



TYPE CERTIFICATE DATA SHEET

No. EASA.IM.R.506

for
Bell 429

Type Certificate Holder
Bell Helicopter Textron Canada Ltd.

12 800, rue de l'Avenir
Mirabel, Québec J7J 1R4
Canada

For Model: 429



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SECTION 1: 429

I. General

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|--|---|
| 1. Type/ Model/ Variant | |
| 1.1 Type | 429 |
| 1.2 Model | 429 |
| 1.3 Variant | - - - |
| 2. Airworthiness Category | Small Rotorcraft |
| 3. Manufacturer | Bell Helicopter Textron Canada Ltd.
12 800, rue de l'Avenir
Mirabel, Québec J7J 1R4, Canada |
| 4. Type Certification Application Date | to TCCA: 27 October 2006
to EASA: 4 August 2008 |
| 5. State of Design Authority | Transport Canada |
| 6. Type Certificate Date by TCCA | 19 June 2009 |
| 7. Type Certificate n° by TCCA | H-107 |
| 8. Type Certificate Data Sheet n° | H-107 |
| 9. EASA Type Certification Date | 23 September 2009 |

II. Certification Basis

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|---|--|
| 1. Reference Date for determining the applicable requirements | 27 October 2006 |
| 2. Airworthiness Requirements | As defined in CRI A-1, Issue 3.
CS-27 Amdt. 1, dated 30 November 2007, including:
- Appendix B - Airworthiness Criteria for Helicopter Instrument Flight
- Appendix C - Criteria for Category A.
Appendix C specifies certain sections of CS-29. For these sections CS-29 Amdt. 1, dated 30 November 2007 is applicable. |
| 3. Special Conditions | - HIRF (reference CRI F-01)
- 30 Second OEI Power Limits – Limit Override Feature (reference CRI E-1) |
| 4. Exemptions | none |
| 5. Deviations | none |
| 6. Equivalent Safety Findings | - CS 29.903 Engine Isolation (reference CRI E-03)
- CS 27.307 (b)(5), CS 27.723, CS 27.725, CS 27.727 Landing Gear Limit Drop Test (reference CRI C-02)
- CS 27/29.1545 (b)(2) Airspeed Indicator Markings of V _{NE} (Autorotation) (reference CRI B-01) |
| 7. Requirements elected to comply | none |
| 8. Environmental Protection Requirements | |
| 8.1 Noise Requirements | See EASA Type Certificate Data Sheet for Noise TCDSN EASA.IM.R.506 |
| 8.2 Emission Requirements | CS-34, Initial Issue, dated 17 October 2003 |
| 9. Operational Suitability Data (OSD) | see SECTION 2 below |



III. Technical Characteristics and Operational Limitations

1. Type Design Definition
BHTCL Drawing 429-100-001 revision CA,
or later approved revision
2. Description
Main rotor: four MR blades
Tail rotor: four TR blades
Fuselage: carbon composite and aluminium
Landing gear: skid type, and optional retractable
wheeled type (see Note 7)
Powerplant: two free turbine engines
3. Equipment
Refer to approved RFM for equipment list
4. Dimensions
 - 4.1 Fuselage
Length: 11.68 m
Width hull: 1.63 m
Height: 3.23 m
 - 4.2 Main Rotor
Diameter: 10.97 m
 - 4.3 Tail Rotor
Diameter: 1.65 m
5. Engine
 - 5.1 Model
Pratt & Whitney Canada
2 x Model PW207D1, or,
2 x Model PW207D2
(see Note 3)
 - 5.2 Type Certificate
TCCA TC/TCDS n°: E-23
EASA TC/TCDS n°: EASA.IM.E.017
 - 5.3 Limitations
 - 5.3.1 Installed Engine Limitations and Transmission Torque Limits
Refer to engine TCDS EASA.IM.E.017
 - 5.3.2 Other Engine and Transmission Torque Limits
Refer to engine TCDS EASA.IM.E.017
6. Fluids (Fuel/ Oil/ Additives)
 - 6.1 Fuel
Jet A, Jet B, Jet A-1, JP-4, JP-5, JP-8
 - 6.2 Oil
Engine: MIL-PRF-23699
Transmission and
Tail Rotor Gearbox: DOD-PRF-85734
For approved engine oil types, prohibition against mixing
brands and for approved transmission and gearbox oil
types refer to Maintenance Manual BHT-429-MM-01.
 - 6.3 Additives
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.
Anti-icing fuel additive is not required with PW207D2
engine, which incorporates fuel heater kit.
Refer to approved RFM.
7. Fluid capacities
 - 7.1 Fuel
Refer to 429 Flight Manual for fuel capacity
 - 7.2 Oil
Refer to 429 Maintenance Manual for oil capacity
 - 7.3 Coolant System Capacity
n/a



