

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

H15NM
Revision 3
Hagglund Helicopters, LLC
UH-1H

September 17, 2003

TYPE CERTIFICATE DATA SHEET NO. H15NM

This data sheet, which is part of Type Certificate No. H15NM, prescribes conditions and limitations under which the product for which the type certificate was issued meets the airworthiness requirements of the 14 Code of Federal Aviation Regulations (14 CFR).

Type Certificate Holder: Hagglund Helicopters, LLC
5101 NW A Avenue
Pendleton, OR 97801

Type Certificate Holder Record: Western International Aviation, Inc. transferred ownership of TC H15NM to Hagglund Helicopters, LLC on January 24, 2001

I - Model UH-1H, (Restricted Category Military Surplus Rotorcraft) Approved March 25, 1994

Engine 1 - Lycoming T53-L-13B (See Note 10 For Alternative Engines)

Fuel ASTM-D1655 (Jet A, Jet A-1, Jet B) (See Note 12 For Alternative Fuels)

Engine Limits

	Torque Pressure (PSI)	Output Horsepower (HP)	Output (RPM)	Exhaust Gas Temp. (C°)	Gas Gen Speed N ₁ (%)
Takeoff (30 min.)	50.0	1100	6600	610 - 625	101.5
Max. Cont.	50.0	1100	6600	400 - 610	101.5

Refer to TM55-1520-210-10 for additional limitation data.

Rotor Limits

	<u>Power Off</u>	<u>Power On</u>
Maximum r.p.m.	339	324
Minimum r.p.m.	294	294

Airspeed Limits

Roof-mounted pitot static:

V_{NE} (never exceed speed) 124 knots up to 7500 lbs. Gross Weight, sea level to 2000 feet. Never exceed 113 knots up to 9500 lbs. Gross Weight, sea level to 2000 feet. Refer to TM55-1520-210-10, Chapter 5, Section V, for specific operating airspeed limitations. See Note 2 for specific operation airspeed limitation placards.

Nose-Mounted Pitot static:

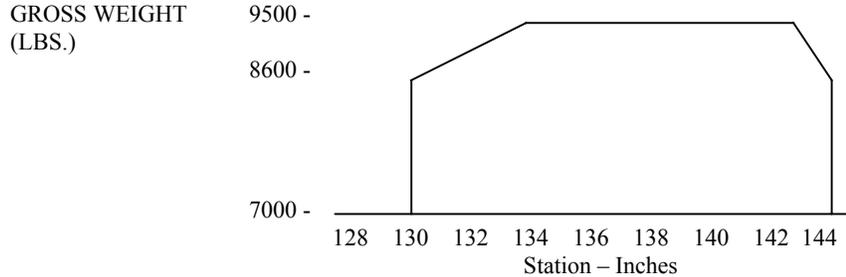
Never exceed 112 knots up to 7500 lbs. Gross Weight, sea level to 2000 feet. Never exceed 103 knots up to 9500 lbs. Gross Weight, sea level to 2000 feet. Refer to TM55-1520-210-10, Chapter 5, Section V, for specific operating airspeed limitations. See Note 2 for specific operation airspeed limitation placards.

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C.G. Range

Longitudinal C.G. Limits

(+130.0) to (+144.0) at 7000 lbs.
 (+130.0) to (+144.0) at 8600 lbs.
 (+130.0) to (+134.0) at 9500 lbs.
 (+134.0) to (+143.0) at 9500 lbs.
 Straight line variation between points given.



Lateral C.G. Limits Plus or Minus 7.5 in.

Empty Weight C.G. Range

(+130.0) to (+144.0)

Datum

Station 0, datum is 7.6 inches aft of the most forward point of the fuselage nose section.

Leveling Means

Plumb line from top of left main door frame to index plate on cabin floor. See Note 1.

Maximum Weight

9500 lbs.

