Fuel capacity	40 U.S. gal. (opt. 65 U.S. gal.)				
Oil capacity	4.4 U.S. gal. (W670) 3.0 U.S. gal. (IO-540)				
Control surface movements	Aileron	Up	24°	Down	8°
	Elevator	Left Up	16°	Down	10°;
		Right Up	15°	Down	11° (Min)
	Rudder	Left	23°	Right	23°
	Spoilers	Up	90°		
Serial numbers eligible	DW-1-0002 and up				
Certification basis	FAR 21.25(a)(1) Using the airworthiness requirements of Appendix B of CAM 8.				
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 technical data, and a check of the flight characteristics.				
Exterior Finish	The wings, aileron, and center section must be painted white to reflect heat.				

NOTE 1. Current weight and balance report together with list of equipment included in certificated empty weight, and loading instructions, when necessary, must be provided for each aircraft at the time of original certification.

NOTE 2. The following placard must be displayed in front of, and in clear view of, the pilot on airplane serial no. DW-1-0001:

EAGLE AIRCRAFT CO. AIRPLANE MODEL DW-1 TYPE CERTIFICATE NO. A4NW

"THIS AIRCRAFT IS CERTIFIED UNDER CAR 8, AS A SPECIAL PURPOSE AGRICULTURAL AIRCRAFT AND MUST BE OPERATED IN COMPLIANCE WITH OPERATING LIMITATIONS STATED IN THE FORM OF PLACARDS AND MARKINGS. THIS AIRCRAFT APPROVED FOR DAY, VFR FLIGHT ONLY. NO INVERTED OR ACROBATIC MANEUVERS INCLUDING SPINS APPROVED.

MAXIMUM MANEUVERING SPEED (V _m)	90 mph CAS
MAXIMUM OPERATING SPEED (V _{ne})	113 mph CAS
MAXIMUM POSITIVE LOAD FACTOR	4.2 G
MAXIMUM NEGATIVE LOAD FACTOR	-1.0 G

DESIGN GROSS WEIGHT 3860 LBS. CENTER OF GRAVITY LIMITS ARE FROM 13.5 INCHES TO 18.75 INCHES AFT OF DATUM. DATUM IS THE MAIN LANDING GEAR AXLE.

SULPHUR DUSTING AND FLAMMABLE LIQUID SPRAYING IS PROHIBITED UNLESS SPECIAL FIRE PREVENTION MEASURES HAVE BEEN INCORPORATED IN THIS

AIRCRAFT.

THE ALTERNATOR IN THIS ELECTRICAL SYSTEM HAS BEEN TESTED TO 45 AMPS MAXIMUM."

The following placard must be displayed in front of and in clear view of the pilot on airplane serial no. DW-1-0002 and up:

EAGLE AIRCRAFT CO. AIRPLANE MODEL DW-1 TYPE CERTIFICATE NO. A4NW
"THIS AIRCRAFT IS CERTIFIED UNDER CAR 8, AS A SPECIAL PURPOSE AGRICULTURAL AIRCRAFT AND MUST BE OPERATED IN COMPLIANCE WITH OPERATING LIMITATIONS STATED IN THE FORM OF PLACARDS, MARKINGS, AND AIRPLANE FLIGHT MANUAL. THIS AIRCRAFT APPROVED FOR DAY AND NIGHT VFR FLIGHT ONLY. NO INVERTED OR ACROBATIC MANEUVERS INCLUDING SPINS APPROVED.

MAXIMUM MANEUVERING SPEED (V _m)	107 mph CAS
MAXIMUM OPERATING SPEED (V _{ne})	130 mph CAS
MAXIMUM POSITIVE LOAD FACTOR	4.2 G
MAXIMUM NEGATIVE LOAD FACTOR	-1.0 G

DESIGN GROSS WEIGHT 4000 LBS. CENTER OF GRAVITY LIMITS ARE FROM 13.5 INCHES TO 18.75 INCHES AFT OF DATUM. DATUM IS THE MAIN LANDING GEAR AXLE.

SULPHUR DUSTING AND FLAMMABLE FLUID SPRAYING IS PROHIBITED UNLESS SPECIAL FIRE PREVENTION MEASURES HAVE BEEN INCORPORATED IN THIS AIRCRAFT.

THE TYPE CERTIFICATE REQUIRES THAT THE WINGS, AILERON, AND CENTER SECTION BE PAINTED WHITE.

(Continental W670)

THE ALTERNATOR IN THIS ELECTRICAL SYSTEM HAS BEEN TESTED TO 40 AMPS MAXIMUM."

NOTE 3. Reserved.

NOTE 4. The DW-1 (serial numbers DW-1-0002 and up) has demonstrated satisfactory operation at 5400 pounds gross weight in the restricted category envelope at sea level under standard day conditions. Further weight increases should not be accomplished in the field.

The design maximum takeoff and landing weight is 4000 pounds. Since the hopper load is disposable, landings in excess of this weight should not be required. If it is necessary to make a landing weight over 4000 pounds, the pilot must exercise caution to prevent structural damage to the landing gear and airframe. The takeoff weight should be adjusted also, to suit the runway surface to prevent over-stressing the structure.

NOTE 5. Airplane Serial No. DW-1-0001 was extensively damaged and cannot be rebuilt to the original certified configuration due to insufficient type design data. This airplane is no longer eligible for a Restricted Category Airworthiness Certificate.

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