TYPE CERTIFICATE DATA SHEET

No. EASA.R.008

for

AS 350 / EC 130

Type Certificate Holder

Airbus Helicopters

Aéroport International Marseille – Provence
13725 Marignane CEDEX
France

For Models: AS 350 B, AS 350 D, AS 350 B1, AS 350 B2, AS 350 BA, AS 350 BB, AS 350 B3
EC 130 B4, EC 130 T2

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SECTION 1: AS 350 B

I. General

1.	Type/ Model/ Variant	
	1.1 Type	AS 350
	1.2 Model	AS 350 B
	1.3 Variant	- - -
2.	Airworthiness Category	Small Rotorcraft
3.	Manufacturer	Airbus Helicopters Aéroport International Marseille Provence 13725 Marignane CEDEX, France
4.	Type Certification Application Date to DGAC FR:	19 June 1974
5.	State of Design Authority	EASA (pre EASA: DGAC, France)
6.	Type Certificate Date by DGAC FR	27 October 1977
7.	Type Certificate n°	EASA.R.008 (former DGAC FR: 157)
8.	Type Certificate Data Sheet n°	EASA.R.008 (former by DGAC FR: 157)
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	19 June 1974 (see II.3.)
2.	Airworthiness Requirements	FAR Part 27, Amdts. 1 to 10 included
3.	Special Conditions	Complementary and Special Conditions defined in DGAC FR letters 6518, dated 17 August 1976 and 6437, dated 28 July 1977
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.008
	8.2 Emission Requirements	n/a
9.	Operational Suitability Data (OSD)	see SECTION 10 below

III. Technical Characteristics and Operational Limitations

1.	Type Design Definition	350A000000
2.	Description	Main rotor: three (3) blades Tail rotor: two (2) blades Fuselage: metal-sheet monocoque Landing gear: skid type Powerplant: one turbo-shaft engine

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3. Equipment

The approved items of equipment are listed in Airbus Helicopters document No. 350A044320.
The basic required equipment specified in the applicable airworthiness regulations (see certification bases) must be installed on the aircraft at certification time and at every time after certification.

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, 3 blades

4.3 Tail Rotor

Diameter: 1.86 m, 2 blades

5. Engine

5.1 Model

Safran Helicopter Engines (former: Turbomeca)
1 x Model Arriel 1B

5.2 Type Certificate

TC/TCDS n°: EASA.E.073 (former DGAC FR n° M5)

5.3 Limitations

5.3.1 Installed Engine Limitations and Transmission Torque Limits

	Limit TQ on shaft [Nm]	Gas generator NG ** [%]	Min. guaranteed PWR * [kW]	Temperature T4 [°C]
Max. transient (5 sec)	- - -	105	- - -	- - -
Max. TOP (5 min)	829	100	478	810
MCP		98	440	775

Notes: - Maximum T4 on starting: 840°C
- * ISA, ground level
- ** 100% = 51 800 rpm

5.3.2 Transmission Torque Limits

Max. TQ: 83% (100% corresponds to 396 kW power output at 386 rpm MR speed)

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: 540 litres
Usable fuel: 538.7 litres, post AMS 07 0289
Unusable fuel: 1.3 litre, post AMS 07 0289

7.2 Oil

Engine: 5.2 litres
MGB: 6.5 litres (circuit included)
TGB: 0.33 litre

7.3 Coolant System Capacity

n/a

8. Air Speed Limitations

V_{NE}: 147 KIAS (272 km/h) from MSL up to 1 000 ft (305 m).
- at higher altitudes, V_{NE} reduced by 3.5 kt/1 000 ft (20 km/h per 1 000 m).
- at OAT between -30° C and -40° C, substract 10 kt (18.5 km/h) from the above decreasing law.

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9.	Rotor Speed Limitations	Power on: Maximum 386 rpm Minimum 380 rpm Power off: Maximum 424 rpm Minimum 320 rpm (audio warning at 335 rpm) The audio warning sounds when rotor speed drops below: - 335 rpm, pre-modification 07.1891 - 360 rpm, post-modification 07.1891
10.	Maximum Operating Altitude and Temperature	
	10.1 Altitude	TKOF/LDG: refer to approved RFM En route: 16 000 ft (4 875 m)
	10.2 Temperature	Refer to approved RFM
11.	Operating Limitations	VFR day VFR night, when the additional equipment required by operational regulations is installed and serviceable. (For more information refer to RFM). Non-icing conditions
12.	Maximum Mass	1 950 kg
13.	Centre of Gravity Range	Longitudinal C.G. limits maximum forward limit: 3 170 mm maximum rearward limit: 3 550 mm up to 1 300 kg 3 430 mm for 1 900 kg and up to 1 950 kg. Linear variation between the points Lateral C.G Limits L.H. limit: 150 mm R.H. limit: 80 mm
14.	Datum	Longitudinal: the datum plane (STA 0) is located at 3 400 mm forward of MRH centre line. Lateral: aircraft symmetry plane
15.	Levelling Means	Transmission deck
16.	Minimum Flight Crew	1 pilot (right seat)
17.	Maximum Passenger Seating Capacity	5 When fitted with the forward 2-place seat optional equipment, the maximum number of passengers is increased to six (pilot not included). This option is to be used in accordance with the corresponding RFMS.
18.	Passenger Emergency Exit	2 (two), one on each side of the passenger cabin
19.	Maximum Baggage/ Cargo Loads	Max. load in: R.H. side hold: 100 kg L.H. side hold: 120 kg Rear hold: 80 kg Forward cabin floor: 150 kg Rear cabin floor: 310 kg
20.	Rotor Blade Control Movement	For rigging information refer to Maintenance Manual
21.	Auxiliary Power Unit (APU)	n/a

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22.	Life-limited Parts	The AS 350 Master Servicing Manual, Chapter 4 "Airworthiness Limitations", originally approved by DGAC FR and subsequently by EASA, contains limitations which are mandatory.

IV. Operating and Service Instructions

1.	Flight Manual	AS 350 B Flight Manual, initially approved by DGAC FR on 27 October 1977, or later EASA (or DGAC FR) approved revision (reference: in French language).
2.	Maintenance Manual	- AS 350 Master Servicing Manual - AS 350 Maintenance 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 Flight Manual.
3.	Structural Repair Manual	AS 350 Repair Manual
4.	Weight and Balance Manual	Refer to approved RFM
5.	Illustrated Parts Catalogue	AS 350 Illustrated Parts Catalogue
6.	Service Letters and Service Bulletins	As published by Aérospatiale, Eurocopter France, Eurocopter or Airbus Helicopters
7.	Required Equipment	Refer to EASA-approved Rotorcraft Flight Manual and related supplements for other approved mandatory and optional equipment and Master Minimum Equipment List.

V. Notes

1. Manufacturer's eligible serial numbers:
   For AS 350 B: s/n 1003, and subsequent.
   For AS 350 D converted into AS 350 B, see Note 3.
2. AS 350 D aircraft may be converted into AS 350 B by application of Service Bulletin 01.00.12.
3. The commercial designation is: Ecureuil

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SECTION 2: AS 350 D

I. General

1.	Type/ Model/ Variant	
	1.1 Type	AS 350
	1.2 Model	AS 350 D
	1.3 Variant	- - -
2.	Airworthiness Category	Small Rotorcraft
3.	Manufacturer	Airbus Helicopters Aéroport International Marseille Provence 13725 Marignane CEDEX, France
4.	Type Certification Application Date to DGAC FR	28 March 1978
5.	State of Design Authority	EASA (pre EASA: DGAC, France)
6.	Type Certificate Date by DGAC FR	4 July 1978
7.	Type Certificate n°	EASA.R.008 (former DGAC FR: 157)
8.	Type Certificate Data Sheet n°	EASA.R.008 (former DGAC FR: 157)
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	19 June 1974 (see II.3.)
2.	Airworthiness Requirements	FAR Part 27, Amdts. 1 to 10 included
3.	Special Conditions	Complementary and Special Conditions defined in DGAC FR letters 6518, dated 17 August 1976 and 6437, dated 28 July 1977
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.008
	8.2 Emission Requirements	n/a
9.	Operational Suitability Data (OSD)	see SECTION 10 below

III. Technical Characteristics and Operational Limitations

1.	Type Design Definition	350A000000
2.	Description	Main rotor: three (3) blades Tail rotor: two (2) blades Fuselage: metal-sheet monocoque Landing gear: skid type Powerplant: one turbo-shaft engine

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3. Equipment

The approved items of equipment are listed in Airbus Helicopters document No. 350A044320.
The basic required equipment specified in the applicable airworthiness regulations (see certification basis) must be installed on the aircraft at certification time and at any time after certification.

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, 3 blades

4.3 Tail Rotor

Diameter: 1.83 m, 2 blades

5. Engine

5.1 Model

Honeywell International Inc. (former: Lycoming Engines)
1 x Model LTS 101-600A-2

5.2 Type Certificate

FAA TC/TCDS n°: E5NE
DGAC FR TC/TCDS n°: M.IM 5
EASA TC/TCDS n°: EASA.IM.E.228

5.3 Limitations

5.3.1 Installed Engine Limitations and Transmission Torque Limits

	Limit TQ on shaft [Nm]	Gas generator NG ** [%]	Min. guaranteed PWR * [kW]	Temperature T4 [°C]
Max. transient (5 sec)	- - -	105.6	- - -	843***
Max. TOP (5 min)	733	103.7	459	782
MCP	704	102.2	440	763

The installed engine limitations at MCP are: NG = 48 930 rpm, and T4 = 755°C

Notes: - Maximum T4 on take-off: 899°C***
- * ISA, ground level
- ** 100% = 47 866 rpm
- *** Max. operating time with temperature above 818°C: 12 sec.

