DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

H22NM
Revision 7
Arrow Falcon Exporters Inc.

OH-58A+
OH-58A
OH-58C

August 26, 2009

TYPE CERTIFICATE DATA SHEET NO. H22NM

This data sheet, which is part of Type Certificate No. H22NM, 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 — Arrow Falcon Exporters, Inc.
2081 South Wildcat Way
Porterville, Ca. 93257

I. Model OH-58A+ (Restricted Category Military Surplus Rotorcraft) approved September 25, 1996

Engine — Allison 250-C20C (T63-A720) See Note 8

Fuel — ASTMD1655 JETB. See AF55-1520-228-10 for other approved fuels.

Engine Limits

	Torque Pressure (Percent)	Output r.p.m	Exhaust Gas Temperature (^{o}C)	Gas Gen Speed
Takeoff (5 Min.)	100%	100%	810	105%
Max. Cont	85%	100%	738	105%

See Flight Manual AF55-1520-228-10 for transient limits.

Rotor Limits

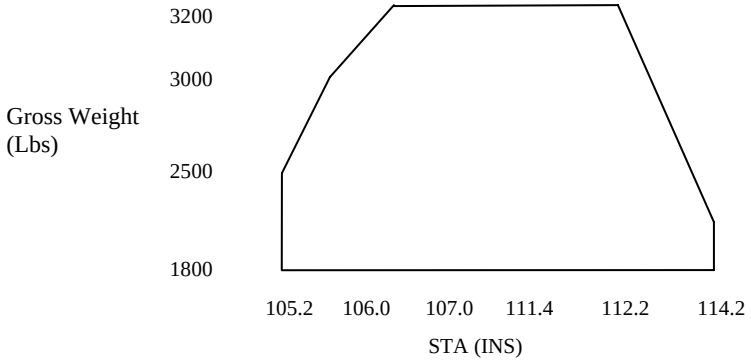
Power off	Power on
Maximum 390 RPM (Dual tach 110%)	Maximum 354 RPM (Dual tach reading) Rotor 100%
Minimum 330 RPM (Dual tach 93%)	Minimum 347 RPM (Dual tach reading) Rotor 98%

(See Flight Manual for transient limits.)

Page No.	1	2	3	4	5	6	7	8
Rev No.	7	5	5	5	7	5	5	7

C. G. Range

A) Longitudinal C.G. Limits
(+107.0 To +111.4) at 3200 lbs.
(+ 106.0 To +112.2) at 3000 lbs.
(+105.2 To +114.2) at 2500 lbs.
(+105.2 To +114.2) at 1800 lbs.
Straight line variation between points given.
(See Chart)



B) Lateral C.G. Limits
2.6 inches Right
2.4 inches Left

Empty Weight C.G. Range — Longitudinal Limits (+105.2) to (+114.2)

Maximum Weight — 3200 lbs.

II. Model OH-58A (Restricted Category Military Surplus Rotorcraft) Approved June 26, 1997

Engine — Allison 250-ClOD (T63-A700) See Note 8

Fuel — ASTMDl655 JETB. See AF55-1520-228-1O for other approved fuels.

Engine Limits

	Torque Pressure (psi)	Output r.p.m	Exhaust Gas Temperature (^{o}C)	Gas Gen Speed
Takeoff (5 Min.)	92	103%	749	104%
Max. Cont	79	103%	693	104%

See Flight Manual AF55-1520-228-10 for transient limits.

Note: Powerplant cooling has been demonstrated to be adequate for the following ambient temperature schedule: 125°F at sea level and decreases by 3.6°F per 1000 feet to the operating maximum altitude of 10,000 feet.

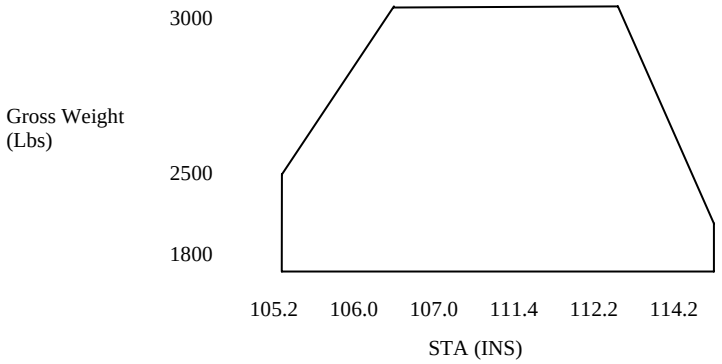
Rotor Limits

Power off	Power on
Maximum 390 RPM	Maximum 354 RPM
Minimum 330 RPM	Minimum 347 RPM

A void prolonged operation between 172 and 206 RPM
(See Flight Manual for transient limits.)

