

DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION

R00012AT  
Revision 2

Rowland Aviation Services,  
LLC

UH-1B

August 28, 2015

TYPE CERTIFICATE DATA SHEET NO. R00012AT

This data sheet, which is part of Type Certificate No. R00012AT, 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:           Rowland Aviation Services, LLC  
348 Blackberry Road  
Swainsboro, GA 30401

Type Certificate Holder Record:   Southern Helicopter, Inc., 1170 W. State Highway 12, Newton, AL  
36352, transferred TC R00012AT to Rowland Aviation Services, LLC on  
April 29, 2002.

I. - Model UH-1B. (Restricted Category Military Surplus Helicopter) approved: March 24, 1997  
(See Note 10 regarding helicopter, engines and appliances)

Engine:                   1-Lycoming T53-L-11

Fuel:                    MIL-T-5624, Grade JP-4; alternate fuel MIL-T-5624, Grade JP-5.  
See U.S. Army Technical Manual (TM) 55-1520-219-10 for substitute and emergency  
fuels. (See Note 11 for alternate fuels)

Engine Limits	Torque Pressure (p.s.i.)	Output Shaft ( r.p.m.)	Exhaust Gas Temperature (°C)
Takeoff (5 minutes)	47.5 (1100 H.P.)	6600	610
Maximum Continuous	39.0 (900 H.P.)	6400	590

See Notes 14, 15, and 16 regarding engine limits. Refer to TM 55-1520-219-10, Operators Manual Army Model UH-1B Helicopters, Chapter 5, for additional limitation data.

Rotor Limits	<u>Power Off</u>	<u>Power On</u>
	Maximum 339 r.p.m.	Maximum 324 r.p.m.
	Minimum 295 r.p.m.	Minimum 294 r.p.m.
	Continuous Operation 294 - 324 r.p.m.	
	Maximum for auto rotation is 339 r.p.m.	

Airspeed Limits:           Never exceed 120 knots up to and including 6600 lbs. G.W., sea level to 2000 ft.  
Never exceed 112 knots from 6600 to 7200 lbs. G.W., sea level to 2000 ft.  
Never exceed 95 knots from 7200 to 8500 lbs. G.W., sea level to 2000 ft.  
(See Note 2 for specific operating airspeed limitations.)  
V<sub>NE</sub> decreases 3 knots per 1,000 ft. above sea level.

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Other Limits:	<p>Flight hours are counted from takeoff to landing.</p> <p>The helicopters approved under this type certificate are done so under the concept of limited exposure associated with escape from inadvertent ice encounters, and are prohibited against flight into known icing. The helicopters must be re-evaluated if certification to the General Ice protection Airworthiness Regulations is requested.</p>
Center of Gravity (C.G.) Range:	<p><u>Longitudinal C.G. Limits:</u>          (+125.0) to (+136.0) at 6600 lbs. and above.          (+125.0) to (+136.4) at 6500 lbs.          (+125.0) to (+137.3) at 6250 lbs.          (+125.0) to (+138.0) at 6000 lbs. or less</p> <p><u>Lateral C.G. Limits:</u>  <math>\pm 4.7</math> in. left from center line of fuselage</p>
Empty Weight (C.G.) Range:	Refer to TM 55-1520-219-10, Operators Manual Army Model UH-1B Helicopters, Chapter 6 Charts.
Datum:	Station 0, datum is 7.6 inches, aft of the most forward point of the fuselage nose section. Refer to TM 55-1520-219-10, Operators Manual Army Model UH-1B Helicopters, Chapter 6.
Leveling Means:	Plumb line from top of cabin door frame to index plate on cabin floor. (See Note 1 for instruction manual.)
Maximum Weight:	8,500 lbs.
Minimum Crew:	1 (Pilot) at + 46.7
Number of Seats:	See Note 12 for limitations.
Maximum Baggage:	200 lbs. (150 lbs./sq. foot, deck loading maximum). Refer to TM 55-1520-219-10, Operators Manual Army Model UH-1B Helicopters, Chapter 6.
Fuel Capacity:	<p>168 U.S. gallons (+136) if crashworthy fuel system not installed          Usable fuel 160.5 gallons if crashworthy fuel system not installed.          163 U.S. gallons (+136) if crashworthy fuel system is installed.          Usable fuel 154.5 gallons if crashworthy fuel system is installed.</p>
Oil Capacity:	3.25 gallons (+157), Unusable oil 1.5 gallons (included in capacity)
Rotor Blade and Control Movement:	For rigging information refer to TM 55-1520-219-20. Aviation Unit and Intermediate Maintenance Instructions Army Model UH-1B.
Serial No's. Approved:	<p>The following Army Model UH-1B Helicopter has been approved under this TCDS as of August 18, 2003:</p> <p>S/N's: 1934 only</p>
Certification Basis:	<p>FAR 21.25(a)(2), effective February 1, 1965, including Amendments 21-1 through 21-71. Type Certificate No. R00012AT issued for the special purpose of:</p> <p>(1) Agriculture Operations under FAR 21.25(b)(1)</p>

