

**DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION**

H11SW

**AST, Inc.  
UH-1F**

**May 1, 2007  
Revision 3**

**TYPE CERTIFICATE DATA SHEET NO H11SW**

This data sheet, which is part of type certificate H11SW, 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:**       **AST, Inc.  
34976 Kamph Drive NE  
Albany, OR 97322**

**Type Certificate Holder Record:**   TC issued to Erickson Air-Crane on March 31, 1994  
TC transferred to Firefly Aviation Helicopter Services on March 27, 1996  
TC transferred to AST, Inc. on February 27, 2003

**Model UH-1F (Military Surplus, Restricted Category) Approved March 31, 1994**

**Engine:**                               General Electric T-58-3

**Fuel:**                                 JP-4, Mil-T-5624: Jet A-1  
JP-5, Mil-T-5624G: Jet B

<b>Engine Limits:</b>	Torque Pressure (P.S.I.)	Output Horsepower (H.P.)	Exhaust Gas Temp (°C)	Gas Gen Speed (R.P.M.)
Take-Off (5 min)	67	1100	678-690	102.5%
Continuous	54	888	635	Limited by EGT

<b>Rotor Limits:</b>	Power Off	Power On
	Maximum 339 RPM	Maximum 317 RPM
	Minimum 295 RPM	Minimum 295 RPM

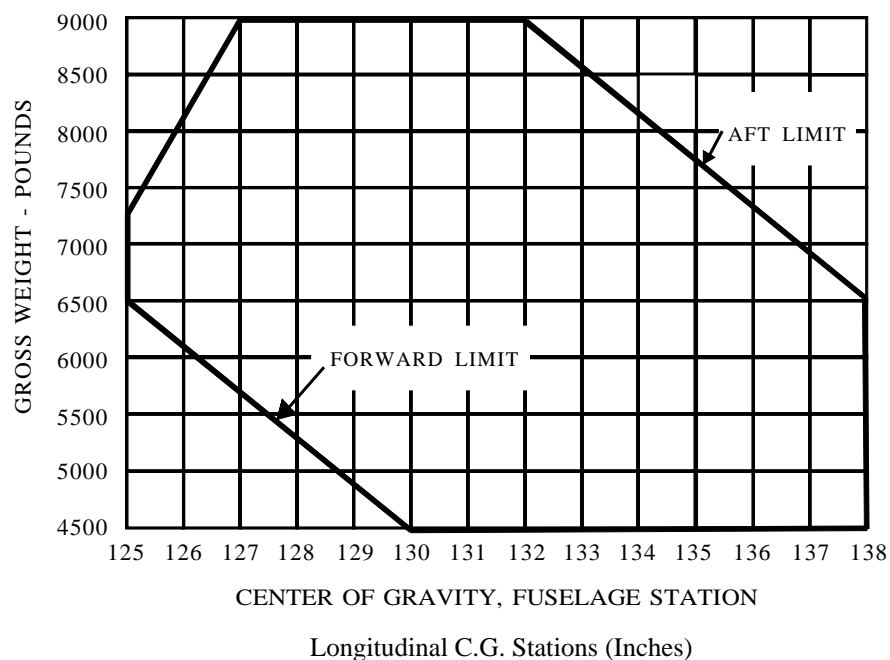
**Airspeed Limits:**               Never exceed 120 knots  
Above 70 knots, 6200 to 6450 Engine RPM required.

**Other Limits:**                   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.

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**C.G. Range:**

Longitudinal C.G. Limits:  
(+127.0) to (+132.0) to 9000 lbs.  
(+125.0) to (+136.0) to 7250 lbs.  
(+125.0) to (+138.0) to 6500 lbs.  
(+130.0) to (+138.0) to 4500 lbs.



**Datum:** 7.6 inches aft of aircraft nose.

**Leveling Means:** Drop plumb bob from "key hole" slot in upper left door sill.  
Reference T.O. 1H-1(U)F-5.

**Maximum Weight:** 9000 pounds

**Minimum Crew:** 1

**No. Seats:** See Note 13

**Maximum Baggage:** 400 lbs. in Tail Boom Compartment

**Fuel Capacity:** 224 Gallons Total (3.0 unusable)

**Oil Capacity:** 5.4 Gallons Total (0.8 unusable)

**Rotor Blade & Control Movements:** Refer to USAF T.O. 1H-1(U)F-2-1

**Approved Serial No.:** The following model UH-1F helicopters have been approved under this TC:  
Bell                      USAF  
 7116                      66-1220

**Certification Basis:** FAR 21.25(a)(2) effective February 1, 1965, including Amendments 21-1 through 21-71. Type Certificate H11SW issued March 31, 1994 for the Special Purpose of:

(1) 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 for AST Inc. model UH-1F. 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.

(2) 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 for AST Inc. model UH-1F. Therefore, aircraft certificated under this type certificate are only eligible for the Forest and Wildlife Conservation Operations excepted by FAR 36.1 (a)(4) and defined under FAR 137.3.

(3) External Load Operations under FAR 21.25 (b) (7).

Note: In accordance with FAR 36.1(a)(4), compliance with the noise requirements was not shown for AST Inc. model UH-1F. 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).

Any alteration 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 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 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.

**Production Basis:** None. No helicopter may be produced under this approval.

Prior to adding serial numbers to the 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, which will include as a minimum, the inspections contained in the FAA rotorcraft Directorate Restricted Category Conformity document dated September 25, 2001.

