DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

R00008RD
Revision 6
Bell
505
February 11, 2022

TYPE CERTIFICATE DATA SHEET NO. R00008RD

This data sheet which is part of type certificate No. R00008RD prescribes conditions and limitations under which the product for which type certificate was issued meets the airworthiness requirements of the Federal Aviation Regulations.

Type Certificate Holder: Bell Textron Canada Limited
12800 rue de l'Avenir
Mirabel, Quebec
J7J 1R4 Canada

Type Certificate Holder Record: Bell Helicopter Textron Canada Limited was the previous name of TC holder. The company name history is presented below.

Type Certificate Holder	Period
Bell Helicopter Textron Canada Limited Mirabel Quebec	Prior to 16 December 2019
Bell Textron Canada Limited Mirabel Quebec	16 December 2019 Present

I. Model 505 (Normal Category), Approved June 1, 2017

Engine: 1 Safran (Turbomeca) Arrius 2R
FAA Engine Type Certificate Data Sheet E34NE

Fuel: ASTM-D-1655, Type, Jet A, and Jet A-1; ASTM-D-6615, Type, Jet B; MIL-DTL-5624 Grade JP-4; MIL-DTL-5624 Grade JP-5 and MIL-DTL-83133 Grade JP-8

See Rotorcraft Flight Manual for fuel temperature limitations.

Anti-icing fuel additive is required for operations at fuel temperatures below 4°C (39.2°F). The maximum allowed concentration of fuel additives is 0.15% by volume.

Oil: For approved engine oil types, prohibition against mixing brands and for approved transmission and gearbox oil types refer to Maintenance Manual BHT-505-MM.

Installed Engine Limits

	Torque Lbf-ft (%)	Turbine Temperature °C (°F)	Gas Generator Speed % (RPM)
Take-Off (5 Min)	442.5 (100)	853 (1,567)	101.29 (54,817)
Max. Continuous	405.6 (92)	817 (1,502)	99.8 (54,011)

See Rotorcraft Flight Manual for transient limits
Output shaft speed limit is 104% (5,834 RPM)

Rotor Limits

Power Off	Power On
Maximum 407 RPM 111%	Maximum 394 RPM 107%
Minimum 331 RPM 90%	Minimum 371 RPM 101%

Transmission Torque Limits

	Torque Limits %
Take Off (5 min)	100
Maximum Continuous	90
Transient (5 sec)	105

Airspeed Limits	Basic V_{NE} (never exceed) is 135 KIAS. Decrease V_{NE} for ambient conditions in accordance with the Airspeed Limitations placard in the Rotorcraft Flight Manual.