Minimum Crew

1 (Pilot) at (+46.7)

No. of Seats

See Note 15

Maximum Baggage

100 lbs. per sq. ft. of cargo area. (See U.S. Army TM55-1520-210-10.)

Fuel Capacity

208.5 U.S. gallons (+151.6) Crashworthy system.
 220.0 U.S. gallons (+151.6) Non-crashworthy system.

Oil Capacity

3.25 gallons (+173.0)

Rotor Blade and
Control Movements

For rigging information, refer to U.S. Army TM55-1520-210-23 (Maintenance Manual).

Serial No.'s Approved

U.S. Military Surplus UH-1H Helicopters as identified in Hagglund Helicopters, LLC Report No. HH-200 dated March 28, 2001, or later FAA approved revisions. Current copy on file at the Los Angeles Aircraft Certification Office.

Certification Basis

Part 21 § 21.25(a)(2), effective February 1, 1965, including Amendments 21-1 through 21-42.

Type Certificate No. H15NM, for the special purpose of:

- 1) Agricultural Operations under § 21.25(b)(1).

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

- 2) Forest and Wildlife Conservation under § 21.25(b)(2)

Certification Basis (cont'd)

Note: In accordance with § 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 § 36.1(a)(4) and defined under § 137.3.

3) External Load Operation under § 21.25(b)(7)

Note: In accordance with part § 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 § 36.1(a)(4) and defined under §133.1(b).

Any alteration to the helicopter 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 29 airworthiness standards, transport category, Amendment 1, effective August 12, 1965, plus special conditions for turbine engine installations and 14 CFR 29.1529, Instructions for Continued Airworthiness, Amendment 20, effective September 11, 1980. Also should consider that military installed crashworthy fuel systems in some of these aircraft and should require that to be maintained.

Date of Application: November 5, 1993.

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.

Equipment Equipment necessary for the particular special purpose operation must be installed. Each helicopter is required to incorporate modifications as specified in Hagglund Helicopter, LLC's Special Purpose Modifications, Report No. HH-600, N.C., dated October 22, 2001, or later FAA approved revisions.

NOTE 1. A current weight and balance report including a list of equipment included in the certificated empty weight, and loading instructions when necessary, must be provided for each helicopter at the time of original airworthiness certification. Refer to Chapter 6 of Operator's Manual, TM55-1520-210-10 and Maintenance Manual TM55-1520-210-23, Paragraph 1-36 for leveling means and weight and balance determination.

NOTE 2. The following placards must be prominently displayed in the cockpit in full view of the pilots as appropriate:

Placard No. 1:

CALIBRATED AIRSPEED-KNOTS
With Roof Mounted Pitot Static

LIMITS		AIRCRAFT WT/KIAS	
		GROSS WEIGHT	
<u>Density Alt. (Ft.)</u>	<u>To 7500 lbs.</u>	<u>8500 lbs.</u>	<u>9500 lbs.</u>
SL to 2000	124	118	113
3000	121	115	110
6000	112	106	101
9000	103	97	92
12000	94	88	92
15000	82	76	83
18000	70	-	-

NOTE 2 (Cont'd)

UNDER 7500 LBS. GW USE 6000 TO 6600 RPM RANGE
 OVER 7500 LBS. GW USE 6400 TO 6600 RPM RANGE
 POWER OFF 294 TO 339 ROTOR RPM
 REDUCE SPEED WHEN VIBRATION IS EXCESSIVE

CALIBRATED AIRSPEED-KNOTS
 With Nose Mounted Pitot Static

LIMITS	AIRCRAFT WT/KIAS		
	GROSS WEIGHT		
<u>Density Alt. (Ft.)</u>	<u>To 7500 lbs.</u>	<u>8500 lbs.</u>	<u>9500 lbs.</u>
SL to 2000	112	107	103
3000	109	104	100
6000	100	95	91
9000	91	86	82
12000	82	77	73
15000	70	65	-
18000	58	-	-

UNDER 7500 LBS. GW USE 6000 TO 6600 RPM RANGE
 OVER 7500 LBS. GW USE 6400 TO 6600 RPM RANGE
 POWER OFF 294 TO 339 ROTOR RPM
 DECREASE AIRSPEED IF VIBRATION IS EXCESSIVE

Placard No. 2:

“THIS ROTORCRAFT MUST BE OPERATED IN ACCORDANCE WITH THE RESTRICTED CATEGORY OPERATING LIMITATIONS OF 14 CFR part 91 § 91.313.”