8. Air Speed Limitations	V _{NE PWR ON} : 155 KIAS V _{NE PWR OFF} : 100 KIAS
9. Rotor Speed Limitations	Power on: Maximum 100 % Maximum Cat A 104 % Minimum 99 % Power off: Maximum 107 % Minimum 85 %
10. Maximum Operating Altitude and Temperature	
10.1 Altitude (en route)	20 000 ft (6 096 m) PA
10.2 Temperature	Maximum sea level ambient air temperature for operation is 51.7°C (125°F) and decreases with HP at a standard lapse rate of 2°C (3.6°F) per 1 000 feet. Minimum ambient air temperature is -40°C (-40°F). Refer to approved RFM.
11. Operating Limitations	VFR day and night IFR (single and dual pilot) Cat A and B
12. Maximum Mass	3 175 kg (7 000 lb) internal loading 3 629 kg (8 000 lb) external loading
13. Centre of Gravity Range	Refer to approved RFM
14. Datum	Longitudinal: the datum plane (STA 0) is located at 1 836 mm (72.3 in) forward of the helicopter nose. Lateral: Fuselage median plane (buttock line BL 0.0).
15. Levelling Means	Protractor or level placed on the crew or passenger floor or seat rails, both longitudinally and laterally
16. Minimum Flight Crew	one (1) pilot
17. Maximum Passenger Seating Capacity	seven (7)
18. Passenger Emergency Exit	2, one on each side of the cabin
19. Maximum Baggage/ Cargo Loads	Refer to approved RFM for loading schedule
20. Rotor Blade Control Movement	For rigging information refer to Maintenance Manual
21. Auxiliary Power Unit (APU)	n/a
22. Life-limited Parts	See approved ALS Section in Chapter 04 Maintenance Manual BHT-429-MM-01, dated 19 June 2009, or later approved revision.

IV. Operating and Service Instructions

1. Flight Manual	Bell Rotorcraft Flight Manual, BHT-429-FM-1, dated 19 June 2009 (Transport Canada approved), or later approved revision
2. Maintenance Manual	- BHT-429-MM-01, dated 19 June 2009, or later revision - Life-limited components and approved retirement times are listed in Chapter 4, Airworthiness Limitations Section of Maintenance Manual BHT-429-MM-01, dated 19 June 2009, or later approved revision
3. Structural Repair Manual	BHT-ALL-SRM - Structural Repair Manual
4. Weight and Balance Manual	Refer to approved RFM, Section 5
5. Illustrated Parts Catalogue	BHT-429-IPB Illustrated Parts Breakdown



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|----|---------------------------------------|--|
| 6. | Miscellaneous Manuals | - BHT-ALL-SPM Standard Practices Manual
- BHT-ELEC-SPM Electrical Standard Practices Manual
- BHT-SPECTOOL-IPB Special Tools Illustrated Parts Breakdown
- CSSD-PSE-87-001 Corrosion Control Guide
- CSSD-PSE-90-001 Chafing Control Guide |
| 7. | Service Letters and Service Bulletins | As published by Bell Helicopter Textron Canada |
| 8. | Required Equipment | Refer to approved RFM and related supplements for other approved mandatory and optional equipment and MMEL.
For Ditching equipment see Note 6. |