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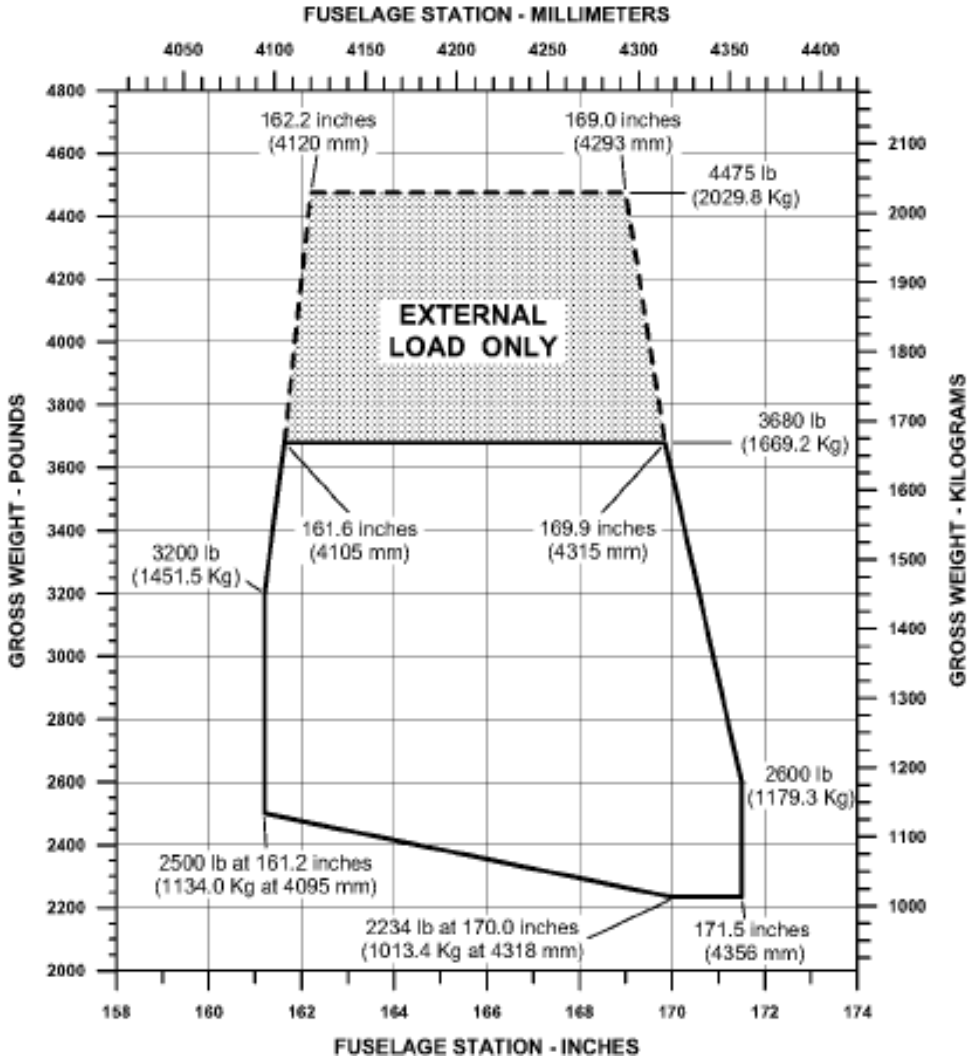
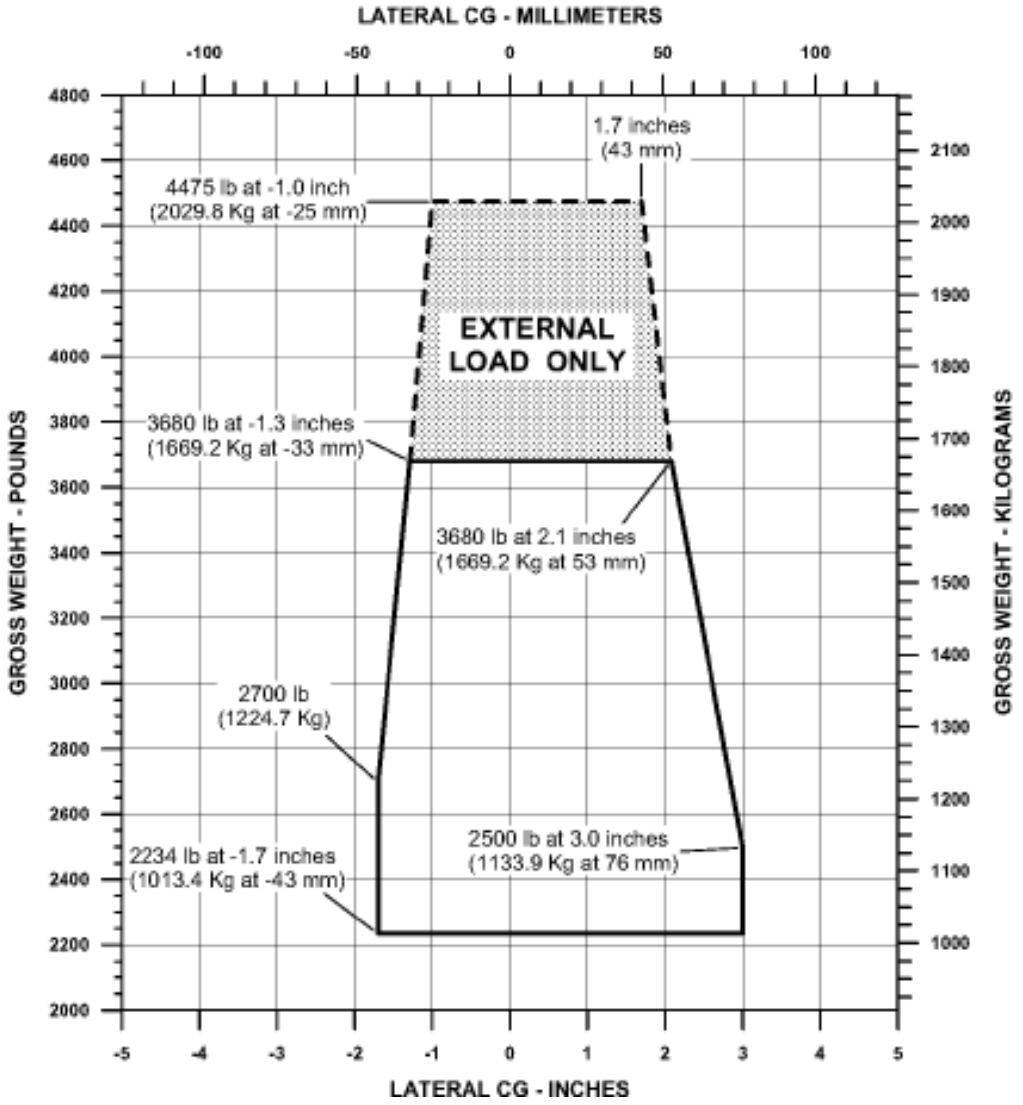
C.G. Limit	Refer to approved Rotorcraft Flight Manual (See Note 3)
Empty Weight CG Range	See Maintenance Manual
Datum	Model 505 station 0 datum is 96 cm (37.8 in.) forward of the nose of the helicopter.
Leveling Means	Protractor or level placed on the crew or passenger floor or seat rails, both longitudinally and laterally
Maximum Weight (Mass)	1,670 kg (3,680 lb.) Internal Loading 2,030 kg (4,475 lb.) External Loading
Altitude limits	Maximum altitude at 6,096 m (20,000 ft.) pressure altitude
OAT Limits	-40°C (-40°F) to 46°C (115°F), decreasing with pressure altitude at a standard lapse rate of 2°C (3.56°F) per 1,000 feet for Bell 505 serial numbers 65011 to 65300 (excluding 65170). -40°C (-40°F) to 50°C (122°F), decreasing with pressure altitude at a standard lapse rate of 2°C (3.6°F) per 1000 feet for Bell 505 serial numbers 65170 and 65301 and subsequent.
Minimum crew	1 pilot
Maximum occupants	5 (includes crew)
Maximum Baggage	Refer to approved Rotorcraft Flight Manual for loading schedule.
Fuel capacity	Refer to 505 Maintenance Manual for Fuel Quantity
Oil capacity	Refer to 505 Maintenance Manual for Oil Quantity
Rotor blade and Control movement	For rigging information refer to the 505 Maintenance Manual
Serial numbers eligible	65011 and subsequent
Import Requirements	To be considered eligible for operation in the United States, each aircraft manufactured under this Type Certificate must have a U.S. Airworthiness Certificate that may be issued on the basis of the Canadian Department of Transport Certificate of Airworthiness for Export signed by the Minister of Transport containing the following statement: “The rotorcraft covered by this certificate has been examined, tested and found to comply with the type design approved under Type Certificate R0000RD and to be in condition for safe operation.” The approved type design for the model 505 consists of data listed under Bell top part No. SLS-100-003-001, Revision C, or later approved revision for serial numbers 65011 and Subsequent The U.S. airworthiness certification basis for aircraft certificated under FAR section 21.29 and exported by the country of manufacture is FAR Section 21.183(c) or 21.185(c). Refer to the applicable bilateral agreement to verify eligibility for import into the United States of both new and used aircraft based on the scope of the agreement, to identify any required statements by the exporting authority on the export certificate of airworthiness (or equivalent document), and for procedures for coordinating exceptions to conformity statements on these documents. Refer to FAA Order 8130.2, *Airworthiness Certification of Aircraft*, for requirements for issuance of an *airworthiness certificate* for imported aircraft.
Production Basis	None. See Import Requirements

