TYPE CERTIFICATE
DATA SHEET

N° EASA.R.124

for
SA 318

Type Certificate Holder
Airbus Helicopters

Aéroport International Marseille – Provence
13725 Marignane CEDEX
France

For Models: SA 3180 Alouette Astazou, SA 318 B, SA 318 C
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SECTION 1: SA 3180 Alouette Astazou, SA 318 B, SA 318 C

I. General

1. Type/ Model/ Variant
   
   1.1 Type
   SA 318
   
   1.2 Model
   SA 3180 Alouette Astazou
   SA 318 B
   SA 318 C
   
   1.3 Variant
   - - -
   
2. Airworthiness Category
   Small Rotorcraft
   
3. Manufacturer
   Airbus Helicopters
   Aéroport International Marseille – Provence
   13725 Marignane CEDEX, France
   
4. Type Certification Application Date to DGAC
   not recorded
   
5. State of Design Authority
   EASA
   (pre EASA: DGAC, France)
   
6. Type Certificate Date by DGAC FR
   for SA 3180 Alouette Astazou: 18 February 1964
   for SA 318 B: 18 February 1964
   for SA 318 C: 18 February 1964
   
7. Type Certificate n°
   DGAC FR: n° 1
   EASA: EASA.R.124
   
8. Type Certificate Data Sheet n°
   n° 24 (until issue 9, dated March 1993)
   EASA.R.123 (since 27 January 2010)
   
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
   not recorded
   
2. Airworthiness Requirements
   CAR-6, edition dated 11 October 1955 with additional Special Conditions notified at the French Official Services by the government of the United States (letter dated 28 May 1957)
   
3. Special Conditions
   Refer to §1 certification basis (see II.2)
   
4. Exemptions
   none
   
5. Deviations
   none
   
6. Equivalent Safety Findings
   none
   
7. Requirements elected to comply
   none
   
8. Environmental Protection Requirements
   
   8.1 Noise Requirements
   Complies with the essential requirements by virtue of early TC date, see also TCDSN N° EASA.R.124
   
   8.2 Emission Requirements
   n/a
   
9. Operational Suitability Data (OSD)
   Not required for rotorcraft that are no longer in production. CR (EU) 748/2012, as amended by CR (EU)
III. Technical Characteristics and Operational Limitations

1. Type Design Definition

SA 3180 Alouette Astazou, basic SA 3180 definition

SA 318 B definition is obtained by applying the SA 3180 definition the following modifications:
- AM 565/SS 01.07 – AM 816/SS 53-12 – AM 821/SS 11.02
- AM 798/SS 65.40 – AM 815/SS 65.32
  or AM 767/SS 65.41 with Rear Gear Box 3160-66.10.000.1 and Alouette III rear blades.
- and for versions fitted with float gear AM 641/SS 32.12 and AM 769/SS 01.07

SA 318 C definition is obtained by applying the SA 3180 definition the following modifications:
- AM 565/SS 01.07 – AM 816/SS 53-12 – AM 656/SS 05.19 – AM 816/SS 53.12 –
  AZ 155/SS 11.03 - AZ 141/SS 32.17
- AM 798/SS 65.40 – AM 815/SS 65.32 – AM 820/SS 05.24
  or AM 767/SS 65.41 with Rear Gear Box 3160-66.10.000.1 and Alouette III rear blades.

Note: Alouette Astazou may have been obtained from Alouette II by applying the Sud-Aviation modification ref AM-817. To be deemed to have been approved by EASA, this transformation must have been done before 7 March 2007 when the Alouette II was officially declared to satisfy the definition of the Annex II of Basic Regulation EC 1592/2002.

2. Description

Main rotor: three-bladed main rotor
Tail rotor: two-bladed tail rotor
Fuselage: airframe of conventional structure
Landing gear: skids, wheeled fixed landing gear, or float gear
Powerplant: single turbine

3. Equipment

As per compliance with applicable airworthiness requirements defined here above and referenced within approved Rotorcraft Flight Manual.