V. Notes

1. Manufacturer's eligible serial numbers: s/n 57001, and subsequent.
2. Certification noise levels are detailed in the approved RFM.
3. PW207D1 is a derivative of the PW207D with increased mechanical power and without a fuel heater. The PW207D2 is identical to the PW207D1, but has a fuel heater installed.
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".
5. The current weight and balance report, including list of equipment included in approved empty weight and loading instructions, when necessary, must be in each rotorcraft at the time of original certification
6. The Emergency Flotation Kit (429-706-069) is approved for emergency water landing only and not for ditching per CS 27.801.
For Ditching approval per CS 27.801 the following kits must be installed:
 - Ditching equipment meeting the requirements of CS 27.1411 and CS 27.1415;
 - Ditching Kit 429-706-048;
 - If the Airline Passenger seating configuration is installed, the Bell Helicopter Kit 429-706-068 (Push-out window mounted in the hinged passenger doors).
7. The 429 Retractable Landing Gear Kit (429-705-001) converts the basic skid gear to a retractable wheeled landing gear (EASA approval 10058322)

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SECTION 2: OPERATIONAL SUITABILITY DATA (OSD)

The OSD elements listed below are approved by the European Aviation Safety Agency as per Commission Regulation (EU) 748/2012, as amended by Commission Regulation (EU) No 69/2014.

I. OSD Certification Basis

- I.1 Reference Date for determining the applicable OSD requirements
Grandfathering date: 17 February 2014
- I.2 MMEL - Certification Basis
JAR-MMEL/MEL Section 1 Subpart A & B Amendment 1
- I.3 Flight Crew Data - Certification Basis
CS-FCD, Initial Issue, dated 31 January 2014
- I.4 SIM Data - Certification Basis
Reserved
- I.5 Maintenance Certifying Staff Data - Certification Basis
Reserved

II. OSD Elements

- II.1 MMEL
European Aviation Safety Agency
Master Minimum Equipment List (MMEL) BELL 429,
BHT-429-EASA-MMEL
Revision: Original, dated 29 September 2015, or later EASA-approved revision
- II.2 Flight Crew Data
Operational Suitability Data (OSD)
Flight Crew Data Bell 429
BHT-429-EASA-FCD
Revision: OSD FC Original, 9 September 2015, or later EASA-approved revision
- II.3 SIM Data
Reserved
- II.4 Maintenance Certifying Staff Data
Reserved



SECTION: ADMINISTRATIVE

I. Acronyms and Abbreviations

CRI	Certification Review Item	RFM	Rotorcraft Flight Manual
IFR	Instrument Flight Rules	s/n	Serial Number
KIAS	Knots Indicated Air Speed	STA	Station
MMEL	Master Minimum Equipment List	TR	Tail Rotor
MR	Main Rotor	VFR	Visual Flight Rules
OSD	Operational Suitability Data	V _{NE}	Never Exceed Speed
PA	Pressure Altitude	V _{PWR OFF}	Power-off Speed (Autorotation)
PWR	Power	V _{PWR ON}	Power-on Speed

II. Type Certificate Holder Record

II.1 Type Certificate Holder	Period
Bell Helicopter Textron Canada Ltd. 12 800, rue de l'Avenir Mirabel, Québec J7J 1R4, Canada	From 19 June 2009

III. Change Record

Issue	Date	Changes	TC issue
Issue 1	23 Sep 2009	Initial issue of EASA TCDS	23 September 2009
Issue 2	18 Dec 2017	Optional Retractable Wheeled Landing Gear added; Maximum Mass with External Load updated; number of emergency exit added; Required Equipment for Ditching listed; OSD data added; EASA TCDS format updated	---

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