TYPE CERTIFICATE
DATA SHEET

No. EASA.R.146

for
AS 355

Type Certificate Holder
Airbus Helicopters
Aéroport International Marseille – Provence
13725 Marignane CEDEX
France

For Models:
AS 355 E
AS 355 F, AS 355 F1, AS 355 F2
AS 355 N, AS 355 NP
TABLE OF CONTENTS

SECTION 1: AS 355 E ................................................................. 3
  I. General ........................................................................... 3
  II. Certification Basis ......................................................... 3
  III. Technical Characteristics and Operational Limitations ............. 3
  IV. Operating and Service Instructions ....................................... 6
  V. Notes ........................................................................... 6

SECTION 2: AS 355 F ................................................................. 8
  I. General ........................................................................... 8
  II. Certification Basis ......................................................... 8
  III. Technical Characteristics and Operational Limitations ............. 8
  IV. Operating and Service Instructions ....................................... 11
  V. Notes ........................................................................... 12

SECTION 3: AS 355 F1 ............................................................... 13
  I. General ........................................................................... 13
  II. Certification Basis ......................................................... 13
  III. Technical Characteristics and Operational Limitations ............. 13
  IV. Operating and Service Instructions ....................................... 16
  V. Notes ........................................................................... 17

SECTION 4: AS 355 F2 ............................................................... 18
  I. General ........................................................................... 18
  II. Certification Basis ......................................................... 18
  III. Technical Characteristics and Operational Limitations ............. 18
  IV. Operating and Service Instructions ....................................... 21
  V. Notes ........................................................................... 22

SECTION 5: AS 355 N ............................................................... 23
  I. General ........................................................................... 23
  II. Certification Basis ......................................................... 23
  III. Technical Characteristics and Operational Limitations ............. 23
  IV. Operating and Service Instructions ....................................... 27
  V. Notes ........................................................................... 27

SECTION 6: AS 355 NP ............................................................... 28
  I. General ........................................................................... 28
  II. Certification Basis ......................................................... 28
  III. Technical Characteristics and Operational Limitations ............. 29
  IV. Operating and Service Instructions ....................................... 31
  V. Notes ........................................................................... 32

SECTION 7: OPERATIONAL SUITABILITY DATA (OSD) .................... 33
  OSD Elements ...................................................................... Error! Bookmark not defined.

SECTION: ADMINISTRATIVE ..................................................... 34
  I. Acronyms and Abbreviations ............................................ 34
  II. Type Certificate Holder Record .......................................... 34
  III. Change Record ................................................................ 34
SECTION 1: AS 355 E

I. General

1. Type/Model
   1.1 Type AS 355
   1.2 Model AS 355 E

2. Airworthiness Category Small Rotorcraft

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

4. Type Certification Application Date to DGAC FR: 4 January 1979

5. State of Design Authority EASA

6. Type Certificate Date by NAA DGAC FR: 24 October 1980

7. Type Certificate n° EASA.R.146 (former DGAC FR: 146)

8. Type Certificate Data Sheet n° EASA.R.146 (former DGAC FR: 146)

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
   For Airworthiness and Environmental Protection: 4 January 1979
   for OSD elements: 17 February 2014

2. Airworthiness Requirements
   2.1 For a/c equipped with Emergency Floataction System (EFS) (removable parts P/N / MPN: [223244-0 / 704A42690057]) FAR 27 Amdt. 16 included as above (2.1) with the following additional requirement of CS 27, Amdt. 10, dated 27 January 2023: 27.1587-b3

3. Special Conditions Additional and special conditions specified in letter DGAC 53 879, dated 11 August 1980

4. Exemptions none

5. Deviations none

6. Equivalent Safety Findings none

7. Environmental Protection Requirements
   7.1 Noise Requirements not recorded
   7.2 Emission Requirements n/a

8. Operational Suitability Data (OSD) (For OSD elements see SECTION 7 below)

III. Technical Characteristics and Operational Limitations

1. Type Design Definition 350A00.0000 + 350A04.4077

2. Description
   Main rotor: three (3) blades
   Tail rotor: two (2) blades
   Fuselage: metal-sheet monocoque
   Landing gear: skid type
   Powerplant: two turbo-shaft engines
3. Equipment
The approved equipment form the subject of AH document reference 350A.04.4320. The basic equipment required by the applicable airworthiness regulation (see certification basis), must be installed on the aircraft for the certification and at any moment later on. The RFM must be on board of the aircraft.

4. Dimensions
4.1 Fuselage
- Length: 10.93 m
- Width hull: 1.87 m
- Height: 3.14 m

4.2 Main Rotor
- Diameter: 10.69 m

4.3 Tail Rotor
- Diameter: 1.86 m

5. Engine
5.1 Model
Rolls-Royce Corporation (former: Allison) 2 x Model 250-C20F

5.2 Type Certificate
- FAA TC/TCDS: E4CE
- EASA TC/TCDS: EASA.IM.E.052

5.3 Limitations
5.3.1 Installed Engine Limitations and Transmission Torque Limits

<table>
<thead>
<tr>
<th>TQ limits *[%]</th>
<th>Gas generator speed **[%]</th>
<th>Output shaft speed [rpm (rpm)] (corresponding to MR rpm)</th>
<th>Exhaust gas Temperature [°C]</th>
</tr>
</thead>
<tbody>
<tr>
<td>AEO-TOP</td>
<td>73</td>
<td>105</td>
<td>6 196 (406)</td>
</tr>
<tr>
<td>AEO-MCP</td>
<td>73</td>
<td>105</td>
<td>6 196 (406)</td>
</tr>
<tr>
<td>OEI-MCP</td>
<td>100</td>
<td>105</td>
<td>6 196 (406)</td>
</tr>
</tbody>
</table>

Note:
* 100% torque → 521 Nm
** 105 % gas generator speed → 53 519 rpm

5.3.2 Other Engine and Transmission Torque Limits
Refer to approved RFM for limitations in transient conditions

6. Fluids (Fuel/Oil/Additives)
Refer to approved RFM

7. Fluid capacities
7.1 Fuel
- Fuel tank capacity: 736.7 litres
- Usable fuel: 736.0 litres

7.2 Oil
- Engine: 5.7 litres (system capacity)
- MGB: 11.0 litres (system included)
- TGB: 0.33 litre

7.3 Coolant System Capacity
n/a

8. Air Speed Limitations
Power-on $V_{NE}$
- Absolute $V_{NE}$: 150 KIAS (278 km/h) for HP=0
  - at altitude, decrease by 2.5 kt per 1 000 ft (15 km/h every 1 000 m)
  - in cold weather with OAT below -35°C, subtract 10 kt (19 km/h) from the above $V_{NE}$

Power-off $V_{NE}$
- Absolute $V_{NE}$: 120 KIAS (222 km/h) for HP=0
  - at altitude, decrease by 2.5 kt per
9. Rotor Speed Limitations

Power-on flight:
- AEO: 390 (+4, -5) rpm
- OEI: 375 to 394 rpm

In autorotation:
- Max. 425 rpm
- Min. 330 rpm (aural warning at 360 rpm)

10. Maximum Operating Altitude and Temperature

10.1 Altitude
- Maximum operating PA: 16 000 ft (4 875 m)
- Maximum TKOF/LDG PA: 16 000 ft (4 875 m)

10.2 Temperature
- Refer to approved RFM

11. Operating Limitations

- VFR day and night
- IFR
- No flights in icing conditions
- No aerobatic manoeuvres
- For more information refer to RFM

12. Maximum Mass

- 2 100 kg

13. Centre of Gravity Range

Longitudinal C.G. limits

- Maximum deviation on right: 90 mm
- Maximum deviation on left: 160 mm

The weight breakdown and C.G. limit document containing the list of equipment included in the certificated empty weight and the loading instructions shall accompany the helicopter at the time of the initial certification and on a permanent basis from that period on.

In order to obtain the most correct weight and C.G. data, the helicopter shall be jacked up its lifting points rather than using the skids. Should modifications affecting weight and C.G. position to be incorporated, the RFM instructions shall be referred to.

