TYPE CERTIFICATE DATA SHEET

No. EASA.IM.R.520

for

505

Type Certificate Holder
Bell Textron Canada Ltd.

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

For Model: 505
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SECTION 1: 505

I. General

1. Type/ Model/ Variant
   1.1 Type 505
   1.2 Model 505
   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: 10 September 2013 to EASA: 17 November 2014

5. State of Design Authority
   Transport Canada

6. Type Certificate Date by TCCA 19 December 2016

7. Type Certificate n° by TCCA H-112

8. Type Certificate Data Sheet n° H-112

9. EASA Type Certification Date 10 November 2017

II. Certification Basis

1. Reference Date for determining the applicable requirements 10 September 2013


3. Special Conditions
   - JAA INT/POL 27/29/1 Issue 3 HIRF Protection
   - TCCA SCA 2015-09 Rechargeable Lithium Batteries
   - Automatic Speech Recognition (ASR)

4. Exemptions none

5. Deviations none

6. Equivalent Safety Findings
   - TCCA AWM Chapter 527, sections 527.307 (b)(5), 527.723, 527.725 and 527.727 - Landing Gear Limit Drop Test
   - CS 27.921 Non-guarded Rotor Brake control
   - CS 27.995 (d) Fuel Shut off Valve
   - TCCA AWM 527.1545 (b)(2) - Airspeed Indicator Markings of VNE (autorotation)

7. Requirements elected to comply none

8. Environmental Protection Requirements

   8.1 Noise Requirements See TCDSN EASA.IM.R.520

   8.2 Emission Requirements CS-34, Amdt. 1, dated 29 January 2013

9. Operational Suitability Data (OSD) see SECTION 2 below

III. Technical Characteristics and Operational Limitations

1. Type Design Definition
   SLS-100-003-001 revision C, or later approved revision

2. Description
   Main rotor: Semi rigid teetering type, 2 all metal blades
   Tail rotor: Semi rigid teetering type, 2 all metal blades
3. Equipment

Basic equipment must be installed and operational prior to registration of the helicopter.

4. Dimensions

4.1 Fuselage

Length: 10.53 m
Width hull: 1.52 m
Height: 3.10 m

4.2 Main Rotor

Diameter: 11.28 m

4.3 Tail Rotor

Diameter: 1.65 m

5. Engine

5.1 Model

Safran Helicopter Engines
1 x Model Arrius 2R

5.2 Type Certificate

EASA TC/TCDS n°: EASA.E.031

5.3 Limitations

5.3.1 Installed Engine Limitations and Transmission Torque Limits

<table>
<thead>
<tr>
<th>Torque limits</th>
<th>Gas generator speed</th>
<th>Turbine TOT</th>
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</thead>
<tbody>
<tr>
<td>[% (lb-ft)]</td>
<td>[% (rpm)]</td>
<td>[°C]</td>
</tr>
<tr>
<td>TOP (5 min)</td>
<td>100 (442.5)</td>
<td>101.29 (54 817)</td>
</tr>
<tr>
<td>MCP</td>
<td>92 (405.6)</td>
<td>99.80 (54 011)</td>
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</table>

Note: Output shaft speed limit is 104 % (5 834 rpm)

5.3.2 Other Engine and Transmission Torque Limits

<table>
<thead>
<tr>
<th>Torque limits</th>
<th>[%]</th>
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<tr>
<td>TKOF</td>
<td>100 %</td>
</tr>
<tr>
<td>MCP</td>
<td>90 %</td>
</tr>
<tr>
<td>Transient</td>
<td>105 %</td>
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6. Fluids (Fuel/ Oil/ Additives)

6.1 Fuel

<table>
<thead>
<tr>
<th>Type</th>
<th>Specification</th>
<th>Type</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kerosene</td>
<td>Canada CGSB 3.23</td>
<td>USA</td>
<td>ASTM D1655</td>
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<tr>
<td>Jet A, A-1</td>
<td>3-GP-23</td>
<td>MIL-DTL-83133</td>
<td></td>
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<tr>
<td>JP8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wide Cut</td>
<td>Canada CGSB 3.22</td>
<td>USA</td>
<td>ASTM D1655</td>
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<tr>
<td>Jet B</td>
<td>3-GP-24</td>
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<td>JP4</td>
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<tr>
<td>High Flash</td>
<td>USA</td>
<td>MIL-DTL-5624</td>
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<tr>
<td>JP5</td>
<td>CGSB 3.22</td>
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</tbody>
</table>

Note: Refer to approved RFM for fuel temperature limitations

6.2 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

6.3 Additives

none
7. Fluid capacities
   7.1 Fuel
   Fuel tank capacity: Refer to approved RFM
   Usable fuel: Refer to approved RFM
   7.2 Oil
   Refer to approved RFM
   7.3 Coolant System Capacity
   n/a
8. Air Speed Limitations
   $V_{NE}$: 135 KIAS
   For further information refer to approved RFM.
9. Rotor Speed Limitations
   Nominal rotor rpm is 104 % (383 rpm)
   Power on:
   Maximum 107 % (394 rpm)
   Minimum 97 % (357 rpm)
   Power off:
   Maximum 115 % (422 rpm)
   Minimum 90 % (331 rpm)
10. Maximum Operating Altitude and Temperature
   10.1 Altitude
   20 000 ft (6 096 m) PA
   10.2 Temperature
   -32°C to 50°C (-25.6°F to 122°F)
11. Operating Limitations
   VFR day and night
12. Maximum Mass
   1 669 kg (3 680 lb)
13. Centre of Gravity Range
   Refer to approved RFM (see Note 3)
14. Datum
   Longitudinal:
   the datum plane (STA 0) is located at 960 mm (37.8 in)
   forward of the nose of the helicopter.
   Lateral: fuselage median plane.
15. Levelling Means
   Protractor or level placed on the crew or passenger floor
   or seat rails, both longitudinally and laterally
16. Minimum Flight Crew
   1 pilot
17. Maximum Passenger Seating Capacity
   4
18. Passenger Emergency Exit
   1 on each side of the passenger cabin
19. Maximum Baggage/ Cargo Loads
   Cabin cargo loading: 269 kg/m² (55 lb/ft²)
   Cabin cargo mass: 129 kg (425 lb)
   Baggage compartment loading: 244 kg/m² (50 lb/ft²)
   Baggage compartment mass: 113 kg (250 lb)
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 of the
   Maintenance Planning Information BHT-505-MPI-1, Issue
   3, dated 18 May 2017, or later - approved revisions

