DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

H13WE
Revision 13
Rotorcraft Dev. Corp.
UH-1B
UH-1H
August 1, 2012

TYPE CERTIFICATE DATA SHEET NO. H13WE

This data sheet which is part of Type Certificate No. H13WE 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	Rotorcraft Development Corporation 132 Skalkaho Hwy. Hamilton, Montana 59840
Type Certificate Holder Record	Garlick Helicopter Corporation transferred TC H13WE to Rotorcraft Development Corporation on November 17, 2008. Garlick Helicopter, Inc. transferred TC H13WE to Garlick Helicopter Corporation on June 29, 2007.

I - Model UH-1B, 9PCLHL (Utility Helicopter Restricted Category) approved: March 4, 1981

Engine: Lycoming T-53-L-11D (See note 8 for approved alternate engines)

Fuel: Mil-T-5624, Grade JP-4; alternate fuel
Mil-T-5624, Grade JP-5; See TM 55-1520-219-10 for substitute and emergency fuels.

Engine Limits

	Torque Pressure (PSI)	Output RPM	Exhaust Gas Temperature (Deg. C)
Takeoff (5 min.)	47.5 (1100 HP)	6600	610
Max. Continuous	39.0 (900 HP)	6400	590

See NOTES 11, 12, & 13

Rotor Limits

Power Off	Power On
Maximum 339 RPM	Maximum 324 RPM
Minimum 295 RPM	Minimum 294 RPM

Continuous operations 294-324 RPM

Airspeed Limits: Never Exceed 120 knots (138 MPH) up to and including 6600 lbs. G.W. sea level to 2000 feet.

Never Exceed 112 knots (129 MPH) up to 7200 lbs. G.W. sea level to 2000 feet. (See Note 2 for specific operating airspeed limitations.)

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I - Model UH-1B, 9PCLHL (cont'd)

Other Limits	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 requested.
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) to 6000 lbs. or less. See TM 55-1520-219-10, Center of Gravity Charts for specific loads/weights.
Empty Weight C.G. Range	(+125.0) to (+138.0)
Maximum Weight	8500 lbs.
Minimum Crew	1 (pilot)
Maximum Passengers	See Note 18
Maximum Baggage	200 lb. (150 lbs./sq. ft. deck loading maximum.)
Fuel Capacity Usable	163 U.S. gals if Crashworthy Fuel System is installed. 168 U.S. gals if Crashworthy Fuel System is not installed.
Oil Capacity	3.25 gals (+157)
Rotor Blade and Control Movement	For rigging information, refer to Technical Manual: 55-1520-219-20.
Approved Serial Nos.	Surplus UH-1 B helicopters as identified in FAA Approved Garlick Helicopters Report No. GHI-TC-01, dated April 7, 1995 or later approved revision.

II - Model UH-1H, 15PCLM (Utility Helicopter Restricted Category) approved: December 14, 1992

Engine	Lycoming T-53-L-13B (See notes 8 & 17 for approved alternate engines)
Fuel	Mil-T-5624, Grade JP-4; alternate fuel Mil-T-5624, Grade JP-5; See TM 55-1520-228-10 for substitute and emergency fuels.

Engine Limits

	Torque Pressure (PSI)	Output RPM	Exhaust Gas Temperature (Deg. C)
Takeoff (5 min.)	50.0 (1100 HP)	6600	610-625
Max. Continuous	50.0 (1100 HP)	6600	400-610

Rotor Limits

Power Off	Power On
Maximum 339 RPM	Maximum 324 RPM
Minimum 294 RPM	Minimum 294 RPM

Continuous operation 294-324 RPM
Maximum for auto rotation is 339 RPM

Airspeed Limits: Never Exceed 124 knots (143 MPH) up to and including 7500 lbs.

II - Model UH-1H, 15PCLM (cont'd)