Lateral C.G. Limits

- Maximum deviation on right: 90 mm
- Maximum deviation on left: 160 mm

14. Datum

Longitudinal:
- The datum plane (STA 0) is located at 3 400 mm forward of main rotor head centre

Lateral: Rotorcraft symmetry plane
15. Levelling Means  
Transmission deck

16. Minimum Flight Crew  
1 pilot (right seat)

17. Maximum Passenger Seating Capacity  
5 6, when the aircraft is equipped with the optional two-place seat. This optional item is to be used in accordance with the associated RFMs

18. Passenger Emergency Exit  
Refer to approved RFM

19. Maximum Baggage/Cargo Loads

<table>
<thead>
<tr>
<th>Location</th>
<th>Max. load [kg]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. load for R.H. lateral hold</td>
<td>100</td>
</tr>
<tr>
<td>Max. load for L.H. lateral hold</td>
<td>120</td>
</tr>
<tr>
<td>Max. load for rear hold</td>
<td>80</td>
</tr>
<tr>
<td>Max. load on cabin floor</td>
<td>FWD 150</td>
</tr>
<tr>
<td></td>
<td>AFT 310</td>
</tr>
</tbody>
</table>

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

21. Auxiliary Power Unit (APU)  
n/a

22. Life-limited Parts  
Maintenance Manual AS 355 E Chapter 5 "Master Servicing Recommendations" have been accepted by DGAC-F to carry out maintenance of AS 355 E helicopters. Chapter 04 "Airworthiness limitations" contains statements that must mandatorily be respected.

IV. Operating and Service Instructions

1. Flight Manual  
AS 355 E Flight Manual, initially approved by DGAC-FR on 24 October 1980, or later EASA (or DGAC-FR) approved revision (reference: in English language).

AS 355 E PRE – Chapter 04 (Airworthiness Limitations), initially approved by DGAC-FR on 24 October 1980, or later EASA (or DGAC-FR) approved revision/edition (reference: in English language).
- AS 355 E Maintenance Manual
- AS 355 E Overhaul Manual
  Compatibility between optional items of equipment is described:
  - in the Master Servicing Manual Chapter 5 for installation
  - in section 10 of RFM for operation

MRS AS 355

Refer to approved RFM

5. Illustrated Parts Catalogue  
AS 355 E Illustrated Parts Catalogue

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

7. Required Equipment  
Refer to EASA-approved RFM and related supplements for other approved mandatory and optional equipment and Master Minimum Equipment List.

V. Notes
V. Notes

1. **Manufacturer’s eligible serial numbers:**
   For AS 355 E: s/n 5001, and subsequent.

2. **The commercial designation is:** Ecureuil II / TwinStar

3. **Placards:**
   3.1 The following placard must be fitted in a way that the pilot can see it clearly:
      “The markings and placards installed on this helicopter contain operating limitations which must be complied with when operating this rotorcraft. Other operating limitations which must be complied with when operating this rotorcraft are contained in the Rotorcraft Flight Manual. The airworthiness limitations section of the rotorcraft maintenance manual must be complied with”
   3.2 Refer to the RFM as regards the other placards.

***
SECTION 2: AS 355 F

I. General

1. Type/ Model/ Variant
   1.1 Type
   AS 355
   1.2 Model
   AS 355 F

2. Airworthiness Category
   Small Rotorcraft
   See Note 4 for Category B and “Equivalence Category A”

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

4. Type Certification Application Date
to DGAC FR: 4 January 1979

5. State of Design Authority
   EASA

6. Type Certificate Date by DGAC-F
   DGAC FR: 14 April 1981

7. Type Certificate n°
   EASA.R.146 (former DGAC FR: 146)

8. Type Certificate Data Sheet n°
   EASA.R.146 (former DGAC FR: 146)

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

II. Certification Basis

1. Reference Date for determining the applicable requirements
   For Airworthiness and Environmental Protection:
   4 January 1979
   for OSD elements: 17 February 2014.

2. Airworthiness Requirements
   2.1
   FAR 27 Amdt. 16 included; performance of AS 355 F supplement 11-2 of RFM were established in accordance
   with FAR 29 requirements Part 29-45 through 29-79 (see Note 4)
   as above (2.1) with the following additional requirement
   of CS 27, Amdt. 10, dated 27 January 2023: 27.1587-b3

2.2 For a/c equipped with Emergency Floatation System (EFS) (removable parts P/N / MPN: [223244-0 / 704A42690057])

3. Special Conditions
   Additional and special conditions specified in letter DGAC 53 879, dated 11 August 1980

4. Exemptions
   none

5. Deviations
   none

6. Equivalent Safety Findings
   none

7. Environmental Protection Requirements
   7.1 Noise Requirements
   not recorded
   7.2 Emission Requirements
   n/a

8. Operational Suitability Data (OSD)
   (For OSD elements see SECTION 7 below)

III. Technical Characteristics and Operational Limitations

1. Type Design Definition
   355A043186

2. Description
   Main rotor: three (3) blades
   Tail rotor: two (2) blades
Fuselage: metal-sheet monocoque  
Landing gear: skid type  
Powerplant: two turbo-shaft engines

3. Equipment

The approved equipment form the subject of AH document reference 350A.04.4320. The basic equipment required by the applicable airworthiness regulation (see certification basis), must be installed on the aircraft for the certification and at any moment later on. The RFM must be on board of the aircraft.

4. Dimensions

4.1 Fuselage

<table>
<thead>
<tr>
<th>Length</th>
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<tr>
<td>Width hull</td>
<td>1.87 m</td>
</tr>
<tr>
<td>Height</td>
<td>3.14 m</td>
</tr>
</tbody>
</table>

4.2 Main Rotor

| Diameter | 10.69 m |

4.3 Tail Rotor

| Diameter | 1.86 m |

5. Engine

5.1 Model

Rolls-Royce Corporation (former: Allison)

2 x Model 250-C20F

5.2 Type Certificate

FAA TC/TCDS: E4CE  
EASA TC/TCDS: EASA.IM.E.052

5.3 Limitations

5.3.1 Installed Engine Limitations and Transmission Torque Limits

| TQ limits  |
|------------|-----------|
| Gas generator speed | Output shaft speed | Exhaust gas temperature |
| *[%] | **[%] | [rpm (rpm)] | [°C] |
| AEO-TOP | 73 | 105 | 6 196 (406) | 810 |
| AEO-MCP | 73 | 105 | 6 196 (406) | 738 |
| OEI-MCP | 100 | 105 | 6 196 (406) | 810 |

Note:  
* 100% torque → 521 Nm  
** 105 % gas generator speed → 53519 rpm

5.3.2 Other Engine and Transmission Torque Limits

Refer to approved RFM for limitations in transient conditions

6. Fluids (Fuel/ Oil/ Additives)

7. Fluid capacities

7.1 Fuel

Fuel tank capacity: 736.7 litres  
Usable fuel: 736.0 litres

7.2 Oil

Engine: 5.7 litres (system capacity)  
MGB: 11 litres (system included)  
TGB: 0.33 litre

7.3 Coolant System Capacity

n/a

8. Air Speed Limitations

Power-on $V_{NE}$: 150 KIAS (278 km/h) for HP=0  
- at altitude, decrease by 2.5 kt per 1 000 ft (15 km/h every 1 000 m)  
- in cold weather with OAT below -35°C, subtract 10 kt (19 km/h) from the above $V_{NE}$
Power-off $V_{NE}$:
Absolute $V_{NE}$: 120 KIAS (222 km/h) for HP=0
  - at altitude, decrease by 2.5 kt per 1 000 ft (15 km/h every 1 000 m)
  - in cold weather with OAT below -25°C, subtract 20 kt (37 km/h) from the above $V_{NE}$, without $V_{NE}$ being less than 65 KIAS (120 km/h)

Refer to RFM for approved airspeed with doors open or removed

9. Rotor Speed Limitations
Power-on flight:
  - AEO: 390 (+4, -5) rpm
  - OEI: 375 to 394 rpm
In autorotation:
  - Max. 425 rpm
  - Min. 330 rpm (aural warning at 360 rpm)

10. Maximum Operating Altitude and Temperature
10.1 Altitude
  - Maximum operating PA: 16 000 ft (4 875 m)
  - Maximum TKOF/LDG PA: 16 000 ft (4 875 m)

10.2 Temperature
  - Refer to approved RFM

11. Operating Limitations
  - VFR day and night
  - IFR
  - No flights in icing conditions
  - No aerobatic manoeuvres
  - For more information refer to RFM

12. Maximum Mass
  - 2 300 kg

13. Centre of Gravity Range
  - Longitudinal C.G. limits
  - Lateral C.G. Limits
    - Max. deviation on right: 90 mm
    - Max. deviation on left: 160 mm
  - The weight breakdown and C.G. limit document containing the list of equipment included in the certificated empty weight and the loading instructions shall accompany the helicopter at the time of the initial certification and on a permanent basis from that period on.
  - In order to obtain the most correct weight and C.G. data, the helicopter shall be jacked up its lifting points rather than using the skids. Should modifications affecting weight and C.G. position to be incorporated, the RFM instructions shall be referred to.

