TYPE CERTIFICATE DATA SHEET

No. EASA.R.146

for

AS355

Type Certificate Holder

Airbus Helicopters

Aéroport International Marseille – Provence
13725 Marignane CEDEX
France

For Models: AS355 E
AS355 F, AS355 F1, AS355 F2
AS355 N, AS355 NP

TABLE OF CONTENTS

SECTION 1: AS355 E

I. General

1.	Type/ Model/ Variant	
	1.1 Type	AS355
	1.2 Model	AS355 E
	1.3 Variant	n/a
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	4 January 1979
2.	Airworthiness Requirements	FAR 27 Amdt. 16 included
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.	Requirements elected to comply	none
8.	Environmental Protection Requirements	
	8.1 Noise Requirements	not recorded
	8.2 Emission Requirements	n/a
9.	Operational Suitability Data (OSD)	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 (35.86 ft); Width hull: 1.87 m (6.14 ft); Height: 3.14 m (10.30 ft)

4.2 Main Rotor — Diameter: 10.69 m (35.07 ft)

4.3 Tail Rotor — Diameter: 1.86 m (6.10 ft)

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 [rpm (rpm)] (corresponding to MR rpm)	Exhaust gas Temperature [°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→ 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)

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: 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 litres

7.3 Coolant System Capacity — n/a

8. Air Speed Limitations

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

Power-off V_{NE}
Absolute V_{NE}: 222 km/h (120 kt) for HP=0
- at altitude, decrease by 15 km/h

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

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

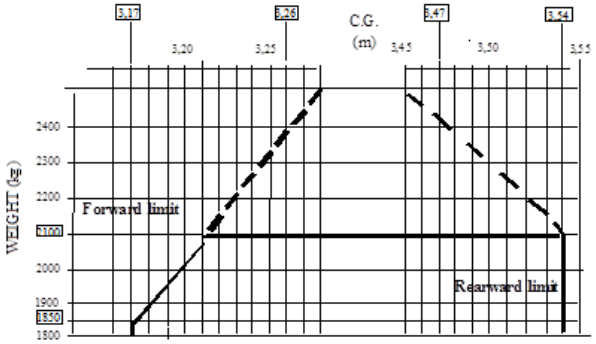
VFR day and night
IFR
No flights in icing conditions
No aerobatic manoeuvres
For more information refer to RFM

12. Maximum Mass

2 100 kg (4 630 lb)

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: 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

Location	Max. load [kg (lb)]
Max. load for R.H. lateral hold	100 (220)
Max. load for L.H. lateral hold	120 (264)
Max. load for rear hold	80 (176)
Max. load on cabin floor	FWD 150 (331) AFT 310 (683)

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 AS355 E Chapter 5 "Master Servicing Recommendations" have been accepted by DGAC-F to carry out maintenance of AS355 E helicopters. Chapter 04"Airworthiness limitations" contains statements that must mandatorily be respected.

IV. Operating and Service Instructions

1. Flight Manual — AS355 E Flight Manual, initially approved by DGAC-FR on 24 October 1980, or later EASA (or DGAC-FR) approved revision (reference: in English language).

2. Maintenance Manual — AS355 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).
- AS355 E Maintenance Manual
- AS355 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

3. Structural Repair Manual — MRS AS355

4. Weight and Balance Manual — Refer to approved RFM

5. Illustrated Parts Catalogue — AS355 E Illustrated Parts Catalogue

6. Service Letters and Service Bulletins — As published by Aerospatiale, Eurocopter France, Eurocopter or Airbus Helicopters and approved by EASA (or 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 AS355 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: AS355 F

I. General

1.	Type/ Model/ Variant	
	1.1 Type	AS355
	1.2 Model	AS355 F
	1.3 Variant	n/a
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), (i), 2nd bullet, 1st indented bullet.