5.3.2 Transmission Torque Limits

Max. TQ: 101% (100% corresponds to 396 kW power output at 386 rpm MR speed)

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: 540 litres
Usable fuel: 538.7 litres, post AMS 07 0289
Unusable fuel: 1.3 litre, post AMS 07 0289

7.2 Oil

Engine: 4.0 litres
MGB: 6.5 litres (circuit included)
TGB: 0.33 litre

7.3 Coolant System Capacity

n/a

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8.	Air Speed Limitations	V_{NE}: 147 KIAS (272 km/h) from MSL up to 1 083 ft (330 m). - at higher altitudes, V_{NE} reduced by 3.5 kt/1 000 ft (20 km/h per 1 000 m). - at OAT between -30° C and -40° C, subtract 10 kt (18.5 km/h) from the above decreasing law.
9.	Rotor Speed Limitations	Power on: Maximum 386 rpm Minimum 380 rpm Power off: Maximum 424 rpm Minimum 320 rpm (audio warning below 335 rpm)
10.	Maximum Operating Altitude and Temperature	
	10.1 Altitude	TKOF/LDG: refer to approved RFM En route: 15 000 ft (4 575 m)
	10.2 Temperature	Refer to approved RFM
11.	Operating Limitations	VFR day VFR night, when the additional equipment required by operational regulations is installed and serviceable. (For more information refer to RFM).
12.	Maximum Mass	1 950 kg
13.	Centre of Gravity Range	Longitudinal C.G. limits maximum forward limit: 3 170 mm maximum rearward limit: 3 550 mm up to 1 300 kg 3 430 mm for 1 900 kg and up to 1 950 kg. Linear variation between the points Lateral C.G Limits L.H. limit: 150 mm R.H. limit: 80 mm
14.	Datum	Longitudinal: the datum plane (STA 0) is located at 3 400 mm forward of MRH centre line. Lateral: aircraft symmetry plane
15.	Levelling Means	Transmission deck
16.	Minimum Flight Crew	1 pilot (right seat)
17.	Maximum Passenger Seating Capacity	5 When fitted with the forward 2-place seat optional equipment, the maximum number of passengers is increased to six (pilot not included). This option is to be used in accordance with the corresponding RFMS.
18.	Passenger Emergency Exit	2 (two), one on each side of the passenger cabin
19.	Maximum Baggage/ Cargo Loads	Max. load in: R.H. side hold: 100 kg L.H. side hold: 120 kg Rear hold: 80 kg Forward cabin floor: 150 kg Rear cabin floor: 310 kg
20.	Rotor Blade Control Movement	For rigging information refer to Maintenance Manual
21.	Auxiliary Power Unit (APU)	n/a

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22.	Life-limited Parts	The AS 350 Master Servicing Manual, Chapter 4 "Airworthiness Limitations", originally approved by DGAC FR and subsequently by EASA, contains limitations which are mandatory.

IV. Operating and Service Instructions

1.	Flight Manual	AS 350 D Flight Manual, initially approved by DGAC FR on 4 July 1978, or later EASA (or DGAC FR) approved revision (reference: in French language).
2.	Maintenance Manual	- AS 350 Master Servicing Manual - AS 350 Maintenance 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 Flight Manual.
3.	Structural Repair Manual	AS 350 Repair Manual
4.	Weight and Balance Manual	Refer to approved RFM
5.	Illustrated Parts Catalogue	AS 350 Illustrated Parts Catalogue
6.	Service Letters and Service Bulletins	As published by Aérospatiale, Eurocopter France, Eurocopter or Airbus Helicopters
7.	Required Equipment	Refer to EASA-approved Rotorcraft Flight Manual and related supplements for other approved mandatory and optional equipment and Master Minimum Equipment List.

V. Notes

1. Manufacturer's eligible serial numbers:
   For AS 350 D: s/n 1028, and subsequent.
   For AS 350 C converted into AS 350 D, see Note 3.
2. AS 350 C aircraft may be converted into AS 350 D by application of Service Bulletin 01.01.
3. The commercial designation is: AStar

* * *

SECTION 3: AS 350 B1

I. General

1.	Type/ Model/ Variant	
	1.1 Type	AS 350
	1.2 Model	AS 350 B1
	1.3 Variant	n/a
2.	Airworthiness Category	Small Rotorcraft
3.	Manufacturer	Airbus Helicopters Aéroport International Marseille Provence 13725 Marignane CEDEX, France
4.	Type Certification Application Date	to DGAC FR: 13 December 1984
5.	State of Design Authority	EASA (pre EASA: DGAC, France)
6.	Type Certificate Date by DGAC FR	9 January 1986
7.	Type Certificate n°	EASA.R.008 (former DGAC FR: 157)
8.	Type Certificate Data Sheet n°	EASA.R.008 (former DGAC FR: 157)
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	19 June 1974 (see II.3.)
2.	Airworthiness Requirements	FAR Part 27, Amdts. 1 to 10 included
3.	Special Conditions	Complementary and Special Conditions defined in DGAC FR letters 6518, dated 17 August 1976 and 6437, dated 28 July 1977 and 53639, dated 25 June 1985
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.008
	8.2 Emission Requirements	n/a
9.	Operational Suitability Data (OSD)	see SECTION 10 below

III. Technical Characteristics and Operational Limitations

1.	Type Design Definition	Document 350A044455
2.	Description	Main rotor: three (3) blades Tail rotor: two (2) blades Fuselage: metal-sheet monocoque Landing gear: skid type Powerplant: one turbo-shaft engine Designed as a derivative of model AS 350 B.

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3. Equipment

The approved items of equipment are listed in Airbus Helicopters document No. 350A044320.
The basic required equipment specified in the applicable airworthiness regulations (see certification bases) must be installed on the aircraft at certification time and at every time after certification.

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, 3 blades

4.3 Tail Rotor

Diameter: 1.86 m, 2 blades

5. Engine

5.1 Model

Safran Helicopter Engines (former: Turbomeca)
1 x Model Arriel 1D

5.2 Type Certificate

TC/TCDS n°: EASA.E.073 (former DGAC FR n° M5)

5.3 Limitations

5.3.1 Installed Engine Limitations and Transmission Torque Limits

	Limit TQ on shaft [Nm]	Gas generator NG ** [%]	Min. guaranteed PWR * [kW]	Temperature T4 [°C]
Max. transient (5 sec)	- - -	105.5	- - -	- - -
Max. TOP (5 min)	830	101.2 100.8	510	845
MCP		98	450	795

Notes: - * ISA, ground level
- ** 100% = 51 800 rpm

5.3.2 Transmission Torque Limits

Max. TQ:
- IAS 40 kt - 74 km/h, or higher: 94%
- IAS below 40 kt - 74 km/h: 100%

100% TQ corresponds to:
- 488 kW power output at 394 rpm MR speed
- 478 kW power output at 386 rpm MR speed

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: 540 litres
Usable fuel: 538.7 litres post AMS 07 0289
Unusable fuel: 1.25 litre post AMS 07 0289

7.2 Oil

Engine: 6.2 litres
MGB: 6.5 litres (circuit included)
TGB: 0.33 litre

7.3 Coolant System Capacity

n/a

8. Air Speed Limitations

V_{NE} power-on:
- 155 KIAS (287 km/h) for H_P =0
- at altitude, speed decreases by 3 kt/1 000 ft

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		(18 km/h/1 000 m) - in cold weather, for -30°C > OAT, subtract 10 kt (19 km/h) from the above V_{NE}. V_{NE} power-off: - 125 KIAS (231 km/h) for H_P=0 - at altitude, speed decreases by 3 kt/1 000 ft (18 km/h/1 000 m) - in cold weather, substract the following values from the above V_{NE}: - 10 kt (19 km/h), for -20°C > OAT > -30°C - 20 kt (37 km/h), for -30°C > OAT, without V_{NE} being less than 65 KIAS (120 km/h).
9.	Rotor Speed Limitations	Power on: Maximum 394 rpm Minimum 385 rpm Power off: Maximum 430 rpm Minimum 320 rpm (audio warning below 365 rpm)
10.	Maximum Operating Altitude and Temperature	
	10.1 Altitude	TKOF/LDG: 14 000 ft PA (4 267 m) En route: 20 000 ft PA (6 096 m)
	10.2 Temperature	Refer to approved RFM
11.	Operating Limitations	VFR day VFR night, when the additional equipment required by operational regulations is installed and serviceable. (For more information refer to RFM).
12.	Maximum Mass	2 200 kg
13.	Centre of Gravity Range	Longitudinal C.G. limits Maximum forward limit: 3 170 mm up to 2 000 kg Linear variation from 3 170 mm to 3 200 mm between 2 000 kg and 2 200 kg 3 200 mm at 2 200 kg Maximum rearward limit: 3 500 mm up to 1 200 kg Linear variation from 3 500 mm to 3 430 mm between 1 200 kg and 2 200 kg 3 430 mm at 2 200 kg Lateral C.G Limits L.H. limit: 180 mm R.H. limit: 140 mm
14.	Datum	Longitudinal: the datum plane (STA 0) is located at 3 400 mm forward of MRH centre line. 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 fitted with the forward two-place seat optional equipment, the maximum number of passengers is increased to six (pilot not included). This option is to be used in accordance with the corresponding RFMS.