14. Datum
  - Longitudinal:
    - the datum plane (STA 0) is located at 3 400 mm forward
15. Levelling Means
   Transmission deck

16. Minimum Flight Crew
   1 pilot (right seat)

17. Maximum Passenger Seating Capacity
   6, when the aircraft is equipped with the optional two-place seat. This optional item is to be used in accordance with the associated RFM supplement.

18. Passenger Emergency Exit
   Refer to approved RFM

19. Maximum Baggage/ Cargo Loads

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<td>150</td>
</tr>
<tr>
<td>AFT</td>
<td>310</td>
</tr>
</tbody>
</table>

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

21. Auxiliary Power Unit (APU)
   n/a

22. Life-limited Parts
   Maintenance Manual AS 355 F Chapter 5 "Master Servicing Recommendations" have been initially accepted by DGAC FR to carry out maintenance of AS 355 F helicopters. Chapter 04"Airworthiness limitations" contains statements that must mandatorily be respected.

IV. Operating and Service Instructions

1. Flight Manual

   AS 355 F PRE – Chapter 04 (Airworthiness Limitations), initially approved by DGAC FR on 14 April 1981, or later EASA (DGAC FR) approved revision/edition (reference: in English language).
   AS 355 F Maintenance Manual
   AS 355 F Overhaul Manual
   Compatibility between optional items of equipment is described:
   - in the "Master Servicing Recommendations" Chapter 5-80 for installation
   - in section 10 of RFM for operation.

   MRS AS 355

   Refer to approved RFM

5. Illustrated Parts Catalogue
   AS 355 F Illustrated Parts Catalogue

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

7. Required Equipment
   Refer to EASA-approved RFM and related supplements for other approved mandatory and optional equipment and Master Minimum Equipment List.
V. Notes

1. Manufacturer’s eligible serial numbers:
   AS 355 F: s/n 5044, and subsequent of version.
   AS 355 E: aircraft converted into AS 355 F by application of Service Bulletin n°01.02

2. The commercial designation is: Ecureuil II / TwinStar

3. Placards:
   3.1 The following placard must be fitted in a way that the pilot can see it clearly:
      “The markings and placards installed on this helicopter contain operating limitations which must be
      complied with when operating this rotorcraft. Other operating limitations which must be
      complied with when operating this rotorcraft are contained in the Rotorcraft Flight Manual. The
      airworthiness limitations section of the rotorcraft maintenance manual must be complied with”.
   3.2 Refer to the RFM as regards the other placards.

4. The AS 355 F is certificated as Group A under BCAR Section G. This certification basis provides an
   equivalence to Category A in accordance with EASA AIR-OPS (EU regulation nº 965/2012) GM1
   CAT.POL.H.200 & CAT.POL.H.300 & CAT.POL.H.400 & when the following conditions are met:
   1. The aircraft is equipped with the “Engines fire-extinguishing system” OP0691 and either OP0692
      or OP0913;
   2. The aircraft is equipped with a second fan wheel on the engine and main gearbox oil cooling unit
      OP9009/07 9013/07 9016;
   3. The aircraft is operated in accordance with the RFM Supplement 11-2 – “Take-off and landing
      procedures and performance data on clear airfield and helipad with one engine inoperative”.

   * * *
SECTION 3: AS 355 F1

I. General

1. Type/ Model
   1.1 Type AS 355
   1.2 Model AS 355 F1

2. Airworthiness Category
   Small Rotorcraft
   See Note 4 for Category B and “Equivalence Category A”

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

4. Type Certification Application Date
   to DGAC FR: 31 January 1983

5. State of Design Authority
   EASA

6. Type Certificate Date by DGAC-F
   DGAC FR: 9 May 1983

7. Type Certificate n°
   EASA.R.146
   (former DGAC FR: 168)

8. Type Certificate Data Sheet n°
   EASA.R.146
   (former DGAC FR: 168)

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

II. Certification Basis

1. Reference Date for determining the applicable requirements
   For Airworthiness and Environmental Protection:
   4 January 1979
   for OSD elements: 17 February 2014.

2. Airworthiness Requirements
   2.1 FAR 27 Amdt. 16 included; Performance of AS 355 F1
      supplement 11-2 of RFM were established in accordance
      with FAR 29 requirements Part 29-45 through 29-79 (see
      Note 4)
      as above (2.1) with the following additional requirement
      of CS 27, Amdt. 10, dated 27 January 2023: 27.1587-b3

3. Special Conditions
   Additional and special conditions specified in letter DGAC

4. Exemptions
   none

5. Deviations
   none

6. Equivalent Safety Findings
   none

7. Environmental Protection Requirements
   7.1 Noise Requirements
   See TCDSN EASA.R.146

   7.2 Emission Requirements
   n/a

8. Operational Suitability Data (OSD)
   (For OSD elements see SECTION 7 below)

III. Technical Characteristics and Operational Limitations

1. Type Design Definition
   355A043317
2. Description
Main rotor: three (3) blades
Tail rotor: two (2) blades
Fuselage: metal-sheet monocoque
Landing gear: skid type
Powerplant: two turbo-shaft engines

3. Equipment
The approved equipment form the subject of AH document reference 350A.04.4320.
The basic equipment required by the applicable airworthiness regulation (see certification basis), must be
installed on the aircraft for the certification and at any moment later on.
The RFM must be on board of the aircraft.

4. Dimensions
4.1 Fuselage
Length: 10.93 m
Width hull: 1.87 m
Height: 3.14 m

4.2 Main Rotor
Diameter: 10.69 m

4.3 Tail Rotor
Diameter: 1.86 m

5. Engine
5.1 Model
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5.2 Type Certificate
FAA TC/TCDS: E4CE
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<td>105</td>
<td>6 196 (406)</td>
<td>810</td>
</tr>
<tr>
<td>AEO-MCP</td>
<td>73***</td>
<td>105</td>
<td>6 196 (406)</td>
<td>738</td>
</tr>
<tr>
<td>OEI-MCP</td>
<td>100</td>
<td>105</td>
<td>6 196 (406)</td>
<td>810</td>
</tr>
</tbody>
</table>

Note: *100% torque → 521 Nm
**105 % gas generator speed → 53 519 rpm
***Maximum continuous torque limited to 406 Nm (78 %) for <55 KIAS

5.3.2 Other Engine and Transmission Torque Limits
Refer to approved RFM for limitations in transient conditions

6. Fluids (Fuel/ Oil/ Additives)
Refer to approved RFM

7. Fluid capacities
7.1 Fuel
Fuel tank capacity: 736.7 litres
Usable fuel: 736.0 litres

7.2 Oil
Engine: 5.7 litres (system capacity)
MGB: 11 litres (system included)
TGB: 0.33 litre

7.3 Coolant System Capacity
n/a

8. Air Speed Limitations
Power-on $V_{NE}$
Absolute $V_{NE}$: 150 KIAS (278 km/h) for HP=0
  - at altitude, decrease by 2.5 kt per
  1 000 ft (15 km/h every 1 000 m)
- in cold weather with OAT below -35°C, subtract 10 kt (19 km/h) from the above $V_{NE}$

Power-off $V_{NE}$

Absolute $V_{NE}$: 120 KIAS (222 km/h) for HP=0

- at altitude, decrease by 2.5 kt per 1 000 ft (15 km/h every 1 000 m)
- in cold weather with OAT below -25°C, subtract 20 kt (37 km/h) from the above $V_{NE}$, without $V_{NE}$ being less than 65 KIAS (120 km/h)

Refer to RFM for approved airspeed with doors open or removed

9. Rotor Speed Limitations

Power-on flight:

AEO: 390 (+4, -5) rpm

OEI: 375 to 394 rpm

In autorotation:

Max. 425 rpm (aural warning at 410 rpm)

Min. 330 rpm (aural warning at 360 rpm)

10. Maximum Operating Altitude and Temperature

10.1 Altitude

Max. operating PA: 16 000 ft (4 875 m)

Max. TKOF/LDG PA: 16 000 ft (4 875 m)

10.2 Temperature

Refer to approved RFM

11. Operating Limitations

VFR day and night

IFR

No flights in icing conditions

No aerobatic manoeuvres

For more information refer to RFM

12. Maximum Mass

2 400 kg

13. Centre of Gravity Range

Longitudinal C.G. limits

Lateral C.G Limits

maximum deviation on right: 90 mm

maximum deviation on left: 160 mm

The weight breakdown and C.G. limit document containing the list of equipment included in the certificated empty weight and the loading instructions shall accompany the helicopter at the time of the initial certification and on a permanent basis from that period on.

