

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

R00009SE
Revision 2

Helicopter Transport Services
CH-54A

January 31, 2017

TYPE CERTIFICATE DATA SHEET R00009SE

This data sheet, which is a part of the Type Certificate Data Sheet No. R00009SE 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: TC Transferred to Helicopter Transport Services, LLC on December 18, 2013

I Model CH-54A (Restricted Category Rotorcraft) Approved July 30, 2008. (See NOTES Section)

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

Fuel ASTM-D1655 (Jet A, Jet A-1, Jet B) (SEE NOTE 13.)

Engine Limits

Rating	Torque (%Q)	Output Horsepower (HP)	Power Turbine Speed (N ₂)	Gas Generator Speed (N ₁)	Turbine Inlet Temp. (T ₅)
Dual Engine Limits					
Military Power (30 Min.)	81	9000	105%	104%	688°C
Max. Continuous Cruise	66	8000	95-104%	40-104%	655°C
One Engine Limits					
One Engine Inop (30 Min.)	100	4500	105%	104%	688°C
Max. Continuous Cruise	79	4000	95-104%	40-104%	655°

- (%Q) Values Are Main Transmission Limits

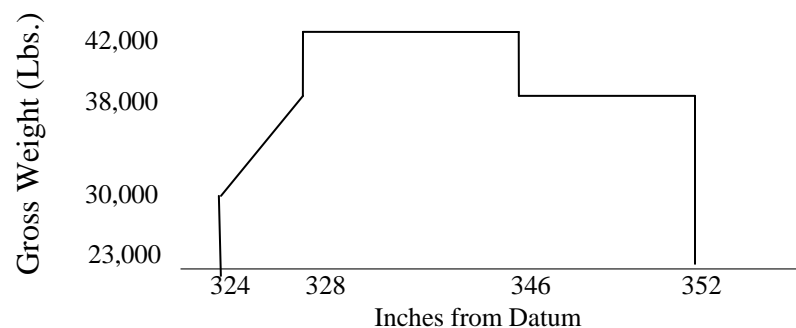
Takeoff and maximum continuous horsepower ratings are normally obtained at a power turbine speed of 9000 r.p.m. (100% N₂)

Total power for two-engine operations is limited to 6600 s.h.p. for takeoff and 5400 s.h.p. maximum continuous.

Refer to Evergreen Helicopters, Inc. Report No. EHI-110, N.C., July 29, 2008, Rotorcraft Flight Manual EHI CH-54A, Chapter 2, or later FAA approved revisions, for additional limitation data.

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Rotor Speed Limits	<u>Power Off</u> Maximum 204 r.p.m. (110% N_r) Minimum 167 r.p.m. (90% N_r)	<u>Power On</u> 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.	
Center of Gravity (C.G. Range)	(+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.	



Straight line variation between points given.

Empty Weight C.G. Range	Fwd. Limit 324 inches aft of datum Aft Limit 352 inches aft of datum
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.
Maximum External Weight	20,000 lbs.
Minimum Crew	2 - pilot and copilot
Number of Seats	5 – 2 at (+92.9); 1 at (+108.5); 1 at (+127.0); 1 at (+130.0) (SEE NOTE 12.)
Maximum Cargo	SEE NOTE 5.
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 4.
Other Operating Limitations	SEE NOTE 5.