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18.	Passenger Emergency Exit	2 (two), one on each side of the passenger cabin
19.	Maximum Baggage/ Cargo Loads	Max. load in: R.H. side hold: 100 kg L.H. side hold: 120 kg Rear hold: 80 kg Forward cabin floor: 150 kg Rear cabin floor: 310 kg
20.	Rotor Blade Control Movement	For rigging information refer to Maintenance Manual
21.	Auxiliary Power Unit (APU)	n/a
22.	Life-limited Parts	The AS 350 Master Servicing Manual, Chapter 4 "Airworthiness Limitations", originally approved by DGAC FR and subsequently by EASA, contains limitations which are mandatory.

IV. Operating and Service Instructions

1.	Flight Manual	AS 350 B1 Flight Manual, initially approved by DGAC FR on 9 January 1986, or later EASA (or DGAC FR) approved revision (reference: in French language).
2.	Maintenance Manual	- AS 350 Master Servicing Manual - AS 350 Maintenance 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 Flight Manual.
3.	Structural Repair Manual	AS 350 Repair Manual
4.	Weight and Balance Manual	Refer to approved RFM
5.	Illustrated Parts Catalogue	AS 350 Illustrated Parts Catalogue
6.	Service Letters and Service Bulletins	As published by Aérospatiale, Eurocopter France, Eurocopter or Airbus Helicopters
7.	Required Equipment	Refer to EASA-approved Rotorcraft Flight Manual and related supplements for other approved mandatory and optional equipment and Master Minimum Equipment List.

V. Notes

1. Manufacturer's eligible serial numbers:
   For AS 350 B1: s/n 1822, and subsequent.
2. The commercial designation is: Ecureuil

* * *

SECTION 4: AS 350 B2

I. General

1.	Type/ Model/ Variant	
	1.1 Type	AS 350
	1.2 Model	AS 350 B2
	1.3 Variant	n/a
2.	Airworthiness Category	Small Rotorcraft
3.	Manufacturer	Airbus Helicopters Aéroport International Marseille Provence 13725 Marignane CEDEX, France For helicopters manufactured under license see sub-paragraph V.1 – Eligible serial numbers.
4.	Type Certification Application Date	to DGAC FR: 6 October 1988
5.	State of Design Authority	EASA (pre EASA: DGAC FR, France)
6.	Type Certificate Date by DGAC FR	26 April 1989
7.	Type Certificate n°	EASA.R.008 (former DGAC FR: 157)
8.	Type Certificate Data Sheet n°	EASA.R.008 (former DGAC FR: 157)
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	19 June 1974 (see II.3.)
2.	Airworthiness Requirements	FAR Part 27, Amdts. 1 to 10 included
3.	Special Conditions	Complementary and special conditions defined in letters 6518, dated 17 August 1976, 6437, dated 28 July 1977, and 53639, dated 25 June 1985 (see letter 53151/SFACT/TC, dated 9 February 1989). For aircraft equipped with VEMD major modification, as above plus Special Conditions on protection against the effects of High Intensity Radiated Fields (HIRF)
4.	Exemptions	none
5.	Deviations	none
6.	Equivalent Safety Findings	Equivalent Safety Findings for Powerplant Instrument Markings
7.	Requirements elected to comply	none
8.	Environmental Protection Requirements	
	8.1 Noise Requirements	see TCDSN EASA.R.008
	8.2 Emission Requirements	n/a
9.	Operational Suitability Data (OSD)	see SECTION 10 below

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III. Technical Characteristics and Operational Limitations

1. Type Design Definition — Document 350A044541

2. Description
Main rotor: three (3) blades
Tail rotor: two (2) blades
Fuselage: metal-sheet monocoque
Landing gear: skid type
Powerplant: one turbo-shaft engine
Designed as a derivative of model AS 350 B1.

3. Equipment — The approved items of equipment are listed in Airbus Helicopters document No. 350A044320.
The basic required equipment specified in the applicable airworthiness regulations (see certification bases) must be installed on the aircraft at certification time and at every time after certification.

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, 3 blades

4.3 Tail Rotor — Diameter: 1.86 m, 2 blades

5. Engine

5.1 Model — Safran Helicopter Engines (former: Turbomeca)
1 x Model Arriel 1D1

5.2 Type Certificate — TC/TCDS n°: EASA.E.073 (former DGAC FR n° M5)

5.3 Limitations

5.3.1 Installed Engine Limitations and Transmission Torque Limits

	Limit TQ on shaft [Nm]	B2 without VEMD Gas generator NG ** (Δ Ng) [%]	B2 with VEMD Gas generator NG ** (Δ Ng) [%]	Min. guaranteed PWR * [kW]	Temperature T4 [°C]
Max. transient (5 sec)	- - -	107.5 % (+6)	103.1 % (+1)	- - -	- - -
Max. TOP (5 min)	830	without P2 air bleed (0) with P2 air bleed (-0.6)	Automatic P2 derating by VEMD	478***	845
MCP		98% (-3.5)	98% (-4)	449	795

Notes:
- * ISA, ground level
- ** 100% = 51 800 rpm
- *** The mechanical power has been limited to this value taking the fuel flow limit into account.

5.3.2 Transmission Torque Limits

- Max. continuous TQ: 94%
- TKOF TQ range from 0 to 40 kt: 94% to 100%
- Max. TKOF TQ: 100%
- Max. transient TQ (5s): 107%

100% TQ corresponds to: 478 kW at 386 rpm MR speed

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:	540 litres	
	Usable fuel:	538.7 litres	post AMS 07 0289
	Unusable fuel:	1.3 litre	post AMS 07 0289
7.2 Oil	Engine:	5.2 litres	
	MGB:	6.5 litres (circuit included)	
	TGB:	0.33 litre	
7.3 Coolant System Capacity	n/a		

8. Air Speed Limitations

V_{NE} power-on:
- 155 KIAS (287 km/h) for H_P =0
- at altitude, speed decreases by 3 kt/1 000 ft (18 km/h/1 000 m)
- in cold weather, for -30°C > OAT, subtract 10 kt (19 km/h) from the above V_{NE}.

V_{NE} power-off:
- 125 KIAS (231 km/h) for H_P=0
- at altitude, speed decreases by 3 kt/1 000 ft (18 km/h per 1 000 m)
- in cold weather, subtract the following values from the above V_{NE}:
  - 10 kt (19 km/h), for -20°C > OAT > -30°C
  - 20 kt (37 km/h), for -30°C > OAT, without V_{NE} being less than 65 KIAS (120 km/h).

9. Rotor Speed Limitations

Power on:	
Maximum	394 rpm
Minimum	385 rpm
Power off:	
Maximum	430 rpm (audio warning above 410 rpm)
Minimum	320 rpm (audio warning below 360 rpm)

10. Maximum Operating Altitude and Temperature

10.1 Altitude	TKOF/LDG:	refer to approved RFM
	En route:	20 000 ft PA (6 096 m)
10.2 Temperature	Refer to approved RFM	

11. Operating Limitations

VFR day
VFR night, when the additional equipment required by operational regulations is installed and serviceable. (For more information refer to RFM).
Flight in falling snow: refer to approved RFM
(For more information refer to approved RFM)

12. Maximum Mass

2 250 kg

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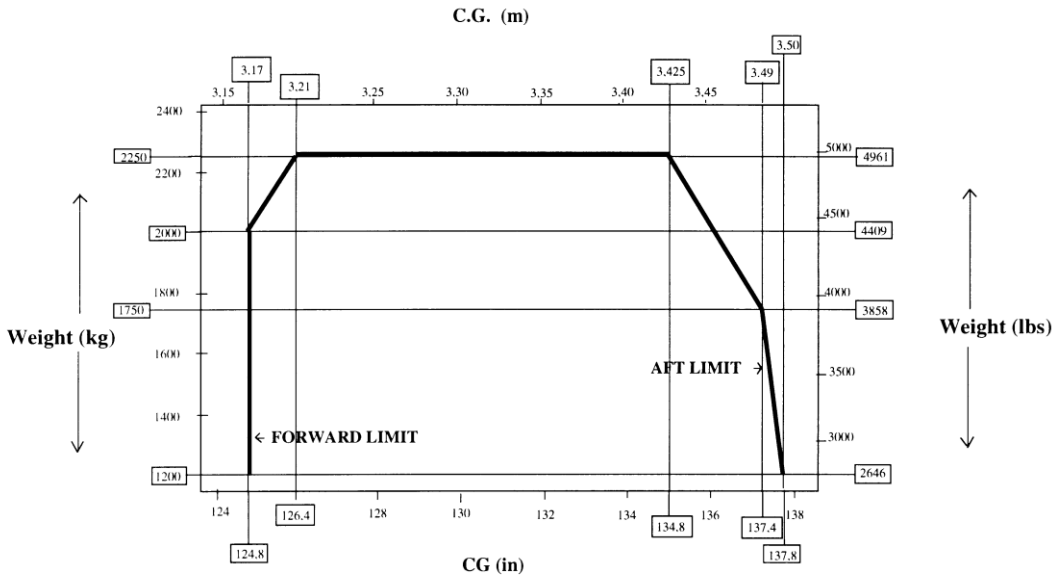
13. Centre of Gravity Range — Longitudinal C.G. limits



Lateral C.G Limits
L.H. limit: 180 mm
R.H. limit: 140 mm

14. Datum — Longitudinal:
the datum plane (STA 0) is located at 3 400 mm forward of MRH centre line.
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 fitted with the forward two-place seat optional equipment, the maximum number of passengers is increased to six (pilot not included). This option is to be used in accordance with the corresponding RFMS.

