

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

R0011DE Billings Flying Service, Inc. CH-47D Revision 5 May 1, 2017
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TYPE CERTIFICATE DATA SHEET R0011DE

This data sheet, which is a part of Type Certificate No. R0011DE, prescribes conditions and limitations under which the product for which the type certificate was issued meets the airworthiness requirements of the 14 Code of Federal Aviation Regulations (14 CFR).

Type Certificate Holder: Billings Flying Service, Inc.
 6309 Jellison Road
 Billings, MT 59101

Type Certificate Holder Record: N/A

I Model CH-47D (Restricted Category Rotorcraft) Approved July 22, 2014. (See NOTES Section)

Engines (2) Honeywell T55-GA-714A

Fuel ASTM-D1655 (Jet A, Jet A-1, Jet B); JP-8, JP-5, JP-4, Alternative and emergency fuels are listed in Operators Manual BFS-210 "CH-47D Helicopter", Rev. Original, dated July 21, 2014 or later FAA approved revision.

Engine and
Transmission Limits

Rating	Torque (% Q)	Gas Gen. Speed (%Ng)	Power Turbine Speed (%N _p)	Power Turbine Inlet Temp
Dual Engine Limits				
Take-Off (10 Min.)	100%	110%	111%	899
Military Power (30 Min.)	100%	-----	-----	854
Normal Continuous	100%	-----	-----	816
Maximum Transient	100%	110%	111%	943
One Engine Limits				
One Engine Inop (10 Min.)	123%	110%	111%	899
One Engine Inop (30 Min.)	123%	-----	-----	854
Normal Continuous	123%	-----	-----	816
Maximum Transient	123%	110%	111%	943

Refer to Billings Flying Service, Inc., Rotorcraft Flight Manual no. BFS-210 "CH-47D Helicopter", Rev. Original, Dated July 21, 2014 or later FAA approved revisions for additional limitation data.

Rotor Speed Limits

Minimum
Maximum

Power Off

91% r.p.m.
108% r.p.m.

Power On

91% r.p.m.
111% r.p.m.