Serial No. Approved	U.S. Military Surplus CH-54A helicopters as identified in Evergreen Helicopters, Inc. Report No. EHI-105, Serial Numbers approved, N.C., dated January 21, 2008, or later FAA Approved revisions.
Certification Basis	<p>14 CFR Part 21, § 21.25(a)(2) effective February 1, 1965, including Amendments 21-1 through 21-42. Type Certificate No. R00009SE issued July 30, 2008, for the Special Purpose of:</p> <ol style="list-style-type: none"> 1) Agricultural Operations under 14 CFR Part 2 , § 21.25(b)(1). <p>Note: In accordance with 14 CFR 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 14 CFR Part 137, § 137.3.</p> <ol style="list-style-type: none"> 2) Forest and Wildlife Conservation Operations under 14 CFR Part 21, § 21.25(b)(2). <p>Note: In accordance with 14 CFR 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 dispensing firefighting materials excepted by § 36.1(a)(4) and defined under 14 CFR Part 137, § 137.3.</p> <ol style="list-style-type: none"> 3) External Load Operation under 14 CFR Part 21, § 21.25(b)(7). <p>Note: In accordance with 14 CFR 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 external loads operations excepted by § 36.1(a)(4) and defined under 14 CFR Part 133, § 133.1(b).</p> <p>Any alteration to the aircraft for Special Purposes not identified above requires further FAA approval and in addition may require noise and/or flight testing.</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, Amendment 21-96, Effective February 4, 2013. Otherwise, non-significant modifications are to meet the requirements of 14 CFR § 29 Amendment 1, effective August 12, 1965, and 14 CFR § 29.1529, Instructions for Continued Airworthiness, Amendment 20.</p>
Date of Application	July 14, 2004.
Production Basis	None. No helicopters may be produced under this approval. Prior to adding serial numbers to this Type Certificate, each candidate helicopter must pass 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	<p>The basic required equipment necessary for the particular special purpose operation must be installed for certification. Each helicopter is required to incorporate modifications as specified in:</p> <ol style="list-style-type: none"> 1. Evergreen Helicopters, Inc. Engineering Configuration Report No. EHI-101, N.C., dated February 10, 2008, or later FAA approved revisions. 2. Evergreen Helicopters, Inc. Report No. EHI-110, N.C., Rotorcraft Flight Manual EHI CH-54A, July 29, 2008, or later FAA approved revisions.

3. Evergreen Helicopters, Inc. Report No. EHI-110-CL, N.C., Abbreviated Check List Rotorcraft Flight Manual EHI CH-54A, July 29, 2008.
4. U.S. Army External Cargo Hook P/N 6435-63000-025 installed on model CH-54A as part of the military configuration.

NOTES

NOTE 1. A current weight and balance report including a list of equipment included in the certified empty weight, and loading instructions when necessary, must be provided for each helicopter at the time of original airworthiness certification and at all times thereafter.

1. Refer to Chapter 6, Evergreen Helicopters, Inc. Report No. EHI-110, N.C., Rotorcraft Flight Manual EHI CH-54A, dated July 29, 2008, or later FAA approved revisions.
2. TM55-1520-217-23-1-1, Maintenance Manual, Paragraph 1-29 through 1-31.
3. Evergreen Helicopters, Inc. Weight and Balance Report No. EHI-107, N.C., June 30, 2008, or later FAA approved revisions.

NOTE 2. The following placards, Evergreen Helicopters, Inc. Drawing No. EHI-1001, N.C., January 21, 2008, or later FAA approved revisions, must be prominently displayed in the cockpit in full view of the pilots:

Placard No. 1

THIS HELICOPTER MUST BE OPERATED IN COMPLIANCE WITH THE OPERATING LIMITATIONS SPECIFIED IN THE APPROVED HELICOPTER OPERATORS MANUAL. REFER TO EVERGREEN HELICOPTERS, INC. REPORT NO. EHI-110, N.C., ROTORCRAFT FLIGHT MANUAL EHI CH-54A, CHAPTER 2, DATED JULY 29, 2008 OR LATER FAA APPROVED REVISION FOR OPERATING LIMITS AND RESTRICTIONS.

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

EXTERNAL LOADS OPERATIONS: Vne WILL BE DETERMINED FOR EACH PROPOSED EXTERNAL LOAD APPLICATION.

Placard No. 4

“VFR OPERATIONS ONLY.”

NOTE 3. The builder's data plate required by 14 CFR Part 45, § 45.13 must be installed in accordance with Evergreen Helicopters, Inc. Drawing No. EHI-1002, N.C., dated January 21, 2008, or later FAA approved revisions.

NOTE 4. The helicopter(s) must be serviced, maintained, inspected, repaired, and overhauled in accordance with the requirements and documents specified in:

- 1) Evergreen Helicopter, Inc. Instructions for Continued Airworthiness Report EHI-102, Rev. 1, dated June 20, 2008, or later FAA accepted revision, or

- 2) Helicopter Transport Services 102-HTS, Rev. 3, dated December 1, 2016, or later FAA accepted revision, or
- 3) other FAA accepted inspection programs.

