

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

R00006DE
Revision 3

Garlick Helicopters

OH-58A
OH-58A+
OH-58C

July 11, 2007

TYPE CERTIFICATE DATA SHEET NO. R00006DE

This data sheet, which is part of Type Certificate No. R00006DE 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: Garlick Helicopter Corporation
 132 Skalkaho Hwy.
 Hamilton, Montana 59840

Type Certificate Holder Record: Garlick Helicopter, Inc. transferred TC R00006DE to Garlick Helicopter Corporation on June 29, 2007.

I - Model OH-58A, (Restricted Category Military Surplus Helicopter) Approved August 15, 1996

Engine: 1- Allison 250-C10D (T63-A-700)
 (See note 8 & 11 for alternate engine.)

Fuel: ASTM D1655 Jet B (See note 10 for alternate fuels.)

Engine Limits:	<u>Torque Pressure</u>	<u>Output Shaft Speed</u>	<u>Turbine Out Temp</u>	<u>Gas Gen. Speed</u>
Takeoff (5 min)	92 psi	103%	749°C Maximum	104%
Max. Continuous	79 psi	103%	693°C	104%

(See Operator's Manual TM55-1520-228-10 for transient limits)

NOTE: Powerplant cooling has been demonstrated to be adequate for the following ambient temperature schedule: 125 Degrees F at sea level, decreasing at a lapse rate of 3.6 Degrees F per 1000 feet to 89 Degrees F at the maximum operating altitude of 10,000 feet.

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I - Model OH-58A (cont'd)

Rotor Limits:	<u>Power Off</u>	<u>Power On</u>
	Maximum 390 rpm	Maximum 354 rpm
	Minimum 330 rpm	Minimum 347 rpm

Avoid Prolonged Operation Between 172 to 206 RPM
(See Operator's Manual TM55-1520 228-10 for transient limits)

Airspeed Limits: Never exceed 120 knots CAS
Decrease V_{NE} 3 knots/1000 ft.above 3000 ft.

V_{NE} will be determined for each Special Purpose Operation and must be FAA approved.

Other Limits: Flight Hours are counted from takeoff to landing.

The helicopter 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 helicopter must be re-evaluated if certification to the General Ice protection Airworthiness Regulations is requested.

C.G. Range: Straight line variation between points given.

Longitudinal C.G. Limits
+106 to +112 at 3000 lbs.
+105.2 to +114.2 at 2500 lbs.
+105.2 to +114.2 at 1800 lbs.
(Reference C.G.Chart in Operator's Manual TM55-1520-228-10 Chapter 6)

Empty Weight C.G.
Range +105.2 to 114.2

Maximum Weight: 3000 lbs. (see note 12 for external cargo configuration information)

Minimum Crew: 1 at +65.0

No. of Seats: See Note 22

Maximum Cargo: 950 lbs. between station +77 and +114. See Operator's Manual, TM55-1520-228-10.

Fuel Capacity Useable: 70.3 Gallons (Total Fuel: 71.5 gallons at sta. +116)
See TM55-1520-228-10 for limits with 23.9 aux. fuel cell installed.

Oil Capacity: 11.2 Pints at sta. +179.0

Rotor Blade and
Control Movements: For rigging information, refer to TM55-1520-228-23-2 Intermediate Maintenance Manual.

Approved Serial No's: US Military Surplus OH-58A Helicopters as identified in FAA Approved
Garlick Helicopters Report No. GHI-TC03, dated 8-15-96 or later FAA-Approved revision.
Current copy is available at Denver ACO.

II - Model OH-58A+, (Restricted Category Military Surplus Helicopter) Approved Aug. 15, 1996

Engine: 1- Allison 250-C20C (T63-A-720) (See Note 11)

Fuel: ASTM D1655 Jet B (See note 10 for alternate fuels)

Engine Limits:	Torque <u>Output</u>	Output <u>Shaft Speed</u>	Turbine <u>Out Temp</u>	Gas Gen. <u>Speed</u>
Takeoff (5 min)	100%	100%	810°C Maximum	105%
Max. Continuous	85%	100%	738°C	105%

(See Operator's Manual TM55-1520-228-10 for transient limits.)