II. Certification Basis

1.	Reference Date for determining the applicable requirements	4 January 1979
2.	Airworthiness Requirements	
	FAR 27 Amdt. 16 included; performance of AS355 F supplement 11-2 of RFM were established in accordance with FAR 29 requirements Part 29-45 through 29-79 (see Note 4)	
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.	Requirements elected to comply	none
8.	Environmental Protection Requirements	
	8.1 Noise Requirements	not recorded
	8.2 Emission Requirements	n/a
9.	Operational Suitability Data (OSD)	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

Length: 10.93 m (35.86 ft)
Width hull: 1.87 m (6.14 ft)
Height: 3.14 m (10.30 ft)

4.2 Main Rotor

Diameter: 10.69 m (35.07 ft)

4.3 Tail Rotor

Diameter: 1.86 m (6.10 ft)

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 [rpm (rpm)] (corresponding to MR rpm)	Exhaust gas temperature [°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)

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

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

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

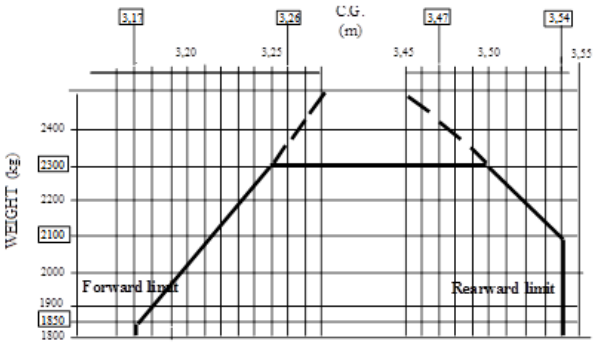
VFR day and night
IFR
No flights in icing conditions
No aerobatic manoeuvres
For more information refer to RFM

12. Maximum Mass

2 300 kg (5 071 lb)

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

Location	Max. load [kg (lb)]
Max. load for R.H. lateral hold	100 (220)
Max. load for L.H. lateral hold	120 (264)
Max. load for rear hold	80 (176)
Max. load on cabin floor	FWD 150 (331) AFT 310 (683)

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 AS355 F Chapter 5 "Master Servicing Recommendations" have been initially accepted by DGAC FR to carry out maintenance of AS355 F helicopters. Chapter 04"Airworthiness limitations" contains statements that must mandatorily be respected.

IV. Operating and Service Instructions

1. Flight Manual — AS355 F Flight Manual, initially approved by DGAC FR on 14 April 1981, or later EASA (DGAC FR) approved revision (reference: in English language).

2. Maintenance Manual — AS355 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).
AS355 F Maintenance Manual
AS355 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.

3. Structural Repair Manual — MRS AS355

4. Weight and Balance Manual — Refer to approved RFM

5. Illustrated Parts Catalogue — AS355 F 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:
   AS355 F: s/n 5044, and subsequent of version.

   AS355 E: aircraft converted into AS355 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 AS355 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: AS355 F1

I. General

1.	Type/ Model/ Variant	
	1.1 Type	AS355
	1.2 Model	AS355 F1
	1.3 Variant	n/a
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 bullet, 1st indented bullet.

II. Certification Basis

1.	Reference Date for determining the applicable requirements	4 January 1979
2.	Airworthiness Requirements	

FAR 27 Amdt. 16 included; Performance of AS355 F1 supplement 11-2 of RFM were established in accordance with FAR 29 requirements Part 29-45 through 29-79 (see Note 4)

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.	Requirements elected to comply	none
8.	Environmental Protection Requirements	
	8.1 Noise Requirements	See TCDSN EASA.R.146 for noise
	8.2 Emission Requirements	n/a
9.	Operational Suitability Data (OSD)	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 (35.86 ft)
Width hull: 1.87 m (6.14 ft)
Height: 3.14 m (10.30 ft)

4.2 Main Rotor

Diameter: 10.69 m (35.07 ft)

4.3 Tail Rotor

Diameter: 1.86 m (6.10 ft)

