



Oil Capacity 6 gallons (+157.0) unusable oil 1.6 gallons (included in capacity)

Rotor Blade and Control Movements For rigging information, refer to Technical Manual 55-1520-218-20.

Other Operating Limitations Flight hours are counted from takeoff to landing.

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 required.

Battery must be moved to Station (+3.4) and US/Rotal Ballast Box, part no. W/R 10-20-74, W/R 10-25-74 must be installed at (+3.4) for solo operation when no additional crew, or internal cargo or equipment is carried within the cockpit or cabin. (See NOTE 2 for required placard.)

II. - Model UH-1B (Restricted Category) approved December 21, 1976.

(See note 8 & 10 regarding helicopter, engines and appliances)

Engine Lycoming T53-L-11D series or T5311B.

Fuel MIL-T-5624, Grade JP-4 (Jet B) (See note 11 for alternate fuels).

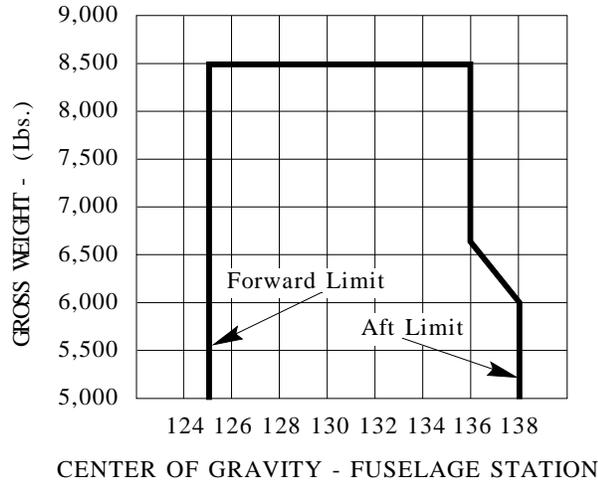
Engine Limits	Torque Pressure (p.s.i.)	Output Shaft (r.p.m.)	Exhaust Gas Temp (° C)
Takeoff (5 min.)	47.5 (1100 HP)	6600	610
Maximum continuous	39.0 ( 900 HP)	6400	590

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.	

Airspeed Limits Never exceed 120 knots (138 mph) up to and including 6600 lbs. G.W. sea level to 2000 ft.

Never exceed 112 knots (129 mph) at 7200 lbs. G.W. sea level to 2000 ft. (See NOTE 2 for specific operating airspeed limitations.)

C. G. Range Longitudinal C.G. Limits:  
 (+125.0) to (+136.0) to 6600 lbs. and above.  
 (+125.0) to (+136.4) to 6500 lbs.  
 (+125.0) to (+137.3) to 6250 lbs.  
 (+125.0) to (+138.0) at 6000 lbs. or less



Maximum Gross Weight	8500 lbs.
Minimum Crew	1 (pilot)
No. of Seats	See Note 11
Maximum Baggage	200 lbs. (150 lbs./sq. ft. deck loading maximum)
Fuel Capacity	168 U.S. gallons (+136)
Oil Capacity	3.25 gallons (+157)
Rotor Blade and Control Movements	For rigging information, refer To Technical Manual 55-1520-219-20.
Other Operating Limitations	Flight hours are counted from takeoff to landing

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 required.

**III. - UH-1H (Restricted Category) approved June 20, 1989.**

(See note 8 & 10 regarding helicopter, engines and appliances)

Engine Lycoming T53-L-13B and T5313B (Civ) series.

Fuel MIL-T-5624, Grade JP-4 (see note 11 for alternate fuels)

Engine Limits	Torque Pressure	Output Shaft	Exhaust Gas Temp
	(p.s.i.)	(r.p.m.)	(° C)
Takeoff (30 min.)	50.0 (1100 HP)	6600	610 to 625
Maximum continuous	50.0 (1100 HP)	6600	400 to 610

Rotor Limits

<u>Power Off</u>	<u>Power On</u>
Maximum 339 R.P.M.	Maximum 324 R.P.M.
Minimum 294 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 Roof Mounted Pitot: Never exceed 124 knots (143 mph) up to and including 7500 lbs.

