



AGÊNCIA NACIONAL DE AVIAÇÃO CIVIL - BRASIL

TYPE CERTIFICATE DATA SHEET No. ER-2010T09

Type Certificate Holder:

BELL HELICOPTERS TEXTRON CANADA LIMITED
 12800 rue de l'Avenir
 Mirabel, Quebec, J7J 1R4
CANADA

ER-2010T09-00
 Sheet 01
 BELL HELICOPTERS
 429
 10 December 2010

This data sheet, which is part of Type Certificate No. 2010T09, prescribes conditions and limitations under which the product, for which the Type Certificate was issued, meets the airworthiness requirements of the Brazilian Aeronautical Regulations.

I - Model Bell 429 (Normal Category; Category A), approved 10 December 2010.

ENGINE 2 Pratt and Whitney Canada PW207D1 or D2 engines (See NOTE 7)
 ANAC Engine Type Certificate Data Sheet EM 9707

FUEL SPECIFICATION ASTM-D-1655, Type Jet A, Jet A-1, and Jet B; MIL-DTL-5624 Grade JP-4 and Grade JP-5; and MIL-DTL-83133 Grade JP-8.
 See Rotorcraft Flight Manual for fuel mixture and 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.

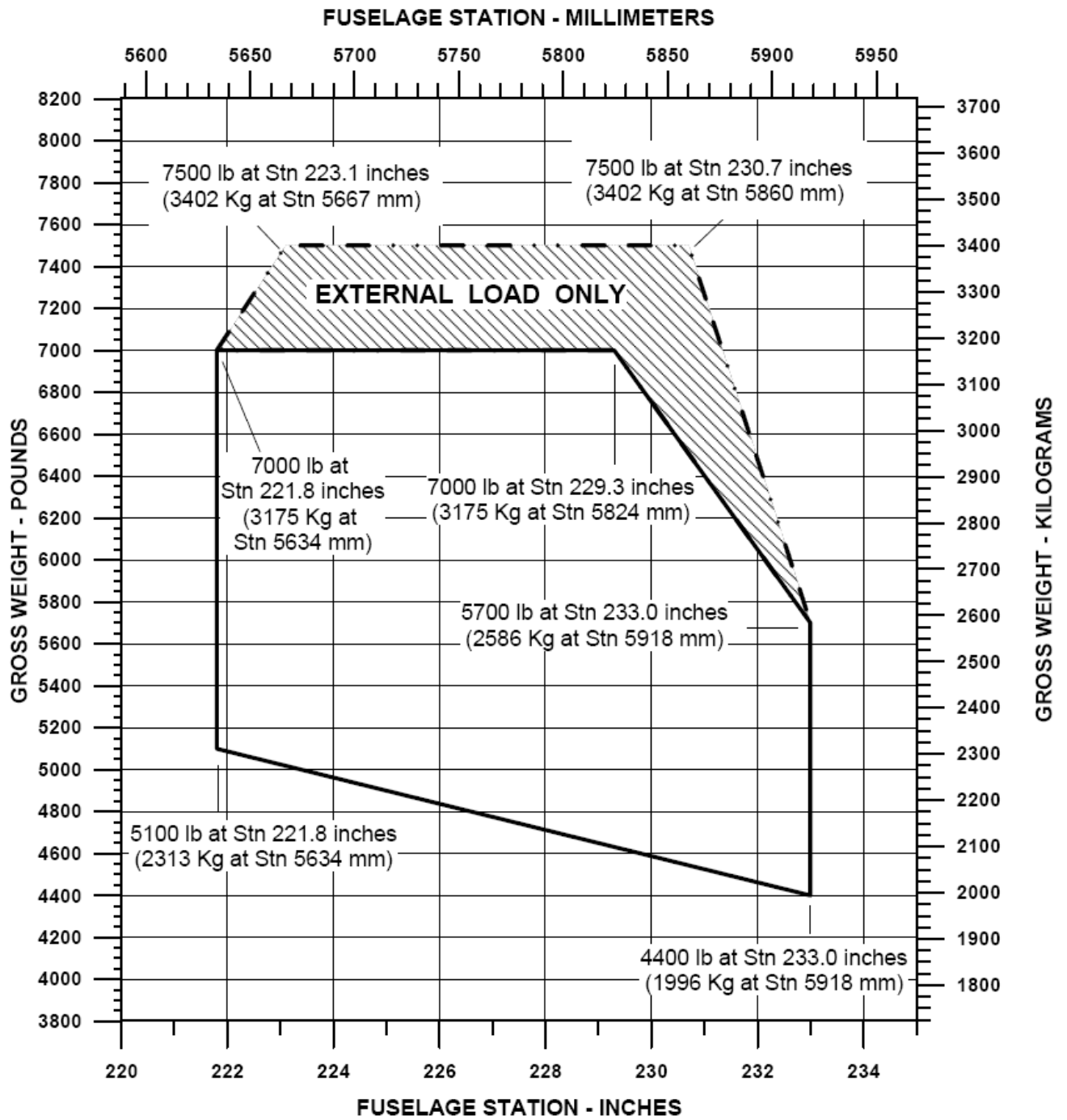
ENGINE LIMITS	Twin Engine	Torque (%)	Turbine	Gas generator
	Operation	lb-ft	temperature °C (°F)	speed %(rpm)
	Take-off (5 min)	(54,3) 523	900 (1 652)	99,8 (57 900)
	Max. Continuous	(53,3) 513	850 (1 562)	97,2 (56 400)
	One Engine			
	Inoperative			
	30 Sec. OEI	(66,3) 638	990 (1 814)	104,3 (60 500)
	2 min. OEI	(63,8) 614	950 (1 742)	102,2 (59 300)
	3 min. OEI	(60,2) 580	925 (1 697)	101,2 (58 700)
	Continuous OEI	(59,5) 573	900 (1 652)	99,8 (57 900)