Rotor Limits:	<u>Power Off</u>	<u>Power On</u>
	Maximum 390 rpm (Dual Tach Reading 110%)	Maximum 354 rpm (Dual Tach Reading 100%)
	Minimum 330 rpm (Dual Tach Reading 93%)	Minimum 347 rpm (Dual Tach Reading 98%)

Avoid Prolonged Operation Between 172 to 206 RPM
(See Operator's Manual TM55-1520 228-10 for transient limits)

Airspeed Limits: Never exceed 120 knots CAS
Decrease V_{NE} 3 knots/1000 ft. above 3000 ft.
100 Knots Recommended Maximum for Autorotation
 V_{NE} will be determined for each Special Purpose Operation and must be FAA approved.

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: Straight line variation between points given.
Longitudinal C.G. Limits
+107.0 to +111.4 at 3200 lbs.
+106.0 to +112.2 at 3000 lbs.
+105.2 to +114.2 at 2500 lbs.
+105.2 to +114.2 at 1800 lbs.
(Reference C.G. Chart in Operator's Manual TM55-1520-228-10 Chapter 6.)

Empty Weight C.G.
Range +105.2 to 114.2

Maximum Weight: 3200 lbs. (See note 13 for external cargo configuration information.)

Minimum Crew: 1 at +65.0

No. of Seats: See Note 22

Maximum Cargo: 950 lbs. between station +77 and +114. See Operator's Manual, TM55-1520-228-10.

II - Model OH-58A+ (cont'd)

Fuel Capacity Useable: 70.3 Gallons (Total Fuel: 71.5 gallons at sta. +116)
See TM55-1520-228-10 for limits with 23.9 aux.fuel cell installed.

Oil Capacity: 11.2 Pints at +179.0

Rotor Blade and Control Movements: For rigging information, refer to TM55-1520-228-23-2, Intermediate Maintenance Manual.

Approved Serial No's: US Military Surplus OH-58A+ Helicopters as identified in FAA Approved Garlick Helicopters Report No. GHI-TC03, dated 8-15-96 or later FAA-Approved revision. Current copy is available at Denver ACO.

III - Model OH-58C, (Restricted Category Military Surplus Helicopter) Approved Aug. 15, 1996

Engine: 1- Allison 250-C20C (T63-A-720) (See Note 11)

Fuel: ASTM D1655 Jet B (See note 10 for alternate fuels)

Engine Limits:	<u>Torque Pressure</u>	<u>Output Shaft Speed</u>	<u>Turbine Out Temp</u>	<u>Gas Gen. Speed</u>
Takeoff (5 min)	100%	100%	810°C Maximum	105%
Max. Continuous	85%	100%	738°C	105%

(See Operator's Manual TM55-1520-228-10 for transient limits)

Rotor Limits:	<u>Power Off</u>	<u>Power On</u>
	Maximum 390 rpm (Dual Tach Reading 110%)	Maximum 354 rpm (Dual Tach Reading 100%)
	Minimum 330 rpm (Dual Tach Reading 93%)	Minimum 347 rpm (Dual Tach Reading 98%)

Avoid Prolonged Operation Between 172 to 206 RPM
(See Operator's Manual TM55-1520 228-10 for transient limits)

Airspeed Limits: Never exceed 120 knots CAS
Decrease V_{NE} 3 knots/1000 ft. above 3000 ft.
100 Knots Recommended Maximum for Autorotation

V_{NE} will be determined for each Special Purpose Operation and must be FAA approved.

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.