4. Dimensions

4.1 Fuselage
Length: 9.70 m (31.82 ft), or,
   9.75 m (31.99 ft) with Alouette III tail rotor blades
Width: 2.08 m (6.82 ft) with narrow pads gear
   2.38 m (7.81 ft) with large pads gear
   2.20 m (7.22 ft) with wheel gear
   2.75 m (9.02 ft) with float gear
Height: 2.75 m (9.02 ft)

4.2 Main Rotor
Diameter: 10.20 m (33.46 ft)

4.3 Tail Rotor
Diameter: 1.82 m (5.96 ft), or,
   1.91 m (6.27 ft) with Alouette III tail rotor blades

5. Engine

5.1 Model
SAFRAN Helicopter Engines (Turbomeca)
  1 x Model Astazou II A, or,
  1 x Model Astazou II A2

5.2 Type Certificate
EASA TC/TCDS n°: EASA.E.139
  (DGAC-FR TC/TCDS n°: 24)
5.3 Limitations

5.3.1 Installed Engine Limitations

<table>
<thead>
<tr>
<th></th>
<th>PWR [kW]</th>
<th>Gas generator [min⁻¹]</th>
<th>Temperature T4 [°C]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max rpm</td>
<td>---</td>
<td>43 500¹</td>
<td>---</td>
</tr>
<tr>
<td>Max PWR (transmission limitation)</td>
<td>299</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>MCP (turbine limitation)</td>
<td>353</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Max T4 before engine start</td>
<td>---</td>
<td>150</td>
<td></td>
</tr>
<tr>
<td>Max T4 at engine start</td>
<td>---</td>
<td>600</td>
<td></td>
</tr>
<tr>
<td>Max T4 at engine start (5 sec)</td>
<td>---</td>
<td>630</td>
<td></td>
</tr>
<tr>
<td>Max T4 at TKOF (θs ≤ 15°C)</td>
<td>---</td>
<td>490</td>
<td></td>
</tr>
<tr>
<td>Max T4 at TKOF (θs 0 45°C)</td>
<td>---</td>
<td>515</td>
<td></td>
</tr>
<tr>
<td>Max T4 continuous</td>
<td>---</td>
<td>---</td>
<td>Astazou IIA: 460</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Astazou IIA2: 490</td>
</tr>
</tbody>
</table>

**Note:** ¹ rpm ± 1 500 allowed only for quick pitch angle changes

5.3.2 Transmission Torque Limits

Refer to approved RFM

6. Fluids (Fuel/ Oil/ Additives)

6.1 Fuel

Refer to approved RFM

6.2 Oil

Refer to approved RFM for engine and gearboxes

6.3 Additives

Refer to approved RFM

6.4 Hydraulic

Refer to approved RFM

7. Fluid capacities

7.1 Fuel

Cubic tank:
Fuel tank capacity: 580 litres (153 US gal)
Usable fuel: 565 litres (149 US gal)

Quadrilobic tank:
Fuel tank capacity: 575 litres (152 US gal)
Usable fuel: 573 litres (151 US gal)

7.2 Oil

7.5 litres (1.9 US gal)

7.3 Coolant System Capacity

n/a

8. Air Speed Limitations

SA 3180 Alouette Astazou and SA 318

B versions:

<table>
<thead>
<tr>
<th>Altitude [m]</th>
<th>0</th>
<th>1 000</th>
<th>2 000</th>
<th>3 000</th>
<th>4 000</th>
<th>4 500</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mass [kg]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 600</td>
<td>185</td>
<td>165</td>
<td>145</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>1 500</td>
<td>185</td>
<td>175</td>
<td>155</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>1 400</td>
<td>185</td>
<td>185</td>
<td>165</td>
<td>145</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>1 300</td>
<td>185</td>
<td>195</td>
<td>175</td>
<td>155</td>
<td>125</td>
<td>---</td>
</tr>
<tr>
<td>1 200</td>
<td>185</td>
<td>195</td>
<td>185</td>
<td>165</td>
<td>135</td>
<td>135</td>
</tr>
<tr>
<td>1 100</td>
<td>185</td>
<td>195</td>
<td>195</td>
<td>175</td>
<td>145</td>
<td>145</td>
</tr>
<tr>
<td>1 000</td>
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<td>195</td>
<td>195</td>
<td>185</td>
<td>155</td>
<td>155</td>
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</table>
SA 318 C * version:

<table>
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<tr>
<th>Altitude [m]</th>
<th>0</th>
<th>1 000</th>
<th>2 000</th>
<th>3 000</th>
<th>4 000</th>
<th>4 500</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mass [kg]</td>
<td>V_{NE} [km/h]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 650</td>
<td>205</td>
<td>200</td>
<td>175</td>
<td>145</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>1 600</td>
<td>205</td>
<td>200</td>
<td>175</td>
<td>145</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>1 500</td>
<td>205</td>
<td>200</td>
<td>175</td>
<td>150</td>
<td>125</td>
<td>---</td>
</tr>
<tr>
<td>1 400</td>
<td>205</td>
<td>200</td>
<td>176</td>
<td>156</td>
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<td>125</td>
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<tr>
<td>1 300</td>
<td>205</td>
<td>200</td>
<td>181</td>
<td>163</td>
<td>145</td>
<td>135</td>
</tr>
<tr>
<td>1 300</td>
<td>205</td>
<td>200</td>
<td>185</td>
<td>170</td>
<td>155</td>
<td>148</td>
</tr>
<tr>
<td>1 100</td>
<td>205</td>
<td>200</td>
<td>188</td>
<td>176</td>
<td>165</td>
<td>157</td>
</tr>
</tbody>
</table>

*- For CG longitudinal position between +3 000 mm and +3 150 mm, the table values must be reduced by 10 km/h.

9. Rotor Speed Limitations
   Maximum 420 rpm
   Minimum 280 rpm
   Max continuous 362 rpm

10. Maximum Operating Altitude and Temperature
   10.1 Altitude
   14 760 ft (4 500 m) PA
   Note: Additional limitation for H/C equipped with float gear (refer to approved RFM)

10.2 Temperature
   -40 °C to +55 °C

11. Operating Limitations
   VFR day
   VFR night, when the additional equipment required by operational regulations is installed and serviceable.
   For more information refer to approved RFM.
   Non-icing conditions

12. Maximum Mass
   TKOF/LDG
   SA 3180 Alouette Astazou: 1 500 kg (3 307 lb)
   SA 318 B: 1 600 kg* (3 527 lb)
   SA 318 C: 1 650 kg (3 638 lb)

   * Flights performed at weight >1 500 kg must be recorded (except if AM 656/SS 05.19 is applied)

13. Centre of Gravity Range
   Longitudinal C.G. limits
   Forward limit: 2 720 mm (8.92 ft)
   Aft limit: 3 150 mm (10.33 ft)

   Cyclic stick setting
   normal (3.5°)
   special, Mod. S.190 (5°)

   LH limit [mm] | 135 | 146 |
   RH limit [mm] | 43  | 32  |

14. Datum
   Longitudinal:
   3 000 mm (9.84 ft) forward of main rotor centre line
   Lateral: aircraft symmetry plane

15. Levelling Means
   4 levelling legs on the central structure:
   - 2 on left lower nodes
   - 2 on right lower nodes
16. Minimum Flight Crew
   1 pilot (RH seat at STA +1 340 mm)

17. Maximum Passenger Seating Capacity
   Four
   1 in LH seat at STA +1 340
   3 on rear bench at STA +2 130

18. Passenger Emergency Exit
   Refer to approved RFM

19. Maximum Baggage/ Cargo Loads

<table>
<thead>
<tr>
<th>Configuration</th>
<th>Baggage/Cargo location</th>
<th>Max load</th>
<th>Station</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 pilot + 4 passengers – 80 kg each</td>
<td>Under the rear bench</td>
<td>100 kg (220 lb)</td>
<td>+2 200 mm</td>
</tr>
<tr>
<td>1 pilot + 1 passenger on front seats</td>
<td>Behind the front seats with the rear bench folded up</td>
<td>230 kg (507 lb)</td>
<td>+1 900 mm</td>
</tr>
</tbody>
</table>

20. Rotor Blade Control Movement
   For rigging information refer to the Maintenance Manual

21. Auxiliary Power Unit (APU)
   n/a

22. Life-limited Parts
   The periods specified in the latest approved revision of the Airworthiness Limitations section of the Maintenance Manual must not be exceeded.

IV. Operating and Service Instructions

1. Flight Manual
   SA 3180 Alouette Astazou, SA 318 B and SA 318 C Flight Manual, original edition approved by DGAC, or later DGAC-FR or EASA approved revision.

   SA 3180, SA 318 B and SA 318 C Maintenance Manual

   not recorded

   not recorded

5. Illustrated Parts Catalogue
   not recorded

6. Miscellaneous Manuals
   not recorded

7. Service Letters and Service Bulletins
   As published by Aérospatiale, Eurocopter or Airbus Helicopters

8. Required Equipment
   As per compliance with applicable requirements and in accordance with the original Type Design standard; refer to approved Flight Manual.