See rotorcraft manual for transient limits
 Output shat speed limits is 104,5% (6 271 rpm)

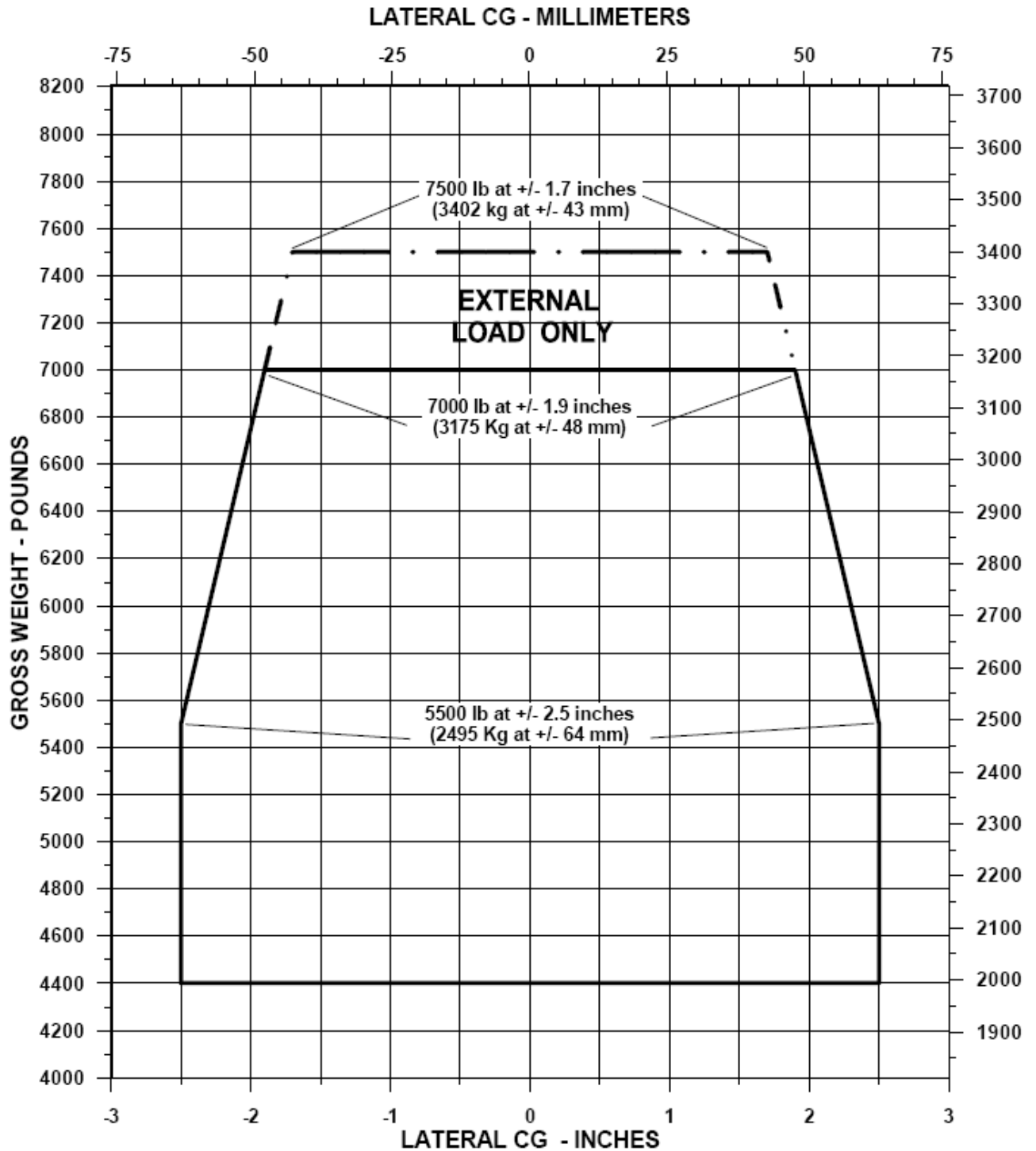
ROTOR LIMITS	Power Off		Power On	
	Maximum	423 rpm 107%	Maximum	411 rpm 104%
	Minimum	336 rpm 85%	Minimum	391 rpm 99%

