DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

H18NM
Revision 5
Siller Helicopters, Inc.
CH-54A
July 24, 2012

TYPE CERTIFICATE DATA SHEET H18NM

This data sheet, which is a part of Type Certificate Data Sheet No. H18NM, 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: Siller Helicopters, Inc.
1250 Smith Road
Yuba City, CA 95991

Type Certificate Holder Record: Siller Helicopters, LLC
1250 Smith Road
Yuba City, CA 95991

Siller Helicopters,
1250 Smith Road,
Yuba City, CA 95991

I Model CH-54A (Restricted Category Rotorcraft) Approved August 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 13 for Alternative Fuels)

Engine and Transmission 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%	688º-C
Normal Continuous Cruise	66	8000	95-104%	40-104%	655º-C
One Engine Limits					
One Engine Inop (30 Min.)	100	4500	105%	104%	688°-C
Max. Continuous Cruise	79	4000	95-104%	40-104%	655º-C

- (%Q) Values are Main Transmission Limits

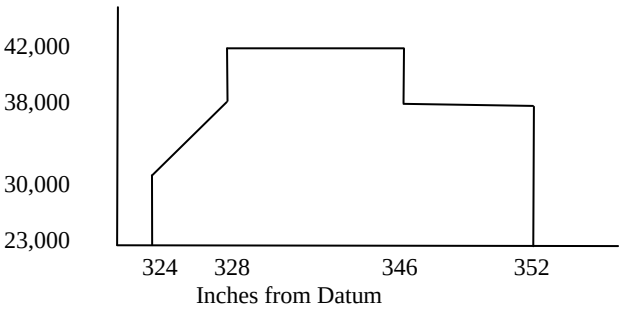
Takeoff and maximum continuous horsepower ratings are normally obtained at a power turbine speed of 9000 r.p.m. (100% N_2).

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

Refer to Department of the Army Technical Manual No. TM55-1520-217-10-1, 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)	193 r.p.m. (104%N_r)
Minimum	167 r.p.m. (90%N_r)	185 r.p.m. (100%N_r)

Airspeed Limits	Vne (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.
Gross Weight (Lbs.)	 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 the 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	2 at (+92.9). 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 Siller Helicopters, LLC Serial Number Approved Report Number SH-065, N.C., dated August 15, 2005, or later FAA approved revision.
Certification Basis	Part 21 § 21.25(a)(2) effective February 1, 1965, including Amendments 21-1 through 21-42. Type Certificate No. H18NM issued August 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 § 137.3.

Certification Basis – Continued

2) Forest and Wildlife Conservation Operations under § 21.25(b)(2).

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 aerial dispensing of liquids and forest conservation material excepted by § 36.1(a)(4) and defined under § 137.3.

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

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 § 133.1(b).

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 part 21 § 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 and 14 CFR part 29 § 29.1529, Instructions for Continued Airworthiness, Amendment 20, effective September 11, 1980.

Date of Application

June 16, 1994

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

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:

1. Siller Helicopters, LLC Engineering Configuration Report No. SH-063, Revision 1, dated August 16, 2005, or later FAA Approved revisions.
2. 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.
3. Department of the Army Technical Manual No. TM55-217-CL-1, Operator's & Crewmember's Checklist, Army Model CH-54A Helicopters, Pilot's Checklist, dated June 2, 1985.
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.

1. TM55-1520-217-10-1, Operator's Manual, Army Model CH-54A Helicopters, Chapters 5 and 6.
2. TM55-1520-217-23-1-1, Maintenance Manual, Paragraph 1-29 through 1-31.

NOTE 1 – Continued

3. Siller Helicopters, LLC Weight and Balance Report No. SH-067, N.C., dated August 18, 2005 or later FAA Approved revisions.

