TYPE CERTIFICATE
DATA SHEET

No. EASA.R.508

for

EC 120

Type Certificate Holder
Airbus Helicopters

Marseille Provence
13725 Marignane CEDEX
France

For Model: EC 120 B
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SECTION 1: EC 120 B

I. General

1. Type/ Model/ Variant
   1.1 Type: EC 120
   1.2 Model: EC 120 B
   1.3 Variant: ---

2. Airworthiness Category: Small Rotorcraft, Category B

3. Manufacturer: Airbus Helicopters
   Marseille Provence
   13725 Marignane CEDEX, France

4. Type Certification Application Date to DGAC FR: 6 May 1994

5. State of Design Authority: EASA

6. Type Certificate Date by NAA: DGAC FR: 19 June 1997

7. Type Certificate n°: EASA.R.508
   (former DGAC FR: 189)

8. Type Certificate Data Sheet n°: EASA.R.508
   (former DGAC FR: 189)

9. EASA Type Certification Date: 28 September 2003,
   in accordance with CR (EU) 1702/2003, Article 2, 3., (a),
   (i), 2nd bullet, 1st indented bullet.

II. Certification Basis

1. Reference Date for determining the applicable requirements: 6 May 1994

2. Airworthiness Requirements: JAR 27, Issue 1, dated 6 September 1993,
   as defined in CRI A-01

3. Special Conditions: HIRF (CRI E-09)

4. Exemptions: none

5. Deviations: none

6. Equivalent Safety Findings: - Main gear box oil filter bypass
   - Powerplant instrument marking

7. Requirements elected to comply: none

8. Environmental Protection Requirements: See TCDSN EASA.R.508

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

III. Technical Characteristics and Operational Limitations

1. Type Design Definition: Basic EC 120 B definition:
   Report DMD C 000A0761 E01, Issue B

2. Description: Single gas turbine engine; three-bladed ‘Spheriflex’ main rotor,
   eight-bladed ‘Fenestron’ tail rotor; helicopter with skid type landing gear;
   seat capacity up to four passengers and one pilot

3. Equipment: As per compliance with JAR 27 requirements and
   referenced within approved RFM
4. Dimensions

4.1 Fuselage
- Length: 9.60 m
- Width hull/skids: 1.50 m/2.07 m
- Height: 3.40 m

4.2 Main Rotor
- Diameter: 10.00 m

4.3 Tail Rotor
- Diameter: 0.75 m

5. Engine

5.1 Model
- Safran Helicopter Engines (former: Turboméca)
- 1 x Model Arrius 2F

5.2 Type Certificate
- DGAC France TC/TCDS n°: M22
- EASA TC/TCDS n°: EASA.E.031

5.3 Limitations

5.3.1 Installed Engine Limitations

<table>
<thead>
<tr>
<th></th>
<th>Gas generator speed (N_G) [1] [%]</th>
<th>Exhaust gas temperature (T_4) [°C]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. TKOF (5 min)</td>
<td>101.0</td>
<td>870</td>
</tr>
<tr>
<td>Max. Continuous</td>
<td>99.5</td>
<td>830</td>
</tr>
<tr>
<td>Max. transient (5 sec)</td>
<td>103.6</td>
<td>900</td>
</tr>
<tr>
<td>Max. Continuous (starting)</td>
<td>- - -</td>
<td>800</td>
</tr>
</tbody>
</table>

Note: [1] 100%: 54 117 rpm

5.3.2 Transmission Torque Limits

- Max. transient: 110%
- Max. TKOF: 103%
- Max. Continuous: 97%

Engine torque: 100% = 477.5 Nm

Note: 100% = 300 kW at 406 rpm

6. Fluids (Fuel/ Oil/ Additives)

6.1 Fuel
- Refer to approved RFM

6.2 Oil
- Refer to approved RFM

6.3 Additives
- Refer to approved RFM

7. Fluid capacities

7.1 Fuel
- Fuel tank capacity: 410.5 litres
- Usable fuel: 406 litres

7.2 Oil
- Engine: Min. 3.0 litres
- Max. 4.9 litres
- MGB: 4.0 litres
- TGB: 0.2 litres

7.3 Coolant System Capacity
- n/a

8. Air Speed Limitations

V_{NE PWR ON}: 150 KIAS at MSL
V_{NE PWR OFF}: 120 KIAS at MSL
Reduce by 3 kt per 1 000 ft