C. G. Range

A) Longitudinal C.G. Limits
(+ 106.0 To +112.2) at 3000 lbs.
(+105.2 To + 114.2) at 2500 lbs.
(+105.2 To +114.2) at 1800 lbs.
Straight line variation between points given.
(See Chart)



Empty Weight CG. Range — Longitudinal Limits (+105.2) to (+ 114.2)

Maximum Weight — 3000 lbs.

III. Model OH-58C (Restricted Category Military Surplus Rotorcraft) Approved June 26, 1997

Engine — Allison 250-C20C (T63-A720) See Note 8

Fuel — ASTMD1655 JETB. See AF55-1520-228-10 for other approved fuels.

Engine Limits

	Torque Pressure (Percent)	Output r.p.m.	Exhaust Gas Temperature (^{o}C)	Gas Gen Speed
Takeoff (5 Min.)	100%	100%	810	105%
Max. Cont	85%	100%	738	105%

See Flight Manual AF55-1520-228-10 for transient limits.

Rotor Limits

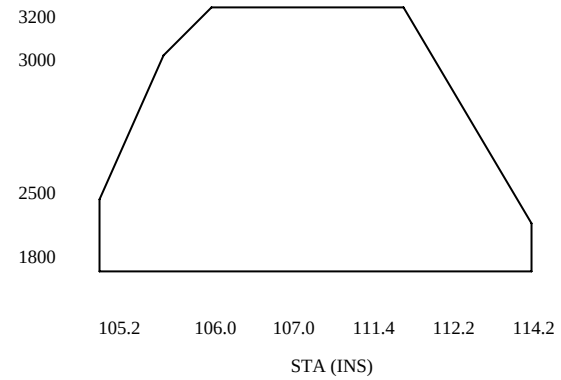
Power off	Power on
Maximum 390 RPM (Dual tach 110%)	Maximum 354 RPM (Dual tach reading) Rotor 100%
Minimum 330 RPM (Dual tach 93%)	Minimum 347 RPM (Dual tach reading) Rotor 98%

(See Flight Manual for transient limits.)

C. G. Range

A) Longitudinal C.G. Limits
(+ 107.0 To +111.4) at 3200 lbs.
(+ 106.0 To + 112.2) at 3000 lbs.
(+ 105.2 To + 114.2) at 2500 lbs.
(+105.2 To +114.2) at 1800 lbs.
Straight line variation between points given.

C.G. Range (cont'd)



B) Lateral C.G. Limits
2.6 inches Right
2.4 inches Left

Empty Weight C.G. Range	Longitudinal Limits (+105.2) to (+ 114.2)
Maximum Weight	3200 lbs.

Data Pertinent To All Models

Airspeed Limits	Never exceed 138 MPH (120 Knots) CAS, Refer to AF55-1520-228-10 for additional information (AIRSPEED LIMITS). Decrease V_{ne} 3 knots per 1,000 ft. above 3,000 ft. 100 kts recommended maximum for autorotation.
Datum	Station 0 (datum is 1 inch forward of most forward point of fuselage cabin nose section or 55.16 inches forward of jack point center line).
Leveling Means	Leveling means is plumb line from ceiling left rear cabin to index plate on floor.
Minimum Crew	1 at (+65.0)
Number of seats	See Note 15 (1 at +65.0 and 2 at +104.0.)
Maximum Cargo	Total Maximum Cargo Weight of 950 pounds not exceeding 100 lbs. per sq. ft. between (+77) and (+114).
Fuel Capacity	71.5 gallons (+116.0) 70.3 useable (See AF55-1520-228-10 for fuel operations limits).
Oil Capacity	11.2 pints (+179.0)
Control Movements	For rigging information, refer to chapter 11 of the Aviation Unit and Intermediate Maintenance Manual TM55-1520-228-23-2.
Serial Nos. Approved:	Refer to Arrow Falcon Serial Numbers Eligible Report Number AF5145 dated July 10, 1996, or later FAA approved revision. A current copy is on file at the Los Angeles ACO.
Certification Basis	14 CFR 21.25 (a) (2) effective February 1, 1965, including Amendments 21-1 through 21-42. Type Certificate No. H22NM for the Special Purpose(s) of:

Certification Basis (cont' d)

I) Agricultural Operations under 14 CFR 21.25(b)(1).