18. Passenger Emergency Exit — 2 (two), one on each side of the passenger cabin

19. Maximum Baggage/ Cargo Loads — Max. load in:

R.H. side hold:	100 kg
L.H. side hold:	120 kg
Rear hold:	80 kg
Forward cabin floor:	150 kg
Rear cabin floor:	310 kg

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

21. Auxiliary Power Unit (APU) — n/a

22. Life-limited Parts — The AS 350 Master Servicing Manual, Chapter 4 "Airworthiness Limitations", originally approved by DGAC FR and subsequently by EASA, contains limitations which are mandatory.

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IV. Operating and Service Instructions

1.	Flight Manual	AS 350 B2 Flight Manual, approved by DGAC FR on 26 April 1989, or later approved revision (reference: in French language). For VEMD major modification: AS 350 B2 (VEMD) Flight Manual, approved under ref. EASA.R.C 01396 on 22 November 2006, or later approved revision (reference: in English language) AS 350 B2 (VEMD) Flight Manual, approved under ref. 10029919 on 3 May 2010, or later approved revision (reference: in French language)
2.	Maintenance Manual	- AS 350 Master Servicing Manual - AS 350 Maintenance 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 Flight Manual.
3.	Structural Repair Manual	AS 350 Repair Manual
4.	Weight and Balance Manual	Refer to approved RFM
5.	Illustrated Parts Catalogue	AS 350 B2 Illustrated Parts Catalogue
6.	Service Letters and Service Bulletins	As published by Aérospatiale, Eurocopter France, Eurocopter or Airbus Helicopters
7.	Required Equipment	Refer to EASA-approved Rotorcraft Flight Manual and related supplements for other approved mandatory and optional equipment and Master Minimum Equipment List.

V. Notes

1. Manufacturer's eligible serial numbers:
   For AS 350 B2: s/n 2100, and subsequent.
   For AS 350 B2 with VEMD major modification: s/n 4129, and subsequent.
   - AS 350 B1 converted into AS 350 B2 by application by application of Service Bulletin n° 01.26 or 01.00.26
   - AS 350 B aircraft converted into AS 350 B2 by application of Service Bulletin n° 01.00.51
   - AS 350 BA aircraft converted into AS 350 B2 by application of Service Bulletin n° 01.00.50 or Service Bulletin n° 01.90.61

   The aircraft, the s/n of which are listed in Airbus Helicopters document:
   - L102-001 are manufactured under Helibras license;
   - L 102-002 are manufactured under AE-MS license.
2. The commercial designation is: Ecureuil

* * *

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SECTION 5: AS 350 BA

I. General

1.	Type/ Model/ Variant	
	1.1 Type	AS 350
	1.2 Model	AS 350 BA
	1.3 Variant	n/a
2.	Airworthiness Category	Small Rotorcraft
3.	Manufacturer	Airbus Helicopters Aéroport International Marseille Provence 13725 Marignane CEDEX, France. For helicopters manufactured under license see sub-paragraph V.1 – Eligible serial numbers.
4.	Type Certification Application Date	to DGAC FR: 17 May 1991
5.	State of Design Authority	EASA (pre EASA: DGAC FR, France)
6.	Type Certificate Date by DGAC FR	26 November 1991
7.	Type Certificate n°	EASA.R.008 (former DGAC FR: 157)
8.	Type Certificate Data Sheet n°	EASA.R.008 (former DGAC FR: 157)
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	19 June 1974 (see II.3.)
2.	Airworthiness Requirements	FAR Part 27, Amdts. 1 to 10 included
3.	Special Conditions	Complementary and special conditions defined in letters 6518, dated 17 August 1976, 6437, dated 28 July 1977, and 53639, dated 25 June 1985 (see letter 53881, dated 14 August 1991)
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.008
	8.2 Emission Requirements	n/a
9.	Operational Suitability Data (OSD)	see SECTION 10 below

III. Technical Characteristics and Operational Limitations

1.	Type Design Definition	Documents 350A044685
2.	Description	Main rotor: three (3) blades Tail rotor: two (2) blades Fuselage: metal-sheet monocoque Landing gear: skid type

Powerplant: one turbo-shaft engine
Designed as a derivative of models AS 350 B1 and AS 350 B2.

3. Equipment

The basic required equipment specified in the applicable airworthiness regulations (see certification bases) must be installed on the aircraft at certification time and at every time after certification.

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, 3 blades

4.3 Tail Rotor

Diameter: 1.86 m, 2 blades

5. Engine

5.1 Model

Safran Helicopter Engines (former: Turbomeca)
1 x Model Arriel 1B

5.2 Type Certificate

TC/TCDS n°: EASA.E.073 (former DGAC FR n° M5)

5.3 Limitations

5.3.1 Installed Engine Limitations and Transmission Torque Limits

	Limit TQ on shaft [Nm]	Gas generator NG ** [%]	Min. guaranteed PWR * [kW]	Temperature T4 [°C]
Max. transient (5 sec)	*reserved*	105	- - -	- - -
Max. TOP (5 min)	*reserved*	100	478	810
MCP		98	440	775

Notes: - * ISA, ground level
- ** 100% = 51 800 rpm
- Max. T4 starting: 840°C

5.3.2 Transmission Torque Limits

Max. TQ:
- IAS 40 kt - 74 km/h, or higher: 83%
- IAS below 40 kt - 74 km/h: 88%

100% TQ corresponds to 478 kW power output at 386 rpm MR speed

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: 540 litres
Usable fuel: 538.7 litres post AMS 07 0289
Unusable fuel: 1.3 litre post AMS 07 0289

7.2 Oil

Engine: 5.2 litres
MGB: 6.5 litres (circuit included)
TGB: 0.33 litre

7.3 Coolant System Capacity

n/a

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8. Air Speed Limitations

V_{NE} power-on:
- 155 KIAS (287 km/h) for PA=0
- at altitude, speed decreases by 3 kt/1 000 ft (18 km/h/1 000 m)
- in cold weather, for -30°C > OAT, subtract 10 kt (19 km/h) from the above V_{NE}.

V_{NE} power-off:
- 125 KIAS (231 km/h) for PA=0
- at altitude, speed decreases by 3 kt/1 000 ft (18 km/h/1 000 m)
- in cold weather, subtract the following values from the above V_{NE}:
  - 10 kt (19 km/h), for -20°C > OAT > -30°C
  - 20 kt (37 km/h), for -30°C > OAT, without V_{NE} being less than 65 KIAS (120 km/h).

9. Rotor Speed Limitations

Power on:

Maximum	394 rpm
Minimum	385 rpm

Power off:

Maximum	430 rpm (audio warning above 410 rpm)
Minimum	320 rpm (audio warning below 360 rpm)

10. Maximum Operating Altitude and Temperature

10.1 Altitude

TKOF/LDG:	refer to approved RFM
En route:	16 000 ft PA (4 875 m)

10.2 Temperature

Refer to approved RFM

11. Operating Limitations

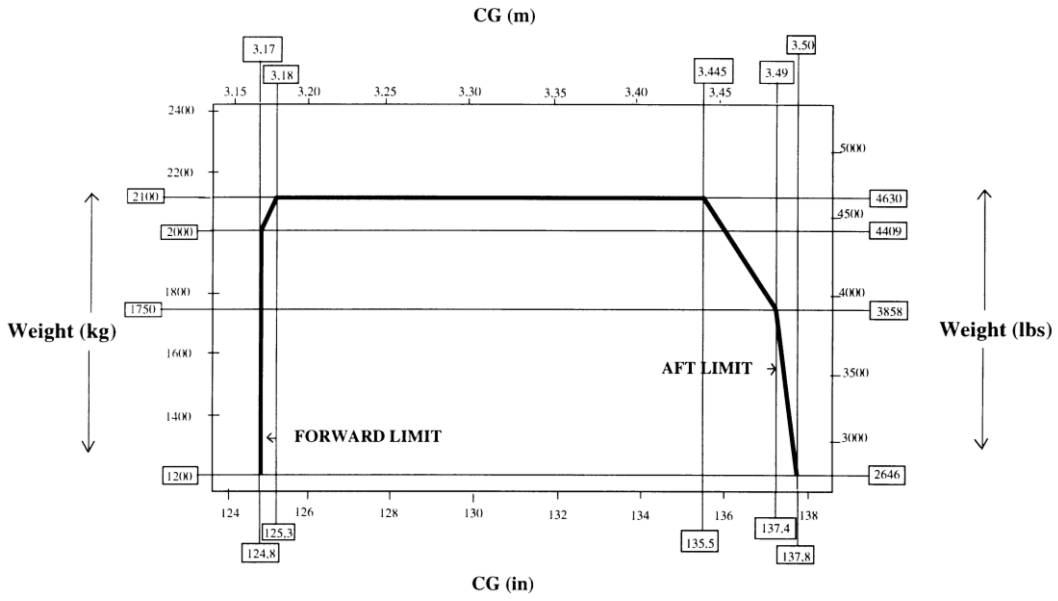
VFR day
VFR night, when the additional equipment required by operational regulations is installed and serviceable. (For more information refer to RFM).

