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# TYPE CERTIFICATE DATA SHEET

No. EASA.IM.R.506

**for**  
Bell 429

**Type Certificate Holder**  
Bell 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

1. Type/ Model/ Variant	
1.1 Type	429
1.2 Model	429
1.3 Variant	- - -
2. Airworthiness Category	Small Rotorcraft
3. Manufacturer	Bell 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

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 - 30 Second OEI Power Limits – Limit Override Feature - SCA 2016-01, Rechargeable Lithium Batteries and Battery Systems
4. Exemptions	none
5. Deviations	none
6. Equivalent Safety Findings	- CS 29.903 Engine Isolation - CS 27.307 (b)(5), CS 27.723, CS 27.725, CS 27.727 Landing Gear Limit Drop Test - CS 27/29.1545 (b)(2) Airspeed Indicator Markings of V <sub>NE</sub> (Autorotation)
7. Requirements elected to comply	none
8. Environmental Protection Requirements	
8.1 Noise Requirements	See TCDSN EASA.IM.R.506
8.2 Emission Requirements	n/a
9. Operational Suitability Data (OSD)	see SECTION 2 below



### III. Technical Characteristics and Operational Limitations

1. Type Design Definition Bell 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<sub>NE PWR ON</sub>: 155 KIAS
  - V<sub>NE PWR OFF</sub>: 100 KIAS



- |     |  |  |
|-----|--|--|
| 9.  | Rotor Speed Limitations                    | Power on: Maximum 100 %<br>Maximum Cat A 104 %<br>Minimum 99 %<br>Power off: Maximum 107 %<br>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<br>IFR (single and dual pilot)<br>Cat A and B  |
| 12. | Maximum Mass                               | 3 175 kg (7 000 lb) internal loading<br>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                         | For ALS see Chapter 04 of BHT-429-MPI, dated 10 January 2019, or later approved issue (see Note 8)   |

#### 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, dated 10 January 2019, or later issue<br>- Life-limited components and approved retirement times (ALS) are listed in Chapter 4 of BHT-429-MPI, dated 10 January 2019, or later approved issue (see Note 8) |
| 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  |
| 6. | Miscellaneous Manuals       | - BHT-ALL-SPM Standard Practices Manual<br>- BHT-ELEC-SPM Electrical Standard Practices Manual<br>- 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, or Bell 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 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)
8. In 2019 the Instructions for Continuing Airworthiness (ICA) and Airworthiness Limitations Section (ALS) were converted to digital format.  
Applicability of the legacy printed documents listed below is up to:
  - BHT-429-MM-01, revision 31, dated 16 November 2018.
  - Life-limited components and approved retirement times are listed in Chapter 4, Airworthiness Limitations Section of Maintenance Manual BHT-429-MM-01, revision 29, dated 25 July 2018.

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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

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

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
Bell Textron Canada Ltd. 12 800, rue de l'Avenir Mirabel, Québec J7J 1R4, Canada	From 16 December 2019

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	---
Issue 3	16 Dec 2019	Type Certificate Holder name change	Reissued, 16 December 2019
Issue 4	1 Mar 2021	II.3.: SCA 2016-01 added; III.1: drawing title corrected III.22., IV.2.: digital Maintenance Manual and Airworthiness Limitations Section introduced; V.: Note 8 added	---

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