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 [rpm (rpm)] (corresponding to MR rpm)	Exhaust gas Temperature [°C]
AEO-TOP	78	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→ 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)

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: 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}: 278 km/h (150 kt) for HP=0
- at altitude, decrease by 15 km/h every 1 000 m (2.5 kt/1 000 ft)

- in cold weather with OATbelow -35°C, substract 19 km/h (10 kt) from the above V_{NE}

Power-off V_{NE}
Absolute V_{NE}: 222 km/h (120 kt) for HP=0

- at altitude, decrease by 15 km/h every 1 000 m (2.5 kt/1000 ft)
- in cold weather with OAT below -25°C, substract 37 km/h (20 kt) from the above V_{NE}, without V_{NE} being less than 120 km/h (65 kt)

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

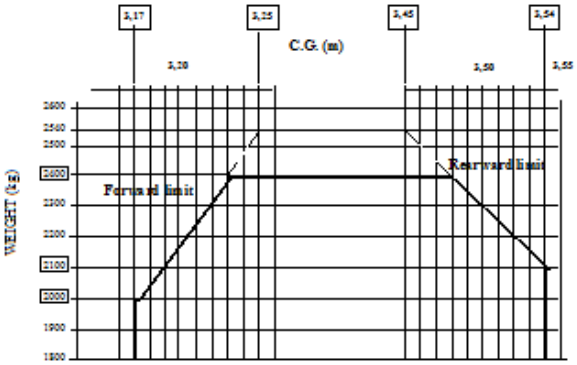
VFR day and night
IFR
No flights in icing conditions
No aerobatic manoeuvres
For more information refer to RFM

12. Maximum Mass

2 400 kg (5 291 lb)

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

Location	Max. load [kg (lb)]
Max. load for R.H. lateral hold	100 (220)
Max. load for L.H. lateral hold	120 (264)
Max. load for rear hold	80 (176)
Max. load on cabin floor	FWD 150 (331) AFT 310 (683)

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 AS355 F1 Chapter 5 "Master Servicing Recommendations" have been accepted by DGAC-F to carry out maintenance of AS355 F1 helicopters. Chapter 04"Airworthiness limitations" contains statements that must mandatorily be respected.

IV. Operating and Service Instructions

1. Flight Manual — AS355 F Flight Manual, initially approved by DGAC FR on 9 May 1983, or later EASA (DGAC FR) approved revision (reference: in English language).

2. Maintenance Manual — AS355 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).

3. Structural Repair Manual — MRS AS355

4. Weight and Balance Manual — Refer to approved RFM

5. Illustrated Parts Catalogue — AS355 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 AS355 F1: s/n 5315, and subsequent.
   AS355 F aircraft converted into AS355 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 AS355 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: AS355 F2

I. General

1.	Type/ Model/ Variant	
	1.1 Type	AS355
	1.2 Model	AS355 F2
	1.3 Variant	n/a
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-F	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	4 January 1979
2.	Airworthiness Requirements	
	FAR 27 Amdt. 16 included; Performance of AS355 F2 SUPPLEMENT 11-2 of RFM were established in accordance with FAR 29 requirements Part 29-45 through 29-79 (see Note 4.)	
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.	Requirements elected to comply	none
8.	Environmental Protection Requirements	
	8.1 Noise Requirements	See TCDSN EASA.R.146 for noise
	8.2 Emission Requirements	n/a
9.	Operational Suitability Data (OSD)	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 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 (35.86 ft)
Width hull: 1.87 m (6.14 ft)
Height: 3.14 m (10.30 ft)

4.2 Main Rotor

Diameter: 10.69 m (35.07 ft)

4.3 Tail Rotor

Diameter: 1.86 m (6.10 ft)

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 [rpm (rpm)] (corresponding to MR rpm)	Exhaust gas Temperature [°C]
AEO-TOP	78	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→ 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)

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: 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}: 278 km/h (150 kt) for HP=0
- at altitude, decrease by 15 km/h every 1 000 m (2.5 kt/1 000 ft)