12. Maximum Mass

2 100 kg

13. Centre of Gravity Range

Longitudinal C.G. limits



Lateral C.G Limits

L.H. limit:	180 mm
R.H. limit:	140 mm

14.	Datum	Longitudinal: the datum plane (STA 0) is located at 3 400 mm forward of MRH centre line. 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 fitted with the forward two-place seat optional equipment, the maximum number of passengers is increased to six (pilot not included). This option is to be used in accordance with the corresponding RFMS.
18.	Passenger Emergency Exit	2 (two), one on each side of the passenger cabin
19.	Maximum Baggage/ Cargo Loads	Max. load in: R.H. side hold: 100 kg L.H. side hold: 120 kg Rear hold: 80 kg Forward cabin floor: 150 kg Rear cabin floor: 310 kg
20.	Rotor Blade Control Movement	For rigging information refer to Maintenance Manual
21.	Auxiliary Power Unit (APU)	n/a
22.	Life-limited Parts	The AS 350 Master Servicing Manual, Chapter 4 "Airworthiness Limitations", originally approved by DGAC FR and subsequently by EASA, contains limitations which are mandatory.

IV. Operating and Service Instructions

1.	Flight Manual	AS 350 BA Flight Manual, approved by DGAC FR on 26 November 1991, or later EASA (or DGAC FR) approved revision (reference: in French language).
2.	Maintenance Manual	- AS 350 Master Servicing Manual - AS 350 Maintenance 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 Flight Manual.
3.	Structural Repair Manual	AS 350 Repair Manual
4.	Weight and Balance Manual	Refer to approved RFM
5.	Illustrated Parts Catalogue	AS 350 Illustrated Parts Catalogue
6.	Service Letters and Service Bulletins	As published by Aérospatiale, Eurocopter France, Eurocopter or Airbus Helicopters
7.	Required Equipment	Refer to EASA-approved Rotorcraft Flight Manual and related supplements for other approved mandatory and optional equipment and Master Minimum Equipment List.

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V. Notes

1. Manufacturer's eligible serial numbers:
   For AS 350 BA: s/n 2588, and subsequent.
   - AS 350 B aircraft converted into AS 350 BA by application of Service Bulletin n° 01.00.35
   - AS 350 D aircraft converted into AS 350 BA by application of Service Bulletin n° 01.00.40

   The aircraft, the s/n of which are listed in Airbus Helicopters document:
   - L102-001 are manufactured under Helibras license;
   - L102-002 are manufactured under AE-MS license.
2. The commercial designation is: Ecureuil

* * *

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SECTION 6: AS 350 BB

I. General

1.	Type/ Model/ Variant	
	1.1 Type	AS 350
	1.2 Model	AS 350 BB
	1.3 Variant	n/a
2.	Airworthiness Category	Small Rotorcraft
3.	Manufacturer	Airbus Helicopters Aéroport International Marseille Provence 13725 Marignane CEDEX, France For helicopters manufactured under license see sub-paragraph V.1 – Eligible serial numbers.
4.	Type Certification Application Date	to DGAC FR: 23 July 1996
5.	State of Design Authority	EASA (pre EASA: DGAC FR, France)
6.	Type Certificate Date by DGAC FR	15 November 1996
7.	Type Certificate n°	EASA.R.008 (former DGAC FR: 157)
8.	Type Certificate Data Sheet n°	EASA.R.008 (former DGAC FR: 157)
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	19 June 1974 (see II.3.)
2.	Airworthiness Requirements	FAR Part 27, Amdts. 1 to 10 included
3.	Special Conditions	Complementary and special conditions defined in letters 6518, dated 17 August 1976, 6437, dated 28 July 1977, and 53639, dated 25 June 1985
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.008
	8.2 Emission Requirements	n/a
9.	Operational Suitability Data (OSD)	see SECTION 10 below

III. Technical Characteristics and Operational Limitations

1.	Type Design Definition	350A044825
2.	Description	Main rotor: three (3) blades Tail rotor: two (2) blades Fuselage: metal-sheet monocoque Landing gear: skid type Powerplant: one turbo-shaft engine

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3. Equipment

The approved items of equipment are listed in Airbus Helicopters document n° 350A044320.
The basic required equipment specified in the applicable airworthiness regulations (see certification bases) must be installed on the aircraft at certification time and at every time after certification.

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, 3 blades

4.3 Tail Rotor

Diameter: 1.86 m, 2 blades

5. Engine

5.1 Model

Safran Helicopter Engines (former: Turbomeca)
1 x Model Arriel 1D1 (with TU 221)

5.2 Type Certificate

TC/TCDS n°: EASA.E.073 (former DGAC FR n° M5)

5.3 Limitations

5.3.1 Installed Engine Limitations and Transmission Torque Limits

	Limit TQ on shaft [Nm]	Gas generator NG ** [%]	Min. guaranteed PWR * [kW]	Temperature T4*** [°C]
Max. transient (5 sec)	*reserved*	105.7	- - -	- - -
Max. TOP (5 min)	*reserved*	98.5	478	845
MCP		96.5	428	795

Notes: - * ISA, ground level
- ** Min. stabilised rating: 67% - 100% = 51 800 rpm
- *** Max. transient during starting: 865°C

5.3.2 Transmission Torque Limits

- Max. continuous: 88% for IAS < 60 kt
  83% for IAS ≥ 60 kt
- Max. transient: 107% for IAS < 40 kt

88% TQ corresponds to 420 kW power output at 386 rpm MR speed,
or, 429 kW at 394 rpm MR speed.

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: 540 litres
Usable fuel: 538.7 litres post AMS 07 0289
Unusable fuel: 1.3 litre post AMS 07 0289

7.2 Oil

Engine: 5.2 litres
MGB: 6.5 litres (circuit included)
TGB: 0.33 litre

7.3 Coolant System Capacity

n/a

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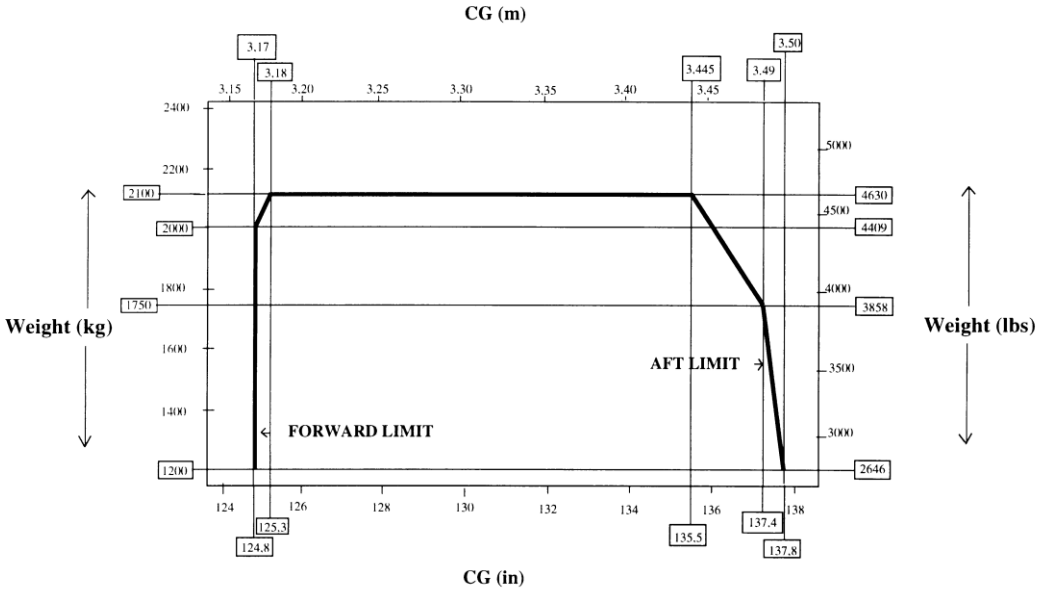
8.	Air Speed Limitations	V_{NE} power-on: - 155 KIAS (287 km/h) for PA=0 - at altitude, speed decreases by 3 kt/1 000 ft (18 km/h/1 000 m) - in cold weather, for -30°C > OAT, subtract 10 kt (19 km/h) from the above V_{NE}. V_{NE} power-off: - 125 KIAS (231 km/h) for PA=0 - at altitude, speed decreases by 3 kt/1 000 ft (18 km/h/1 000 m) - in cold weather, substract the following values from the above V_{NE}: - 10 kt (19 km/h), for -20°C > OAT > -30°C - 20 kt (37 km/h), for -30°C > OAT, without V_{NE} being less than 65 KIAS (120 km/h).
9.	Rotor Speed Limitations	Power on: Maximum 394 rpm Minimum 385 rpm Power off: Maximum 430 rpm (audio warning above 410 rpm) Minimum 320 rpm (audio warning below 360 rpm)
10.	Maximum Operating Altitude and Temperature	
	10.1 Altitude	TKOF/LDG: refer to approved RFM En route: 16 000 ft PA (4 875 m)
	10.2 Temperature	Refer to approved RFM
11.	Operating Limitations	VFR day VFR night, when the additional equipment required by operational regulations is installed and serviceable. (For more information refer to RFM).
12.	Maximum Mass	2 100 kg
13.	Centre of Gravity Range	Longitudinal C.G. limits



		Lateral C.G Limits L.H. limit: 180 mm R.H. limit: 140 mm
14.	Datum	Longitudinal: the datum plane (STA 0) is located at 3 400 mm forward of MRH centre line. 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 fitted with the forward two-place seat optional equipment, the maximum number of passengers is increased to six (pilot not included). This option is to be used in accordance with the corresponding RFMS.
18.	Passenger Emergency Exit	2 (two), one on each side of the passenger cabin
19.	Maximum Baggage/ Cargo Loads	Max. load in: R.H. side hold: 100 kg L.H. side hold: 120 kg Rear hold: 80 kg Forward cabin floor: 150 kg Rear cabin floor: 310 kg
20.	Rotor Blade Control Movement	For rigging information refer to Maintenance Manual
21.	Auxiliary Power Unit (APU)	n/a
22.	Life-limited Parts	The AS 350 Master Servicing Manual, Chapter 4 "Airworthiness Limitations", originally approved by DGAC FR and subsequently by EASA, contains limitations which are mandatory.