**Date of Application:** December 3, 1992

**Equipment:** The basic required equipment as prescribed in the applicable airworthiness regulations must be installed on each helicopter for certification. In addition the following is required:

- (a) U.S. Air Force T.O. 1H-(U)F-1, UH-1F Flight manual
- (b) The special purpose equipment and documents must be available in or on each helicopter for type certification and airworthiness certification

- NOTE 1 Current weight and balance report, T.O. 1H1(U)F-5, including the list of equipment that was included in the certificated empty weight and loading instructions must be in each type helicopter at time of original airworthiness certification and at all times thereafter. Refer to U.S. Air Force T.O. 1H-(U)F-1 for Weight and Balance information.
- NOTE 2 The following Placards must be prominently displayed in the cabin in clear view of the pilot:
- Placard No. 1 “THIS HELICOPTER MUST BE OPERATED IN COMPLIANCE WITH THE OPERATING LIMITATION SPECIFIED IN THE APPROVED HELICOPTER OPERATION’S MANUAL. REFER TO U.S. AIR FORCE T.O. 1H-(U)F-1.”
- Placard No. 2 “THIS ROTORCRAFT MUST BE OPERATED IN ACCORDANCE WITH THE RESTRICTED CATEGORY OPERATING LIMITATIONS OF FAR 91.313.”
- Placard No. 3. “EXTERNAL LOAD OPERATIONS: Vne WILL BE DETERMINED FOR EACH PROPOSED EXTERNAL LOAD APPLICATION”
- Placard No. 4. “NO PERSON MAY BE CARRIED IN THIS HELICOPTER UNLESS HE IS A FLIGHT CREWMEMBER, FLIGHT CREWMENER TRAINEE, OR HE PERFORMS AN ESSENTIAL FUNCTION IN CONNECTION WITH THE MISSION OR IS NECESSARY FOR THE WORK ACTIVITY DIRECTLY ASSOCIATED WITH THE OPERATION.”
- NOTE 3 Aircraft shall be serviced, maintained, inspected and overhauled in accordance with T.O. 1H-1(U)F-2-1, organization maintenance; per T.O. 1H-1(U)F-6CF-1 and T.O. 2J-T58-2WC-1, and phased inspections per T.O. 1H-1(U)F-6WC-2. Limited life schedule for helicopter components is included in USAF T.O. 1H-1(U)F-6, Change 12, Section III, Part A. Main Rotor Blade Assy part number 204-011-250-113 has a retirement life limit of 2500 hours.
- NOTE 4. In addition to the standard helicopter requirements, the following additional data and/or helicopter configuration requirements must be met for each individual AST UH-1F helicopter upon application for an original Special Airworthiness Certificate:
- A completed Application for Airworthiness Certificate, FAA Form 8130-6 that 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 this Type Certificate.
  - The application for airworthiness certification and the helicopter’s registration certificate must match the information on the AST Data Plate.
  - The documents specified in the Note 3 are with the helicopter
  - The conditions and limitations specified in this Type Certificate Data Sheet are met.
  - Prior to adding a serial number to this Type Certificate the candidate Aircraft shall be reconfigured in accordance with special “Reconfiguration Buildup” report No. EAC-DS-001 dated March 17, 1994, or later FAA approved revision. In addition, the FAA Airworthiness Directives Bell Service Bulletins for all Bell 204/205/212 series helicopters. USAF Time Compliance Technical Orders and General Electric T-58-3 engines must be reviewed for applicability and complied with accordingly.
  - Prior to issuance of an airworthiness certificate for each aircraft all inspections and modifications must be accomplished per the latest revision of all Firefly Aviation Helicopter Services UH-1F technical directives.

- NOTE 5           The Maximum Allowable Operating Time (MAOT) schedule for Service Life Limited Part overhaul and retirement intervals are specified in TO 1H-1(U)F-6, Change 12, Section III Part A
- NOTE 6           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.
- NOTE 7           Restricted category aircraft may not be operated in a foreign country without the express written approval of that country.
- NOTE 8           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 9.           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 10           Aircraft shall be operated in accordance with USAF T.O. 1H-1(U)F-1 flight manual and is limited to VFR Operations only.
- NOTE 11           Continued airworthiness of the UH-1F series helicopters listed by serial number in this TCDS is contingent upon compliance with all FAA airworthiness directives applicable to Bell Helicopter Textron, Inc. Model 204, 205 and 212 series helicopters, the General Electric CT-58 (military model T-58-3) engine and any component installed thereon.
- NOTE 12.           Helicopters that do not have documentation showing they were surplus from an Armed Force of the United States are not eligible for certification under this type certificate. Engines and appliances that do not have documentation showing they were surplus from an Armed Force of the United States are not eligible for installation on a helicopter under this type certificate. Helicopter(s), engine(s), and appliances that have records indicating time-in-service by a foreign military or a foreign government will be presumed to be ineligible for certification or installation under this type certificate. This presumption may be overcome by the applicant substantiating, to the satisfaction of the FAA, through documentation, tests, computations, evaluations, analyses, or other means or methods that the helicopter, engine, or appliance, during its time-in-service by the foreign military or foreign government, was maintained by a extent and in a manner equal to that of an Armed Force of the United States.
- NOTE 13.           No person may be carried in this helicopter during flight unless that person is essential to the purpose of the flight.
- NOTE 14           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 Evaluation Group (FTW-AEG), prior to approval for return to service.

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