	Roof-mounted pitot static	G.W. sea level to 2000 feet. Never Exceed 113 knots (132 MPH) at 9500 lbs. G.W. sea level to 2000 feet. *(See Note 2 for specific operating airspeed limitations.)*
	Nose-mounted pitot static	Never Exceed 119 knots (137 mph) up to and including 7500 lbs. G.W. sea level to 2000 ft. Never Exceed 108 knots (124 mph) at 9500 lbs. G.W. sea level to 2000 ft. *(See Note 2 for specific operating airspeed limitations)*
Other Limits	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 requested.	
C. G. Range	Longitudinal C.G. Limits: (+130.0) to (+144.0), at 3600 lbs. or less. Lateral C.G. Limits: Plus or minus 7.5 inches See TM 55-1520-210-10, Center of Gravity Charts for specific loads/weights.	
Empty Weight C.G. Range	(+130.0) to (+144.0)	
Maximum Weight	9500 lbs	
Minimum Crew	1 (pilot)	
Maximum Passengers	See Note 18	
Maximum Baggage	100 lbs/sq. ft. cargo area (See TM 55-1520-210-10).	
Fuel Capacity Useable	206.5 U.S. gals (+151.6) Crashworthy system.	
Oil Capacity	3.25 gals. (+173.0)	
Rotor Blade and Control Movements	For rigging information, refer to Technical Manual 55-1520-210-23.	
Approved Serial Nos.	Surplus UH-1 H helicopters as identified in FAA Approved Garlick Helicopters Report No. GHI-TC-01, dated April 7, 1995 or later approved revision.	

DATA PERTINENT TO ALL MODELS

Datum	7.6" aft of aircraft nose.
Leveling Means	Plumb line from top of left main door frame.
Certification Basis	FAR 21.25(a)(2) effective February 1, 1965. Type Certificate No. H13WE issued for the purpose of: 1. Agricultural under FAR 21.25 (b)(1) 2. Forest and Wildlife Conservation under FAR 21.25 (b)(2) 3. Aerial Surveying Operations under FAR 21.25 (b)(3) 4. Patrolling Operations under FAR 21.25 (b)(4) 5. External Cargo Operations under FAR 21.25 (b)(7)

DATA PERTINENT TO ALL MODELS (cont'd)

Note: In accordance with FAR 36.1(a)(4), compliance with the noise requirements has been shown for Garlick Models UH-1B and UH-1H. No determination has been made by the Federal Aviation Administration that the noise levels of this aircraft are or should be acceptable or unacceptable for operation at, into, or out of, any airport.

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.

UH-1B
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 plus special conditions for turbine engine installations and 14 CFR 29.1529, Instructions for continued airworthiness, Amendment 20, effective September 11, 1980. Also should consider that military installed crashworthy fuel systems in some of these aircraft and should require that to be maintained.

UH-1H
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 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, plus special conditions for turbine engine installations and 14 CFR 29.1529, Instructions for Continued Airworthiness, Amendment 20, effective September 11, 1980.

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 certificate basis) must be installed in each helicopter for certification. In addition, the following are required:

UH-1B
U.S. Army TM 55-1520-219-10 Operator's Manual UH-1 B.

UH-1H
1) U.S. Army TM 55-1520-210-10, Operator's Manual UH-1H.
2) Standard U.S. Army cargo suspension installation 204-072-024-1; 205-070-900-5; 205-070-900-7; or 205-070-900-19 I/A/W TM 55-1520-210-23P (Parts Manual) installed and maintained I/A/W TM 55-1520-210-23 (Maintenance Manual) and operated I/A/W TM 55-1520-210-10 (Operator's Manual) for all external cargo operations. Refer to Note 12 for operating limitations.

All external equipment and its attachments installed on this aircraft, (other than that equipment necessary to conduct the Special Purpose Operations for FAR Part 21.25 (b)(7) "External Cargo Operations", operating under FAR Part 133) must be FAA approved.

NOTES

NOTE 1. Current weight and balance report, including list of equipment included in certificated empty weight and loading instructions must be in each helicopter at time of original airworthiness certification and at all times thereafter.

UH-1B Only
Refer to pages 12-4a and 12-4b of Operator's Manual (TM 55-1520-219-10) or Appendix D of Maintenance Manual (TM 55-1520-219-20) for CG determination and use of ballast if required.

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

UH-1B
(a) OPERATING LIMITS

DENSITY	CALIBRATED AIR SPEED – KNOTS							
ALTITUDE	6600 LBS OR LESS		7200 LB		8000 LB		8500 LB	
RPM	6400	6600	6400	6600	6400	6600	6400	6600
SEA LEVEL TO								
2000 FT	120	120	109	112	95	101	86	95
	116	116	105	108	92	97	82	92
	102	106	92	97	77	86	68	80
	90	94	79	86	65	76	----	----
	77	84	66	75	----	----	----	----
	64	72	----	----	----	----	----	----
	51	61	----	----	----	----	----	----

From 0 to 70 knots use 6000 to 6600 RPM range.
From 70 to 120 knots use 6400 to 6600 RPM range.

EXTERNAL LOAD OPERATION: VNE will be determined for each proposed external load application.

REDUCE AIR SPEED WHEN VIBRATION IS EXCESSIVE.

(b) This helicopter must be operated in accordance with the Restricted Category operating limitations of 91.313 and with the limitations noted in U.S. ARMY TM 55-1520-219-10.