IV. Operating and Service Instructions

1.	Flight Manual	AS 350 BB Flight Manual, approved by DGAC FR on 15 November 1996, or later EASA (or DGAC FR) approved revision (reference: in French language).
2.	Maintenance Manual	- AS 350 Master Servicing Manual - AS 350 Maintenance 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 Flight Manual.
3.	Structural Repair Manual	AS 350 Repair Manual
4.	Weight and Balance Manual	Refer to approved RFM
5.	Illustrated Parts Catalogue	AS 350 Illustrated Parts Catalogue
6.	Service Letters and Service Bulletins	As published by Eurocopter France, Eurocopter or Airbus Helicopters
7.	Required Equipment	Refer to EASA-approved Rotorcraft Flight Manual and related supplements for other approved mandatory and optional equipment and Master Minimum Equipment List.

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V. Notes

1. Manufacturer's eligible serial numbers:
   For AS 350 BB: s/n 2945, and subsequent.
2. The commercial designation is: Ecureuil

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SECTION 7: AS 350 B3

I. General

1.	Type/ Model/ Variant	
	1.1 Type	AS 350
	1.2 Model	AS 350 B3
	1.3 Variant	n/a
2.	Airworthiness Category	Small Rotorcraft
3.	Manufacturer	Airbus Helicopters Aéroport International Marseille Provence 13725 Marignane CEDEX, France For helicopters manufactured under license see sub-paragraph V.1 – Eligible serial numbers.
4.	Type Certification Application Date	to DGAC FR: 14 October 1996
5.	State of Design Authority	EASA (pre EASA: DGAC FR, France)
6.	Type Certificate Date by DGAC FR	24 December 1997
7.	Type Certificate n°	EASA.R.008 (former DGAC FR: 157)
8.	Type Certificate Data Sheet n°	EASA.R.008 (former DGAC FR: 157)
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	19 June 1974 (see II.3.)
2.	Airworthiness Requirements	FAR Part 27, Amdts. 1 to 10 included
	2.1 for a/c incorporating mod. OP-3369 (2 370 kg weight extension)	as above (2.) with the following requirements of CS 27, first issue, dated 14 November 2003 to replace the same numbered paragraphs of FAR 27: 27.1; 27.21; 27.25; 27.27; 27.33; 27.45; 27.51; 27.65; 27.71; 27.73; 27.75; 27.79; 27.141; 27.143; 27.173; 27.175; 27.177; 27.241; 27.301; 27.303; 27.305; 27.307; 27.309; 27.321; 27.337; 27.339; 27.341; 27.351; 27.471; 27.473; 27.501; 27.505; 27.521; 27.547; 27.549; 27.563 (b); 27.571; 27.602; 27.661; 27.663; 27.695; 27.723; 27.725; 27.727; 27.737; 27.751; 27.753; 27.801 (b),(d); 27.927 (c); 27.1041; 27.1043; 27.1045; 27.1301; 27.1501; 27.1519; 27.1529; 27.1581; 27.1583; 27.1585; 27.1587; 27.1589.
	2.2 for a/c incorporating mod. OP-4305 (Arriel 2D engine installation)	as above (2.1)
	2.3 for a/c incorporating mod. OP-4605 (installation of a fuel system improving crashworthiness)	as above (2.2) with requirement CS 27.561 (c) Amdt. 3, dated 11 December 2012 replacing same numbered paragraph of FAR 27 for the following elements of the fuel tank lower structure, affected by this modification: cradles, longitudinal beams, X-stops and rods.
3.	Special Conditions	Complementary and special conditions defined in DGAC FR letter 971726, dated 3 April 1997.

3.1	for a/c incorporating mod. OP-3369 (2 370 kg weight extension)	as above (3.)
3.2	for a/c incorporating mod. OP-4305 (Arriel 2D engine installation)	as above (3.1) and: - Part 21.A.21 (d) taking precedence over "Complementary Condition" CC 27.903 (a) in Appendix 1 to DGAC letter 971726, - Power plant control replacing Special Condition B.1. in Appendix 2 to DGAC letter 971726, - Structure protection against lightning replacing Special Condition D.1. in Appendix 2 to DGAC letter 971726, - Protection from effects of HIRF replacing Special Condition E1 in Appendix 3 to DGAC letter 971726, - Immunity from effects of lightning replacing Special Condition E2 per Appendix 3 to DGAC letter 971726, - Rotor drive system endurance test for HIP.
3.3	for a/c incorporating mod. OP-4605 (installation of a fuel system improving crashworthiness)	as above (3.2)
4.	Exemptions	none
5.	Deviations	none
6.	Equivalent Safety Findings	Powerplant Instrument Markings for a/c incorporating MOD OP-4305 (Arriel 2D engine installation)
7.	Requirements elected to comply	for OP4605 see 2.3
8.	Environmental Protection Requirements	
8.1	Noise Requirements	see TCDSN EASA.R.008
8.2	Emission Requirements	n/a
9.	Operational Suitability Data (OSD)	see SECTION 10 below

III. Technical Characteristics and Operational Limitations

1.	Type Design Definition	Document 350A044805 Document 350A045426 for aircraft incorporating modification OP-3369 (2 370 kg weight extension). Document 350A047343 for aircraft incorporating modification OP-4305 (Arriel 2D engine installation)
2.	Description	Main rotor: three (3) blades Tail rotor: two (2) blades Fuselage: metal-sheet monocoque Landing gear: skid type Powerplant: one turbo-shaft engine Designed as a derivative of model AS 350 B2.
3.	Equipment	The approved items of equipment are listed in Airbus Helicopters document No. 350A044320. The basic required equipment specified in the applicable airworthiness regulations (see certification bases) must be installed on the aircraft at certification time and at every time after certification.
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, 3 blades

4.3 Tail Rotor — Diameter: 1.86 m, 2 blades

5. Engine

5.1 Model — Safran Helicopter Engines (former: Turbomeca)
1 x Model Arriel 2B, or,
1 x Model Arriel 2B1, or,
1 x Model Arriel 2D

5.2 Type Certificate — Same TC/TCDS for the 3 engines models, n°: EASA.E.001 (former DGAC FR n° M19)

5.3 Limitations

5.3.1 Installed Engine Limitations and Transmission Torque Limits

On AS 350 B3 Arriel 2B (before modifications AMS 072803 and 072808):

	Limit TQ on shaft [Nm]	Gas generator NG ** (Δ Ng) [%]	Min. guaranteed PWR * [kW]	Temperature T4 [°C]
Max. transient (5 sec)	- - -	102.3 % (+1)	- - -	- - -
Max. TOP (5 min)	853	101.1 (0)	535	915
MCP	716	94.8 (-4) V_i > 70 kt	450	849
		97.1 (-4) V_i < 70 kt		

On AS 350 B3 Arriel 2B (after modifications AMS 072803 and 072808), and on AS 350 B3 Arriel 2B1:

	Limit TQ on shaft [Nm]	Gas generator NG ** (Δ Ng) [%]	Min. guaranteed PWR * [kW]	Temperature T4 [°C]
Max. transient (5 sec)	- - -	102.3 (+1)	- - -	- - -
Max. TOP (5 min)	853	101.1 (0)	535	915
MCP	791	97.1 (-4)	497	849

Notes: - * ISA, ground level at 386 rpm MR speed
- ** 100% = 52 110 rpm – with neither electrical nor P2 bleed, ISA ground level

On AS 350 B3 Arriel 2D ****:

	Limit TQ on shaft [Nm]	Gas generator NG *** (Δ Ng) [%]	Min. guaranteed PWR * [kW]	Temperature T4 [°C]
Max. transient (20 sec)	- - -	101.9 (+1)	- - -	- - -
Max. TOP (5 min)	853	100.9 (0)	535	949
Max. TOP/HIP (30 min) *****				
MCP	791	98.0 (-4)	450	905

Notes: - * ISA, ground level at 386 rpm MR speed.
- ** 100% = 52 110 rpm.
- *** As the actual Ng limitations depend on ambient conditions, the operational limitations are the Δ Ng values. Ng values correspond to the maximum Ng reached in the whole flight domain.
- **** The engine is not physically derated but its performance is limited when installed in

the AS 350 B3. Specific limitations have been implemented in the VEMD, allowing the pilot to control the installed Arriel 2D at the same power limitations as when an Arriel 2B1 is installed, for each aircraft rating (MCP, MTOP and MTP).

- ***** Use of HIP (Hover Increased Power, TOP 30 min) is only allowed when enhanced thermal protection is fitted on the AS 350 B3 tail boom (modification OP-4309).