- in cold weather with OATbelow -35°C, substract 19 km/h (10 kt) from the above V_{NE}

Power-off V_{NE}

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

- at altitude, decrease by 15 km/h every 1 000 m (2.5 kt/1000 ft)
- in cold weather with OAT below -25°C, substract 37 km/h (20 kt) from the above V_{NE}, without V_{NE} being less than 120 km/h (65 kt)

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

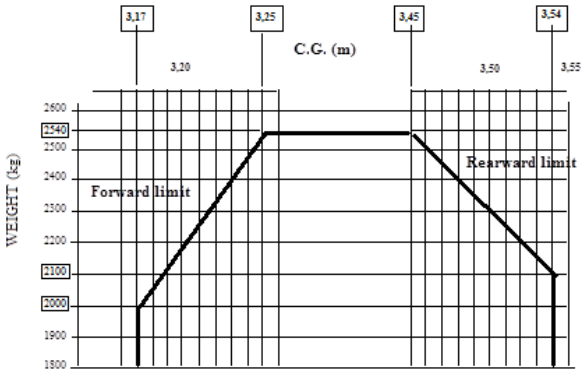
VFR day and night
IFR
No flights in icing conditions
No aerobatic manoeuvres
For more information refer to RFM

12. Maximum Mass

2 540 kg (5 600 lb)

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

Location	Max. load [kg (lb)]
Max. load for R.H. lateral hold	100 (220)
Max. load for L.H. lateral hold	120 (264)
Max. load for rear hold	80 (176)
Max. load on cabin floor	FWD 150 (331) AFT 310 (683)

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 AS355 F2 Chapter 5 "Master Servicing Manual " have been initially accepted by DGAC FR to carry out maintenance of AS355 F2 helicopters. Chapter 04"Airworthiness limitations" contains statements that must mandatorily be respected.

IV. Operating and Service Instructions

1. Flight Manual — AS355 F2 Flight Manual, initially approved by DGAC FR on 10 December 1985, or later EASA (DGAC FR) approved revision (reference: in English language).

2. Maintenance Manual — AS355 F2 PRE– Chapter 05-99(Airworthiness Limitations) or AS355 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).
- AS355 F2 Maintenance Manual
- AS355 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.

3. Structural Repair Manual — MRS AS355

4. Weight and Balance Manual — Refer to approved RFM

5. Illustrated Parts Catalogue — AS355 F2 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 AS355 F2: s/n 5334, and subsequent.
   AS355 F1 aircraft converted into AS355 F2 by application of Service Bulletin n°01.20
   The aircrafts 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 AS355 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 5: AS355 N

I. General

1.	Type/ Model/ Variant	
	1.1 Type	AS355
	1.2 Model	AS355 N
	1.3 Variant	n/a
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	10 October 1984
2.	Airworthiness Requirements	

FAR 27 Amdt. 20 included such as modified by CTC 27.
Plus the following paragraphs of Amdt. 21:
21, 45, 71, 79, 143, 151, 161, 173, 175, 177, 672, 673, 729, 735, 779, 807, 1329, 1413, 1519, 1525, 1555, 1585 and 1587
Performance of AS355 F2 Supplement 11-2 of RFM were established in accordance with FAR 29 requirements Part 29-45 through 29-79 (see Note 4).

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.	Requirements elected to comply	none
8.	Environmental Protection Requirements	
	8.1 Noise Requirements	See TCDSN EASA.R.146 for noise
	8.2 Emission Requirements	n/a
9.	Operational Suitability Data (OSD)	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 (35.86 ft)
Width hull: 1.87 m (6.14 ft)
Height: 3.14 m (10.30 ft)

4.2 Main Rotor

Diameter: 10.69 m (35.07 ft)

4.3 Tail Rotor

Diameter: 1.86 m (6.10 ft)

