This Data Sheet which is integral part of Type Certificate № TB 0023 prescribes the conditions and limitations under which the product(s) for which the Type Certificate was granted meet(s) the airworthiness requirements and environmental protection requirements, stated in Certification basis mentioned in this Data Sheet paragraph 2.II.2 of the Section 2.
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SECTION 1. GENERAL

1.1. Data Sheet (TCDS) No: TB 0023
1.2. Type Certificate Holder: Bell Helicopter Textron Canada Limited
12800 rue de l'Avenir
Mirabel, Quebec
Canada
1.3. Initial Certifying Authority: Transport Canada (TCCA)
1.4. EASA Airworthiness Category: Normal Category Rotorcraft, category B and category A (see Note 2.5.1)
1.5. Manufacturer: Bell Helicopter Textron Canada Limited
12800 rue de l'Avenir
Mirabel, Quebec
Canada

SECTION 2. MODEL BELL 429

2.I. General:
2.I.1. Helicopter designation: Bell 429
2.I.2. Application Date for State Aviation Administration of Ukraine (SAAU) validation: 19.04.2010
2.I.3. SAAU Validation Date: 26.06.2012
2.I.4. Eligible serial number: Helicopter serial number from 57001 and subsequent

2.II. Certification Basis:
2.II.1. TCCA Certification Basis: Refer to Data Sheet (TCDS) TCCA No H-107
See SAAU CRI G-1
“Airworthiness requirements for normal category rotorcraft. Part 27” (AR-27), includes Appendix B - Airworthiness Criteria for Helicopter Instrument Flight, and Appendix C - Criteria for Category A;
2.II.2. SAAU Certification Basis: - SAAU Airworthiness requirements:
- Environmental Protection Requirements:
ICAO Annex 16, Volume I, Chapter 8.
2.II.2.1. SAAU Equivalent Safety Findings:
AR 27.307 (b), 27.723, 27.725, 27.727 - proof of structure, landing gear limit drop test (CRI ST-1);
AR 27.561 – emergency landing conditions (CRI ST-5);
AR 29.903 (b) - engine isolation (CRI E-4);
AR 27.1459 - flight data recorders (CRI A-6).

2.III. Technical Characteristics and Operational Limitations:
2.III.1. Helicopter description:
The Bell 429 is a small (normal category) helicopter with twin engine, four main and four tail rotor blades. Helicopter can accommodate 9 (nine) persons (2 crew and 7 passengers maximum).

2.III.2. Type Design Definition:
The helicopter Type Design is defined by Drawing 429-100-001 Revision CG, or later approved revision, for helicopter serial number from 57001 and subsequent.
See Note 2.V.2 for Ukrainian registered helicopters.

2.III.3. Required equipment:
List of required equipment are in TCCA approved Rotorcraft Flight Manual (RFM) BHT-429-FM-1 dated 17 May 2011 or in later TCCA approved revisions and in TCCA approved Supplements to RFM (FMS).
List of required equipment for Category A, see. Note 2.V.1.
See Note 2.V.2 for Ukrainian registered helicopter also.

2.III.4. Dimensions:
Fuselage:
Length: 11.73 m
Width: 1.63 m
Height: 4.04 m
Main Rotor Diameter: 10.97 m
Tail Rotor Diameter: 1.65 m

2.III.5. Engines:
2.III.5.1. Model:
PRATT & WHITNEY CANADA - Models PW207D1 or D2 engines.
SAAU TC № TD 0030, issue 2.
Number: 2
2.III.5.3. Installed Engine Limits:

<table>
<thead>
<tr>
<th>Behaviors</th>
<th>Max torque % (lb ft.)</th>
<th>Max turbine Temp °C</th>
<th>Max gas gen. speed rpm</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Twin Engine Operation</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Take-off (5 minutes)</td>
<td>54.3 (523)</td>
<td>900</td>
<td>57900</td>
</tr>
<tr>
<td>Max. Continuous</td>
<td>53.3 (513)</td>
<td>850</td>
<td>56400</td>
</tr>
<tr>
<td><strong>One Engine Inoperative (OEI)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30 seconds OEI</td>
<td>66.3 (638)</td>
<td>990</td>
<td>60500</td>
</tr>
<tr>
<td>2 minutes OEI</td>
<td>63.8 (614)</td>
<td>950</td>
<td>59300</td>
</tr>
<tr>
<td>30 minutes OEI</td>
<td>60.2 (580)</td>
<td>925</td>
<td>58700</td>
</tr>
<tr>
<td>Continuous OEI</td>
<td>59.5 (573)</td>
<td>900</td>
<td>57900</td>
</tr>
</tbody>
</table>