In order to obtain the most correct weight and C.G. data, the helicopter shall be jacked up its lifting points rather than using the skids. Should modifications affecting
weight and C.G. position to be incorporated, the RFM instructions shall be referred to.

14. Datum
   Longitudinal:
   the datum plane (STA 0) is located at 3 400 mm forward of main rotor head centre
   Lateral: aircraft symmetry plane

15. Levelling Means
   Transmission deck

16. Minimum Flight Crew
   1 pilot (right seat)

17. Maximum Passenger Seating Capacity
   5
   6, when the aircraft is equipped with the optional two-place seat. This optional item is to be used in accordance with the associated RFM supplement.

18. Passenger Emergency Exit
   Refer to approved RFM

19. Maximum Baggage/ Cargo Loads

<table>
<thead>
<tr>
<th>Location</th>
<th>Max. load [kg]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. load for R.H. lateral hold</td>
<td>100</td>
</tr>
<tr>
<td>Max. load for L.H. lateral hold</td>
<td>120</td>
</tr>
<tr>
<td>Max. load for rear hold</td>
<td>80</td>
</tr>
<tr>
<td>Max. load on cabin floor</td>
<td>FWD 150, AFT 310</td>
</tr>
</tbody>
</table>

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

21. Auxiliary Power Unit (APU)
   n/a

22. Life-limited Parts
   Maintenance Manual AS 355 F1 Chapter 5 "Master Servicing Recommendations" have been accepted by DGAC-F to carry out maintenance of AS 355 helicopters. Chapter 04 "Airworthiness Limitations" contains statements that must mandatorily be respected.

IV. Operating and Service Instructions

1. Flight Manual

   AS 355 F1 PRE—Chapter 04 (Airworthiness Limitations), initially approved by DGAC FR on 9 May 1983, or later EASA (DGAC FR) approved revision/edition (reference: in English language).

   MRS AS 355

   Refer to approved RFM

5. Illustrated Parts Catalogue
   AS 355 F1 Illustrated Parts Catalogue

6. Service Letters and Service Bulletins
   As published by Aerospatiale, Eurocopter France, Eurocopter or Airbus Helicopters and approved by EASA (DGAC FR).

7. Required Equipment
   Refer to EASA-approved RFM and related supplements for other approved mandatory and optional equipment and Master Minimum Equipment List.
V. Notes

1. Manufacturer’s eligible serial numbers:
   For AS 355 F1: s/n 5315, and subsequent.
   AS 355 F aircraft converted into AS 355 F1 by application of Service Bulletin n°01.09

2. The commercial designation is: Ecureuil II / TwinStar

3. Placards:
   3.1 The following placard must be fitted in a way that the pilot can see it clearly:
       “The markings and placards installed on this helicopter contain operating limitations which must
       be complied with when operating this rotorcraft. Other operating limitations which must be
       complied with when operating this rotorcraft are contained in the Rotorcraft Flight Manual. The
       airworthiness limitations section of the rotorcraft maintenance manual must be complied with”
   3.2 Refer to the RFM as regards the other placards.

4. The AS 355 F1 is certificated as Group A under BCAR Section G. This certification basis provides an
   equivalence to Category A in accordance with EASA AIR-OPS (EU regulation nº 965/2012) GM1
   CAT.POL.H.200& CAT.POL.H.300& CAT.POL.H.400& when the following conditions are met:
   1. The aircraft is equipped with the “Engines fire-extinguishing system” OP0691 and either OP0692
      or OP0913;
   2. The aircraft is equipped with a second fan wheel on the engine and main gearbox oil cooling unit
      OP9009/07 9013/07 9016;
   3. The aircraft is operated in accordance with the RFM Supplement 11-2 – “Take-off and landing
      procedures and performance data on clear airfield and helipad with one engine inoperative”.

* * *
SECTION 4: AS 355 F2

I. General

1. Type/ Model/ Variant
   1.1 Type
       AS 355
   1.2 Model
       AS 355 F2

2. Airworthiness Category
   Small Rotorcraft
   See Note 4 for Category B and “Equivalence Category A”

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

4. Type Certification Application Date
   to DGAC FR: 5 April 1984

5. State of Design Authority
   EASA

6. Type Certificate Date by DGAC-FR
   DGAC FR: 10 December 1985

7. Type Certificate n°
   EASA.R.146 (former DGAC FR: 168)

8. Type Certificate Data Sheet n°
   EASA.R.146 (former DGAC FR: 168)

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
   For Airworthiness and Environmental Protection:
   4 January 1979
   for OSD elements: 17 February 2014.

2. Airworthiness Requirements
   2.1
   FAR 27 Amdt. 16 included;
   Performance of AS 355 F2 SUPPLEMENT 11-2 of RFM
   were established in accordance with FAR 29
   requirements Part 29-45 through 29-79 (see Note 4.)
   as above (2.1) with the following additional requirement
   of CS 27, Amdt. 10, dated 27 January 2023: 27.1587-b3

2.2 For a/c equipped with Emergency Floatation System (EFS) (removable parts P/N
   / MPN: [223244-0 / 704A42690057])

3. Special Conditions
   Additional and special conditions specified in letter DGAC 53 879, dated 11 August 1980.

4. Exemptions
   none

5. Deviations
   none

6. Equivalent Safety Findings
   none

7. Environmental Protection Requirements
   7.1 Noise Requirements
       See TCDSN EASA.R.146
   7.2 Emission Requirements
       n/a

8. Operational Suitability Data (OSD)
   (For OSD elements see SECTION 7 below)

III. Technical Characteristics and Operational Limitations

1. Type Design Definition
   355A043359

2. Description
   Main rotor: three (3) blades
   Tail rotor: two (2) blades
3. Equipment
The approved equipment form the subject of AH document reference 350A.04.4320.
The basic equipment required by the applicable airworthiness regulation (see certification basis), must be installed on the aircraft for the certification and at any moment later on.
The RFM must be on board of the aircraft.

4. Dimensions
4.1 Fuselage
Length: 10.93 m
Width hull: 1.87 m
Height: 3.14 m

4.2 Main Rotor
Diameter: 10.69 m

4.3 Tail Rotor
Diameter: 1.86 m

5. Engine
5.1 Model
Rolls-Royce Corporation (former: Allison)
2 x Model 250-C20F

5.2 Type Certificate
FAA TC/TCDS: E4CE
EASA TC/TCDS: EASA.IM.E.052

5.3 Limitations
5.3.1 Installed Engine Limitations and Transmission Torque Limits

<table>
<thead>
<tr>
<th></th>
<th>TQ limits [*][%]</th>
<th>Gas generator speed [**][%]</th>
<th>Output shaft speed [rpm (rpm)] (corresponding to MR rpm)</th>
<th>Exhaust gas Temperature [°C]</th>
</tr>
</thead>
<tbody>
<tr>
<td>AEO-TOP</td>
<td>78</td>
<td>105</td>
<td>6 196 (406)</td>
<td>810</td>
</tr>
<tr>
<td>AEO-MCP</td>
<td>73***</td>
<td>105</td>
<td>6 196 (406)</td>
<td>738</td>
</tr>
<tr>
<td>OEI-MCP</td>
<td>100</td>
<td>105</td>
<td>6 196 (406)</td>
<td>810</td>
</tr>
</tbody>
</table>

Note:
*100% torque → 521 Nm
**105 % gas generator speed → 53 519 rpm
***Maximum continuous torque limited to 406 Nm (78 %) for <55 KIAS

5.3.2 Other Engine and Transmission Torque Limits
Refer to approved RFM for limitations in transient conditions

6. Fluids (Fuel/ Oil/ Additives)
Refer to approved RFM

7. Fluid capacities
7.1 Fuel
Fuel tank capacity: 736.7 litres
Usable fuel: 736.0 litres

7.2 Oil
Engine: 5.7 litres (system capacity)
MGB: 11 litres (system included)
TGB: 0.33 litre

7.3 Coolant System Capacity
n/a

8. Air Speed Limitations
Power-on $V_{NE}$: 150 KIAS (278 km/h) for HP=0

- at altitude, decrease by 2.5 kt per 1 000 ft (15 km/h every 1 000 m)
- in cold weather with OAT below -35°C, subtract 10 kt (19 km/h)
9. Rotor Speed Limitations