Placard No. 3:

“THIS HELICOPTER MUST BE OPERATED IN COMPLIANCE WITH THE OPERATING LIMITATIONS SPECIFIED IN THE APPROVED HELICOPTER OPERATORS MANUAL. REFER TO TM55-1520-210-10, CHAPTER 5, FOR OPERATING LIMITS AND RESTRICTIONS.”

Placard No. 4:

“VFR OPERATIONS ONLY.”

The Builder's Data Plate required by § 45.13 must be installed in accordance with Drawing HH-001, dated June 12, 2001, or later FAA approved revisions.

NOTE 3.

The helicopter(s) must be serviced, maintained, inspected, repaired, and overhauled in accordance with the documents specified in Haggland Helicopters, LLC Instructions For Continued Airworthiness Report No. HH-300, dated April 4, 2001, or later FAA accepted revision, or inspected in accordance with other FAA accepted inspection program. The TC Holder's Instructions For Continued Airworthiness Report is part of the TC Holder's Instructions For Continued Airworthiness.

NOTE 4.

In addition to the standard helicopter requirements, the following additional data an/or helicopter configuration requirements must be met for each individual model UH-1H helicopter upon application for an original Special Airworthiness Certificate:

- A. Each helicopter must pass a conformity inspection in accordance with Hagglund Helicopters, LLC Engineering Configuration Report No. HH-100, dated September 10, 2001, or later FAA approved revision. The Configuration Report identifies any military Maintenance Work Orders accomplished on that particular helicopter, and a description of the 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 effect 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. An FAA representative must perform a detailed inspection for workmanship, materials, and conformity with the approved technical data following a check, by the type certificate holder, of the flight characteristics in accordance with all applicable portions of Section II of the U.S. Army Technical Manual TM55-1520-242-MTF Maintenance Test Flight Manual, Army Model UH-1, EH-1 Helicopter, Change 1, dated December 19, 1986, 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 owners/operator's business which is other than air transportation.

NOTE 6. This helicopter must be operated in accordance with a Flight Manual comprised of the following:

(1) Department of the Army Technical Manual No. TM55-1520-210-10, "Operator's Manual, Army Model UH-1H/V Helicopters", dated 15 February 1988, with Changes 1-10.

NOTE 7. Restricted category aircraft may not be operated in a foreign country without express written approval of that country.

NOTE 8. 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 9. 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 inspections accomplished.

NOTE 10. Alternative approved engines are: 1 – Lycoming T53-L-13; 1 – Lycoming T53-L-13BA

NOTE 11. An acceptable method of determining engine cycles from engine total operating time is contained in Hagglund Helicopters, LLC Report No. HH-500, dated December 6, 2001, 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 12. Alternative and emergency fuels are listed in TM55-1520-210-10, Operators Manual Army Model UH-1H/V Helicopters, Chapter 2, Section XVI. Some limitations apply for the use of certain alternate and emergency fuels. These limitations are listed in this section.

NOTE 13. The Airworthiness Directives for the helicopter(s) and engine(s) are contained in Hagglund Helicopters, LLC Report No. HH-400, dated March 28, 2001, or later FAA approved revisions must be complied with prior to original certification.

NOTE 14. Any alteration to the type design of this aircraft may require Instructions For Continued Airworthiness. These instructions must be submitted to 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.

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