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Airspeed Limits

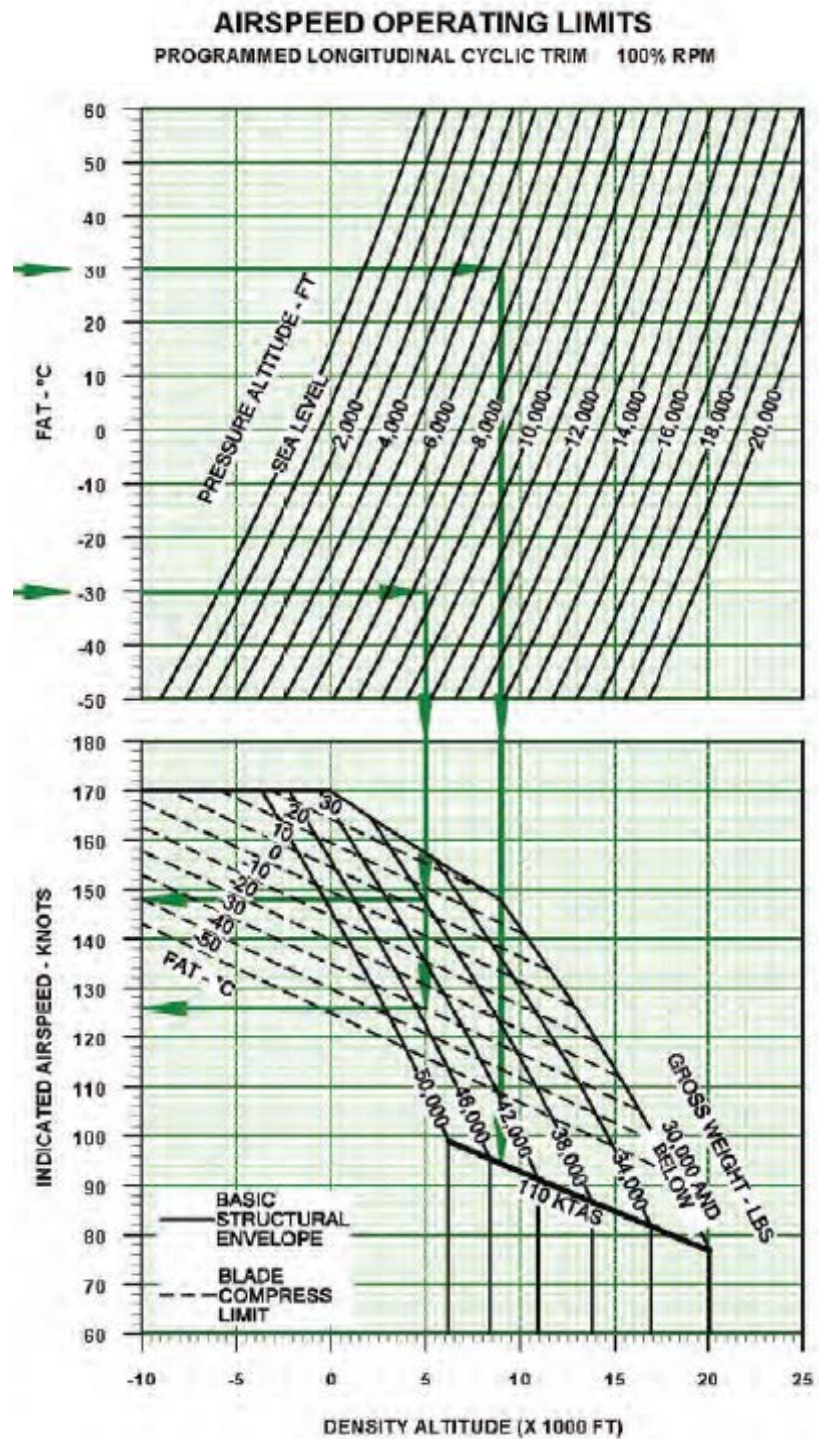


Figure 1

Refer to Rotorcraft Flight Manual BFS-210 "CH-47D Helicopter", Rev. Original, Dated July 21, 2014 or later FAA approved revision for abnormal conditions.