Power-off $V_{NE}$

Absolute $V_{NE}$: 120 KIAS (222 km/h) for HP=0
- at altitude, decrease by 2.5 kt per 1 000 ft (15 km/h every 1 000 m)
- in cold weather with OAT below $-25^\circ$C, subtract 20 kt (37 km/h)

from the above $V_{NE}$, without $V_{NE}$ being less than 65 KIAS (120 km/h)

Refer to RFM for approved airspeed with doors open or removed

10. Maximum Operating Altitude and Temperature

10.1 Altitude

Max. operating PA: 16 000 ft (4 875 m)
Max. TKOF/LDG PA: 16 000 ft (4 875 m)

10.2 Temperature

Refer to approved RFM

11. Operating Limitations

VFR day and night
IFR
No flights in icing conditions
No aerobatic manoeuvres
For more information refer to RFM

12. Maximum Mass

2 540 kg

13. Centre of Gravity Range

Longitudinal C.G. limits

Lateral C.G Limits

Max. deviation on right: 90 mm
Max. deviation on left: 160 mm

The weight breakdown and C.G. limit document containing the list of equipment included in the certificated empty weight and the loading instructions shall accompany the helicopter at the time of the initial certification and on a permanent basis from that period on.

In order to obtain the most correct weight and C.G. data, the helicopter shall be jacked up its lifting points rather than using the skids. Should modifications affecting weight and C.G. position to be incorporated, the RFM instructions shall be referred to.
14. Datum

Longitudinal:
The datum plane (STA 0) is located at 3 400 mm forward of main rotor head centre
Lateral: aircraft symmetry plane

15. Levelling Means

Transmission deck

16. Minimum Flight Crew

1 pilot (right seat)

17. Maximum Passenger Seating Capacity

5
6, when the aircraft is equipped with the optional two-place seat. This optional item is to be used in accordance with the associated RFM supplement.

18. Passenger Emergency Exit

Refer to approved RFM

19. Maximum Baggage/ Cargo Loads

<table>
<thead>
<tr>
<th>Location</th>
<th>Max. load [kg]</th>
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<td>Max. load for L.H. lateral hold</td>
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</tr>
<tr>
<td>Max. load for rear hold</td>
<td>80</td>
</tr>
<tr>
<td>Max. load on cabin floor</td>
<td></td>
</tr>
<tr>
<td>FWD</td>
<td>150</td>
</tr>
<tr>
<td>AFT</td>
<td>310</td>
</tr>
</tbody>
</table>

20. Rotor Blade Control Movement

For rigging information refer to Maintenance Manual

21. Auxiliary Power Unit (APU)

n/a

22. Life-limited Parts

Maintenance Manual AS 355 F2 Chapter 5 "Master Servicing Manual" have been initially accepted by DGAC FR to carry out maintenance of AS 355 F2 helicopters. Chapter 04 "Airworthiness limitations" contains statements that must mandatorily be respected.

IV. Operating and Service Instructions

1. Flight Manual


AS 355 F2 PRE– Chapter 05-99(Airworthiness Limitations) or AS 355 F2 ALS Chapter 04, initially approved by DGAC FR on 10 December 1985, or later EASA (DGAC FR) approved revision/edition (reference: in English language).
- AS 355 F2 Maintenance Manual
- AS 355 F2 Overhaul Manual
Compatibility between optional items of equipment is described:
- in the "Master Servicing Recommendations" Chapter 5-80 for installation
- in Section 10 of RFM for operation.


MRS AS 355


Refer to approved RFM

5. Illustrated Parts Catalogue

AS 355 F2 Illustrated Parts Catalogue

6. Service Letters and Service Bulletins

As published by Aerospatiale, Eurocopter France, Eurocopter or Airbus Helicopters.

7. Required Equipment

Refer to EASA-approved RFM and related supplements for other approved mandatory and optional equipment
V. Notes

1. Manufacturer's eligible serial numbers:
   For AS 355 F2: s/n 5334, and subsequent.
   AS 355 F1 aircraft converted into AS 355 F2 by application of Service Bulletin n°01.20
   The aircraft, the s/n of which is listed in Airbus Helicopters document L102-001 are manufactured
   under Helibras license

2. The commercial designation is: Ecureuil II / TwinStar

3. Placards:
   3.1 The following placard must be fitted in a way that the pilot can see it clearly:
   “The markings and placards installed on this helicopter contain operating limitations which must
   be complied with when operating this rotorcraft. Other operating limitations which must be
   complied with when operating this rotorcraft are contained in the Rotorcraft Flight Manual. The
   airworthiness limitations section of the rotorcraft maintenance manual must be complied with”.
   3.2 Refer to the RFM as regards the other placards.

4. The AS 355 F2 is certificated as Group A under BCAR Section G. This Certification basis provides an
   equivalence to Category A in accordance with EASA AIR-OPS (EU regulation nº 965/2012) GM1
   CAT.POL.H.200 & CAT.POL.H.300 & CAT.POL.H.400 & when the following conditions are met:
   1. The aircraft is equipped with the “Engines fire-extinguishing system” OP0691 and either OP0692
      or OP0913;
   2. The aircraft is equipped with a second fan wheel on the engine and main gearbox oil cooling unit
      OP9009/07 9013/07 9016;
   3. The aircraft is operated in accordance with the RFM Supplement 11-2 – “Take-off and landing
      procedures and performance data on clear airfield and helipad with one engine inoperative”
      * * *

and Master Minimum Equipment List.
SECTION 5: AS 355 N

I. General
1. Type/Model/Variant
   1.1 Type
   AS 355
   1.2 Model
   AS 355 N

2. Airworthiness Category
   Small Rotorcraft
   See Note 4 for Category B and “Equivalence Category A”

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

4. Type Certification Application Date
to DGAC FR: 19 October 1984

5. State of Design Authority
   EASA

6. Type Certificate Date by NAA
   DGAC FR: 13 June 1989

7. Type Certificate n°
   EASA.R.146 (former DGAC FR: 168)

8. Type Certificate Data Sheet n°
   EASA.R.146 (former DGAC FR: 168)

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
   For Airworthiness and Environmental Protection:
   10 October 1984
   for OSD elements: 17 February 2014.

2. Airworthiness Requirements
   2.1 FAR 27 Amdt. 20 included such as modified by CTC 27. Plus the following paragraphs of Amdt. 21:
   27.21, 27.45, 27.71, 27.79, 27.143, 27.151, 27.161, 27.173, 27.175, 27.177, 27.672, 27.673, 27.729, 27.735, 27.779, 27.807, 27.1329, 27.1413, 27.1519, 27.1525, 27.1555, 27.1585 and 27.1587
   Performance of AS 355 N Supplement 11-2 of RFM were established in accordance with FAR 29 requirements Part 29-45 through 29-79 (see Note 4).
   as above (2.1) with the following additional requirement of CS 27, Amdt. 10, dated 27 January 2023: 27.1587-b3

3. Special Conditions
   Additional and special conditions specified in letter DGAC 54408 dated 21 October 1988.

4. Exemptions
   none

5. Deviations
   none

6. Equivalent Safety Findings
   none

7. Environmental Protection Requirements
   7.1 Noise Requirements
   See TCDSN EASA.R.146

7.2 Emission Requirements
   n/a

8. Operational Suitability Data (OSD)
   (For OSD elements see SECTION 7 below)
III. Technical Characteristics and Operational Limitations

1. Type Design Definition
   355A043470

2. Description
   Main rotor: three (3) blades
   Tail rotor: two (2) blades
   Fuselage: metal-sheet monocoque
   Landing gear: skid type
   Powerplant: two turbo-shaft engines

3. Equipment
   The approved equipment form the subject of AH document reference 350A.04.4320. The basic equipment required by the applicable airworthiness regulation (see certification basis), must be installed on the aircraft for the certification and at any moment later on. The RFM must be on board of the aircraft.