5.3.2 Transmission Torque Limits

On AS 350 B3 Arriel 2B (before modifications AMS 072803 and 072808):

For V < 40 kt (74 km/h):
- Max. transient TQ (10 sec): 104%
- Max. continuous TQ: 100%

For V ≥ 40 kt (74 km/h):
- Max. continuous TQ: 84%

On AS 350 B3 Arriel 2B (after modifications AMS 072803 and 072808):

For V < 40 kt (74 km/h):
- Max. transient TQ (10 sec): 104%
- Max. continuous TQ: 100%

For V ≥ 40 kt (74 km/h):
- Max. continuous TQ: 92.7%

On AS 350 B3 Arriel 2B1:

- Max. continuous TQ: 92.7%
- TKOF TQ range from 0 to 40 kt: 92.7% to 100%
- Max. TKOF TQ: 100%
- Max. transient TQ (5 sec): 104%

On AS 350 B3 Arriel 2D:

- Max. continuous TQ: 92.7%
- TKOF TQ range from 0 to 40 kt: 92.7% to 100%
- Max. TKOF TQ: 100%
- Max. transient TQ (5 sec): 104%

Note: 100% TQ corresponds to: 535 kW at 386 rpm MR speed

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:	540 litres	
		Usable fuel:	538.7 litres	post AMS 07 0289
			538 litres	post AMS OP 4605
		Unusable fuel:	1.3 litre	post AMS 07 0289
			2 litres	post AMS OP 4605
7.2	Oil	Engine:	5.2 litres	
		MGB:	6.5 litres (circuit included)	
		TGB:	0.33 litre	
7.3	Coolant System Capacity	n/a		

8. Air Speed Limitations

8.1	For AS 350 B3 Arriel 2B (before modifications AMS 072803 and 072808), and for AS 350 B3 Arriel 2B1:	V_{NE} power-on: - 155 KIAS (287 km/h) for PA=0 - at altitude, speed decreases by 3 kt/1 000 ft (18 km/h/1 000 m) - in cold weather, for -30°C > OAT, subtract 10 kt

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(19 km/h) from the above V_{NE}.

V_{NE} power-off:
- 125 KIAS (231 km/h) for PA =0
- at altitude, speed decreases by 3 kt/1 000 ft (18 km/h/1 000 m), without V_{NE} being less than 65 KIAS (120 km/h)
- in cold weather, substract 20 kt (37 km/h) from the above V_{NE} for OAT < -20°C, without V_{NE} being less than 65 KIAS (120 km/h).

8.2 For AS 350 B3 Arriel 2B (after modifications AMS 072803 and 072808):

V_{NE} power-on:
- 155 KIAS (287 km/h) for PA=0
- at altitude, speed decreases by 3 kt/1 000 ft (18 km/h/1 000 m)
- in cold weather, for -30°C > OAT, subtract 10 kt (19 km/h) from the above V_{NE}.
- In the cross-hatched area in the C of G graph, V_{NE} is limited to 133 KIAS (246 km/h) or the V_{NE} defined above (the lowest value).

V_{NE} power-off:
- 125 KIAS (231 km/h) for PA =0
- at altitude, speed decreases by 3 kt/1 000 ft (18 km/h/1 000 m), without V_{NE} being less than 65KIAS (120 km/h)
- in cold weather, substract 20 kt (37 km/h) from the above V_{NE} for OAT < -20°C, without V_{NE} being less than 65 KIAS (120 km/h).

8.3 For AS 350 B3 Arriel 2D:

V_{NE} power-on:
- 155 KIAS (287 km/h) for PA=0
- at altitude, speed decreases by 3 kt/1 000 ft (18 km/h/1 000)
- in cold weather, for -30°C > OAT, subtract 10 kt (19 km/h) from the above V_{NE}.
- In the cross-hatched area in the C of G graph, V_{NE} is limited to 133 KIAS (246 km/h) or the V_{NE} defined above (the lowest value).

V_{NE} power-off:
- 125 KIAS (231 km/h) for PA =0
- at altitude, speed decreases by 3 kt/1 000 ft (18 km/h/1 000 m), without V_{NE} being less than 65 KIAS (120 km/h)
- in cold weather, substract 20 kt (37 km/h) from the above V_{NE} for OAT < -20°C, without V_{NE} being less than 65 KIAS (120 km/h).

9. Rotor Speed Limitations

9.1 For AS 350 B3 Arriel 2B:

Power on:

Maximum	394 rpm
Minimum	385 rpm

9.2 For AS 350 B3 Arriel 2B1:

Power on:

Maximum	405 rpm
Minimum	375 rpm

9.3 For AS 350 B3 Arriel 2D:

Power on:

Maximum	405 rpm
Minimum	375 rpm

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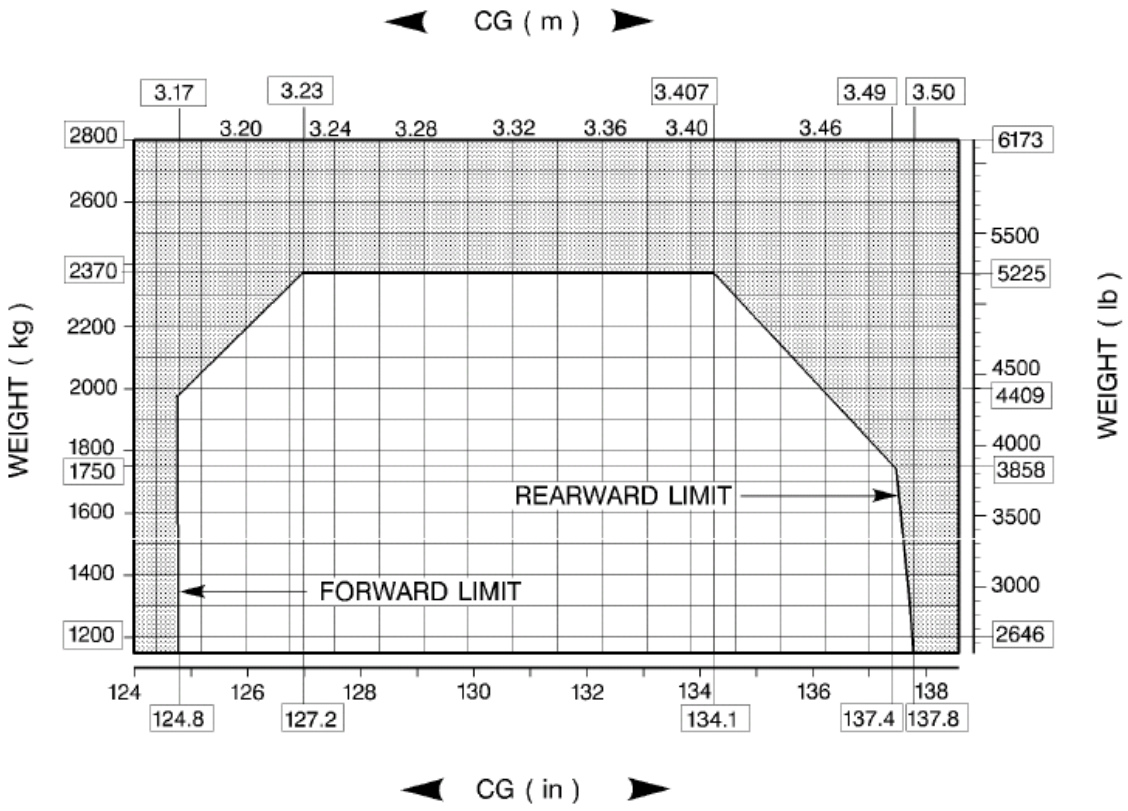
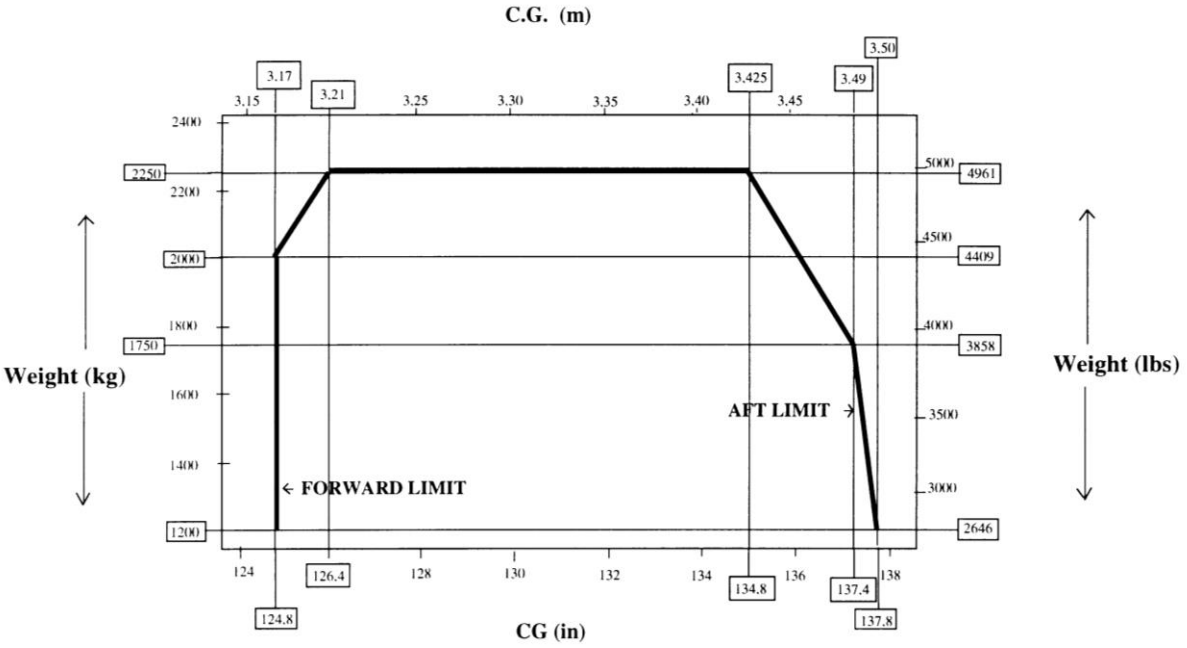
9.4 For all AS 350 B3:	Power off:	
	Maximum	430 rpm (audio warning above 410 rpm)
	Minimum	320 rpm (audio warning below 360 rpm)
10. Maximum Operating Altitude and Temperature		
10.1 Altitude	TKOF/LDG:	refer to approved RFM
	En route:	23 000 ft PA (7 010 m), see Note 3
10.2 Temperature	Refer to approved RFM	
11. Operating Limitations	VFR day VFR night, when the additional equipment required by operational regulations is installed and serviceable. (For more information refer to RFM).	
12. Maximum Mass	2 250 kg 2 370 kg, for aircraft incorporating modification OP 3369	