TRANSMISSION TORQUE LIMITS	Both engines operating	Torque limits %
	Take off	100
	Maximum Continuous	100

	Transient	105
	One Engine Inoperative OEI	
	30 seconds OEI	66,3
	2 minute OEI	59,1
	Continuous OEI	50,0
AIRSPPEED LIMITS	Basic VNE (never exceed) is 155 KIAS. Decrease VNE for ambient conditions in accordance with the Airspeed Limitations placard in the Rotorcraft Flight Manual.	
CG LIMITS	Refer to approved Rotorcraft Flight Manual (See NOTE 1)	
EMPTY WEIGHT CG RANGE	See Maintenance Manual	
ALTITUDE LIMITS	Maximum altitude to 6 096 m (20 000 ft.) pressure altitude.	
OAT LIMITS	Minimum -40°C (-40°F) maximum 51,7°C (125°F), decreasing with pressure altitude at a standard lapse rate of 2°C (3.6°F) per 305 meters (1 000 feet).	
MAXIMUM WEIGHTS	3 175 kg (7 000 lb.) Internal Loading 3 402 kg (7 500 lb.) External Loading	
MINIMUM CREW	1 pilot (right seat)	
PASSENGERS	8 (includes crew)	
MAXIMUM BAGGAGE	Refer to approved Rotorcraft Flight Manual for loading schedule.	
FUEL CAPACITY	Refer to 429 Maintenance Manual for Fuel Capacity.	
OIL CAPACITY	Refer to 429 Maintenance Manual for Oil Capacity.	
CONTROL SYSTEM RIGGING	For rigging information refer to the 429 Maintenance Manual	
SERIAL NUMBERS ELIGIBLE	57001 and subsequent	
DATUM	Station 0 datum is 183.6 cm (72.3 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	
IMPORT REQUIREMENTS	A Brazilian Airworthiness Certificate must be issued in the basis of the Airworthiness Certificate for Exportation issued by the TCCA, including the following statement: "The rotorcraft covered by this Certificate has been inspected, tested and found to comply with the Brazilian approved type design as defined by the ANAC Type Certificate No 2010T09, and is in condition for safe operation."	