G.W. sea level to 2000 ft. Never exceed 113 knots (132 mph) at 9500 lbs. G.W. sea level to 2000 ft. See NOTE 2 for specific operating airspeed limitations.

Nose Mounted Pitot: Never exceed 112 knots (131 mph) up to and including 7500 lbs. G.W. sea level to 2000 ft. Never exceed 103 knots (118 mph) at 9500 lbs. G.W. sea level to 2000 ft. See NOTE 2 for specific operating airspeed limitations.

C.G. Range	Longitudinal C.G. Limits: (+130.0) to (+144.0) Lateral C.G. Limits: $\pm$ 5.0 inches from Center Line of helicopter. See TM 55-1520-210-10, Center of Gravity Charts for specific loads/ weights.
Maximum Gross Weight	9500 lbs.
Minimum Crew	1 (pilot)
No. of Seats	See Note 11
Maximum Baggage	100 lbs/sq. ft. cargo area (See TM 55-1520-210-10).
Fuel Capacity	220 U.S. gallons (+151.6) Non-crashworthy system 209 U.S. gallons Crashworthy system
Oil Capacity	3.25 gallons (+173.0)
Rotor Blade and Control Movements	For rigging information, refer to Technical Manual 55-1520-210-23
Other Operating Limitations	Flight hours are counted from takeoff to landing.

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 required.

#### DATA PERTINENT TO ALL MODELS

Leveling Means:	Plumb line from top of left main door frame to index plate on cabin floor (see note 1).
Approved Serial No.'s:	Model UH-1A, -1B and -1H helicopters that have been conformed identified in FAA approved S.M. & T. Eligible Serial Number Report Number SMTSN01 dated December 23, 2002 or later FAA Approved revision. Current copy is available at Atlanta aircraft certification office.
Certification Basis:	Federal Aviation Regulations FAR 21.25 (a)(2) effective February 1, 1965 including amendments 21-1 through 21-71. Type Certificate No. H3SO issued November 21, 1974, for the special purposes of:

#### **Model UH-1A and UH-1B**

- (1) 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

- (2) External Cargo 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).

- (3) Agricultural 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

Any alterations 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 helicopter type certified under this Type Certificate are to have the certification basis for that modification established under 14 CFR 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 and 14 CFR 29.1529, Instructions for continued airworthiness, Amendment 20, effective September 11, 1980.

Certification Basis (Cont'd)

**Model UH-1H**

(1) 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

(2) External Cargo 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).

(3) Agricultural 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

Any alterations 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 helicopter type certified under this Type Certificate are to have the certification basis for that modification established under 14 CFR 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 and 14 CFR 29.1529, Instructions for continued airworthiness, Amendment 20, effective September 11, 1980.

Date of Application:

November 1, 1974, Amended: July 10, 1984, May 10, 1994, December 27, 1995, and August 23, 2001.

Production Basis:

None. No helicopter may be produced under this approval. 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. The basic required equipment as prescribed for the special purpose operation and as necessary for safe operation must be installed on each helicopter. In addition, the following documents and components must be available in each helicopter for type certification and airworthiness certification:
- (1) U.S. Army TM 55-1520-218-10 Operator's Manual UH-1A
  - (2) U.S. Army TM 55-1520-219-10, Operator's Manual UH-1B.
  - (3) U.S. Army TM 55-1520-210-10, Operator's Manual UH-1H.
  - (4) Deleted.
  - (5) (UH-1B) Standard U.S. Army cargo suspension installation - 204-070-949-5; 204-070-529-1; 204-070-529-3; or 204-070-529-7 IAW TM 55-1520-219-23P (Parts Manual) installed and maintained IAW TM 55-1520-219-20 (Maintenance Manual) and operated IAW TM 55-1520-219-10 (Operator's Manual) for all external cargo operations. Refer to NOTE 2 for operating limitations.
  - (6) (UH-1H) Standard U.S. Army cargo suspension installation - 204-070-900-5; 204-070-900-7; or 204-070-900-19 IAW TM 55-1520-210-23P (Parts Manual) installed and maintained IAW TM 55-1520-210-23 (Maintenance Manual) and operated IAW TM 55-1520-210-10 (Operator's Manual) for all external cargo operations. Refer to NOTE 2 for operating limitations.