*Note: See SAAM Data Sheet Type Certificate No TD 0030, issue 2.*

2.III.6. Transmission Torque Limits (%):

<table>
<thead>
<tr>
<th>Behaviors</th>
<th>Torque Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Both Engines Operating (AEO):</strong></td>
<td></td>
</tr>
<tr>
<td>Take-off</td>
<td>100%</td>
</tr>
<tr>
<td>Max Continuous</td>
<td>100%</td>
</tr>
<tr>
<td>Transient</td>
<td>105%</td>
</tr>
<tr>
<td><strong>One Engine Inoperative (OEI):</strong></td>
<td></td>
</tr>
<tr>
<td>30 seconds OEI</td>
<td>66.3%</td>
</tr>
<tr>
<td>2 minutes OEI</td>
<td>59.1%</td>
</tr>
<tr>
<td>Continuous OEI</td>
<td>50.0%</td>
</tr>
</tbody>
</table>

2.III.7. Rotor Speed Limitation:

- **Power off:**
  - maximum: 107%
  - minimum: 85%

- **Power on AEO and OEI:**
  - maximum: 104%
  - minimum: 99%
2.III.8. **Fluids (Fuel/Oil/Additives/Hydraulics):**

2.III.8.1. Fuel and additives:

<table>
<thead>
<tr>
<th>Type</th>
<th>Specification</th>
<th>Canada</th>
<th>USA</th>
<th>Ukraine</th>
<th>Russia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kerosene</td>
<td></td>
<td>CGSB 3.23</td>
<td>ASTM D1655</td>
<td>MIL-DTL-83133</td>
<td></td>
</tr>
<tr>
<td>Wide Cut</td>
<td></td>
<td>CGSB 3.22</td>
<td>ASTM D1655</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jet B, JP4</td>
<td></td>
<td>CGSB 3.22</td>
<td>MIL-DTL-5624</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High Flash</td>
<td></td>
<td>3-GP-24</td>
<td>MIL-DTL-5624</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jet Fuel TS-1</td>
<td></td>
<td></td>
<td>GSTU</td>
<td>320.00149943.011-99</td>
<td>GOST 10227-86</td>
</tr>
<tr>
<td>Jet Fuel RT</td>
<td></td>
<td></td>
<td>GSTU</td>
<td>320.00149943.007-97</td>
<td>GOST 10227-86</td>
</tr>
</tbody>
</table>

*Note: Detail information about fuels and additives uses see in Section 1 “Limitations” of Ukrainian Supplement Rotorcraft Flight Manual (RFM Ukraine – see Subsection 2.IV of this Data Sheet).*

2.III.8.2. Oils type, conditions and limitations: see the corresponding Maintenance Manual General Information (see Subsection 2.IV of this Data Sheet).

2.III.8.3. Hydraulics: see Section 1 of RFM (see Subsection 2.IV of this Data Sheet).

2.III.8.4. Fluid capacities (liters): see the corresponding Maintenance Manual General Information (see Subsection 2.IV of this Data Sheet).

2.III.9. **Air Speeds Limits** (unless otherwise specified, speeds are indicated airspeeds):

2.III.9.1. **Never exceed Airspeed** \((V_{NE})\):

- **Power ON:** 155 KIAS,
- **Power OFF:** 100 KIAS,
- **OEI:** 130 KIAS.

