

**DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION**

A48CE
Revision 2
HONGDU
N5A
March 7, 2022

TYPE CERTIFICATE DATA SHEET No. A48CE

This data sheet, which is part of Type Certificate No. A48CE, prescribes conditions and limitations under which the product meets the airworthiness requirements of the Federal Aviation Regulations.

Type Certificate Holder Hongdu Aviation Industry Co., Ltd.
Xinxiqiao, Nanchang
Jiangxi Province, 330024
P.R. China

I. Model N5A, (Restricted Category), Approved February 26, 2007

Engine One Textron Lycoming IO-720-D1B, TCDS 1E15

Fuel 100 or 100LL

Oil Lycoming Spec. No. 301-F or Service Instruction No. 1014

Engine Limits

Conditions	HP	RPM	Press. Alt.
Maximum Take-Off (with no time limit)	400	2650	Sea Level
Maximum Continuous	400	2650	Sea Level

Propeller One Hartzell HC-C3YR-1RF/F8475R, TCDS P25EA

Propeller Limits Maximum Diameter 86 inches (2184mm)
Minimum Diameter 84 inches (2134mm)
Pitch Low 13.1° to 13.5°
High 26.0° to 28.0°

Airspeed Limits

Never Exceed (V_{NE})	156 KCAS	179 Mph	289 Km/Hr
Max. Structural Cruising (V_{NO})	112 KCAS	128 Mph	207 Km/Hr
Maneuvering (V_A)	109 KCAS	125 Mph	202 Km/Hr
Flap Extended (V_{FE}) at 15°	97 KCAS	111 Mph	179 Km/Hr
at 27°	89 KCAS	103 Mph	166 Km/Hr

C.G. Range 5.00 in. (127 mm) to 9.72 in. (247 mm) aft of datum at 4960 Lbs. (2250 Kg)
5.00 in. (127 mm) to 11.34 in. (288 mm) aft of datum at 4321 Lbs. (1960 Kg)
and below Straight-line variation between points.

Reference Datum Axis of Fuselage frame No. 3: 107.09 inches (2720 mm) at aft end of engine
cowling.

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<u>Leveling Means</u>	Maintenance Manual N5ACSW6, Chapter 08-M3, page 08-12-00.
<u>Maximum Weight</u>	Max. Takeoff Weight 4960 Lbs (2250 Kg) Max. Landing Weight 4914 Lbs (2229 Kg)
<u>Minimum Crew</u>	1
<u>No. of Seats</u>	1 at 69.24 inches (1758 mm)
<u>Maximum Baggage</u>	None
<u>Hopper load</u>	1675 Lbs (760 Kg) at 2.72 inches (69 mm)
<u>Fuel Capacity</u>	82.95 US Gallons (314 Liters) Total One, 41.48 US Gallon (157 Liters) tank in each wing. Useable capacity 82.0 US Gallons (311 Liters) at 14.0 inches (355 mm)
<u>Oil Capacity</u>	4.8 Liq. US Gallons (18 Liters) at -84.6 inches (-2150 mm)
<u>Max. Operating Altitude</u>	9,842 Ft MSL (3,000 meters)
<u>Control Surface Movements</u>	Aileron trailing edge up 20° (+/- 1°) trailing edge down 16° (+/- 1°) Elevator trailing edge up 30° (+ 0°/- 1°) trailing edge down 17.6° (+ 0°/- 1°) Elevator Trim Tab trailing edge up 10° (+/- 1°) trailing edge down 18° (+/- 1°) Rudder Left/Right 25° (+ 0°/- 1°) Flaps Takeoff 15° (+1.5°/- 1°) Landing 27° (+1.5°/- 1°)

DATA PERTINENT TO ALL MODELS

<u>Manufacturer's Serial Numbers</u>	N5A 020 and on. The CAAC Certificate of Airworthiness for Export must be submitted for each individual airplane. See "Import Requirements." Instructions for Continued Airworthiness (ICA) complying with FAR 23.1529, must be furnished before delivery of the first airplane or issuance of a standard certificate of airworthiness, whichever occurs later. As of April 3, 2008, the FAA has not accepted the ICAs.
<u>Import Requirements</u>	a. A United States airworthiness certificate may be issued on the basis of a Chinese Certificate of Airworthiness for Export signed by a representative of the Civil Aviation Authority of China (CAAC), containing the following statement (in the English language). "The aircraft covered by this certificate has been examined, tested, and found to comply with U.S. type certificate No. A48CE and to be in a condition for safe operation."

- b. The U.S. airworthiness certification basis for aircraft type certificated under FAR Section 21.29 and exported by the country of manufacture is FAR Sections 21.183(c) or 21.185(c).
- c. The U.S. airworthiness certification basis for aircraft type certificated under FAR Section 21.29 exported from countries other than the country of manufacture (e.g., third party country) is FAR Section 21.183(d) or 21.183(b).