UH-1H
(a) OPERATING LIMITS

MODEL UH-1 H
With Roof-mounted pitot static tube
CALIBRATED AIR SPEED - KNOTS

GROSS WEIGHT	6600 LB	7500 LB	8500 LB	9500 LB
SL 2000 FT	124	124	119	114
3000 FT	121	121	116	111
6000 FT	112	112	107	102
9000 FT	102	102	97	92
12000 FT	92	92	87	83
15000 FT	81	81	76	—
18000 FT	69	69	65	—

Up to 7500 Ibs G.W. use 6000 to 6600 RPM Range.
Over 7500 Ibs G.W. use 6400 to 6600 RPM Range.

EXTERNAL LOAD OPERATION: VNE will be determined for each proposed load application.

NOTE 2 (cont'd)

REDUCE AIR SPEED WHEN VIBRATION IS EXCESSIVE.

MODEL UH-1H

With Nose-mounted Pitot Static tube

Limits	Aircraft	Weight /	KIAS
Density Alt (ft)	To 7500 lb	8500 lb	9500 lb
SL-2000	112	107	103
3000	109	104	100
6000	100	95	91
9000	91	86	82
12000	82	77	73
15000	70	65	—
18000	58	—	—
Under 7500 lb 6000-6600 RPM		Over 7500 lb 6400- 6600 RPM	
Power off 294 to 339 RPM			

Decrease Airspeed if Vibration Excessive.

b) This helicopter must be operated in accordance with the Restricted Category operating limitations of FAR 91.313 and within the limitations noted in U.S. ARMY TM 55-1520-210-10.

NOTE 3. **UH-1B**

Continued airworthiness of UH-1B helicopters certificated under this Type Certificate H13WE is contingent upon compliance with Garlick Helicopters Inc. report GH-H13WE-CA1B, compliance with applicable FAA Airworthiness Directives, and compliance with all applicable Garlick Helicopters Inc. Alert Service Bulletins.

UH-1H

Continued airworthiness of UH-1H series helicopters certificated under this Type Certificate H13WE is contingent upon compliance with Garlick Helicopters Inc. report GH-H13WE-CA1H dated 5-3-2002 or later revision, compliance with applicable FAA Airworthiness Directives, and compliance with all applicable Garlick Helicopters Inc. Alert Service Bulletins.

NOTE 4. In addition to the standard helicopter requirements, the following additional data and/or helicopter configuration requirements must be met for each individual model UH-1B or UH-1H helicopter upon application for an original Special Airworthiness Certificate:

UH-1B

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 the Type Certificate, H13WE. **NOTE: See The Most Current FAA Approved Revision of Type Certificate Data Sheet H13WE, Serial Number List REPORT NO. RDC-TC01.**

c) The application for airworthiness certification and the helicopter's registration certification match the information on Garlick Helicopter, Inc. data plate.

d) Garlick Helicopters Report GH 80, Part One, dated September 29, 1980, must be complied with.

e) The battery may be relocated in accordance with Garlick Helicopters Report GH 80 921 & 921-1, Part Two, dated September 30, 1980.

NOTE 4 (cont'd)

f) All UH-1B series aircraft and Lycoming/Honeywell engine T53-L-11 series FAA Airworthiness Directives must be reviewed for applicability and complied with accordingly.

g) FAA Airworthiness Directives as called out in Garlick Helicopters Inc. UH-1 Airworthiness Directive review list dated 5-14-2001 or later edition must be reviewed for applicability and complied with accordingly.

h) The Helicopter(s) must be serviced, maintained, inspected, repaired and overhauled in accordance with the documents specified in Garlick Helicopters Inc. Instructions for Continued Airworthiness report GH-H13WE-CA1B dated 5-24-02 or later accepted revision.

UH-1H

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 the Type Certificate, H13WE. . **NOTE: See The Most Current FAA Approved Revision of Type Certificate Data Sheet H13WE, Serial Number List REPORT NO. RDC-TC01.**

c) The application for airworthiness certification and the helicopter's registration certification match the information on Garlick Helicopter, Inc. data plate.

d) Garlick Helicopters Report GH 80, Part One, dated September 29, 1980, must be complied with.

e) Battery may be re-located in accordance with Garlick Helicopter Report GH 80-921 and 921-1, Part Two, dated September 30, 1980.

f) All UH-1H series aircraft and Lycoming/Honeywell engine T53-L-13 series FAA Airworthiness Directives must be reviewed for applicability and complied with accordingly.

g) FAA Airworthiness Directives as called out in Garlick Helicopters Inc. UH-1 Airworthiness Directive review list dated 5-14-2001 or later edition must be reviewed for applicability and complied with accordingly.

h) The Helicopter(s) must be serviced, maintained, inspected, repaired and overhauled in accordance with the documents specified in Garlick Helicopters Inc. report GH-H13WE-CA1H dated 5-3-2002 or later revision.

i) This model helicopter must be operated in compliance with TM 55-1520-210-10.

