

DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION

H9NM Revision 1 West Coast Fabrications (Surrendered 4/20/90) UH-1E February 3, 1987
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TYPE CERTIFICATE DATA SHEET NO. H9NM

This data sheet, which is part of Type Certificate No. H9NM 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                      Federal Aviation Administration  
 (T.C. surrendered West Coast Fabrications 4/30/90)  
 1524 Spruce Avenue  
 Chico, California 95926

Model U.S. Navy UH-1E (Restricted Category), approved April 11, 1986

Engine    Lycoming T53L11D

Fuel     MIL-J-5624, Grade JP-4 or JP-5

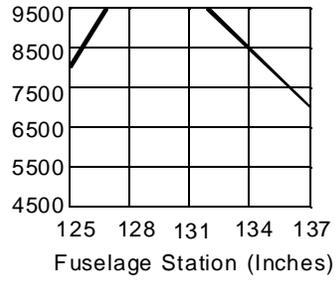
Engine limits	Torque pressure (P.S.I.)	Output shaft speed (RPM)	Exhaust Gas Temp. (°C)	Gas Gen. Speed (RPM)
Takeoff (5 minutes)	50.0 (1100 hp)	6640 (101%)	638	25,200 (100.5%)
Maximum continuous	46.0 ( 900 hp) (See Note 1)	6640 (101%)	621	24,700 ( 97.7%)

Rotor limits	<u>Power Off</u>	<u>Power On</u>
	Maximum 339 rpm (Dual Tach Reading 104.5%)	Maximum 324 rpm (Dual Tach Reading 100%)
	Minimum 294 rpm (Dual Tach Reading 91.0%)	Minimum 310 rpm (Dual Tach Reading 97%)

Airspeed limits                                      Never exceed speed 140 knots up to and including 7500 lbs. G.W. at sea level.  
 Never exceed speed 110 knots from 7500 lbs. to 8500 lbs. GW at sea level.  
 Never exceed speed 70 knots from 8500 lbs. to 9500 lbs. G.W. at sea level.  
 Reference NATOPS Flight Manual NAVAIR 01-110HCA-1.

C.G. Range    (a) Longitudinal C.G. limits  
 (+126.7) to (+132.3) at 9500 lbs.  
 (+125.5) to (+134.4) at 8500 lbs.  
 (+125.0) forward limit at 8150 lbs.  
 (+138.0) aft limit at 7000 lbs.  
 See figure below:

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(b) Lateral C. G. Limits +4.7 in. from centerline of fuselage

Maximum weight	9500 lbs., all weight in excess of 8500 lbs. shall be external load only.
Maximum crew	1 (pilot)
Maximum cargo	See Flight Manual NAVAIR 01-110HCA-1 limits.
Fuel capacity	242 gallons (STA +136.5) See Note 2 for data on unusable fuel.
Oil capacity	3.8 gallons (STA +157) minimum oil 1-1/2 gallons. See Note 2 for data on undrainable oil.
Other operating limitations	This aircraft must be operated in accordance with NATOPS flight Manual NAVAIR 01-110HCA-1 and Avco-Lycoming FAA approved Maintenance Manual T5311-2 engine performance data.
Serial numbers eligible	Model UH-1E, Ser/Bu No. 154960 Military UH-1E Aircraft that comply with the requirements of this data sheet.
Certification basis	FAR 21.25(a)(2), effective February 1, 1965. Type Certificate No. H9NM issued April 11, 1986, for the purpose of: <ol style="list-style-type: none"> <li>1. Agricultural</li> <li>2. Forest and wildlife conservation</li> <li>3. Carriage of external loads FAR Part 133</li> <li>4. Patrolling</li> <li>5. Aerial surveying (photography, mapping and oil and mineral exploration).</li> </ol> Date of application for Type Certificate June 9, 1983.
Production basis	None. No helicopter may be produced under this approval. Prior to original airworthiness certification of each aircraft, FAA personnel must perform an airworthiness inspection determining that the aircraft is in condition for safe operation and that the applicant has conducted a satisfactory flight test.
Equipment	The basic required equipment, as prescribed in the applicable airworthiness regulations (see certification basis) must be installed in the helicopter for certification. In addition, equipment necessary for the particular special purpose must be FAA engineering approved. External Cargo Operations, Part 133, shall be conducted as specified in NAVAIR 01-110HCA-1 Flight Manual. See also Navair Weight and Balance Data, Navair 01-1B-40.
Datum	Station 0 (datum is located 7.60 inches aft of the most forward point of the fuselage cabin nose section).
Leveling means	Plumb line from top of left main door frame.

NOTE 1. The generator speed as shown under "Engine Limits" are maximum permissible speeds. The torque pressure output by the engine torque sensing system and the generator speed for rated power output varies with individual engines and must be determined during engine calibration and stamped on the engine data plate. The torque pressure and gas generator speed shall be adjusted and displayed on the limit placard (P/N 204-70-149) installed on the instrument panel and must correspond to the engine data plate. Gas generator speed limits also vary with OAT in accordance with the schedule as shown on the limit placard (P/N 204-70-149) on the instrument panel.

NOTE 2. Current weight and balance report including list of required equipment and list of equipment included in certificated empty weight, and loading instructions when necessary must be provided for the helicopter at the time of original certification.

The certificated empty weight and corresponding C.G. locations must include undrainable oil of 1.72 lbs. (STA. +154) and unusable fuel of 9.0 lbs. (STA. +145) for 242 gallon capacity fuel system.

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- NOTE 3. The following placard must be displayed in front of and in clear view of the pilot: "THIS AIRCRAFT MUST BE OPERATED IN COMPLIANCE WITH OPERATING LIMITATIONS SPECIFIED IN THE AIRCRAFT FLIGHT MANUAL NAVAIR 01-110HCA-1. All placards required in the aircraft flight manual shall be installed in the appropriate locations.
- NOTE 4. The retirement times of critical parts are listed in NAVAIR 01-11HCA-6 Maintenance Manual. These values of retirement or service life cannot be increased without FAA engineering approval.
- NOTE 5. Prior to Civil Airworthiness Certification the provisions of all applicable AD's and mandatory T.O.'s must be accomplished. All follow-on AD's must be complied with.
- NOTE 6. Rigging information contained in NAVAIR 01-110HCA-2 Maintenance Manual.
- NOTE 7. This helicopter must be serviced and maintained in conformance with instruction given by the U.S. Navy and Avco/Lycoming Corp. in Maintenance Manuals Lycoming No. T5311-2 and NAVAIR 01-110HCA-2.
- NOTE 8. Maximum permissible exhaust gas temperature varies with ambient temperature as described in the NAVAIR 01-110HCA-1 Aircraft Flight Manual and on the face of the ambient temperature gage on the instrument panel.
- NOTE 9. Anti-icing additive at a concentration not in excess of 0.1% by volume or as recommended by the manufacturer may be used in fuel for this helicopter.
- NOTE 10. Gross weights above 8500 lbs. are limited to External Cargo Load only and must not be imposed on the landing gear. The retirement times listed in Note 4 are not changed.
- NOTE 11. All repairs to this aircraft to be performed in accordance with NAVAIR 01-110HCA-3 Structural Repair Manual.
- NOTE 12. Engine inspections to be performed per Lycoming Engine Inspection Handbook T5311-5.

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