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 and at all times thereafter. Refer to TM 55-1520-210-10 (UH-1H), TM 55-1520-218-10 (UH-1A) or TM 55-1520-219-10 (UH-1B), Operators Manual Army Model UH-1H/V, UH-1A or UH-1B Helicopters, Chapter 6, and TM 55-1520-210-23-1 (UH-1H), TM 55-1520-218-23-1 (UH-1A) or TM 55-1520-219-23-1 (UH-1B) Aviation Unit and Intermediate Maintenance Instructions Army Model UH-1H/V/EH-1H/X, UH-1A or UH-1B Chapter 1 for leveling means and weight and balance determination.

Note 2: The following placards must be prominently displayed in the cockpit in full view of the pilot: (On the instrument panel)

Placard No. 1: THIS HELICOPTER ROTORCRAFT MUST BE OPERATED IN ACCORDANCE WITH THE RESTRICTED CATEGORY OPERATING LIMITATIONS OF FAR 91.313.

Placard No. 2: EXTERNAL LOAD OPERATIONS: V<sub>ne</sub> WILL BE DETERMINED FOR EACH PROPOSED EXTERNAL LOAD APPLICATION

Placard No. 3:

**For Model UH-1A**

(a) Operating Limits

CALIBRATED AIRSPEED - KNOTS								
Gross Weight RPM	5000 lbs.		6000 lbs.		6500 lbs.		7200 lbs.	
	6200	6400	6200	6400	6200	6400	6200	6400
SL	105	105	105	105	77	77	58	62
3000 ft.	100	100	98	100	74	74	49	59
6000 ft.	96	96	80	93	71	70	34	43
9000 ft.	89	92	63	75	56	66	--	29
12000 ft.	73	84	47	58	38	48	--	--
15000 ft.	57	67	--	42	22	32	--	--
18000 ft.	42	51	--	--	--	--	--	--



ALTITUDE	To 7500 lbs.	8500 lbs.	9500 lbs.
SL to 2000 ft.	124	118	113
3000 ft.	121	115	110
6000 ft.	112	106	101
9000 ft.	103	97	92
12000 ft.	94	88	83
15000 ft.	82	76	---
18000 ft.	70	---	---

UP TO 7500 LBS GW USE 6000 TO 6600 RPM RANGE

OVER 7500 LBS GW USE 6400 TO 6600 RPM RANGE

POWER OFF 294 TO 339 R.P.M.

**REDUCE AIRSPEED WHEN VIBRATION IS EXCESSIVE**

- (b) This helicopter 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 55-1520-210-10.

Placard No. 4: "INSTRUMENT FLIGHT PROHIBITED"

- Note 3: The UH-1A, UH-1B and UH-1H helicopter(s) must be serviced, maintained, inspected, repaired and overhauled in accordance with the following technical manuals:

UH-1A

This model helicopter must be serviced and maintained in compliance with TM 55-1520-218-10 and TM 55-1520-218-20. Repairs to be made in accordance with TM 55-1520-218-34. Component overhaul intervals and replacement times shall be in accordance with the TBO/Replacement schedule found in TM 55-1520-218-20, unless superseded by appropriate Airworthiness Directive. Component life limits to be U.S. Army TM 55-1520-218-20.