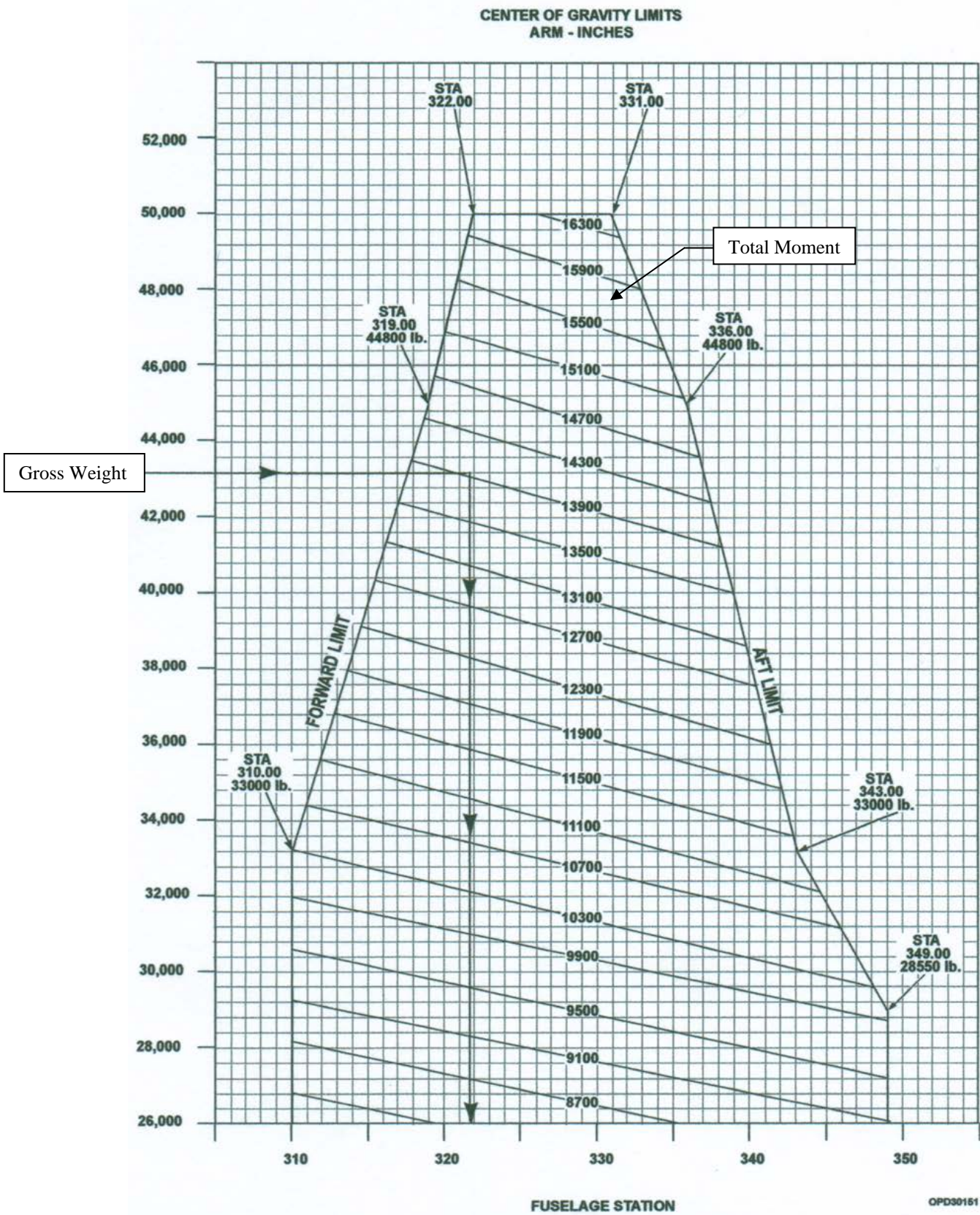


Figure 2

Refer to Rotorcraft Flight Manual no. BFS-210 “CH-47D Helicopter”, Rev. Original, Dated July 21, 2014 or later FAA approved revision for specific C.G. range and limits.

Datum	Station 0 (Datum is 21.5 inches forward of the forward most point of the nose section).	
Leveling Means	Plumb bob from top of forward door opening.	
Maximum Weight	50,000 lbs.	
Cargo Hook Limitations.	<p>The limits presented below are structural limitations only.</p> <p>a. The structural limit of the forward and aft hook is 17,000 pounds each.</p> <p>b. The maximum single load that can be suspended as a tandem load from the forward and aft hooks is 25,000 pounds.</p> <p>c. The center cargo hook is limited to a maximum load of 26,000 pounds.</p>	
Minimum Crew	3 – (1) pilot (+75), (1) copilot (+75), (1) Crewmember (+135) (See Note 11).	
Maximum Cargo	Refer to Rotorcraft Flight Manual No. BFS-210 “CH-47D Helicopter”, Rev. Original, Dated July 21, 2014 or later FAA approved revision for various configurations.	
No. of Seats	See Note 9	
Fuel Capacity	<p>Left Main - 278 Gallons Right Main - 274 Gallons</p> <p>Left Fwd Aux - 122 Gallons Right Fwd Aux - 119 Gallons</p> <p>Left Aft Aux - 118 Gallons Right Aft Aux - 117 Gallons</p> <p>Total is 6887 lb. (1028 Gallons) Note: These are maximum capacities which include residual and trapped fuel. Servicing capacities will be less. Refer to Rotorcraft Flight Manual No. BFS-210 “CH-47D Helicopter”, Rev. Original, Dated July 21, 2014 or later FAA approved revision for various configurations.</p>	
Oil Capacity	7.5 gal. (3.75 Gallons per engine). This is maximum capacity which includes residual and trapped oil. Servicing capacities will be less. See Note 1 for data on systems, fuel, and oil.	
Rotor Blade and Control Movements	For rigging information, refer to TM 1-1520-240-23 series Technical Manuals.	
Other Limits	<p>This helicopter must be operated in accordance with the following:</p> <p>(1) Billings Flying Service, Inc. Report No. BFS-210, Rotorcraft Flight Manual “CH-47D Helicopter”, Rev. Original, dated July 21, 2014 or later FAA approved revisions</p> <p>(2) Billings Flying Service, Inc. Report No BFS-208, Functional Check Flight Manual for the BFS CH-47D Helicopter dated July 21, 2014 or later FAA accepted revisions.</p> <p>(3) Billings Flying Service, Inc. Report No. BFS-206, Crewmember’s Checklist dated July 21, 2014 or later FAA accepted revisions</p>	
Serial No. Approved	U.S. military surplus CH-47D helicopters as identified in Type Certificate Data Sheet R0011DE Approved Serial Number List, Billings Flying Service, Inc., Report Number BFS-204 TC01, Rev. Original dated July 24, 2014, or later FAA approved revision.	
Certification Basis	Part 21 § 21.25(a)(2), (b)(1)(2) & (7) Rotorcraft External Load Operations & Carriage of Cargo – incidental to the operator’s business.	