Refer to approved RFM for airspeed with doors open or removed.
9. **Rotor Speed Limitations**

   **Power on:**
   - **Maximum:** 415 rpm
   - **Minimum:** 390 rpm

   **Power off:**
   - **Maximum:** 447 rpm (aural warning ≥ 420 rpm)
   - **Minimum:** 340 rpm (aural warning ≤ 370 rpm)

10. **Maximum Operating Altitude and Temperature**

    **10.1 Altitude**
    - **Enroute:**
      - 20 000 ft PA (6 096 m)
    - **Take-off and landing:**
      - 2 000 ft PA (610 m), or
      - 20 000 ft PA (6 096 m), when change A00075 and SB 32.001 have been embodied to the aircraft (use RFM issue 2 plus ITR 3C, or subsequent issue)

    **10.2 Temperature**
    - -30°C to ISA +35°C, not to exceed +50°C

11. **Operating Limitations**

    **VFR day**
    - operation permitted only when SB 34.001 has been embodied to the aircraft (use RFM issue 2 plus ITR 3E, or subsequent RFM issues)

    **Non-icing conditions**
    - No flight in freezing rain
    - No aerobatics

12. **Maximum Mass**
    - 1 715 kg, TKOF and LDG

13. **Centre of Gravity Range**
    - Refer to approved RFM

14. **Datum**

    **Longitudinal:**
    - the datum line (STA 0) is located at 4 000 mm-forward of main rotor head

    **Lateral:**
    - aircraft symmetry plane

15. **Levelling Means**
    - Mechanical floor

16. **Minimum Flight Crew**
    - 1 pilot

17. **Maximum Passenger Seating Capacity**
    - 1 cockpit, 3 cabin

18. **Passenger Emergency Exit**
    - 2, one door on each side of the fuselage

19. **Maximum Baggage/ Cargo Loads**

    **Baggage compartment:**
    - loading 300 kg/m²

    **Cabin compartment:**
    - Cargo floor loading 300 kg/m²

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 chapter of the MSM
IV. Operating and Service Instructions

1. Flight Manual
   - Flight Manual EC 120 B, Issue 1, approved 19 June 1997;
   - Flight Manual EC 120 B, Issue 2, Normal Revision 0, date code 16-26, approved by EASA on 16 September 2019 or subsequent approved revisions.

   - EC 120 B Aircraft Maintenance Manual - Chapter 04 (original issue approved by DGAC France, 19 June 1997) at issue 1 (approved by DGAC France, 30 March 1998)
   - EC 120 B Master Servicing Manual - Chapter 04, (original issue approved by DGAC France, 12 March 1999), or subsequent EASA-approved issues and revisions

   n/a

   See Flight Manual EC 120 B, Section 6

5. Illustrated Parts Catalogue
   EC 120 B Illustrated Parts Catalogue

6. Service Letters and Service Bulletins
   As published by Eurocopter or Airbus Helicopters

7. Required Equipment
   As per compliance with JAR 27 requirements and included in the original Type Design Standard. The RFM must be on board.

V. Notes

1. Manufacturer’s eligible serial numbers:
   s/n 1001 up to and including 1700
   Except: s/n 1004

2. Designations:
   ‘H120’ is used as marketing designation for EC 120 B helicopters.
   The commercial designation ‘COLIBRI’ is also used

   * * *
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

17 February 2014 (entry into force of Commission Regulation (EU) No 69/2014)

I.2 MMEL - Certification Basis

JAR-MMEL/MEL, Amdt. 1, Section 1, Subpart A&B, dated 5 August 2005

I.3 Flight Crew Data - Certification Basis

see AH Document 120ABN0053 - Flight Crew Data for EC 120, and,
Explanatory Notes - Transition from Operational Evaluation Board (OEB) Reports to Operational Suitability Data (OSD) for Flight Crew Data, dated 27 March 2015