Certification Basis (Cont'd) Note: In accordance with FAR 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 FAR 36.1(a)(4) and defined under FAR 137.3.

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

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

(3) External Load Operations under FAR 21.25(b)(7).

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

Any alteration to the helicopter for Special Purposes not identified above require further FAA approval and in addition, may require additional 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 14CFR 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, including Amendment 7-5, effective May 1962.

Date of Application: June 5, 1996.

Production Basis: None. No helicopters may be produced under this approval. (See Note 4 requirements.) 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: The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in or on each helicopter for certification. In addition, the following special purpose equipment and documents must be available in or on each helicopter for type certification and airworthiness certification:

- (a) TM 55-1520-219-10, Operators Manual Army Model UH-1B Helicopters
- (b) FAA approved Southern Helicopter, Inc. Supplement to Operator's Manual, dated March 24, 1997, or later FAA approved revision.
- (c) Standard U.S. Army Suspension Installation 204-072-024-1 per TM 55-1520-210-23P (Parts Manual) operated in accordance with TM 55-1520-219-10 (Operator's Manual). All external equipment and its attachments installed on this aircraft must be FAA approved.
- (d) Outside air temperature gage.
- (e) Engine tail pipe temperature gage.

## 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 certification. Refer to TM 55-1520-219-10, Operators Manual Army Model UH-1B Helicopters, and Army Model UH-1B Helicopters Aviation Unit and Intermediate Maintenance Instructions for leveling means and weight and balance determination.

Note 2: The following placards must be prominently displayed in the cabin in clear view of the pilot:

Placard No. 1: THIS ROTORCRAFT MUST BE OPERATED IN ACCORDANCE WITH THE RESTRICTED CATEGORY OPERATING LIMITATIONS OF FAR 91.313 AND WITH THE LIMITATIONS NOTED IN U.S. ARMY TM 55-1520-219-10.

Placard No. 2: EXTERNAL LOAD OPERATIONS:  $V_{ne}$  WILL BE DETERMINED FOR EACH PROPOSED EXTERNAL LOAD APPLICATION.

Placard No. 3: "VFR OPERATIONS ONLY"

Placard No. 4:

**OPERATING LIMITATIONS**

DENSITY ALTITUDE	RPM	CALIBRATED AIR SPEED - KNOTS							
		6600 LBS. OR LESS		7200 LBS		8000 LBS		8500 LBS	
		6400	6600	6400	6600	6400	6600	6400	6600
SEA LEVEL TO 2000 FT.		120	120	109	112	95	101	86	95
3000 FT.		116	116	105	108	92	97	82	92
6000 FT.		102	106	92	97	77	86	68	80
9000 FT.		90	94	78	86	65	76	--	--
12000 FT.		77	84	66	75	--	--	--	--
15000 FT.		64	72	--	--	--	--	--	--
18999 FT.		51	61	--	--	--	--	--	--