III - Model OH-58C (cont'd)

C.G. Range:	Straight line variation between points given. Longitudinal C.G. Limits +107.0 to +111.4 at 3200 lbs. +106.0 to +112.2 at 3000 lbs. +105.2 to +114.2 at 2500 lbs. +105.2 to +114.2 at 1800 lbs. (Reference C.G.Chart in Operator's Manual TM55-1520-228-10 Chapter 6)
Empty Weight C.G. Range	+105.2 to 114.2
Maximum Weight:	3200 lbs. (see note 13 for external cargo configuration information)
Minimum Crew:	1 at +65.0
No. of Seats:	See Note 22
Maximum Cargo:	950 lbs. between station +77 and +114. See Operator's Manual, TM55-1520-228-10.
Fuel Capacity Useable:	70.3 Gallons (Total Fuel: 71.5 gallons at sta. +116) See TM55-1520-228-10 for limits with 23.9 aux. fuel cell installed.
Oil Capacity:	11.2 Pints at +179.0
Rotor Blade and Control Movements:	For rigging information, refer to TM55-1520-228-23-2, Intermediate Maintenance Manual.
Approved Serial No's:	US Military Surplus OH-58C Helicopters as identified in FAA Approved Garlick Helicopters Report No. GHI-TC03, dated 8-15-96 or later FAA-Approved revision. Current copy is available at Denver ACO.

DATA PERTINENT TO ALL MODELS:

Datum:	Station 0 datum is one inch forward of most forward point of fuselage cabin nose section or 55.16 inches forward of jack point centerline.
Leveling Means:	Plumb line from ceiling left rear cabin to index plate on floor.
Certification Basis:	General Note: Any alteration to the aircraft for Special Purposes not identified above require further FAA approval and in addition may require noise and/or flight testing.

Model OH-58A:

FAR 21.25(a)(2) effective February 1, 1965, including Amendments 21-1 through 21-71. Type Certificate R00006DE issued for the Special Purpose of:

- (1) External Load Operations under FAR 21.25(b)(7). See Note 13.
- (2) Agricultural Operations under FAR 21.25(b)(1). See Note 18.
- (3) Forest and Wildlife Conservation Operations under FAR 21.25(b)(2). See Note 19.

Note: In accordance with FAR 36.1(a)(4), compliance with the noise requirements was not shown for Garlick Models OH-58A. Therefore, Model OH-58A aircraft certificated under this type certificate are only eligible for the Special Purposes of External Load Operations, Forest and Wildlife Conservation and Agricultural Operations as listed above.

Model OH-58A+ and OH-58C:

FAR 21.25(a)(2) effective February 1, 1965, including Amendments 21-1 through 21-71.

Type Certificate R00006DE issued for the Special Purpose of:

- (1) External Load Operations under FAR 21.25(b)(7). See Note 13.
- (2) Agricultural Operations under FAR 21.25(b)(1). See Note 18.
- (3) Forest and Wildlife Conservation Operations under FAR 21.25(b)(2). See Note 19.
- (4) Aerial Surveying Operations under FAR 21.25(b)(3). See Note 20.
- (5) Patrolling Operations under FAR 21.25(b)(4). See Note 21.

Note: In accordance with FAR 36.1(a)(4), compliance with the noise requirements has been shown for Garlick Models OH-58+ and OH-58C. 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.

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 27 airworthiness standards, normal category, Amendment 4, effective October 27, 1968 and 14 CFR 27.1529, Instructions for Continued Airworthiness, Amendment 18, 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 certification basis) must be installed in each type helicopter for certification. In addition the Operator's Manual TM55-1520-228-10 and the applicable FAA approved Rotorcraft Flight Manual Supplement applicable to each model, as listed below dated August 15, 1996 or later approved revision is required:

- GH-OH58FMS-A for model OH-58A
- GH-OH58FMS-AP for model OH-58A+
- GH-OH58FMS-C for model OH-58C

NOTES

NOTE 1:A current weight and balance report including list of equipment included in the certificated empty weight and loading instructions when necessary must be provided for each aircraft at time of original certification. Refer to Chapter 6 of Operators Manual (TM55-1520-228-10) or Par. 1-43 of Maintenance Manual (TM55-1520-228-23) for C.G. determination.