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 owner's/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 (cont'd)

NOTE 8. **UH-1B Only**

Lycoming engine models T53-L-11 (s/n suffix "A"), T53-L-11B and T53-L-11C are approved for use as alternate engines under this Type Certificate. Engines Identified in this note will be

maintained on a 1200 hr. (T53-L-11C, 1800 hr.) overhaul schedule and in accordance with the applicable U.S Army Maintenance, Overhaul and Parts Manuals, applicable to that engine.

UH-1H Only

Lycoming engine models T53-L-13, T53-L-13A, T53-L-13BA and the commercial T5313B are approved for use as alternate engines under this Type Certificate. Military engines identified in this note will be maintained on a 2400 hr. overhaul schedule and in accordance with the applicable U.S Army Maintenance, Overhaul and Parts Manuals, applicable to that engine. For T5313B overhaul schedule, ref: Garlick Helicopters report GH-H13WE-CA1H Dated 5-3-02 or later approved revision.

NOTE 9. Type Certificate (TC) and Type Certificate Data Sheet reissued to clearly state that Bell Helicopter Textron, Inc., has no involvement with this TC and that Garlick Helicopters or later specified owner(s) , (See Page 1), are the original holder of TC No. H13WE. Authority, AWS-100 Memo dated February 22, 1985.

NOTE 10. Torque pressure output by the engine torque sensing system varies with individual engines. A calibration of this value is required of each engine and the value corresponding to take-off power is stamped on the engine data plate.

NOTE 11. Gas producer speed, as shown under "Engine Limits", are maximum permissible speeds. The gas producer speed for rated power outputs 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 temperature limit placard installed 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 on the Temperature Limit (GO-NO-GO TAKE-OFF) placard on the instrument panel.

NOTE 12. Maximum permissible exhaust gas temperature varies with ambient temperature as described in the Operators 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 aircraft).

NOTE 13. Aircraft certified under this Type Certificate are eligible for flight with Pilot-in-command located in the left seat position during FAR Part 133 external load operations with Approved Flight Manual Supplement providing they are modified to extend cargo hook manual release capabilities to the left seat position I/A/W Garlick Helicopters, Inc. drawing no. GHI 72290-2. Instruments required for safety of flight must be clearly readable from the left seat position or may be relocated as necessary. Instrument relocation must be FAA approved.

NOTE 14. Garlick Helicopters, Inc. Technical Bulletin No. UHI-93-01 provides information to operators on parts interchangeability and replacement parts.

NOTE 15. Avionics Specialties Power Analyzer and Recorder (PAR) System may be installed in accordance with GHI Technical Bulletin UH1-98-07 dated 7-7-98 or later revision.

NOTE 16. 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 8 (cont'd)

NOTE 17. Any Alteration to the type design of this aircraft may require Instructions for Continued Airworthiness (ICA's). Changes to the Type Design by means of a Supplemental Type Certificate (STC) requiring ICA's or changes to existing ICA's must be submitted and reviewed by the Fort Worth Aircraft Evaluation Group (FTW-AEG). Type Design Changes by means of a Field Approval that require ICA's must have those ICA's reviewed by the Flight Standards District Office (FSDO) managing the Field Approval or the FTW-AEG.

NOTE 18. No person may be carried in this helicopter during flight unless that person is essential to the purpose of the flight.

NOTE 19. Helicopter is not approved for IFR operation or flight into known icing conditions.

NOTE 20. **UH-1H Only**
Aircraft must be modified I/A/W Garlick Helicopters, Inc. Report No. GH-UHI-MOD dated 7-7-98 or later approved revision to conduct the Special Purposes of Aerial Survey Operations under FAR 21.25(b)(3) and Patrolling Operations under FAR 21.25(b)(4).

NOTE 21. **UH-1H Only**
Standard U. S. Army Cargo Suspension Installation 204-072-024-1; 205-070-900-5; 205-070-900-7; or 205-070-900-19 I/A/W TM 55-1520-210-23P (Parts Manual) installed and maintained I/A/W TM 55-1520-210-23; and operated I/A/W TM 55-1520-210-10 (Operator's Manual).

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