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

	TQ limits [Nm (%)]	Gas generator speed **[rpm]	T_4 Temperature [°C]
Max. Contingency Power (2.5 min)	1 x 683 (1 x 131)	56 140	870
Max. TKOF (5 min)	2 x 406 (2 x 78)*	54 685	800
Intermediate Contingency PWR (30 min)	1 x 599 (1 x 115)*	55 300	800
Max. Continuous PWR (AEO)	2 x 380 (2 x 73)* V_i > 55 kt 2 x 406 (2 x 78) V_i < 55 kt	53 285	765
Max. Continuous PWR (OEI)	1 x 521 (1 x 100)*	53 285	765

Note: (*) Torque values corresponding to MGB limitations.
(**) 100% ↔ 328 kW ↔ N_2 = 45 438 rpm ↔ N_R = 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)

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

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

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

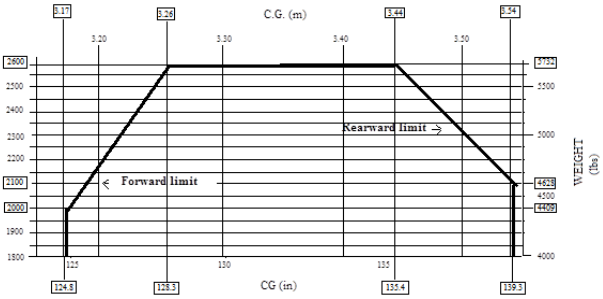
VFR day and night
IFR
No flights in icing conditions
No aerobatic manoeuvres
For more information refer to RFM

12. Maximum Mass

2 600 kg (5 732 lb)

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

Location	Max. load [kg (lb)]
Max. load for R.H. lateral hold	100 (220)
Max. load for L.H. lateral hold	120 (264)
Max. load for rear hold	80 (176)
Max. load on cabin floor	FWD 150 (331) AFT 310 (683)

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 AS355 N Chapter 5 "Master Servicing Manual" have been accepted by DGAC-F to carry out maintenance of AS355 N helicopters. Chapter 04"Airworthiness limitations" contains statements that must mandatorily be respected.

IV. Operating and Service Instructions

1. Flight Manual

AS355 N Flight Manual, initially approved by DGAC FR on 13 June 13, 1989 or later EASA (DGAC FR) approved revision (reference: in English language).

2. Maintenance Manual

AS355 N PRE– Chapter 05-99 (Airworthiness Limitations) or AS355 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).
- AS355 N Maintenance Manual

		- AS355 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.
3.	Structural Repair Manual	MRS AS355
4.	Weight and Balance Manual	Refer to approved RFM
5.	Illustrated Parts Catalogue	AS355 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 AS355 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 AS355 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" 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: AS355 NP

I. General

1.	Type/ Model/ Variant	
	1.1 Type	AS355
	1.2 Model	AS355 NP
	1.3 Variant	n/a
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	10 October 1984

2. Airworthiness Requirements

As defined in CRI A-01, FAR 27 Amdt. 20 included such as modified by CTC 27.
Plus the following paragraphs of FAR 27 Amdt. 21:
§21; §45; §71; §79; §143; §151; §161; §173; §175; §177; §672; §673; §729; §735; §779; §807; §1329; §1413; §1519; §1525; §1555; §1585; §1587
Plus the following paragraphs of FAR 27 Amdt. 23: §923
As defined in CRI A-03, 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 FAR 29 paragraphs are applicable:
§45 (a) and (b)(2) Amdt. 24; §49 (a) Amdt. 39; §51 Amdt. 39; §53 Amdt. 39; §55 Amdt. 39; §59 Amdt. 44; §60 Amdt. 39; §61 Amdt. 39; §62 Amdt. 44; §64 Amdt. 39; §65 (a) Amdt. 39; §67 (a) Amdt. 44; §75 Amdt. 39; §77 Amdt. 44; §79 Amdt. 39; §81 Amdt. 44; §85 Amdt. 44; §87 (a) Amdt. 39; §861 (a) Amdt. 30; §901 (c) Amdt. 26; §903 (b),(c) and (e) Amdt. 36; §908 (a) Amdt. 26; §917 (c)(1)-- Rotor drive system: Design Amdt. 40; §953 (a) Amdt. 0; §1027 (a) Amdt. 26; §1045 (a)(1), (b), (c), (d), and (f) Amdt. 26; §1047 (a) Amdt. 26; §1181 (a) Amdt. 26; §1187 (e) Amdt. 0; §1189 (c) Amdt. 26; §1191 (a)(1) Amdt. 3; §1193 (e) Amdt. 26; §1195 (a), (d) Amdt. 17; §1197 Amdt. 13; §1199 Amdt. 13; §1201 Amdt. 0; §1305 (b) Amdt. 40; §1309 (b)(2) (i) and (d) Amdt. 14; §1323 (c)(1) Amdt. 44; §1331 (b) Amdt. 24; §1587 (a) Amdt. 44.