FROM 0 TO 70 KNOTS USE 6000 TO 6600 RPM RANGE  
FROM 70 TO 120 KNOTS USE 6400 TO 6600 RPM RANGE

REDUCE AIR SPEED WHEN VIBRATION IS EXCESSIVE

EXTERNAL LOAD OPERATION:  $V_{NE}$  60 KNOTS CAS UNLESS FURTHER  
RESTRICTED BY OPERATING LIMITS CHARTS ABOVE

- Note 3: The helicopter(s) must be serviced, maintained, inspected, repaired and overhauled in accordance the documents specified in Southern Helicopter, Inc. Instructions for Continued Airworthiness Report No. SH96801, Section 7 dated October 25, 1996 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. A FAA approved/accepted copy must accompany each helicopter on delivery.
- Note 4: In addition to the standard helicopter requirements, the following additional data and/or helicopter configuration requirements must be met for each individual Southern Helicopter, Inc. helicopter upon application for an original Special Airworthiness Certificate:
- (a) A completed Application for Airworthiness Certificate, FAA Form 8130-6 that has correctly identified the type certificate holder's helicopter and its intended special purpose(s).
  - (b) Written confirmation from the certifying office that the affected serial number has been added to Southern Helicopter, Inc. type certificate.
  - (c) The application for airworthiness certification and the helicopter's registration certification match the information on Southern Helicopter, Inc. data plate. Install data plate in accordance with Southern Helicopter, Inc. Report No. SH96801, dated October 15, 1996.
  - (d) The documents specified in section III of FAA accepted Southern Helicopter, Inc. Instructions for Continued Airworthiness Report No. SH96801 dated October 25, 1996 or later approved/accepted revisions are with the helicopter.
  - (e) The conditions and limitations specified in Southern Helicopter, Inc., Type Certificate Data Sheet R000012AT dated March 24, 1997 or later FAA approved revision are met.
  - (f) The helicopter has demonstrated a satisfactory flight test in accordance with TM 55-1520-242-MTF, recording all the required test data on the form provided therein.
  - (g) The maintenance, overhaul and modification records of each helicopter must be reviewed for changes made by the military that may affect the airworthiness of the aircraft. Modifications and changes of equipment, which affect the safety or performance of the helicopter, must be approved by the FAA.
  - (h) 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 5: This helicopter is prohibited from carrying cargo for compensation or hire. Carriage of cargo is limited to such cargo that is incidental to the helicopter owners/operator's business, which is other than air transportation.
- Note 6: A restricted category helicopter may not be operated in a foreign country without the express written approval of that country.
- Note 7: This helicopter have not been shown to meet the requirements of the applicable comprehensive and detailed Airworthiness Code as provided by Annex 8, to the Convention of the International Civil Aviation Organization.
- Note 8: 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 9: The Airworthiness Directives for the helicopter and engine contained in Southern Helicopter, Inc. Airworthiness Directive Report approved by the FAA, must be complied with prior to original certification.
- (a) U.S. Army Maintenance Work Orders (MWO) and Service Bulletins for the Lycoming T-53-L-11 series engines and FAA AD's applicable to civilian versions must be reviewed for applicability and complied with accordingly.
  - (b) FAA Airworthiness Directives (AD's) and U.S. Army Maintenance Work Orders (MWO) must be reviewed for applicability and complied with accordingly. See Southern Helicopter, Inc. Report SH96801, dated October 25, 1996, or later FAA approved revision, for the list of applicable Technical Directives.
- Note 10: Alternate and emergency fuels are listed in U.S. Army TM 55-1520-219-10 Operators Manual UH-1B Helicopters. Some limitations apply for the use of certain alternative fuels. These limitations are listed in the Overhaul Manual.
- 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: Any Alteration to the type design of this aircraft may require Instructions for Continued Airworthiness. If so, these instructions must be submitted and accepted by the FAA Fort Worth Aircraft Evaluation Group (FTW-AEG), prior to approval for return to service.
- Note 14: Torque pressure output by engine torque sensing system varies with individual engines. A calibration of this value is required on each engine and the value corresponding to take-off power is stamped on the engine data plate.
- Note 15: Gas producer speed, as shown under "Engine Limits" are Maximum permissible speeds. The gas producer speed for rated power output varies with individual engines and must be determined during engine calibration and stamped on the engine data plate. The rated gas producer speed shown on the instrument panel must correspond to the engine data plate gas producer speed. Gas producer speed limits also vary with OAT in accordance with the schedule as shown in the temperature in Limit (Go-No-Go Take-off) placard on the instrument panel.
- Note 16: Maximum permissible exhaust gas temperature varies with ambient temperature as described in the Operator's Manual. Check engine EGT by use of Health Indicator Test (HIT) prior to first take-off of the day. (See TM 55-1520-219-10 and HIT EGT Log for aircraft.)
- Note 17: If necessary for the purpose of weight and balance, relocation of battery to station (+5.5) should be accomplished in accordance with Southern Helicopters Report SH96801, dated October 25, 1996.
- Note 18: Carriage of hazardous materials is prohibited unless compliance is shown with applicable regulations in Code of Federal Regulations Title 49, Part 175.

END