DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

H4NM
Revision 12
Bell Textron Inc.
UH-1L, TH-1L, UH-1E

April 14, 2021

TYPE CERTIFICATE DATA SHEET H4NM

This data sheet which is a part of Type Certificate No. H4NM prescribes conditions and limitations under which the product for which the type certificate was issued meets the airworthiness requirements of the Civil Air Regulations and Federal Aviation Regulations.

Holder of Type Certificate:	Bell Textron Inc. P.O. Box 482 Fort Worth, Texas 76101
Type Certificate Holder Record	Original TC issued on March 19, 1985. TC transferred to Lenair Corp. May 8, 1985. Lenair Corp. transferred TC to Oregon Helicopters, Inc. on February 22, 1988. Oregon Helicopters Transferred TC to Southern Aero Corp. on May 25, 1990. Southern Aero Corp. Transferred TC to Williams Helicopter Tech. On July 9, 1993. Williams Helicopter Tech. Transferred TC to US Helicopter, Inc. on November 25, 1997. U.S.Helicopter , Inc. Transferred TC to Bell Helicopter Textron, Inc. on January 10, 2011. Renamed from “Bell Helicopter Textron Inc.” to “Bell Textron Inc.” on July 1, 2019.

Models UH-1L/TH-1L (Utility Helicopter Restricted Category) Approved March 19, 1985

Engine	Lycoming T53-L-13
Fuel	Grade JP-4 or See Navy NAVAIR 01-110HCA-1
Engine Limits	See U.S. Navy NAVAIR 01-110HCA-1
Rotor Limits	See U.S. Navy NAVAIR 01-110HCA-1
Airspeed Limits	See U.S. Navy NAVAIR 01-110HCA-1
C.G. Range	See U.S. Navy NAVAIR 01-110HCA-1
Maximum Weight	See U.S. Navy NAVAIR 01-110HCA-1
Empty Weight C.G. Range	See U.S. Navy NAVAIR 01-110HCA-1
Minimum Crew	1 (pilot) for VFR flight
No. of Seats	See Note 12
Fuel Capacity	242 U.S. Gallons
Oil Capacity	3.25 U.S. Gallons
Fuel	80/87 min. grade aviation gasoline
Rotor Blade and Control Movements	For rigging information refer to U.S. Navy NAVAIR 01-110HCA-2.
Serial No’s. Approved	None Reported

Model UH-1E (Utility Helicopter Restricted Category) approved March 26, 1986.

Engine	Lycoming T53-L-11 series (See Note 11 for Alternate Engines).
Fuel	Grade JP-4 or see Navy NAVAIR 01-110HCA-1.
Engine Limits	See U.S. Navy NAVAIR 01-110HCA-1
Rotor Limits	See U.S. Navy NAVAIR 01-110HCA-1
Airspeed Limits	See U.S. Navy NAVAIR 01-110HCA-1
C.G. Range	See U.S. Navy NAVAIR 01-110HCA-1
Maximum Weight	See U.S. Navy NAVAIR 01-110HCA-1
Minimum Crew	1 (pilot) for VFR flight 2 (pilot and co-pilot) for IFR flight
No. of Seats	See Note 12
Fuel Capacity	242 U.S. gallons
Oil Capacity	3.25 U.S. gallons
Rotor Blade and Control Movements	For rigging information refer to U.S. Navy NAVAIR 01-110HCA-2.
Serial No.'s Approved	The following Navy Model UH-1E helicopters serial numbers have been approved under this TCDS as of August 18, 2003: S/N's: 154757

Data Pertinent to All Models

Leveling Means	Plumb line dropped from slotted plate in cabin roof directly above leveling plate. The leveling plate is located on the cabin floor just inside the left cargo door.
Certification Basis	FAR 21.25(a)(2), effective February 1, 1965, including Amendments 21-1 through 21-71 for the special purpose of: (1) Agriculture Operations under FAR 21.25(b)(1) 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

Certification Basis (Cont'd)

(3) External Load Operations

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 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 14 CFR 29 airworthiness standards, transport category, Amendment 1, effective August 12, 1965 and 14 CFR 29.1529, Instructions for continued airworthiness, Amendment 20, effective September 11, 1980.

Date of Application

December 4, 1984: Amended, February 4, 1986.

Production Basis

None. No helicopter may be produced under this approval. (See Note 4) 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 each type 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) U.S. Navy NAVAIR 01-110HCA-1 must be available in the helicopter for all flight operations.