3. Special Conditions

Special conditions specified in letter DGAC 54408, dated 21 October 1988.
Protection against the effects of High Intensity Radiated Field (HIRF) (refer to CRI F-01)

4.	Exemptions	none
5.	Deviations	none
6.	Equivalent Safety Findings	Powerplant instrument markings (refer to CRI F-04)
7.	Requirements elected to comply	none
8.	Environmental Protection Requirements	
	8.1 Noise Requirements	Refer to CRI A-01 Noise: CS-36 (Provisions of Chapter 8 of ICAO Annex 16, Volume I, Part II) See TCDSN EASA.R.146 for noise

8.2 Emission Requirements n/a

9. Operational Suitability Data (OSD) 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 AS355 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 (35.86 ft)
Width hull: 1.87 m (6.14 ft)
Height: 3.14 m (10.30 ft)

4.2 Main Rotor Diameter: 10.69 m (35.07 ft)

4.3 Tail Rotor Diameter: 1.86 m (6.10 ft)

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

	TQ limits [Nm (%)]	T_4 Temperature [°C]
AEO Max. transient (10 sec)	2 x 468 (2 x 89.6) (*)	800
Max. TKOF (5 min)	2 x 450 (2 x 86.4) (*) V_i < 55 kt	773
Max. Continuous Power (AEO)	2 x 374 (2 x 71.8) (*)	749
Max. Contingency Power (OEI 2.5 min)	1 x 683 (1x131)	
Max. Continuous Power (OEI)	1 x 599 (115) (*)	812

Note: (*) Torque values corresponding to MGB limitations.
Refer to approved RFM for limitations in transient conditions

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 ↔ N_R = 394 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:	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}: 278 km/h (150 kt) for HP=0

- at altitude, decrease by 15 km/h every 1 000 m (2.5 kt/1 000 ft)
- in cold weather with OAT below -35°C, substract 19 km/h (10 kt) from the above V_{NE}

Power-off V_{NE}

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

- at altitude, decrease by 15 km/h every 1 000 m (2.5 kt/1000 ft)
- in cold weather with OAT below -25°C, substract 37 km/h (20 kt) from the above V_{NE}, without V_{NE} being less than 120 km/h (65 kt)

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

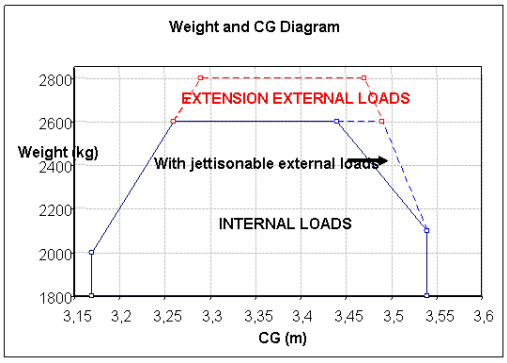
VFR day and night
IFR
No flights in icing conditions
No aerobatic manoeuvres
For more information refer to RFM

12. Maximum Mass

2 600 kg (5 732lb)

13. Centre of Gravity Range

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



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

Location	Max. load [kg (lb)]
Max. load for R.H. lateral hold	100 (220)
Max. load for L.H. lateral hold	120 (264)
Max. load for rear hold	80 (176)
Max. load on cabin floor	FWD 150 (331) AFT 310 (683)

20. Rotor Blade Control Movement

For rigging information refer to Maintenance Manual

21. Auxiliary Power Unit (APU)

n/a

22. Life-limited Parts

See Section IV. 2.