2.III.10. **Operating pressure altitude:**

2.III.10.1. **Maximum:** 20 000 ft (6 096 m)

2.III.10.2. **Maximum without oxygen equipment:**

- **without passengers:** 9 842 ft (3 000 m)
- **with passengers:** 7 874 ft (2 400 m)

*Note: If oxygen equipment are used, its installation on the helicopter must be approval by SAAU.*
2.III.11. **Ambient air temperature at the see level:**
- Maximum: +51.7 °C
- Minimum: -40 °C

2.III.12. **Weight, Center of Gravity and Loading**

2.III.12.1. **Maximum weight for take-off and landing:**
- Maximum Certified Weight:
  - Internal loading: 3175 kg
  - External loading*: 3402 kg

*Note: *- *If installed Cargo Hook – kit (429-706-009).*

2.III.12.2. **Datum:**
- Station 0 datum is 183.6 cm (72.3 in) forward of the nose of the helicopter.

2.III.12.3. **Center of Gravity Data:**
- In accordance with the RFM (see Subsection 2.IV of this Data Sheet).

2.III.12.4. **Baggage compartment:**
- In accordance with Sections 1 and 5 of the RFM (see Subsection 2.IV of this Data Sheet).

2.III.13. **Minimum Flight Crew:**
- 1 pilot

2.III.14. **Maximum Occupants:**
- 9 (includes crew)

2.III.15. **Emergency exits:**
- 2

2.III.16. **Placards and markings:**
- All placards and markings listed in approved RFM (see Subsection 2.IV of this Data Sheet) must be installed in the specified locations. See Note 2.V.2 also.

2.III.17. **Other Limitations:**
- See approved RFM (see Subsection 2.IV of this Data Sheet).

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2.IV. **Operating and Service Instructions:**

**For Flight operation:**
- Supplement to RFM for Ukraine – TCCA approved BHT-429-FMS-SAAU;
- Master Minimum Equipment List (MMEL) – TCCA Document dated 03 November 2010 and later approved Revisions;
Instructions for Maintenance and Continued Airworthiness:


2.V. Notes

2.V.1. Operation of the helicopter for Category A is possible only with additional equipments installed:

- Display Unit (DU) with software Version 2.0 or later (included in basic configuration);
- Radar altimeter (kit) 429-706-042;
- Increased capacity battery (44 AH or 53 AH) - (kit) 429-706-025;
- 200 amp starter generator - (kit) 429-706-020; and
- Articulated landing light (night operations) - (kit) 429-706-027.

2.V.2. In helicopters, which are included in the State Register of Civil Aircraft of Ukraine should be additionally installed:

- Ukraine Certification Kit 429-706-067-115, which includes the following:
  - Supplement to RFM (BHT-429-FMS-SAAU);
  - Placards and decals in Russian language in the agreed scope;
  - Providing of the First Aid Kit installation;
- Fixed ELT installation – Kit 429-706-015;
- Flight data recorder installation (for regular commercial operations) – Kit 429-706-058;
- Cockpit voice recorder installation (for transportation of 6 passengers if crew includes 2 crew members) - Kit 429-706-058;
- Emergency Flotation System - Kit 429-706-069, and Ditching Kit - Kit 429-706-048 (for extended over water operations at a distance from land corresponding to more than ten minutes at normal cruise speed).


The noise levels of the helicopter are not greater than the noise level prescribed in ICAO, Annex 16, Volume I, Chapter 8 noise limits. The noise levels are follows:

<table>
<thead>
<tr>
<th>Gmax, kg</th>
<th>Noise levels in control points EPNL, EPNdB</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>During take-off</td>
</tr>
<tr>
<td></td>
<td>level</td>
</tr>
<tr>
<td>3175</td>
<td>88,9</td>
</tr>
</tbody>
</table>
2.V.4. Each of the documents listed below and their revisions and supplements to them which contain a statement that it is approved by the TCCA and which are issued by Bell Helicopter Textron Canada Limited (BHTCL) in accordance with design organization authorities are accepted by the SAAU and are considered as SAAU approved:

- Rotorcraft Flight Manual;
- Maintenance Manual;
- Vendor manuals referenced in BHTCL service bulletins;
- BHTCL Service Bulletins and Modifications;
- Repair Manuals;
- Repair Instructions.

* * *

Deputy Head of Aeronautical Products
Type Certification Department

Kostiantyn Kryvodubskyi