NOTE 2:The following placards must be prominently displayed in the cockpit in full view of the pilots:

Placard No. 1

"THIS ROTORCRAFT MUST BE OPERATED IN ACCORDANCE WITH THE RESTRICTED CATEGORY OPERATING LIMITATIONS OF FAR 91.313."

Placard No. 2

"THIS HELICOPTER MUST BE OPERATED IN COMPLIANCE WITH THE OPERATING LIMITATIONS SPECIFIED IN THE APPROVED HELICOPTER OPERATORS MANUAL. REFER TO TM55-1520-228-10, CHAPTER 5 FOR OPERATING LIMITS AND RESTRICTIONS."

NOTE 3: The helicopter(s) must be serviced, maintained, and inspected in accordance with the documents specified in Garlick Helicopters, Inc. Instructions for Continued Airworthiness report, GH-OH58-CA1 dated 8-15-96 (or later revision) or other FAA accepted inspection programs. The Garlick Helicopters, Inc. Report GH-OH58-CA1 is part of the Garlick Helicopters, Inc., Instructions for Continued Airworthiness. Retirement times are listed in FAA approved Airworthiness Limitations Section (section II of the above document) dated August 15, 1996 or later approved revision.

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 OH-58, OH-58+, and OH-58C 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 holders helicopter and its intended special purpose(s).
- b) Written confirmation from the certifying office that the affected serial number has been added to Garlick Helicopters, Inc. type certificate.
- c) The application for airworthiness certification and the helicopter's registration certification match the information on Garlick Helicopters, Inc. data plate.
- d) Each helicopter must pass a conformity inspection in accordance with Garlick Helicopters, Inc. Configuration Report, GH-OH58-CR1 dated 8-15-96 (or current revision). The Configuration Report must contain a complete description of each helicopter, any military Modification Work Orders (MWO) accomplished on that particular helicopter, and a description of the Special Purpose modification(s) accomplished on that particular helicopter. In addition, each helicopter must pass an inspection for any hidden damage and the military records reviewed for acceptability of any repairs or alterations.
- e) The maintenance, overhaul, and modification records of each helicopter must be reviewed for military changes that may affect the airworthiness of the helicopter.
- f) After the required inspections, the aircraft must be found to be in a good state of preservation, repair, and in a condition for safe operation.
- g) The Airworthiness Directives for the helicopter and engine contained in Garlick Helicopters, Inc. Airworthiness Directive Report, GH-OH58-CR dated 8-15-96 (or later FAA-Approved revision).

NOTE 5: This aircraft is prohibited from carrying cargo for compensation or hire. Carriage of cargo is limited to such cargo that is incidental to the aircraft owner/operator's business which is other than air transportation. (This note applies to aircraft that have the special purpose, "Carriage of Cargo.")

NOTE 6: Restricted Category aircraft may not be operated in a foreign country without the express written approval of that country.

NOTE 7: This aircraft has not been shown to meet the requirements of the applicable comprehensive and detailed airworthiness code as provided by Annex 8 to the Convention on International Civil Aviation.