Three Limitations:

(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. 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

(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. Therefore, aircraft certificated under this type certificate are only eligible for dispensing firefighting materials excepted by FAR 36.1(a)(4) and defined under FAR 137.3

(3) 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).

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 part 21 § 21.101. Otherwise non-significant modifications are to meet the requirements of 14 CFR 29 Amendment 1, effective August 12, 1965 and 14 CFR part 29 § 29.1529, Instructions for Continued Airworthiness, Amendment 20, effective September 11, 1980.

Date of Application

March 5, 2014

Production basis

None. No helicopters may be produced under this approval. Each helicopter must pass a conformity inspection in accordance with this TCDS, plus any additional special instructions attached to the Request for conformity, FAA 8120-10. In addition, a check by the Type Certificate holder or its agent, of the flight characteristics in accordance with applicable portions of the BFS CH-47D FCF Functional Check Flight Manual for BFS Model CH-47D helicopters.

Equipment

The basic required equipment necessary for the particular special purpose operation must be installed for certification. Some MWOs provide installation of some types of firefighting equipment.

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 airworthiness certification.

NOTE 2.

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

Placard No. 1

THIS HELICOPTER MUST BE OPERATED IN COMPLIANCE WITH THE OPERATING LIMITATIONS SPECIFIED IN THE FAA APPROVED HELICOPTER FLIGHT MANUAL No. BFS-210 "CH-47D HELICOPTER", REV. ORIGINAL, DATED JULY 21, 2014 OR LATER FAA APPROVED REVISION.

Placard No. 2

THIS ROTORCRAFT MUST BE OPERATED IN ACCORDANCE WITH THE RESTRICTED CATEGORY OPERATING LIMITATIONS OF 14 CFR PART 91.313.

- NOTE 3. The builder's data plate required by part 45 § 45.13 must be installed in accordance with Billings Flying Service, Inc. Drawing BFS-001, Rev. Original dated June 20, 2014, or later FAA approved revisions.
- NOTE 4. The helicopter(s) may be serviced, maintained, inspected, repaired and overhauled in accordance with the requirements specified in Billings Flying Service, Inc. Instructions for Continued Airworthiness Report BFS-202 Rev. Original dated June 25, 2014 or later FAA accepted revision, or other FAA approved programs.
- NOTE 5. The life-limited parts, overhaul, and retirement intervals for these helicopters are specified in Section IV of the Billings Flying Service, Inc. Instructions for Continued Airworthiness Report BFS-202 Rev. Original dated June 25, 2014 or later FAA accepted revision. A FAA approved/accepted copy must accompany each helicopter on delivery. Components that have been maintained under methods other than those prescribed in the Airworthiness Limitation Section IV, shall be subject to the following: The certification life limits for the helicopter, its engine and appliances were based on satisfactory service history as designed and operated by the military. Therefore, cycle counting and operational time tracking is required on certain critical components, to operate and maintain the aircraft to the original acceptance criteria, and maintain it's safe for intended use requirement.
- NOTE 6. Billings Flying Service, Inc. Engineering Configuration Report BFS-201, Rev. Original dated March 31, 2014, or later FAA approved revision identifies the de-configuration, addition of equipment, and U.S. Army airframe changes necessary for the special purpose helicopter.
- NOTE 7. A Restricted Category helicopter may not be operated in a foreign country without the express written approval of that country.
- NOTE 8. 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 on International Civil Aviation.
- NOTE 9. The Safety of Flight Compliance Report for the helicopter contained in Billings Flying Service, Inc., Airworthiness & Military Safety Messages report no. BFS-205, Rev. Original, dated March 31, 2014, or later FAA Approved revision, must be complied with prior to original airworthiness certification.
- NOTE 10.
 - 1) No person may be carried in this helicopter during flight unless that person is essential to the purpose of the flight.
 - 2) This Helicopter is prohibited from carrying cargo for compensation or hire. Carriage of internal cargo is limited to such cargo that is incidental to the helicopter owners/operators business, which is other than air transportation.
 - 3) Carriage of hazardous material is prohibited unless compliance is shown with applicable regulations in Code of Federal Regulations Title 49, Part 175.

NOTE 11.

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 12.

Non-Pilot crewmembers will be trained in accordance with the Billings Flying Service, Inc. Rotorcraft Flight Manual "CH-47D Helicopter", as amended; the Billings Flying Service, Inc. Functional Check Flight Manual for the Billings Flying Service, Inc CH-47D Helicopter, as amended; and the Billings Flying Service, Inc. Crewmember's Checklist as amended.

END