IV. Operating and Service Instructions
1. Flight Manual
   Bell Rotorcraft Flight Manual,
   BHT-505-FM-1, Issue 5, dated 24 August 2017,
   or later approved revisions
   - Maintenance Planning Information BHT-505-MPI-1
   - Maintenance Manual BHT-505-MM
   - Engine documents as per Engine TCDS EASA.E.031
   Structural Repair Manual BHT-ALL-SRM
   Refer to Maintenance Manual BHT-505-MM
5. Illustrated Parts Catalogue
   Illustrated Parts Catalogue BHT-505-IPC

6. Miscellaneous Manuals
   - Wiring Diagram Manual BHT-505-WDM
   - Component Maintenance Manual - Vendor Data BHT-505-CMM-V
   - Fault Isolation Manual BHT-505-FIM

7. Service Letters and Service Bulletins
   As published by Bell Helicopter Textron Canada,
   or Bell Textron Canada

8. Required Equipment
   Refer to approved Rotorcraft Flight Manual and related
   supplements for other approved mandatory and optional
   equipment and Master Minimum Equipment List.

V. Notes
1. Manufacturer's eligible serial numbers: s/n 65011, and subsequent.
2. All placards listed in the approved Rotorcraft Flight Manual must be installed in the specified locations.
3. The current weight and balance report, including list of equipment included in approved empty weight
   and load instructions, when necessary, must be in each rotorcraft at the time of original certification.
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
10 September 2013

I.2 MMEL - Certification Basis
Special Condition SC-CS-GEN-MMEL-H Initial Issue

I.3 Flight Crew Data - Certification Basis
CS-FCD Initial Issue

I.4 SIM Data - Certification Basis
reserved

I.5 Maintenance Certifying Staff Data - Certification Basis
reserved

II. OSD Elements

II.1 MMEL
EASA MMEL Bell 505, BHT-505-EASA-MMEL Revision -, EASA-approved on 10 November 2017, or subsequent approved revisions

II.2 Flight Crew Data
EASA Operational Suitability Data (OSD), Flight Crew Data, Bell 505, BHT-505-EASA-FCD Revision -, EASA approved on 10 November 2017, or subsequent approved revisions

II.3 SIM Data
reserved

II.4 Maintenance Certifying Staff Data
reserved
### SECTION: ADMINISTRATIVE

#### I. Acronyms and Abbreviations

<table>
<thead>
<tr>
<th>Amdt.</th>
<th>Amendment</th>
<th>PA</th>
<th>Pressure Altitude</th>
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<tbody>
<tr>
<td>CRI</td>
<td>Certification Review Item</td>
<td>s/n</td>
<td>Serial Number</td>
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<tr>
<td>FCD</td>
<td>Flight Crew Data</td>
<td>SC</td>
<td>Special Condition</td>
</tr>
<tr>
<td>TCCA</td>
<td>Transport Canada</td>
<td>STA</td>
<td>Station</td>
</tr>
<tr>
<td>KIAS</td>
<td>Knots Indicated Air Speed</td>
<td>TOP</td>
<td>Take-Off Power</td>
</tr>
<tr>
<td>MCP</td>
<td>Maximum Continuous Power</td>
<td>TOT</td>
<td>Turbine Outlet Temperature</td>
</tr>
<tr>
<td>min</td>
<td>Minute</td>
<td>TKOF</td>
<td>Take-Off</td>
</tr>
<tr>
<td>MMEL</td>
<td>Master Minimum Equipment List</td>
<td>VFR</td>
<td>Visual Flight Rules</td>
</tr>
<tr>
<td>OSD</td>
<td>Operational Suitability Data</td>
<td>VNE</td>
<td>Never Exceed Speed</td>
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#### II. Type Certificate Holder Record

### II.1 Type Certificate Holder

<table>
<thead>
<tr>
<th>Bell Helicopter Textron Canada Ltd.</th>
<th>Period</th>
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<tbody>
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<td>12 800, rue de l’Avenir Mirabel, Québec J7J 1R4, Canada</td>
<td>From 10 November 2017</td>
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<tr>
<td>Bell Textron Canada Ltd., 12 800 rue de l’Avenir, Mirabel, Québéc J7J 1R4, Canada</td>
<td>from 16 December 2019</td>
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### III. Change Record

<table>
<thead>
<tr>
<th>Issue</th>
<th>Date</th>
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<tr>
<td>Issue 1</td>
<td>10 Nov 2017</td>
<td>Initial issue of EASA TCDS</td>
<td>Initial Issue, 10 November 2017</td>
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<tr>
<td>Issue 2</td>
<td>16 Dec 2019</td>
<td>Type Certificate Holder name change</td>
<td>Reissued, 16 December 2019</td>
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