Note: In accordance with 14 CFR 36.1 (a)(4), compliance with the noise requirements was not shown. Therefore, aircraft certificated under this type certificate are only eligible for agricultural operations excepted by 14 CFR 36.1 (a)(4) and defined under 14 CFR 137.3.

2) Forest and Wildlife Conservation Operations under 14 CFR 21.25(b)(2)

Note: In accordance with 14 CFR 36.1 (a)(4), compliance with the noise requirements was not shown. Therefore, aircraft certificated under this type certificate are only eligible for dispensing fire fighting materials excepted by 14 CFR 36.1 (a)(4) and defined under 14 CFR 137.3.

3) External Load Operation under 14 CFR 21.25(b)(7).

Note: In accordance with 14 CFR 36.1(a)(4), compliance with the noise requirements was not shown. Therefore, aircraft certificated under this type certificate are only eligible for external loads operations excepted by 14 CFR 36.1 (a)(4) and defined under 14 CFR 133.1(b).

4) Aerial Survey Operation under 14 CFR 21.25(b)(3)

Note: In accordance with 14 CFR 36.1(a)(4), compliance with the noise requirements was not shown. Therefore, aircraft certificated under this type certificate are only eligible for aerial survey operations excepted by 14 CFR 36.1 (a)(4). See note 17.

5) Patrolling Operations under 14 CFR 21.25(4)

Note: In accordance with 14 CFR 36.1(a)(4), compliance with the noise requirements was not shown. Therefore, aircraft certificated under this type certificate are only eligible for patrolling operations excepted by 14 CFR 36.1(a)(4). See note 17.

Any alteration to the aircraft for Special Purposes not identified above require further FAA approval and in addition may require noise and/or flight testing.

General Note: Any subsequent modifications to the helicopters type certified under this Type Certificate are to have the certification basis for that modification established under 14 CFR 21.101 published June 7, 2000, which became effective June 10 ,2003. Otherwise non-significant modifications are to meet the requirements of 14 CFR 27 airworthiness standards, normal category, Amendment 4, effective October 27, 1968, and 14 CFR 27.1529, Instructions for Continued Airworthiness, Amendment 18, effective September 11, 1980.

Equipment

The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in or on each helicopter for certification.

Date of Application

November 6,1995

Production Basis

None. No helicopter may be produced under this approval. Prior to adding serial numbers to this Type Certificate, each candidate helicopter must undergo a conformity inspection. The conformity inspection will be

conducted in accordance with a Type Inspection Authorization, Part 1, or request for conformity that will include as a minimum, the inspections contained in the FAA Rotorcraft Directorate Restricted Category conformity document dated September 25, 2001, or later FAA approved revisions.

Notes

Note 1

A current weight and balance report including list of equipment included in the certificated empty weight, and loading instructions when necessary, must be provided for each aircraft at the time of original certification. Refer to Flight Manual AF55-l520-228-10 or Aviation Unit and Intermediate Maintenance Manual, TM55-1520-228-23-2 for C.G. determination.

Note 2

The following placards must be prominently displayed in the cockpit in full view of the pilots:

Placard No. 1

"THIS ROTORCRAFT MUST BE OPERATED IN ACCORDANCE WITH THE RESTRICTED CATEGORY OPERATING LIMITATIONS OF 14 CFR 91.313."

Placard No. 2

"THIS HELICOPTER MUST BE OPERATED IN COMPLIANCE WITH THE OPERATING LIMITATIONS SPECIFIED IN THE APPROVED ROTORCRAFT FLIGHT MANUAL. REFER TO AF 55-1520-228-10 FOR OPERATING LIMITS AND RESTRICTIONS."

Placard No. 3

'VFR OPERATIONS ONLY'

Note 3

The helicopter(s) must be serviced, maintained, inspected, repaired, and overhauled in accordance with the documents specified in Arrow Falcon Exporters, Inc. Instructions for Continued Airworthiness Report, AF5132, dated July 5, 1996, as revised or inspected in accordance with other FAA accepted inspection programs. The TC Holder's Instructions for Continued Airworthiness Report is part of the TC Holder's Instructions for Continued Airworthiness. An FAA approved/accepted copy must accompany each helicopter on delivery.

