

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

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| H16NM |
| Helicopter Transport Services CH-54A |
| January 9, 2014 Revision 7 |

TYPE CERTIFICATE DATA SHEET H16NM

This data sheet, which is a part of the Type Certificate Data Sheet No. H16NM, 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: Helicopter Transport Services, LLC
14497 Keil Road NE
Aurora, OR 97002

Type Certificate Holder Record: Aviation International Rotors, Inc. Transferred Ownership of TC H16NM to Heavy Lift Helicopters, Inc. on March 12, 2002.
Heavy Lift Helicopters, Inc. Transferred Ownership of TC H16NM to Helicopter Transport Services, LLC on March 7, 2008
Address Change on January 9, 2014

I. - Model CH-54A (Restricted Category Rotorcraft) Approved June 15, 1994. (See NOTES Section)

Engines (2) Pratt & Whitney JFTD12A-4A (T73-P-1)

Fuel ASTM-D1655 (Jet A, Jet A-1, Jet B) (SEE NOTE 12.)

Engine Limits

| | Shaft Horsepower | Power Turbine Speed (N ₂) | Gas Gen. Speed (N ₁) | Power Inlet (T ₅) |
|--------------------------|---------------------|--|---|-------------------------------------|
| Military Power (30 Min.) | 4500 | 105% | 104% | 688°C |
| Normal Continuous Cruise | 4000 | 104% | 104% | 655°C |

Takeoff and maximum continuous horsepower ratings are normally obtained at a power turbine speed of 9000 r.p.m. (100% N₂).

Total power for two-engine operation is limited to 6600 shp for takeoff and 5400 shp maximum continuous.

Refer to TM 55-1520-217-10-1, Operator's Manual, Army Model CH-54A Helicopters, Chapter 5, for additional limitation data.

Rotor Speed Limits

Power Off

Power On

Maximum 204 r.p.m. (110% N_r)
Minimum 167 r.p.m. (90% N_r)

Maximum 193 r.p.m. (104% N_r)
Minimum 185 r.p.m. (100% N_r)

Airspeed

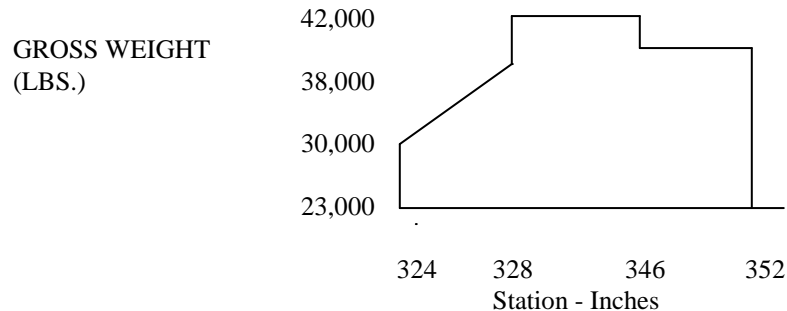
V_{NE} (Never Exceed Speed) 99 knots between 38,000 lbs. and 42,000 lbs.
Gross weight. 115 knots up to 38,000 lbs. gross weight.

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C.G. Range

Longitudinal C.G. Limits

(+324.0 To +352.0) at 23,000 lbs.
 (+324.0 To +352.0) at 30,000 lbs.
 (+328.0 To +352.0) at 38,000 lbs.
 (+328.0 To +346.0) at 38,000 lbs.
 (+328.0 To +346.0) at 42,000 lbs.
 Straight Line Variation Between Points Given. (See chart.)



Empty Weight C.G. Range

None

Datum

Station 0 (Datum is 336 inches forward of main rotor centroid).

Leveling Means

Plumb line from top level plate inside cockpit aft door. (SEE NOTE 1.)

Maximum Weight

42,000 lbs.

Minimum Crew

2 - pilot and copilot

Number of Seats

(See Note 14)

Maximum Cargo

See NOTE 6.

Fuel Capacity

1351 gal. - 454 gal. at (+280.8), 454 gal. at (+397.3), 443 gal. at (+461.3).

Oil Capacity

3.2 gal. at (+234.0) - (2 tanks 1.6 gal. each).

Rotor Blade and
Control Movements

For rigging information, see NOTE 3.

Eligible Serial No.

U.S. Military Surplus CH-54A helicopters as identified in Helicopter Transport Services, LLC Report No. HTS-105, N.C., dated October 16, 2009, or later FAA Approved revisions. A current copy is on file at Seattle ACO.

Certification Basis

Part 21 § 21.25(a)(2) effective February 1, 1965, including Amendments 21-1 through 21-42. Type Certificate No. H16NM issued June 15, 1994, for the Special Purpose of:

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

Note: In accordance with part 36 § 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 except by § 36.1(a)(4) and defined under part § 137.3.