4. Dimensions
   4.1 Fuselage
      Length: 10.93 m
      Width hull: 1.87 m
      Height: 3.14 m
   4.2 Main Rotor
      Diameter: 10.69 m
   4.3 Tail Rotor
      Diameter: 1.86 m

5. Engine
   5.1 Model
      Safran Helicopter Engines (former: Turbomeca)
      2 x Model Arrius 1A
   5.2 Type Certificate
      EASA TC/TCDS: EASA.E.080
   5.3 Limitations
      5.3.1 Installed Engine Limitations and Transmission Torque Limits

<table>
<thead>
<tr>
<th></th>
<th>TQ limits [Nm (%)]</th>
<th>Gas generator speed [rpm]</th>
<th>Tₚ Temperature [°C]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. Contingency Power (2.5 min)</td>
<td>1 x 683 (1 x 131)</td>
<td>56 140</td>
<td>870</td>
</tr>
<tr>
<td>Max. TKOF (5 min)</td>
<td>2 x 406 (2 x 78)*</td>
<td>54 685</td>
<td>800</td>
</tr>
<tr>
<td>Intermediate Contingency PWR (30 min)</td>
<td>1 x 599 (1 x 115)*</td>
<td>55 300</td>
<td>800</td>
</tr>
<tr>
<td>Max. Continuous PWR (AEO)</td>
<td>2 x 380 (2 x 73)*</td>
<td>53 285</td>
<td>765</td>
</tr>
<tr>
<td></td>
<td>2 x 406 (2 x 78) Vi &gt; 55 kt</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 x 521 (1 x 100)*</td>
<td>53 285</td>
<td>765</td>
</tr>
</tbody>
</table>

Note: (*): Torque values corresponding to MGB limitations.
(***): 100% ↔ 328 kW ↔ N₂ = 45 438 rpm ↔ Nₚ = 394 rpm
       Refer to approved RFM for limitations in transient conditions.

5.3.2 Other Engine and Transmission Torque Limits
   Transmission TQ limits:
   Max. transient: 2 x 83%
   Max. TKOF: 2 x 80%
   Max. Continuous: 2 x 73%
   Note: 100 % ↔ 328 kW ↔ NR = 394 rpm
6. Fluids (Fuel/ Oil/ Additives)  Refer to approved RFM

7. Fluid capacities

7.1 Fuel

Fuel tank capacity: 736.7 litres
Usable fuel: 736.0 litres

7.2 Oil

Engine: 5.7 litres (system capacity)
MGB: 11 litres (system included)
TGB: 0.33 litres

7.3 Coolant System Capacity

n/a

8. Air Speed Limitations

Power-on $V_{NE}$:
Absolute $V_{NE}$: 150 KIAS (278 km/h) for HP=0
- at altitude, decrease by 2.5 kt per 1 000 ft (15 km/h every 1 000 m)
- in cold weather with OAT below -35°C, subtract 10 kt (19 km/h) from the above $V_{NE}$

Power-off $V_{NE}$:
Absolute $V_{NE}$: 120 KIAS (222 km/h) for HP=0
- at altitude, decrease by 2.5 kt per 1 000 ft (15 km/h every 1 000 m)
- in cold weather with OAT below -25°C, subtract 20 kt (37 km/h) from the above $V_{NE}$, without $V_{NE}$ being less than 65 KIAS (120 km/h)

Refer to RFM for approved airspeed with doors open or removed

9. Rotor Speed Limitations

Power-on flight:
AEO: 390 (+4, -5) rpm for IAS above 55 kt
390 (+10, -5) rpm for IAS below 55 kt

OEI: 375 to 394 rpm

In autorotation:
Max. 425 rpm (aural warning at 410 rpm)
Min. 330 rpm (aural warning at 360 rpm)

10. Maximum Operating Altitude and Temperature

10.1 Altitude

Max. operating PA: 20 000 ft (6 090 m)
Max. TKOF/LDG PA: 20 000 ft (6 090 m)

10.2 Temperature

Refer to approved RFM

11. Operating Limitations

VFR day and night
IFR
No flights in icing conditions
No aerobatic manoeuvres
For more information refer to RFM

12. Maximum Mass

2 600 kg

13. Centre of Gravity Range

Longitudinal C.G. limits
Late vertical C.G. Limits
- Max. deviation on right: 90 mm
- Max. deviation on left: 160 mm

The weight breakdown and C.G. limit document containing the list of equipment included in the certificated empty weight and the loading instructions shall accompany the helicopter at the time of the initial certification and on a permanent basis from that period on.

In order to obtain the most correct weight and C.G. data, the helicopter shall be jacked up its lifting points rather than using the skids. Should modifications affecting weight and C.G. position to be incorporated, the RFM instructions shall be referred to.

14. Datum
- Longitudinal: the datum plane (STA 0) is located at 3 400 mm forward of main rotor head centre
- Lateral: aircraft symmetry plane

15. Levelling Means
- Transmission deck

16. Minimum Flight Crew
- 1 pilot (right seat)

17. Maximum Passenger Seating Capacity
- 5, when the aircraft is equipped with the optional two-place seat. This optional item is to be used in accordance with the associated RFM supplement.

18. Passenger Emergency Exit
- Refer to approved RFM

19. Maximum Baggage / Cargo Loads

<table>
<thead>
<tr>
<th>Location</th>
<th>Max. load [kg]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. load for R.H. lateral hold</td>
<td>100</td>
</tr>
<tr>
<td>Max. load for L.H. lateral hold</td>
<td>120</td>
</tr>
<tr>
<td>Max. load for rear hold</td>
<td>80</td>
</tr>
<tr>
<td>Max. load on cabin floor</td>
<td>FWD 150 F</td>
</tr>
<tr>
<td></td>
<td>AFT 310</td>
</tr>
</tbody>
</table>

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

21. Auxiliary Power Unit (APU)
- n/a

22. Life-limited Parts
- Maintenance Manual AS 355 N Chapter 5 "Master Servicing Manual" have been accepted by DGAC-F to carry out maintenance of AS 355 N helicopters. Chapter 04 "Airworthiness limitations" contains statements that must mandatorily be respected.
IV. Operating and Service Instructions

1. Flight Manual


AS 355 N PRE– Chapter 05-99 (Airworthiness Limitations) or AS 355 N ALS Chapter 04, initially approved by DGAC FR on 10 December 1985, or later EASA DGAC FR) approved revision/edition (reference: in English language).
- AS 355 N Maintenance Manual
- AS 355 N Overhaul Manual

Compatibility between optional items of equipment is described:
- in the "Master Servicing Recommendations" Chapter 5-80 for installation
- in Section 10 of RFM for operation.


MRS AS 355


Refer to approved RFM

5. Illustrated Parts Catalogue

AS 355 N Illustrated Parts Catalogue

6. Service Letters and Service Bulletins

As published by Aerospatiale, Eurocopter France, Eurocopter or Airbus Helicopters and approved by EASA (DGAC FR).

7. Required Equipment

Refer to EASA-approved RFM and related supplements for other approved mandatory and optional equipment and Master Minimum Equipment List.

V. Notes

1. Manufacturer’s eligible serial numbers:

For AS 355 N: s/n 5361, and subsequent.
The aircraft the s/n of which is listed in Airbus Helicopters document L102-001 are manufactured under Helibras license.

2. The commercial designation is: Ecureuil II / TwinStar

3. Placards:

3.1 The following placard must be fitted in a way that the pilot can see it clearly:

“The markings and placards installed on this helicopter contain operating limitations which must be complied with when operating this rotorcraft. Other operating limitations which must be complied with when operating this rotorcraft are contained in the Rotorcraft Flight Manual. The airworthiness limitations section of the rotorcraft maintenance manual must be complied with”.

3.2 Refer to the RFM as regards the other placards.

4. The AS 355 N is certificated as Group A under BCAR Section G. This Certification basis provides an equivalence to Category A in accordance with EASA AIR-OPS (EU regulation n° 965/2012) GM1 CAT.POL.H.200 & CAT.POL.H.300 & CAT.POL.H.400 when the following conditions are met:

1. The aircraft is equipped with the “Engines fire-extinguishing system” OP2003
2. The aircraft is operated in accordance with the RFM Supplement 11-2 – “Take-off and landing procedures and performance data on clear airfield and helipad with one engine inoperative – Normal Mode and Training Mode”.

***
SECTION 6: AS 355 NP

I. General

1. Type/ Model/ Variant
   1.1 Type
   AS 355
   1.2 Model
   AS 355 NP

2. Airworthiness Category
   Small Rotorcraft
   See Note 4. for Category B and “Equivalence Category A”

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

4. Type Certification Application Date
   15 February 2005

5. State of Design Authority
   EASA

6. EASA Type Certificate Date
   15 February 2007

II. Certification Basis

1. Reference Date for determining the applicable requirements
   For Airworthiness and Environmental Protection: 10 October 1984
   for OSD elements: 17 February 2014.

