

**DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION**

H3EA
Revision 1
BOEING-VERTOL
114A
(U.S. Army CH-47A)

13 August 1969

TYPE CERTIFICATE DATA SHEET NO. H3EA

This data sheet which is a part of type certificate No. H3EA 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 The Boeing Company
Vertol Division
Boeing Center
P.O. Box 16858
Philadelphia, Pennsylvania 19142

I - Model 114A (Restricted Category), approved July 30, 1968

Engine 2 Lycoming T55-L-5, T55-L-7, or T55-L-7B

Fuel AVJET (wide-cut), JPA (MIL-J-5624). (See Operators Manual for alternate fuels for T55-L-5 engine only).

Engine limits	Sea level static - Standard Day							
	Shaft hp		Power Turbine rpm	Gas Producer rpm	Power Turbine Inlet Temp		Output at 230 rpm	Torque 230 Rotor - (lb. ft.)
	L-5,	L-7/7B			L-5,	L-7/7B	L-5	L-7/7B
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Takeoff (Sea level static - standard only)	2200	2650	*	**	638°C	735°C	800	860***
Maximum continuous	1850	2200	*	**	602°C	635°C	680	780

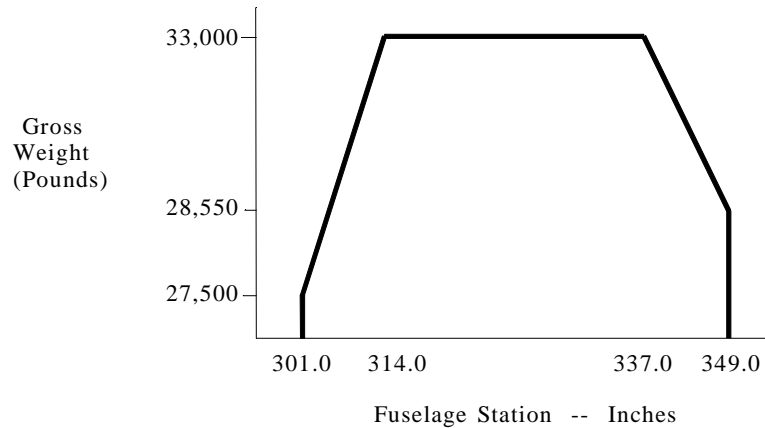
* A direct relationship to rotor r.p.m. exists. 230 rotor r.p.m. corresponds to 15,150 power turbine r.p.m. Power turbine tachometer not installed.
 ** Limit established for each engine - refer to engine acceptance test log.
 *** Transmission torque limit is reached before engine power limit.
 Refer to pages 7-10 and 7-11 of the Operator's Manual, TM55-1520-209-10, for transient limits.

Rotor Limits Power off Power on
 Minimum 204 r.p.m. Minimum 204 r.p.m.
 Maximum 261 r.p.m. Maximum 230 r.p.m.

Airspeed limits Never exceed 110 knots IAS. For increased airspeed limits at gross weights below 33000 lbs. refer to Operator's Manual TM55-1520-209-10.

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C.G. Range (+314.0) to (+337.0) at 33,000 lb.
 (+303.5) to (+349.0) at 28,550 lb.
 (+301.0) to (+349.0) at 27,500 lb. or less



Datum	Fuselage Station 331.0
Leveling means	Plumb bob from top of forward door coaming.
Maximum weight	33,000 lb.
Minimum Crew	2 (Pilot, copilot)
Fuel capacity	4095 lb. (+317.3) (non-self-sealing tanks) 4030 lb. (+317.3) (self-sealing tanks) See Operator's Manual TT755-1520-209-10.
Oil capacity	5.9 gals. (+480.7), 3.3 gals. unusable See NOTE 1 for data on system fuel and oil.
Rotor blade and Control Movements	For rigging information, refer to Department of the Army Technical Manual TM55-1520-209-20, "Organizational Maintenance Manual, Army Models CH-47A and CH-47B helicopters," including changes Nos. 1 through 23 dated April 11, 1968.
Other operating limitations	Department of the Army TM55-1520-209-10, "Operator's Manual Army Models CH-47A and CH-47B helicopters" dated April 1967 including changes Nos. 1 through 3.
Serial Nos. Eligible	B-2 through B-5 and B-7 through B-355.
Certification basis	FAR 21.25(a)(2) including amendment 21-1 through 21-13, effective November 1, 1967. Type Certificate No. H3EA issued July 30, 1968 for the special purposes of carriage if external loads. Date of Application for Type Certificate: January 5, 1968
Production basis	None. No helicopters may be produced under this approval.
Equipment:	Equipment necessary for the particular special purpose operation must be installed. See NOTE 5.