NOTES

Note 1: A current weight and balance report including a list of equipment included in the certificated empty weight, and loading instructions must be in each type helicopter at time of original airworthiness certification and at all times thereafter.

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

Placard No. 1:

OPERATING LIMITATIONS

GROSS WEIGHT (LBS)	7500	8500	9500
AIR SPEED POWER ON (KNOTS)	140	130	125

DECREASED AIRSPEED 3 KNOTS/1000 FT ABOVE 3000 FT

RPM LIMITS

POWER ON 314 TO 324 RPM (6400 TO 6600 RPM)
POWER OFF 300 TO 339 RPM (6100 TO 6900 RPM)

Note 2: (Cont'd)

Placard No. 2:

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. NAVY NAVAIR 01-110HCA-1.

Placard No. 3:

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

Placard No. 4:

TURN ON ENGINE DE-ICE WHEN OPERATING IN VISIBLE MOISTURE AT TEMPERATURES BELOW 32 DEGREES FAHRENHEIT (0 DEGREES CELCIUS).

Placard No. 5:

VFR OPERATIONS ONLY

Placard No. 6:

(A placard identifying the specific type of T53-L-13 or T53-L-11 engine installed, must be installed.)

Note 3: The helicopters must be serviced and maintained in accordance with U.S. Navy NAVAIR 01-110HCA-2. Component overhaul intervals and replacement times shall be in accordance with U.S. Navy NAVAIR 01-110HCA-6.

Note 4: In addition to the standard helicopter requirements, the following additional data and/or helicopter configuration requirements must be met for each individual US Helicopter, Inc. models UH-1L, TH-1L and UH-1E 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 US Helicopter, Inc. Type Certificate.
(c) The application for airworthiness certification and the helicopter's registration certification must match the information on US Helicopter, Inc. data plate.
(d) The helicopter Flight Manual and documents specified in Note 3 are with the helicopter.
(e) The conditions and limitations specified in US Helicopter, Inc. Type Certificate Data Sheet H4NM dated August 12, 2003 or later FAA approved revision are met.
(f) Each helicopter must satisfactorily pass an inspection for conformity, possible hidden damage, and for workmanship and materials used in making any repairs and/or alterations
(g) The maintenance, overhaul, and modifications records of each aircraft must be reviewed for changes by the military services 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 Federal Aviation Administration.

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 has 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: FAA Airworthiness Directives for all UH-1 and Bell 204 series helicopters and Lycoming T53-L-11 or T53-L-13 series engines must be reviewed for applicability and complied with accordingly.

Note 10: The Model UH-1E helicopter is eligible with Lycoming T53-L-13/-13A/ -13B engine when installed in accordance with NAVAIR 01-110HCA-2 installation instructions, and when the engine instruments are marked according to the U.S. Navy NAVAIR 01-110HCA-1 instrument markings for the respective engine on the models UH-/TH-1L helicopters. US Helicopter Manual Supplement Number UH-1E-13 must be included with the Flight Manual.

Note 11: Alternate and emergency fuels are listed in Operators Manual (U.S Navy Model UH-1L, UH-1E and TH-1L Helicopters. Some limitations apply for the use of certain alternative fuels. These limitations are listed in this section.

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: This approval applies to the basic United States Navy/Marine UH-1L, UH-1E and TH-1L helicopters modified by the installation of a data plate, described in US Helicopter, Inc. Specification U97-001-ST.

Note 14: The T53-L-11 engine is rated to an output torque equivalent to 110 horsepower at 6600 RPM for takeoff and 900 horsepower at 6600 RPM for continuous operation.

Note 15: The T53-L-13 gas turbine power plant in these installations is rated to an output torque value equivalent to 1400 horsepower at 6600 RPM take-off and 1250 horsepower continuous; however, the transmission is restricted to a maximum of 1100 horsepower at 6600 RPM (50 PSI).

Note 16: The T53-L-13 and T53-L-13A engines are limited to 97 percent gas generator speed or 24,000 RPM. The aircraft equipped with the T53-L-13B engines are not limited by this powerplant restriction; therefore the pilot must ascertain which engine is installed prior to start. Performance charts have been included in NAVAIR 01-110HCA-1 to cover this reduction in power.

Note 17: Torque pressure output by the 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 18: 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.

Note 19: The rated gas producer speed shown on the temperature limit placard installed on the instrument panel must correspond to the engine data gas producer speed. Gas producer speed limits also vary with the schedule as shown on the Temperature Limit (GO-NO-GO TAKE-OFF) placard on the instrument panel.

Note 20: 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.

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