UH-1B

This model helicopter must be serviced and maintained in compliance with TM 55-1520-219-10 and TM 55-1520-219-20. Repairs to be made in accordance with TM 55-1520-219-34. Component overhaul intervals and replacement times shall be in accordance with the TBO/Replacement schedule found in TM 55-1520-219-20, unless superseded by appropriate Airworthiness Directive. Component life limits to be as specified in U.S. Army TM 55-1520-219-20. These and other applicable documents are specified in Richard's Heavylift helo, Inc. Instructions for Continued Airworthiness Report, Report No. 001 dated May 16, 2007.

UH-1H

This model helicopter must be serviced and maintained in compliance with TM 55-1520-210-10 and TM 55-1520-210-23. Repairs to be made in accordance with TM 55-1520-210-23. Component overhaul intervals and replacement times shall be in accordance with the TBO/Replacement schedule found in TM 55-1520-210-23, unless superseded by appropriate Airworthiness Directive. These and other applicable documents are specified in Richard's Heavylift helo, Inc. Instructions for Continued Airworthiness Report, Report No. 002 dated May 16, 2007.

- Note 4: In addition to the standard helicopter requirements, the following additional data and/or helicopter configuration requirements must be met for each individual S.M. & T. Aircraft models UH-1A, UH-1B and UH-1H upon application for an original Special Airworthiness Certificate:
- A completed Application for Airworthiness Certificate, FAA Form 8130-6 that has correctly identifies the type certificate holder's helicopter and its intended special purpose(s).
  - Written conformation from the certifying office that the affected serial number has been added to S.M. & T. Aircraft Type Certificate.
  - The application for airworthiness certification and the helicopter's registration certificate match the information on S.M. & T. Aircraft data plate.
  - The helicopter Flight Manual and documents specified in Note 3 are with the helicopter.
  - The conditions and limitations specified in S.M. & T. Type Certificate Data Sheet H3SO dated December 23, 2002 or later FAA approved revision are met.

- 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: The Airworthiness Directives for the helicopter and engine must be complied with prior to original certification.
- (a) UH-1A and UH-1B: FAA Airworthiness Directives for all UH-1A, B, & Bell 204 series aircraft and Lycoming engine model T5311 series must be reviewed for applicability and complied with accordingly. All applicable U.S. Army Modification Work Orders (MWO'S) and technical bulletins must be accomplished.
- (b) UH-1H: FAA Airworthiness Directives for UH-1H & Bell Helicopter Model 205 series; and Lycoming T5313B and T53-L-13B series engines must be reviewed for applicability and complied with accordingly. All applicable U.S. Army Modification Work Orders (MWO'S) and technical bulletins must be accomplished
- Note 10: Alternate and emergency fuels are listed in TM 55-1520-210-10 (UH-1H), TM 55-1520-218-10 (UH-1A) or TM 55-1520-219-10 (UH-1B), Operators Manual Army Model UH-1H/V, UH-1A, or UH-1B Helicopters, Chapter 2, Section XVI. Some limitations apply for the use of certain alternate and emergency fuels. These limitations are listed in this section.
- Note 11: 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: Manufacture and install TC Holders Data Plate on helicopter.
- Note 15: **For UH-1B and UH-1H**  
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 16: **For UH-1B**  
Maximum permissible exhaust temperature varies with ambient temperature as described on the Operator's Manual. Check engine EGT by use of Health Indicator Test (HIT) prior to take-off (see TM 55-1520-219-10 and HIT EGT Log for the aircraft).
- Note 17: **For UH-1H**  
Maximum permissible exhaust temperature varies with ambient temperature as described on the Operator's Manual. Check engine EGT by use of Health Indicator Test (HIT) prior to take-off (see TM 55-1520-210-10 and HIT EGT Log for the aircraft).
- Note 18: **All Models**  
Pilot in Command in left seat requires relocation of engine instructions on panel in accordance with U.S. Helicopter Specification U95-008-ST and a manual cargo release on the left side in accordance with U.S. Helicopter Specification U95-006-ST.

.....End.....