- NOTE 1. A current weight and balance report containing a list of the equipment included in the certificated empty weight, and loading instructions when necessary, must be in each helicopter at the time of original airworthiness certification and at all times thereafter. Refer to Department of the Army Technical Manual TM55-1520-209-10, "Operator's Manual, Army Models CH-47A and CH-47B helicopters" dated April 1967 and including changes Nos. 1 through 3.
- NOTE 2. The following placard must be prominently displayed in the cockpit in full view of the pilots:
"This rotorcraft must be operated in accordance with the restricted category operating limitations of FAR 91.39."
- NOTE 3. Service-life-limited components must be retired from service in accordance with the schedule of Chapter 3. Section IV of Department of the Army Technical Manual TM55-1520-209-20: Organizational Maintenance Manual, Army Models CH-47A and CH-47B Helicopters" including changes Nos. 1 through 23 dated April 11, 1968.
- NOTE 4. These helicopters must be serviced and maintained in compliance with the following Department of the Army Technical Manuals:
- TM55-1520-209-20 "Organizational Maintenance Manual, Army Models CH-47A and CH-47B Helicopters" including changes Nos. 1 through 23, dated April 11, 1968.
- TM55-1520-209-35 "DS, GS, and Depot Maintenance Manual, Army Models CH-47A and CH-47B Helicopters" including changes Nos. 1 through 9, dated February 1, 1968.
- TM55-1520-209-20 PMD "CH-47A and CH-47B Helicopters, Preventive Maintenance Daily Inspection Checklist" dated November 30, 1967.
- TM55-1520-209-20 PMI "CH-47A and CH-47B Helicopters, Preventive Maintenance Intermediate Inspection Checklist," dated November 30, 1967.
- TM55-1520-209-20 PMP "CH-47A and CH-47B Helicopters Preventive Maintenance Periodic Inspection Checklist," dated January 9, 1968.
- NOTE 5. Modifications to these rotorcraft or special equipment will be necessary, reference FAR 21.25(a)(2), prior to civil airworthiness certification for the special purpose of carriage of external loads and for any other FAA approval special purpose operations.
- NOTE 6. Prior to civil airworthiness certification compliance with the following Department of the Army Modification Work Orders must be accomplished:
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|--------------------------|---------------------------|---------------------------|
| MWO's: 55-1520-209-20/1 | MWO's: 55-1520-209-30/4 | MWO's: 55-1520-209-34/24 |
| 55-1520-209-20/24 | 55-1520-209-30/28 | 55-1520-209-34/51 |
| 55-1520-209-20/30 | 55-1520-209-30/29 | 55-1520-209-34/58 |
| 55-1520-209-20/31 | 55-1520-209-30/41 | 55-1520-209-34/59 |
| 55-1520-209-20/41 | 55-1520-209-30/48 | 55-1520-209-34/63 |
| 55-1520-209-20/57 | 55-1520-209-30/55 | 55-1520-209-34/71 |
| MWO's: 55-1520-209-34/85 | MWO's: 55-1520-209-34/107 | MWO's: 55-1520-209-34/125 |
| 55-1520-209-34/92 | 55-1520-209-34/109 | 55-1520-209-34/130 |
| 55-1520-209-34/95 | 55-1520-209-34/111 | 55-1520-209-34/132 |
| 55-1520-209-34/104 | 55-1520-209-34/118 | 55-1520-209-34/135 |
| 55-1520-209-34/105 | 55-1520-209-34/124 | 55-1520-209-34/137 |
- NOTE 7. The following kits must be installed prior to issuance of the original Airworthiness Certificate:
Kits: 114DK007-1, 114DK205-1, 114E3030-43 and Inspection Kit: 114G5226-1.

NOTE 8. The following transmission configurations are required to be installed prior to issuance of the original Airworthiness Certificate: 114D1001-26, 114D2001-27, 114D5001-18 and 114D6001-18.

NOTE 9. The retirement times of critical parts are listed in the following table: (Reference TM55-1520-209-20).

<u>COMPONENT</u>	<u>PART NO.</u>	<u>HOURS</u>
Synchronizing Drive	114D3067-2	300
Shaft Adapters Fwd.	114D3067-4	1200
Forward Rotary Wing Blades	114R1002-27	3600
	114R1002-29	3600
	114R1002-31	3600
	114R1002-33	3600
	114R1002-35	3600
	114R1002-37	3600
Aft Rotary Wing Blades	114R1002-28	2400
	114R1002-30	2400
	114R1002-32	2400
	114R1002-34	2400
	114R1002-36	2400
	114R1002-38	2400
Forward and Aft Drive Shaft Collar Assy	114R3388-5	700
Forward and Aft Upper Drive Arm Assy	114R3414-1	700
		114R3414-4
		114R3414-5
Aft Vertical Drive Shaft Assy	114D3002-1 through -6 Serial No. A-102 through A-114, A-149 through A-151 A-154, A-155, M-103, M-104, M-106 thru M-111, M-115 M-117 through M-119 M-121 M-124 through M-130 M-132 M-134 M-135 M-137 through M-143 M-145 through M-160 M-163 through M-165 M-167 through M-174 M-179, M-180, M-185 M-187, M-188, M-190 through M-194 M-197, M-198, M-200 M-201, M-203 through M-205, M-210, M-213, M-214, M-217, M-221, M-224, M-225 through M-227, M-234, M-236,	600

<u>COMPONENT</u>	<u>PART NO.</u>	<u>HOURS</u>
Aft Vertical Drive Shaft Assy	M-255 through M-258 M-274	
Aft Vertical Drive Shaft Assy	114D3002-1 through -6 Serial No. A-118, M-162, M-166, M-176, M-182, M-183, M-189, M-209, M-218, M-222, M-223, M-228, M-230 through -232, M-235, M-237, M-238, M-240, M-242, M-246, M-251, through M-253	800
Aft Vertical Drive Shaft Assy	114D3002-1 through -6 Serial No. A-115 through A-117	1000
Aft Vertical Drive Shaft Assy	114D3002-1 through -6 Serial No. A-119 thru A-148, A-152, A-153, A-156 thru A-189 A-191 and subsequent "A" shaft assy's M-177, M-178, M-184, M-186, M-195, M-196, M-199, M-202, M-206, thru M-208, M-211, M-212, M-215, M-216, M-219, M-220, M-229, M-233, M-239, M-243 thru M-245, M-247 thru M-250, M-254, M-259, thru M-273, M-275 thru M-278, M-280, M-282 thru M-290, M-292 and subsequent "M" shaft assy's.	1000
Bolt	NAS 1308-50DW	600
*Blade Lag Damper Assy	114HS6800-1	

*Periodic inspection of this unit is required in accordance with Item 6.7 Page 16 of TM55-1520-209- 20 PMI.

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