2. Airworthiness Requirements
   2.1 FAR 27 Amdt. 20 included such as modified by CTC 27.
   Plus the following paragraphs of FAR 27 Amdt. 21:
   27.21; 27.45; 27.71; 27.79; 27.143; 27.151; 27.161; 27.173; 27.175; 27.177; 27.672; 27.673; 27.729;
   27.735; 27.779; 27.807; 27.1329; 27.1413; 27.1519; 27.1525; 27.1555; 27.1587
   Plus the following paragraphs of FAR 27 Amdt. 23: §923
   In addition to the requirements listed above, in support of “Equivalence Category A” operations as per
   JAR OPS 3.480, ACJ OPS 3.480 (a)(1)&(a)(2) or per EASA AIR-OPS (EU regulation nº 965/2012) GM1
   CAT.POL.H.200 & CAT.POL.H.300 & CAT.POL.H.400, the following paragraphs of FAR 29:
   29.45 (a) and (b)(2) Amdt. 24; 29.49 (a) Amdt. 39; 29.51 Amdt. 39; 29.53 Amdt. 39; 29.55 Amdt. 39;
   29.59 Amdt. 44; 29.60 Amdt. 39; 29.61 Amdt. 39; 29.62 Amdt. 39; 29.64 Amdt. 39; 29.65 (a) Amdt. 39;
   29.67 (a) Amdt. 44; 29.75 Amdt. 39; 29.77 Amdt. 44; 29.79 Amdt. 39; 29.81 Amdt. 44; 29.85 Amdt. 44;
   29.87 (a) Amdt. 39; 29.861 (a) Amdt. 30; 29.901 (c) Amdt. 26; 29.903 (b)(c) and (e) Amdt. 36; 29.908 (a)
   Amdt. 26; 29.917 (c)(1)-- Rotor drive system: Design Amdt. 40; 29.953 (a) Amdt. 0; 29.1027 (a) Amdt. 26;
   29.1045 (a)(1), (b), (c), (d), and (f) Amdt. 26; 29.1047 (a) Amdt. 26; 29.1181 (a) Amdt. 26; 29.1187 (e)
   Amdt. 0; 29.1189 (c) Amdt. 26; 29.1191 (a)(1) Amdt. 3; 29.1193 (e) Amdt. 26; 29.1195 (a), (d) Amdt. 17;
   29.1197 Amdt. 13; 29.1199 Amdt. 13; 29.1201 Amdt. 0; 29.1305 (b) Amdt. 40; 29.1309 (b)(2) (i) and (d)
   Amdt. 14; 29.1323 (c)(1) Amdt. 44; 29.1331 (b) Amdt. 24; 29.1587 (a) Amdt. 44.

   2.2 For a/c equipped with Emergency Flotation System (EFS) (removable parts P/N / MPN: [223244-0 /
   704A42690057]): as above (2.1) with the following additional requirement of CS 27, Amdt. 10, dated 27
   January 2023: 27.1587-b3

3. Special Conditions
   Protection against the effects of High Intensity Radiated Field (HIRF) (JAA interim policy reference
   INT/POL/27, 29/1 issue 2 dated 1/06/97)

4. Exemptions
   none

5. Deviations
   none

6. Equivalent Safety Findings
   Powerplant instrument markings

7. Environmental Protection Requirements
   7.1 Noise Requirements
   See TCDSN EASA.R.146
7.2 Emission Requirements  
n/a  
8. Operational Suitability Data (OSD)  
(For OSD elements see SECTION 7 below)  

III. Technical Characteristics and Operational Limitations  
1. Type Design Definition  
   355A043975  
2. Description  
   Main rotor: three (3) blades  
   Tail rotor: two (2) blades  
   Fuselage: metal-sheet monocoque  
   Landing gear: skid type  
   Powerplant: two turbo-shaft engines  
3. Equipment  
   As per compliance with AS 355 NP certification basis and included in the original Type Design Standard or indicated on the section 2 - limitations of the Flight Manual  
4. Dimensions  
   4.1 Fuselage  
      Length: 10.93 m  
      Width hull: 1.87 m  
      Height: 3.14 m  
   4.2 Main Rotor  
      Diameter: 10.69 m  
   4.3 Tail Rotor  
      Diameter: 1.86 m  
5. Engine  
   5.1 Model  
      Safran Helicopter Engines (former: Turbomeca)  
      2 x Model Arrius 1A1  
   5.2 Type Certificate  
      EASA TC/TCDS: EASA.E.080  
5.3 Limitations  
   5.3.1 Installed Engine Limitations and Transmission Torque Limits  
<table>
<thead>
<tr>
<th></th>
<th>TQ limits [Nm (%)]</th>
<th>T₄ Temperature [°C]</th>
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</thead>
<tbody>
<tr>
<td>AEO Max. transient (10 sec)</td>
<td>2 x 468 (2 x 89.6) (*)</td>
<td>800</td>
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<tr>
<td>Max. TKOF (5 min)</td>
<td>2 x 450 (2 x 86.4) (*) V&lt; 55 kt</td>
<td>773</td>
</tr>
<tr>
<td>Max. Continuous Power (AEO)</td>
<td>2 x 374 (2 x 71.8) (*)</td>
<td>749</td>
</tr>
<tr>
<td>Max. Contingency Power (OEI 2.5 min)</td>
<td>1 x 683 (1 x 131)</td>
<td></td>
</tr>
<tr>
<td>Max. Continuous Power (OEI)</td>
<td>1 x 599 (115) (*)</td>
<td>812</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Note: (*) Torque values corresponding to MGB limitations. Refer to approved RFM for limitations in transient conditions</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
   5.3.2 Other Engine and Transmission Torque Limits  
   Transmission Torque Limits:  
      Max. transient: 2 x 89.6%  
      Max. TKOF: 2 x 86.4%  
      Max. Continuous: 2 x 77.8%  
   Note: 100 % ↔ 328 kW ↔ Nₑ = 394 rpm  
6. Fluids (Fuel/ Oil/ Additives)  
   Refer to approved RFM  
7. Fluid capacities  
   7.1 Fuel  
      Fuel tank capacity: 736.7 litres  
      Usable fuel: 736.0 litres  
   7.2 Oil  
      Engine: 5.7 litres (system capacity)  
      MGB: 11 litres (system included)
7.3 Coolant System Capacity

8. Air Speed Limitations

- **Power-on V<sub>NE</sub>**
  - Absolute V<sub>NE</sub>: 150 KIAS (278 km/h) for HP=0
  - at altitude, decrease by 2.5 kt per 1 000 ft (15 km/h every 1 000 m)
  - in cold weather with OAT below -35°C, subtract 10 kt (19 km/h) from the above V<sub>NE</sub>

- **Power-off V<sub>NE</sub>**
  - Absolute V<sub>NE</sub>: 120 KIAS (222 km/h) for HP=0
  - at altitude, decrease by 2.5 kt per 1 000 ft (15 km/h every 1 000 m)
  - in cold weather with OAT below -25°C, subtract 20 kt (37 km/h) from the above V<sub>NE</sub>, without V<sub>NE</sub> being less than 65 KIAS (120 km/h)

Refer to RFM for approved airspeed with doors open or removed

9. Rotor Speed Limitations

- **Power-on flight:**
  - AEO: 390 (+4, -5) rpm for IAS above 55 kt
  - 390 (+10, -5) rpm for IAS below 55 kt
  - OEI: 375 to 394 rpm

- In autorotation:
  - Max. 425 rpm (aural warning at 410 rpm)
  - Min. 330 rpm (aural warning at 360 rpm)

10. Maximum Operating Altitude and Temperature

10.1 Altitude

Max. operating PA: 20 000 ft (6 090 m)
Max. TKOF/LDG PA: 20 000 ft (6 090 m)

10.2 Temperature

Refer to approved RFM

11. Operating Limitations

- VFR day and night
- IFR
- No flights in icing conditions
- No aerobatic manoeuvres
For more information refer to RFM

12. Maximum Mass

2 600 kg

13. Centre of Gravity Range

Longitudinal: the C.G. limits are given below:

![Weight and C.G Diagram](image)

- **Lateral C.G Limits**
  - Max. deviation on right: 90 mm
  - Max. deviation on left: 160 mm

The weight breakdown and C.G. limit document containing the list of equipment included in the certificated empty weight and the loading instructions
shall accompany the helicopter at the time of the initial
certification and on a permanent basis from that period on.
In order to obtain the most correct weight and C.G. data,
the helicopter shall be jacked up its lifting points rather
than using the skids. Should modifications affecting
weight and C.G. position to be incorporated, the RFM
instructions shall be referred to.