Lateral Gross Weight / CG Envelope



CERTIFICATION BASIS Brazilian Type Certificate No. 2010T09 issued on 10 December 2010 based on the RBAC 21.29 and RBAC 27, which endorses the 14 CFR Part 27, effective 02 October 1964, as amended by 27-1 thru 27-40, including Appendix B criteria for instruments flight and Appendix C criteria for Category A performance, plus
Compliance with the following additional requirements has been established:
RBAC 27 / 14 CFR part 27, amendment 27-44
RBAC 36 / 14 CFR part 36 amendment 36-1 through 36-28
Equivalent Safety Findings:
RBAC 27/ 14 CFR part 27.307(b)(5), 27.723, 27.725 and 27.727 – Landing gear drop test.
RBAC 27/ 14 CFR part 29.903(b) as required by RBAC/14 CFR part 27 appendix C, Category A Engine Isolation
RBAC 27/ 14 CFR part 27.1545(b)(2) Airspeed Indicator
Special Conditions:
SCA 2005-06; High Intensity Radiated Field (HIRF).
SCA 2005-07; 30-Second OEI Power Limits – Limit Override Feature.

EQUIPMENT The basic required equipment as prescribed in the applicable airworthiness regulations must be installed in the helicopters for certification, and, in addition, those equipments established in the Report No H.10-2450-00; and The TCCA approved Brazilian Rotorcraft Flight Manual issued for the applicable helicopters serial numbers.

NOTES:

- NOTE 1** Weight and balance.
Current weight and balance report including list of required and list of equipment included in certificated empty weight, and loading instructions when necessary must be provided for each helicopter at time of original certification.
- NOTE 2** Marking and placards. The placards specified in the approved Rotorcraft Flight Manual, including the placards in Portuguese specified in the Rotorcraft Flight Manual Supplement BHT-429-FMS-BRAZIL must be displayed in the specified locations.
- NOTE 3** Continuing airworthiness.
Information essential to the proper maintenance of the helicopter is contained in the Manufacturer's Maintenance Manual provided with the helicopter. The approved service lives, mandatory inspection and other approved supplemental procedures are listed in approved Chapter 4, Airworthiness Limitation Section of the Maintenance Manual BHT-429-MM-01, dated 19 June 2009 or later TCCA approved revision.
- NOTE 4** The differences of the Brazilian rotorcraft in relation to the basic TCCA type design are summarized below:
1. The Brazilian Airplane Flight Manual cover page and supplement
2. The Markings and placard in Portuguese or Bilingual
- NOTE 5** This Type Certificate is for Day/Night VFR operation (Single or Dual Pilot); Instrument Flight Rules (IFR) operations (Single or Dual) pilot: Category A, Normal Category Rotorcraft with engine isolation.
- NOTE 6** Certification Noise Levels are detailed in the approved Rotorcraft Flight Manual.
- NOTE 7** PW207D1 is a derivative of the PW207D with increased mechanical power and without fuel heater.
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The PW207D2 is identical to the PW207D1 but has a fuel heater installed.

NOTE 8

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

NOTE 9

The Bell 429 rotorcraft employs electronic engine controls, commonly named Full Authority Digital Engine Controls (FADEC) that are recognized to be more susceptible to Electromagnetic Interference (EMI) than rotorcraft that have manual (non-electronic) controls. EMI may be the result of radiated or conducted interference. For this reason, modifications that add or change systems that have the potential for EMI, must either be qualified to a standard acceptable to the ANAC or tested at the time of installation for interference to the FADEC. This type of testing must employ the particular FADEC diagnostic techniques and external diagnostic techniques. The test procedure must be approved.

NOTE 10

The model 429 incorporates an emergency OEI limit override function. When this feature is selected, damage to the engine and transmission is experienced and continued flight is not permitted. Use of this emergency power invalidates the airworthiness of the rotorcraft. Maintenance in accordance with the model 429 Maintenance Manual is required to return the rotorcraft to an airworthy condition.



HÉLIO TARQUÍNIO JÚNIOR

**Gerente-Geral de Certificação de Produto Aeronáutico
(General Manager, Aeronautical Product Certification)**