Note 4

Prior to obtaining an original Airworthiness Certificate:

A Each helicopter must pass a conformity inspection in accordance with Arrow Falcon Exporters, Inc. Configuration Report, AF5146, dated July 10, 1996 or later revision. The Configuration Report must contain a complete description of each helicopter, any military Maintenance Work Orders accomplished on that particular helicopter, and a description of the Special Purpose modification(s) accomplished on that particular helicopter. In addition, each helicopter must pass an inspection for any possible hidden damage and the military records reviewed for acceptability of any repairs or alterations.

B. The maintenance, overhaul, and modification records of each helicopter must be reviewed for military changes that may affect the airworthiness of the helicopter.

C. After the required inspections, the aircraft must be found to be in a good state of preservation, repair, and in a condition for safe operation.

D. A check by the Type Certificate Holder, of the flight characteristics in accordance with all applicable portions of Sections II and V of the U.S. Army Technical Manual 55-1520-228-MTF Maintenance Test Flight Manual, dated November 1, 1988, as appropriate for each aircraft, or other FAA approved manual.

Note 5 — This aircraft is prohibited from carrying cargo for compensation or hire. Carriage of cargo is limited to such cargo that is incidental to the aircraft's owner/operator's business, which is other than air transportation. (This note applies to aircraft that have the special purpose, "Carriage of cargo.")

Note 6 — Restricted Category aircraft may not be operated in a foreign country without the express written approval of that country.

Note 7 — This aircraft has not been shown to meet the requirements of the applicable comprehensive and detailed airworthiness code as provided by Annex 8 to the Convention on International Civil Aviation.

Note 8 — Engine changes are allowed provided the replacement engine is of the same make and model as identified in this TCDS. The replacement engine must have proper military records and have the applicable FAA Airworthiness inspection accomplished.

Note 9 — The Airworthiness directives for the helicopter and engine contained in Arrow Falcon Exporters, Inc. Airworthiness Directives Report, AF5121 (OH-58A+, OH-58A, and OH-58C) and AF5123 (Engine), dated June 10, 1996, or later FAA Approved revision, must be complied with prior to original airworthiness certification.

Note 10 — An acceptable method of determining engine cycles from engine total operating time is contained in ARROW FALCON Report No. AF5] 30 dated July 24, 1996, or later FAA Approved revision. This may be used when converting military operating hours to commercial equivalent cycles at the time of initial airworthiness conformity.

Note 11 — When equipment identified in Arrow Falcon Exporters Inc. Removed Equipment Report Number AF5144 dated July 29, 1996, or later FAA Approved revision, is removed, the helicopter center gravity (CG) will be beyond aft limitations. The pilot shall refer to Arrow Falcon AF55-1520-228-10, Flight Manual, to determine the amount of ballast to be installed at Sta. 22.2 in order to return the Center of Gravity to specified parameters.

Note 12 — OH-58A+, OH-58A, and OH-58C helicopters shall have additional systems installed as follows:

Description	Report No.
Battery Temperature Monitor	AF5138
Flight Hour Recording Meter Installation	AF5133

	Ballast Weight Installation	AF5134
Note 13	Flight Manual - Model OH-58A+ helicopters having complied with MWO 1520-228-50-6, which installs the T63-A720 engine, must be operated in accordance with the operating limitations in the Flight Manual AF55-1520-228-10 dated January 7, 1997, or later FAA Approved revisions.	
Note 14	Any alteration to the type design of this aircraft may require Instructions for Continued Airworthiness. These instructions must be submitted and accepted by the FTW-AEG, Aircraft Evaluation Group Office, prior to approval for return to service.	
Note 15	No person may be carried in this helicopter during flight unless that person is essential to the purpose of the flight.	
Note 16	Alternate or emergency fuels are listed in TM55-1520-228-10 Chapter 2, Section XIV, Table 2-2. Some limitations apply for the use of certain alternate and emergency fuels. These limitations are listed in this section.	
Note 17	In order to conduct operation under Aerial Survey 14 CFR 21.25(b)(3) or Patrolling Operations under 14 CFR 21.25 wedge style windows at the observer or pilot station must be installed in accordance with Supplemental Type Certificate SA00483SE.	

…..END…..