II. OSD Elements

II.1 MMEL

Master Minimum Equipment List EC 120 B, Normal Revision 0, Issue 2, Date-code 10-27, approved 14 February 2011, or later EASA-approved revisions

II.2 Flight Crew Data

AH Document 120ABN0053 - Flight Crew Data for EC 120, including:
Annex A: OSD Cover Sheet to Annex B – Division Mandatory Data – Non Mandatory Data
SECTION: ADMINISTRATIVE

I. Acronyms and Abbreviations

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Definition</th>
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<tbody>
<tr>
<td>AH</td>
<td>Airbus Helicopters</td>
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<tr>
<td>ALS</td>
<td>Airworthiness Limitations Section</td>
</tr>
<tr>
<td>Amdt.</td>
<td>Amendment</td>
</tr>
<tr>
<td>CR</td>
<td>(European) Commission Regulation</td>
</tr>
<tr>
<td>HIRF</td>
<td>High Intensity Radiated Field</td>
</tr>
<tr>
<td>JAA</td>
<td>Joint Aviation Authorities</td>
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<tr>
<td>JAR</td>
<td>Joint Aviation Requirements</td>
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<tr>
<td>LDG</td>
<td>Landing</td>
</tr>
<tr>
<td>Max.</td>
<td>Maximum</td>
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<tr>
<td>Min.</td>
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<tr>
<td>min</td>
<td>Minute</td>
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<tr>
<td>MMEL</td>
<td>Master Minimum Equipment List</td>
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<tr>
<td>MSM</td>
<td>Master Servicing Manual</td>
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<tr>
<td>PA</td>
<td>Pressure Altitude</td>
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<tr>
<td>PWR</td>
<td>Power</td>
</tr>
<tr>
<td>RFM</td>
<td>Rotorcraft Flight Manual</td>
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<tr>
<td>s/n</td>
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<tr>
<td>sec</td>
<td>Seconds</td>
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<tr>
<td>STA</td>
<td>Station</td>
</tr>
<tr>
<td>TKOF</td>
<td>Take-Off</td>
</tr>
<tr>
<td>VFR</td>
<td>Visual Flight Rules</td>
</tr>
<tr>
<td>VNE</td>
<td>Never Exceed Speed</td>
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II. Type Certificate Holder Record

<table>
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<tr>
<th>Type Certificate Holder</th>
<th>Period</th>
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<tr>
<td>Eurocopter</td>
<td>1 January 1992 - 6 January 2014</td>
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<tr>
<td>Aéroport International Marseille – Provence 13725 Marignane CEDEX, France</td>
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<tr>
<td>Airbus Helicopters</td>
<td>since 6 January 2014</td>
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<tr>
<td>Marseille Provence</td>
<td>13725 Marignane CEDEX, France</td>
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III. Change Record

<table>
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<th>Issue</th>
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<th>Changes</th>
<th>TC issue</th>
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<tr>
<td>Issue 1</td>
<td>15 Jun 2010</td>
<td>Initial EASA Issue, transfer of grandfathered DGAC France TCDS 189, issue 6, and JAA TCDS N’JAA/27/97/002, issue 6, dated October 2002 into EASA format</td>
<td>Initial EASA Issue 15 June 2010</td>
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<tr>
<td>Issue 2</td>
<td>7 Jan 2014</td>
<td>Change of TC holder name from Eurocopter to Airbus Helicopters</td>
<td>Re-issued 7 January 2014</td>
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<tr>
<td>Issue 3</td>
<td>14 Dec 2015</td>
<td>OSD added; editorial changes to EASA format; new model commercial designation EC 120 B / H120 added.</td>
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<tr>
<td>Issue 4</td>
<td>19 Sep 2019</td>
<td>IV.1.: RFM Issue 2 added; V.1.: range of s/n updated; editorial changes; standardisation of TCDS data</td>
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