V. Notes

1. Manufacturer’s eligible serial numbers:
   Each Alouette Astazou version or Alouette II modified with application of the AM-817 Sud-Aviation modification before 7 March 2007.

2. The certified “optional” installations are each approved independently of the basic helicopter and an approved Flight Manual Supplement is associated to each optional installation, if necessary.

3. Commercial designation:
   ALOUETTE ASTAZOU corresponds to SA 3180 Alouette Astazou; SA 318 B and SA 318 C versions
   * * *

An agency of the European Union
SECTION: ADMINISTRATIVE

I. Acronyms and Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>°C</td>
<td>Degree Celsius</td>
</tr>
<tr>
<td>C.G.</td>
<td>Centre of Gravity</td>
</tr>
<tr>
<td>CR</td>
<td>Commission Regulation</td>
</tr>
<tr>
<td>EU</td>
<td>European Union</td>
</tr>
<tr>
<td>LDG</td>
<td>Landing</td>
</tr>
<tr>
<td>Max</td>
<td>Maximum</td>
</tr>
<tr>
<td>MCP</td>
<td>Maximum Continuous Power</td>
</tr>
<tr>
<td>n/a</td>
<td>not applicable</td>
</tr>
<tr>
<td>n°</td>
<td>Number</td>
</tr>
<tr>
<td>OSD</td>
<td>Operational Suitability Data</td>
</tr>
<tr>
<td>PA</td>
<td>Pressure Altitude</td>
</tr>
<tr>
<td>PWR</td>
<td>Power</td>
</tr>
<tr>
<td>RFM</td>
<td>Rotorcraft Flight Manual</td>
</tr>
<tr>
<td>rpm</td>
<td>Rounds per minute</td>
</tr>
<tr>
<td>s/n</td>
<td>Serial Number</td>
</tr>
<tr>
<td>sec</td>
<td>Seconds</td>
</tr>
<tr>
<td>STA</td>
<td>Station</td>
</tr>
<tr>
<td>TC</td>
<td>Type Certificate</td>
</tr>
<tr>
<td>TCDS</td>
<td>Type Certificate Data Sheet</td>
</tr>
<tr>
<td>TKOF</td>
<td>Take-Off</td>
</tr>
<tr>
<td>VFR</td>
<td>Visual Flight Rules</td>
</tr>
<tr>
<td>V_ne</td>
<td>Never Exceed Speed</td>
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II. Type Certificate Holder Record

<table>
<thead>
<tr>
<th>Type Certificate Holder</th>
<th>Period</th>
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<tr>
<td>Sud Aviation</td>
<td>37, Boulevard de Montmorency 75016 Paris, France until 31 December 1996</td>
</tr>
<tr>
<td>Aérospatiale</td>
<td>37, Boulevard de Montmorency 75781 Paris CEDEX 16, France from 1 January 1970 until 31 December 1991</td>
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<td>Eurocopter France</td>
<td>Aéroport International Marseille – Provence 13725 Marignane CEDEX, France, France from 1 January 1992 until 30 May 1997</td>
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<td>Eurocopter</td>
<td>Aéroport International Marseille – Provence 13725 Marignane CEDEX, France, France from 1 June 1997 until 6 January 2014</td>
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<td>Airbus Helicopters</td>
<td>Aéroport International Marseille – Provence 13725 Marignane CEDEX, France, France since 7 January 2014</td>
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III. Change Record

<table>
<thead>
<tr>
<th>Issue</th>
<th>Date</th>
<th>Changes</th>
<th>TC issue</th>
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<tbody>
<tr>
<td>Issue 01</td>
<td>27 Jan 2010</td>
<td>Initial issue of EASA TCDS</td>
<td>Re-issued on 27 January 2010</td>
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<tr>
<td>Issue 02</td>
<td>7 Jan 2014</td>
<td>The company name has been changed to AIRBUS HELICOPTERS</td>
<td>Re-issued on 7 January 2014</td>
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<tr>
<td>Issue 03</td>
<td>14 Feb 2017</td>
<td>New TCDS template, reference to OSD, minor editorial corrections</td>
<td>- - -</td>
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