NOTE 2. The following placards must be prominently displayed in the cockpit in full view of the pilots per Siller Helicopters, LLC Drawing No. SBA-055, Rev. A, dated August 16, 2005, or later FAA Approved revisions:

Placard No. 1

THIS HELICOPTER MUST BE OPERATED IN COMPLIANCE WITH THE OPERATING LIMITATIONS SPECIFIED IN THE APPROVED HELICOPTER OPERATORS MANUAL. REFER TO TM55-1520-217-10-1, CHAPTER 5, 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 part 45 § 45.13 must be installed in accordance with Siller Helicopters, LLC Drawing No. SH-054, Revision A, dated August 16, 2005, or later FAA Approved revisions.

NOTE 4. The helicopter(s) must be serviced, maintained and inspected, repaired, and overhauled in accordance with the requirements and documents specified in Siller Helicopter, LLC Instructions for Continued Airworthiness Report CH-54-064, Revision 1, dated August 11, 2005, or later FAA accepted revision, or inspected in accordance with other FAA accepted inspection programs. The service life limited parts overhaul and retirement intervals for these helicopters is specified in Siller Helicopters, LLC, Instructions For Continued Airworthiness Report, Report No. CH-54-064, Revision 1, dated August 11, 2005 or later FAA Approved revision. A FAA approved/accepted copy must accompany each helicopter on delivery.

The service life limited parts retirements intervals of these helicopters previously listed in the Type Certificate Data Sheet H18NM have been incorporated in Siller Helicopters, LLC, Instructions For Continued Airworthiness Report, Report No. CH-54-064, Revision 1, dated August 11, 2005, or later FAA Approved revision. The life limits are in no way altered or changed from those previously FAA Approved.

NOTE 5. 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.

NOTE 6. Prior to obtaining an original Airworthiness Certificate:

NOTE 6 – Continued

A. Each helicopter must pass a conformity inspection in accordance with Siller Helicopter, LLC Engineering Configuration Report SH-063, Revision 1, dated August 16, 2005, 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.

B. Each helicopter must pass an inspection for any possible hidden damage and the Military records reviewed for acceptability of any repairs or alterations.

C. The maintenance, overhaul, and modification records of each helicopter must be reviewed for military changes that may affect the airworthiness of the helicopter. Modifications and changes of equipment that affect the safety or performance of the helicopter must be approved by the Federal Aviation Administration. 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.

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. A Restricted Category helicopter may not be operated in a foreign country without the express written approval of that country.

NOTE 9. This helicopter 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 Compliance for the helicopter and engine(s) contained in Siller Helicopters, LLC, Airworthiness Directives Report SH-066, N.C., dated August 15, 2005, 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. For additional mission configurations, see Siller Helicopters, LLC Engineering Configuration Report No. SH-063, Revision 1, dated August 16, 2005, or later FAA Approved revisions, 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, and Department of the Army Technical Manual No. TM55-1520-217-23P-1, dated November 14, 1979.

NOTE 13. Alternative 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 14. Any changes to the type design of this helicopter by means of an amended type certificate (TC), supplemental type certificate (STC), or amended STC, requiring instructions for continued airworthiness (ICA) must be submitted through the project Aircraft Certification Office (ACO) for review and acceptance by the Fort Worth -Aircraft Evaluation Group (FTW-AEG) Flight Standards District Office (FSDO) prior to the aircraft delivery, or upon issuance of the first standard airworthiness certificate for the affected aircraft, whichever occurs later as prescribed by Title 14 CFR 21.50. Type design changes (major repairs or alterations) by means of a FAA Form 337 (field approval) that require ICA's must have those ICA's reviewed by the field approving FSDO.

NOTE 15. The certification life limits for the helicopter, its engine and appliances were based on satisfactory service history as designed and operated by the military.

Therefore, to operate and maintain the aircraft to the original acceptance criteria, and maintain it's safe for intended use requirement, cycle counting and operational time tracking is required on certain critical components. See Siller Helicopters, LLC Report CH-54A-064, Instructions For Continued Airworthiness, "Section II, Airworthiness Limitations Schedule", dated August 11, 2005, or later FAA Approved revisions.

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