GROSS WEIGHT / LONGITUDINAL CG LIMITS



GROSS WEIGHT / LATERAL CG LIMITS



Certification Basis

1. For approved MGW configuration of 1670 kg (3680 lb.) internal loading and 2030 kg (4475 lbs.) external loading:

   a) Title 14 CFR part 27, dated October 2, 1964, amendment 27-1 through 27-47

   b) Title 14 CFR part 36 Amendment 36-1 through 36-30

   c) Equivalent Safety Findings:

   FAA Cover Issue Paper CIP-01

   14 CFR part 27.307(b)(5) Proof of Structure Landing Gear Drop Test
   14 CFR part 27.723 Landing Gear Shock Absorption Tests
   14 CFR part 27.725 Landing Gear Limit Drop Test
   14 CFR part 27.727 Landing Gear Reserve Energy Absorption Drop Test
   14 CFR part 27.995(d) Fuel Shut-off Valve
   14 CFR part 27.1545(b)(2) Airspeed Indicator
   14 CFR part 27.49(a), 27.51(a), 27.75(a)(1), 27.141(b), 27.143(a), 27.143(c)(2), 27.143(d), 27.695(a), 27.1581, 27.1587(a)(2)(i), 27.1587(a)(2)(ii) - High Altitude Controllability

Equipment

The basic required equipment as prescribed in the applicable airworthiness regulations (see certification basis) must be installed in the helicopter for certification.

In addition, the following items of equipment are required:

Transport Canada approved Rotorcraft Flight Manual BHT-505-FM-1 dated 19 December 2016 or later approved revision for Bell 505 serial numbers 65011 to 65300 (excluding 65170).

Transport Canada approved Rotorcraft Flight Manual BHT-505-FM-2 dated 30 October 2019 or later approved revision for Bell 505 serial numbers 65170 and 65301 and subsequent.

Refer to approved Rotorcraft Flight Manual for other approved mandatory and optional equipment.

Service Information

Bell Service bulletins, structural repair manuals, vendor manuals, aircraft flight manuals, and overhaul and maintenance manuals, which contain a statement that the document is (Transport Canada) approved, are accepted by the FAA and are considered FAA approved. These approvals pertain to the approved type design only.

NOTE 1

This type certificate is for a Day/Night VFR Normal Category Rotorcraft.

NOTE 2

Certification Noise Levels are detailed in the approved Rotorcraft Flight Manual.

NOTE 3

Current weight and balance report including list of required equipment and list of equipment included in certificated empty weight, and loading instructions when necessary must be provided for each helicopter at the time of original certification. The certificated empty weight and corresponding C.G. locations must include undrainable oil and unusable fuel for the appropriate model.

NOTE 4

The following placard must be displayed in front of and in clear view of the pilot: “THIS HELICOPTER MUST BE OPERATED IN COMPLIANCE WITH OPERATING LIMITATIONS SPECIFIED IN THE APPROVED FLIGHT MANUAL”.

All placards listed in the approved flight manual must be installed in the specified locations.

NOTE 5

Information essential to the proper maintenance of the helicopter is contained in the Manufacturer’s Maintenance Manual provided with each helicopter. The approved service lives, mandatory inspections or other approved supplemental procedures of components are listed in approved Chapter 4, Airworthiness Limitations Section of the Maintenance Manual BHT-505-MPI, dated 19 December 2016 or later approved revision.

NOTE 6

Effective December 16, 2019 the name Bell Helicopter Textron Canada Limited was revised to Bell Textron Canada Limited.

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