IV. Operating and Service Instructions

1. Flight Manual

AS355 NP Flight Manual RN0 code date DECEMBER 06, approved by EASA on 15 February 2007, or later EASA approved revision (reference: in English language).

2. Maintenance Manual

AS355 NP PRE – chapter 05.99 (Airworthiness Limitations), or AS355 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).
- AS355 NP Maintenance Manual
- AS355 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.
3.	Structural Repair Manual	MRS AS355
4.	Weight and Balance Manual	Refer to approved RFM
5.	Illustrated Parts Catalogue	AS355 NP Illustrated Parts Catalogue
6.	Service Letters and Service Bulletins	As published by Eurocopter or Airbus Helicopters and approved by EASA.
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 AS355 NP: s/n 5747and 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 AS355 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

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
Annex B: Operational Evaluation Board Report – Original – dated: 6 May 2009

II.3 SIM Data

reserved

II.4 Maintenance Certifying Staff Data

reserved

SECTION: ADMINISTRATIVE

I. Acronyms and Abbreviations

AEO	All Engines Operative	min	Minute
AFT	aft	Min.	Minimum
AH	Airbus Helicopters	MMEL	Master Minimum Equipment List
AMDT.	Amendment	OEI	One Engine Inoperative
C.G.	Centre of Gravity	OSD	Operational Suitability Data
CR	(European) Commission Regulation	PA	Pressure Altitude
CRI	Certification Review Item	PWR	Power
DGAC FR	Direction Générale de l'Aviation Civile France	RFM	Rotorcraft Flight Manual
FAA	Federal Aviation Administration	RFMS	Rotorcraft Flight Manual Supplement
FWD	forward	s/n	Serial Number
HIRF	High Intensity Radiated Field	SC	Special Condition
IFR	Instrument Flight Rules	sec	Seconds
		STA	Station
JAR	Joint Aviation Requirements	TGB	Tail gear box
KIAS	Knots Indicated Air Speed	TKOF	Take-Off
LDG	Landing	TOP	Take-off power
Max.	Maximum	TQ	Torque
MCP	Maximum continuous power	VFR	Visual Flight Rules
MGB	Main gear box	V_{NE}	Never Exceed Speed

II. Type Certificate Holder Record.

Type Certificate Holder	**Period**
AEROSPATIALE 37, Boulevard de Montmorency 75781 PARIS CEDEX 16, France	From Initial TC until 1 January 1992
EUROCOPTER FRANCE Aéroport International Marseille – Provence 13725 Marignane CEDEX, France	From 1 January 1992 until 1 June 1997
EUROCOPTER Aéroport International Marseille – Provence 13725 Marignane CEDEX, France	From 1 June 1997 until 6 January 2014
AIRBUS HELICOPTERS Aéroport International Marseille – Provence 13725 Marignane CEDEX, France	since 7 January 2014

III. Change Record

Issue	**Date**	**Changes**	**TC issue**
Issue 1	15 Feb 2007	Initial issue of EASA TCDS	Initial Issue, 15 February 2007
Issue 2	10 Nov 2009		- - -
Issue 3	7 Jan 2014	Reissued mainly due to new branding to “Airbus Helicopters”	Re-issued, 7 January 2014
Issue 4	4 Mar 2014		- - -
Issue 5	17 Dec 2015	TCDS template updated and OSD added	- - -

Issue	Date	Changes	TC issue
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	- - -

- end of file -