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| Certification Basis (cont'd) | <p>2) Forest and Wildlife Conservation Operations under § 21.25(b)(2).</p> <p>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.</p> <p>3) External Load Operation under § 21.25(b)(7).</p> <p>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 external loads operations excepted by § 36.1(a)(4) and defined under part § 133.1(b).</p> <p>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 CAR 7, airworthiness standards, transport category, including Amendment 7-5, effective May 1962, plus special conditions for turbine engine installations and 14 CFR 29.1529, Instructions for Continued Airworthiness, Amendment 20, effective September 11, 1980.</p> |
| Date of Application | February 28, 1994. |
| 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 Helicopter Transport Services, LLC Engineering Configuration Report No. HLH-101, Rev 1., dated October 16, 2009, or later FAA approved revisions. |

NOTES

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| NOTE 1. | <p>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 5 and 6 of Operator's Manual, Army Model CH-54A Helicopters, TM55-1520-217-10-1, Maintenance Manual TM55-1520-217-23-1-1, Paragraph 1-29 through 1-31 for leveling means and weight and balance determination, and Helicopter Transport Services, LLC. Weight and Balance Report No. HTS-107, Revision 1, dated June 26, 2010, or latest revision, for aircraft weight and balance calculations.</p> |
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NOTE 2.

The following placards, Drawing HTS-1001, Rev. 1, March 29, 2010, 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 PART 91 § 91.313.”

Placard No. 2

“THIS HELICOPTER MUST BE OPERATED IN COMPLIANCE WITH THE OPERATING LIMITATIONS SPECIFIED IN THE APPROVED HELICOPTEROPERATORS MANUAL. REFER TO TM55-1520-217-10-1, CHAPTER 5, FOR OPERATING LIMITS AND RESTRICTIONS.”

Placard No. 3

“VFR OPERATIONS ONLY.”

The builder’s data plate required by part 45 § 45.13 must be installed in accordance with drawing HTS-1002, Rev. 1, dated March 29, 2010, 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 Helicopter Transport Services, LLC Instructions for Continued Airworthiness Report HTS-102, Revision 2, dated January 24, 2013, or later FAA accepted revision, 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.

NOTE 4.

Prior to obtaining an original Airworthiness Certificate:

A. Each helicopter must pass a conformity inspection in accordance with Helicopter Transport Services, LLC Engineering Configuration Report HLH-101, Rev. 1, dated October 16, 2009, or later FAA approved revision. The Engineering Configuration Report identifies the Military Maintenance Work Orders, Technical Bulletins, Optional Equipment, and 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. In addition a check, by the type certificate holder of the flight characteristics in accordance with all applicable portions of U.S. Army Technical Manual “Operators Manual, Army Model CH-54A Helicopters”, TM55-1520-217-10-1, dated April 8, 1977, with changes 1 through 8, revised September 25, 1986, and U.S. Army Technical Manual No. TM55-1520-217-CL-1, “Operator’s & Crewmember’s Checklist, Army Model CH-54A Helicopters, Pilot’s Checklist”, dated June 2, 1985, as appropriate for each aircraft, or other FAA approved manual must be accomplished.

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.

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- 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 owner/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. TM55-1520-217-10-1, "Operator's Manual, Army Model CH-54A Helicopters", dated April 8, 1977, with Changes 1 through 8, revised September 25, 1986.
 - (2) Department of the Army Technical Manual No. TM55-1520-217-CL-1, "Operator's & Crewmember's Checklist, Army Model CH-54A Helicopters, Pilot's Checklist", dated June 2, 1985.
 - (3) CH-54 Helicopter Transport Services, Inc. Rotorcraft Flight Manual, Report HTS-110, Rev 1, FAA approved October 28, 2009, or later FAA approved revisions.
- NOTE 7. Restricted Category aircraft may not be operated in a foreign country without the 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 records and have the applicable FAA Airworthiness inspection accomplished.
- NOTE 10. The Airworthiness Directives for the helicopter and engine contained in Helicopter Transport Services, LLC, Airworthiness Directives Report HTS-106, Rev. 1, dated March 29, 2010, or later FAA approved revision, must be complied with prior to original airworthiness certification.
- NOTE 11. The service life limited parts overhaul and retirement intervals for these helicopters is specified in Helicopter Transport Services, LLC, Instructions For Continued Airworthiness Report, Report No. HTS-102, Revision 2, dated January 24, 2013, or later FAA approved revision.
- NOTE 12. Alternate and emergency fuels are listed in TM55-1520-217-10-1, Operator's Manual, Army Model CH-54A Helicopters, Chapter 2, Section XV. Some limitations apply for the use of certain alternate and emergency fuels. These limitations are listed in this section.
- NOTE 13. Provisions for the carriage of external loads are available in the form of structural hard points on the fuselage and main landing gear; single point hoist; four lashing reels; and four load-leveler suspension systems. Information concerning the operating limitations with this equipment is contained in the Flight Manual.
- NOTE 14. No person may be carried in the helicopter during flight unless that person is essential to the purpose of the flight.

NOTE 15

Any alteration to the type design of this aircraft may require Instructions for Continued Airworthiness. These instructions must be submitted and accepted by FTW-AEG, Aircraft Evaluation Group Office, prior to approval for return to service.

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