The service life limited parts overhaul and retirement intervals for these helicopters is specified in

- a) Evergreen Helicopters, Inc. Instructions for Continued Airworthiness Report EHI-102, Rev. 1, dated June 20, 2008, or later FAA accepted revision, or
- b) Helicopter Transport Services 102-HTS, Rev. 3, dated December 1, 2016, or later FAA accepted revision

A FAA approved/accepted copy must accompany each helicopter on delivery. The TC Holder's Instructions for Continued Airworthiness Report is part of the TC Holder's Instructions for Continued Airworthiness.

- NOTE 5. This helicopter must be operated in accordance with a Flight Manual comprised of the following:
1. Evergreen Helicopters, Inc. Report No. EHI-110, Rotorcraft Flight Manual EHI CH-54A, dated July 29, 2008, or later FAA approved revisions.
 2. Evergreen Helicopters, Inc. Report No. EHI-110-CL Abbreviated Check List Rotorcraft Flight Manual EHI CH-54A, July 29, 2008.
- NOTE 6. Prior to civil airworthiness certification, Evergreen Helicopters, Inc. Engineering Configuration Report EHI-101, N.C., dated February 10, 2008, or later FAA approved revisions, must be incorporated.
- NOTE 7. 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 8. Restricted Category aircraft may not be operated in a foreign country without the express written approval of that country.
- NOTE 9. 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 10. Military to Civil or Military to Military engine changes are allowed provided the replacement engine is of the same make and model as identified in this TCDS. The military or civil replacement engine must have proper military or civil records and have the applicable FAA Airworthiness inspection accomplished and is in an airworthy condition.
- NOTE 11. The Airworthiness Directives and Department of the Army Safety of Flight (SOF) messages for the helicopter and engine(s) contained in Evergreen Helicopters, Inc., Airworthiness Directives Report EHI-106, Rev 1, dated June 20, 2008 or later FAA approved revision, must be complied with prior to original airworthiness certification.
- NOTE 12. No person may be carried in this helicopter during flight unless that person is essential to the purpose of the flight.
- NOTE 13. Alternate and emergency fuels are listed in Evergreen Helicopters, Inc. Report No. EHI-110, N.C., Rotorcraft Flight Manual EHI CH-54A, Chapter 2, Section XV, July 29, 2008 or later FAA approved revisions. Some limitations apply for the use of certain alternate and emergency fuels. These limitations are listed in this section.

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 FTW-AEG, Aircraft Evaluation Group Office, prior to approval for return to service.

NOTE 15. In addition to the standard helicopter requirements, the following additional data and/or helicopter configuration requirements must be met for each individual EHI model CH-54A helicopter upon application for an original Special Airworthiness Certificate:

1. A completed Application for Airworthiness Certificate, FAA Form 8130-6 that correctly identifies the type certificate holder's helicopter and its intended special purpose(s).
2. Written confirmation from the certifying office that the affected serial number has been added to this Type Certificate.
3. The application for airworthiness certification and the helicopter's registration certificate must match the information on the EHI Data Plate.
4. The documents specified in either
 - a) Section III of the FAA accepted Evergreen Helicopters, Inc. Instructions for Continued Airworthiness Report EHI-102, Rev. 1, dated June 20, 2008, or later FAA accepted revision, or
 - b) Section III of the FAA accepted Helicopter Transport Services Instructions for Continued Airworthiness 102-HTS, Rev. 3, dated December 1, 2016, or later FAA accepted revisionare with the helicopter.
5. The conditions and limitations specified in this Type Certificate Data Sheet are met.

NOTE 16. Helicopters that do not have documentation showing they were surplus from an Armed Force of the United States are not eligible for certification under this type certificate. Helicopter(s), engine(s), and appliances that have records indicating time-in-service by a foreign military or a foreign government will be presumed to be ineligible for certification or installation under this type certificate. This presumption may be overcome by the applicant substantiating, to the satisfaction of the FAA, through documentation, tests, computations, evaluations, analyses, or other means or methods that the helicopter, engine, or appliance, during its time-in-service by the foreign military or foreign government, was maintained by a extent and in a manner equal to that of an Armed Force of the United States.

END