Refer to the applicable bilateral agreement to verify eligibility for import into the United States of both new and used aircraft based on the scope of the agreement, to identify any required statements by the exporting authority on the export certificate of airworthiness (or equivalent document), and for procedures for coordinating exceptions to conformity statements on these documents. Refer to FAA Order 8130.2, *Airworthiness Certification of Aircraft*, for requirements for issuance of an *airworthiness certificate* for imported aircraft.

Certification Basis

Code of Federal Regulations (CFR)

14 CFR 23 effective February 1, 1965, including Amendments 23-1 through 23-31.

Plus,

14 CFR 23.851, Amendment 23-45

Minus,

23.221, 23.677(b), 23.771(b), 23.775(b), (c), and (d), 23.807(a)(3), 23.841, 23.843, 23.853(c), 23.1311 Amdt. 23-49, 23.1326 Amdt. 23-49, 23.1415, 23.1416, 23.1419, 23.1441, 23.1443, 23.1449, 23.1450, 23.1453

14CFR Part 36 effective December 1, 1969, including Amendments 36-1 through Amendment 36-28, (excepted from noise level requirements by 14 CFR part 36.1(a)(2), only compliance with 14 CFR Part 36.1583 required; an non-agricultural use requires noise level compliance to 14 CFR Part 36 appendix F.)

No Equivalent Level of Safety (ELOS) were identified.

No Special Conditions were identified.

Type Certificate No. A48CE was issued January 9, 2007.

Date of Application for Type Certificate was April 12, 2002.

Equipment

The basic required equipment as prescribed in the applicable airworthiness regulations (See Certification Basis) must be installed in the airplane for certification.

In addition, the following items of equipment are required:

Airplane Flight Manual, dated 31 January 2003, or later approved revision.

Agricultural Dispersal Equipment

Airplane maybe flown with no external dispersal equipment and/or with external dispersal equipment as shown in N5A Agricultural Aircraft Maintenance Manual N5ACSW6, Part 2, Chapter 95:

- a. Spray System
- b. Dust Spreader

NOTES:

NOTE 1

Weight and Balance:

The empty weight and corresponding center of gravity location must include the following:

- 1. Unusable fuel: 4.4 Lbs (2.0 Kg) at 31.5 inches (800 mm).

2. A current weight and balance report including a list of equipment included in the certificated empty weight and loading instructions when necessary, shall be provided for each aircraft at the time of original certification.
3. The certificated empty weight and corresponding center of gravity location must include full oil and unusable fuel.

NOTE 2

- a. In addition to the operating limitations in this data sheet other limitations shall
be shown on placards or listings accessible to the pilot. All placards required in CAAC approved Airplane Flight Manual shall be installed in appropriate location.
- b. The following placards must be displayed in front of and in clear view of the pilot:
 1. The markings and placards installed in this airplane contain operating limitations which must be complied with when operating the airplane in the restricted agricultural category. Other operating limitations which must be complied with when operating this airplane are contained in the Airplane Flight Manual.
 2. This airplane is limited to day-VFR and non-icing operations only.
 3. No acrobatic maneuvers, including spins, are approved.
 4. Demonstrated crosswind landing is 15.6 Mph (7.0 M/Sec).
 5. Design Maneuvering Speed (V_A) 107 K 124 Mph 199 Km/Hr
 6. No Smoking.
 7. Usable fuel is 82.0 Liq. US Gallons (311 Liters). The indication of fuel gauge is only accurate in level flight and parking.
- c. Placard adjacent to magnetic compass: Compass calibrated at engine level flight and applicable equipment, including radio, except heating.
- d. Placard near fueling cap on wing surface: Fuel 100/130LL
- e. Placard on nose landing gear strut:
Damper Pressure 173.4 psi (1200 kPa)
Travel 10.04 (+0.08/-0) inches (255 (+2/-0) mm)
Tire pressure 36.3 (+4.3/-0) psi (250 (+30/-0) kPa)
- f. Placard on main landing gear strut:
Damper pressure 377 psi (2600 kPa)
Travel 5.28 (+0/-0.08) inches (134 (+0/-2) mm)
Tire Pressure 43.5 (+7.25/-0) psi (300 (+50/-0) kPa)
- g. All Placards and Access Cover Symbols shall be installed as shown in the CAAC approved N5A Agricultural Airplane Flight Manual N5ACSW1(E), dated 31 January 2003 or later revision, Section 7, Paragraph 7.31 in Figures 7-27 through 7-30.

NOTE 3

Instruction for Continued Airworthiness and Service Life Limited components are included in the CAAC approved N5A Agricultural Aircraft Maintenance Manual N5ACSW6, Chapter 12-M3, and N5A Flight Manual N5ACSW1(E), Section 8. Revisions to Airworthiness Limitations must be directly FAA approved through the CAAC.

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