14. Datum

Longitudinal:
the datum plane (STA 0) is located at 3 400 mm forward
of main rotor head centre
Lateral: aircraft symmetry plane

15. Levelling Means

Transmission deck

16. Minimum Flight Crew

1 pilot (right seat)

17. Maximum Passenger Seating Capacity

5
6, when the aircraft is equipped with the optional two-
place seat. This optional item is to be used in accordance
with the associated RFM supplement.

18. Passenger Emergency Exit

Refer to approved RFM

19. Maximum Baggage/ Cargo Loads

<table>
<thead>
<tr>
<th>Location</th>
<th>Max. load [kg]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. load for R.H. lateral hold</td>
<td>100</td>
</tr>
<tr>
<td>Max. load for L.H. lateral hold</td>
<td>120</td>
</tr>
<tr>
<td>Max. load for rear hold</td>
<td>80</td>
</tr>
<tr>
<td>Max. load on cabin floor</td>
<td></td>
</tr>
<tr>
<td>FWD 150</td>
<td></td>
</tr>
<tr>
<td>AFT 310</td>
<td></td>
</tr>
</tbody>
</table>

20. Rotor Blade Control Movement

For rigging information refer to Maintenance Manual

n/a

21. Auxiliary Power Unit (APU)

n/a

22. Life-limited Parts

See Section IV. 2.

IV. Operating and Service Instructions

1. Flight Manual

AS 355 NP Flight Manual RNO code date DECEMBER 06,
approved by EASA on 15 February 2007, or later EASA
approved revision (reference: in English language).


AS 355 NP PRE – chapter 05.99 (Airworthiness
Limitations), or AS 355 NP ALS Chapter 04 edition
2007.01.19 Rev 000, approved by EASA on 15 February
2007, or later EASA approved revision/edition
(reference: in English language).
- AS 355 NP Maintenance Manual
- AS 355 NP Overhaul Manual
Compatibility between optional items of equipment is
described:
- from an installation aspect: in the "Master Servicing
  Recommendations".
- from an operational aspect: in "Supplements" Chapter
  of the RFM.


MRS AS 355


Refer to approved RFM
5. Illustrated Parts Catalogue
   AS 355 NP Illustrated Parts Catalogue
6. Service Letters and Service Bulletins
   As published by Eurocopter or Airbus Helicopters.
7. Required Equipment
   Refer to EASA-approved RFM and related supplements for other approved mandatory and optional equipment and Master Minimum Equipment List.

V. Notes

1. Manufacturer’s eligible serial numbers:
   For AS 355 NP: s/n 5747 and subsequent.
2. The commercial designation is: Ecureuil II / TwinStar
3. Placards:
   3.1 The following placard must be fitted in a way that the pilot can see it clearly:
       “The markings and placards installed on this helicopter contain operating limitations which must be complied with when operating this rotorcraft. Other operating limitations which must be complied with when operating this rotorcraft are contained in the Rotorcraft Flight Manual. The airworthiness limitations section of the rotorcraft maintenance manual must be complied with.”
   3.2 Refer to the RFM as regards the other placards.
4. According to its certification basis, the AS 355 NP is equivalent to Category A in accordance with EASA AIR-OPS (EU regulation nº 965/2012) GM1 CAT.POL.H.200 & CAT.POL.H.300 & CAT.POL.H.400.
   * * *
SECTION 7: 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
   For all Models: 17 February 2014 (entry into force of CR (EU) n° 69/2014)

I.2 MMEL - Certification Basis
   For all Models: JAR-MMEL/MEL Section 1, Amdt. 1

I.3 Flight Crew Data - Certification Basis
   For all models: CS-FCD Initial Issue 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
   For all Models: MMEL AS355 E/F/F1/F2/N/NP rev. RN2, 12 December 2015, or subsequent approved revisions

II.2 Flight Crew Data
   Airbus Helicopter document 355ABN0072 - Flight Crew Data for AS355 family, including:
   Annex A: OSD Cover Sheet to Annex B – Division Mandatory Data – Non Mandatory Data

II.3 SIM Data
   reserved

II.4 Maintenance Certifying Staff Data
   reserved
SECTION: ADMINISTRATIVE

I. Acronyms and Abbreviations

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Definition</th>
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</thead>
<tbody>
<tr>
<td>AEO</td>
<td>All Engines Operative</td>
</tr>
<tr>
<td>AFT</td>
<td>aft</td>
</tr>
<tr>
<td>AH</td>
<td>Airbus Helicopters</td>
</tr>
<tr>
<td>CR</td>
<td>(European) Commission Regulation</td>
</tr>
<tr>
<td>DGAC FR</td>
<td>Direction Générale de l'Aviation Civile France</td>
</tr>
<tr>
<td>FAA</td>
<td>Federal Aviation Administration</td>
</tr>
<tr>
<td>fwd</td>
<td>forward</td>
</tr>
<tr>
<td>HIRF</td>
<td>High Intensity Radiated Field</td>
</tr>
<tr>
<td>IFR</td>
<td>Instrument Flight Rules</td>
</tr>
<tr>
<td>JAR</td>
<td>Joint Aviation Requirements</td>
</tr>
<tr>
<td>KIAS</td>
<td>Knots Indicated Air Speed</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>MGB</td>
<td>Main gear box</td>
</tr>
<tr>
<td>min</td>
<td>Minute</td>
</tr>
<tr>
<td>MMEL</td>
<td>Master Minimum Equipment List</td>
</tr>
<tr>
<td>OEI</td>
<td>One Engine Inoperative</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>
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<tr>
<td>RFMS</td>
<td>Rotorcraft Flight Manual Supplement</td>
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<tr>
<td>s/n</td>
<td>Serial Number</td>
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<tr>
<td>SC</td>
<td>Special Condition</td>
</tr>
<tr>
<td>sec</td>
<td>Seconds</td>
</tr>
<tr>
<td>sta</td>
<td>Station</td>
</tr>
<tr>
<td>TGB</td>
<td>Tail gear box</td>
</tr>
<tr>
<td>TKOF</td>
<td>Take-Off</td>
</tr>
<tr>
<td>TOP</td>
<td>Take-off power</td>
</tr>
<tr>
<td>TQ</td>
<td>Torque</td>
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<tr>
<td>VFR</td>
<td>Visual Flight Rules</td>
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<tr>
<td>VNE</td>
<td>Never Exceed Speed</td>
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II. Type Certificate Holder Record

<table>
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<tbody>
<tr>
<td>AEROSPATIALE</td>
<td>From Initial TC until 1 January 1992</td>
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<tr>
<td>37, Boulevard de Montmorency 75781 PARIS CEDEX 16, France</td>
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<tr>
<td>EUROCOPTER FRANCE</td>
<td>From 1 January 1992 until 1 June 1997</td>
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<td>Aéroport International Marseille – Provence 13725 Marignane CEDEX, France</td>
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<tr>
<td>EUROCOPTER</td>
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<tr>
<td>AIRBUS HELICOPTERS</td>
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III. Change Record

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<td>Initial issue of EASA TCDS</td>
<td>Initial Issue, 15 February 2007</td>
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<tr>
<td>Issue 2</td>
<td>10 Nov 2009</td>
<td>- -</td>
<td>- -</td>
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<tr>
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<td>7 Jan 2014</td>
<td>Reissued mainly due to new branding to “Airbus Helicopters”</td>
<td>Re-issued, 7 January 2014</td>
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<tr>
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<td>4 Mar 2014</td>
<td>- -</td>
<td>- -</td>
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<tr>
<td>Issue 5</td>
<td>17 Dec 2015</td>
<td>TCDS template updated and OSD added</td>
<td>- -</td>
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<td>TC issue</td>
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| Issue 6| 30 Aug 2017| Correction of:  
- Section 2, V.1 (s/n applicability), and,  
- Section 6, III., 5.1 (engine model designation); minor editorial changes                                                              | - - -    |
| Issue 7| 19 April 2024| Section 5, AS 355 N: RFM reference corrected, Note 4 corrected/deleted  
Section 6, AS 355 NP: reference to ‘CRI’ removed  
Section 7., MMEL: year of acceptance corrected (was 2015); OSD I. moved to SECTION 1-6, II.;  
All Models: II.1 reference date amended; II. adapted to TCDS format policy;  
All models: AS 355 : in II.2 certification basis updated following EFS sea state addition in RFM // CS26 compliance | - - -    |

- end of file -