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: Alternate and emergency fuels are listed in TM55-1520-228-10 Chapter 2, Section XIV and table 2-2. Some limitations apply for the use of certain alternate and emergency fuels. These limitations are listed in this section.
- NOTE 10: Model OH-58A helicopters having MWO 1520-228-50-6 complied with are powered by the T63-A-720 engine and are operated in accordance with Operating Limitations as outlined in Operator's Manual TM55-1520-228-10 and Garlick Helicopters, Inc. approved Flight Manual Supplement GH-OH58FMS-AP dated 8-15-96 (or later FAA approved revision) is required. This modified model is referred to in some US Army publications as an OH-58A-720 or OH-58A+ (A-Plus) and on this data sheet as OH-58A+.
- NOTE 11: External cargo hook, P/N GH-76334-01, shall be installed on Model OH-58A in accordance with Garlick Helicopters, Inc. Drawing No. GH-76334, revision A, dated 8-05-96 or later FAA-Approved revision. Model OH-58A helicopters with external cargo hook installed in accordance with Drawing No. GH-76334 meet structural and design requirements for a maximum external load of 1500 pounds. Garlick Helicopters FAA-Approved Flight Manual Supplement GH-OH58-CHFMS dated 8-15-96 (or later FAA approved revision) for "External Cargo Hook" is required. Continued airworthiness of the cargo hook installation shall be accomplished in accordance with Garlick Helicopters, Inc. GH-CHCA-76 dated 8-15-96 or later revision.
- NOTE 12: External cargo hook P/N GH-76334-01 shall be installed on Models OH-58A+ and OH-58C in accordance with Garlick Helicopters, Inc. Drawing No. GH-76334, revision A, dated 8-05-96 or later FAA-Approved revision. Model OH-58A+ and OH-58C helicopters with external cargo hook installed in accordance with Drawing No. GH-76334 meet structural and design requirements for a maximum external load of 1500 pounds. Garlick Helicopters FAA-Approved Flight Manual Supplement GH-OH58-CHFMS dated 8-15-96 (or later FAA approved revision) for "External Cargo Hook" is required. Continued airworthiness of the cargo hook installation shall be accomplished in accordance with Garlick Helicopters, Inc. GH-CHCA-76 dated 8-15-96 or later revision.
- NOTE 13: Bell Helicopter Textron, Inc. has no involvement with this Type Certificate. Garlick Helicopters, Inc. is the original holder of TC No. R00006DE Authority, AWS-100 Memo dated February 22, 1985.
- NOTE 14: Engine Oil By-Pass Valve may be removed IAW Garlick Helicopters, Inc. Report No. GH-OH58-OV dated 1-18-96 or later approved revision.
- NOTE 15: Pilot must verify load calculations prior to flight anytime articles are stowed in avionics compartment aft of station 120 to insure weight and balance CG limits are not exceeded. Maximum allowable weight in avionics compartment shall be 250 lbs. including battery.
- NOTE 16: Auxiliary Power Plug installed in accordance with Garlick Helicopters, Inc. drawing no. GH-61500 dated 8-5-96 or later FAA-Approved revision. Auxiliary power plug supplies power, as required, to actuate appliances attached to the cargo hook.
- NOTE 17: To conduct Agricultural Operations under FAR 21.25(b)(1), the aircraft must be modified IAW Garlick Helicopters Report No. GH-OH58-MOD, Rev 1, FAA approved August 6, 1997, or later FAA approved revision.
- NOTE 18: To conduct Forest and Wildlife Conservation Operations under FAR 21.25(b)(2), the aircraft must be modified IAW Garlick Helicopters, Inc. Drawing No. GH-76334, Rev. A dated 8/5/96 or later FAA-approved revision, External Cargo Hook installation of dispensing of firefighting materials utilizing a water bucket. Any other device installed for this special purpose must be FAA approved.
- NOTE 19: To conduct Aerial Surveying Operations under FAR 21.25(b)(3), the aircraft must be modified IAW Garlick Helicopters, Inc. Report No. GH-OH58-MOD, Rev 1. dated August 6, 1997, or later FAA-approved revision.

- NOTE 20: To conduct Patrolling Operations under FAR 21.25(b)(4), the aircraft must be modified IAW Garlick Helicopters, Inc. Report No. GH-OH58-MOD, Rev 1. dated August 6, 1997, or later FAA-approved revision.
- NOTE 21: Any Alteration to the type design of this aircraft may require Instructions for Continued Airworthiness. Is so, these instructions must be submitted and accepted by the FAA Forth Worth Aircraft Evaluation Group (FTW-AEG), prior to approval for return to service.
- NOTE 22: No person may be carried in this helicopter during flight unless that person is essential to the purpose of the flight.

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