13. Centre of Gravity Range

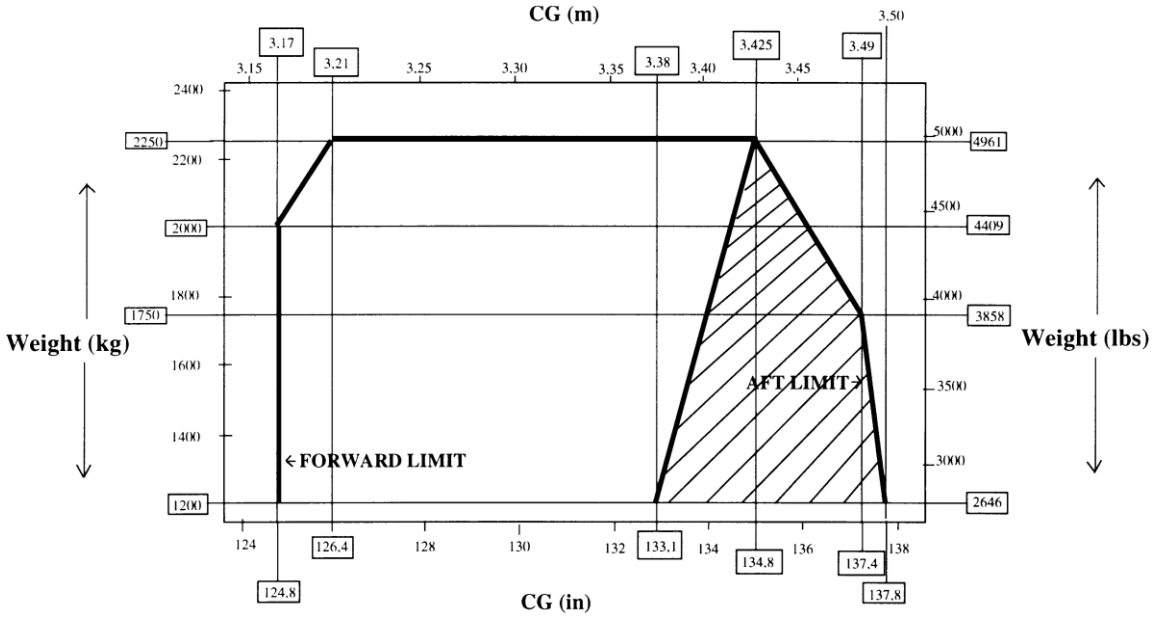
13.1 Longitudinal C.G. limits for AS 350 B3 Arriel 2B1 for aircraft incorporating modification OP-3369:



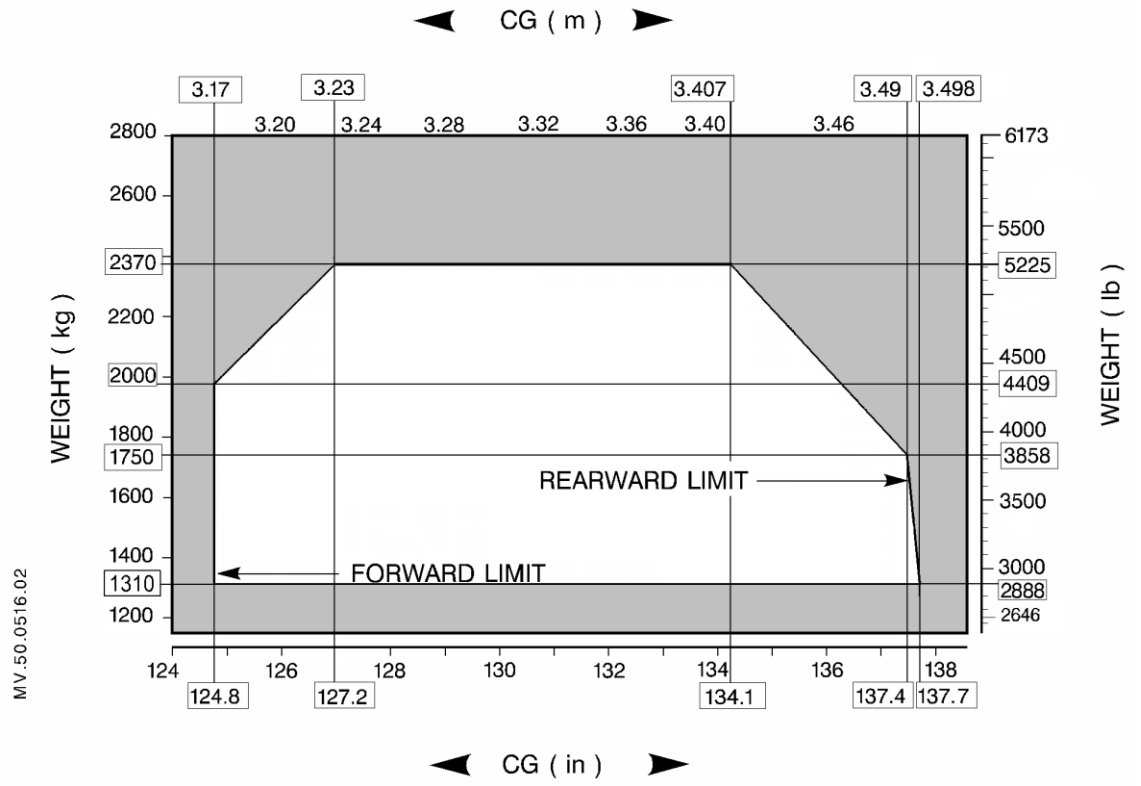
13.2 Longitudinal C.G. limits for AS 350 B3 Arriel 2B (before modifications AMS 072803 and 072808), and for AS 350 B3 Arriel 2B1



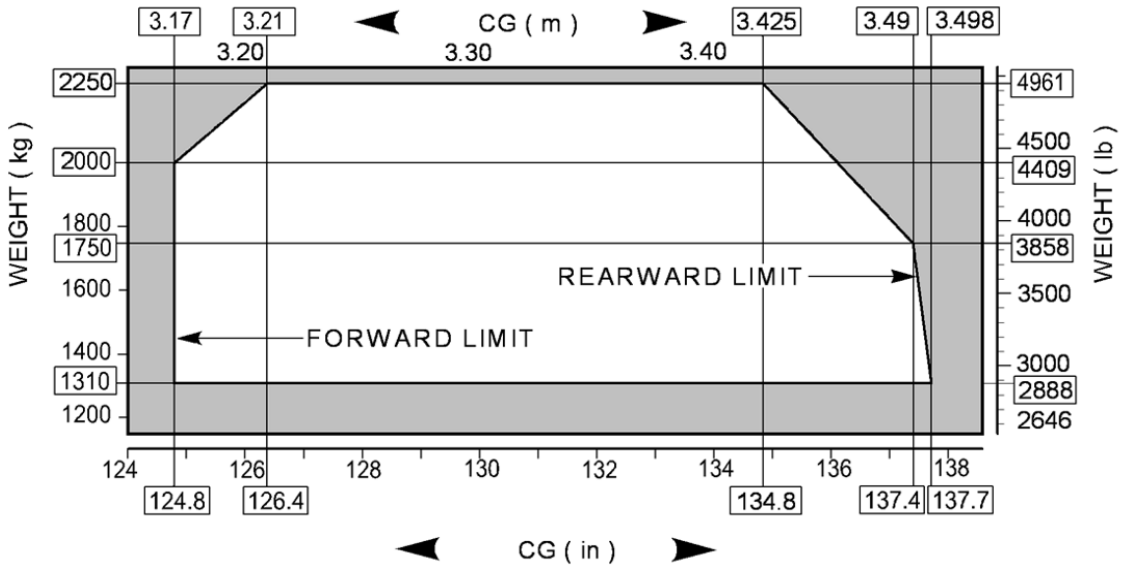
13.3 Longitudinal C.G. limits for AS 350 B3 Arriel 2B (after modifications AMS 072803 and 072808):



13.4 Longitudinal C.G. limits for AS 350 B3 Arriel 2D a/c incorporating modification OP-3369:



13.5 Longitudinal C.G. limits for AS 350 B3 Arriel 2D:



13.6 Lateral C.G Limits:

L.H. limit: 180 mm up to 2 250 kg, and
80 mm from 2 250 up to 2 370 kg for aircraft incorporating modification OP3369

R.H. limit: 140 mm up to 2 250 kg and
80 mm from 2 250 up to 2 370 kg for aircraft incorporating modification OP3369

14. Datum

Longitudinal:
the datum plane (STA 0) is located at 3 400 mm forward of MRH centre line.
Lateral: aircraft symmetry plane

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15.	Levelling Means	Transmission deck
16.	Minimum Flight Crew	1 pilot (right seat)
17.	Maximum Passenger Seating Capacity	5 When the aircraft is fitted with the forward two-place seat optional equipment, the maximum number of passengers is increased to six (pilot not included). This option is to be used in accordance with the corresponding RFMS.
18.	Passenger Emergency Exit	2 (two), one on each side of the passenger cabin
19.	Maximum Baggage/ Cargo Loads	Max. load in: R.H. side hold: 100 kg L.H. side hold: 120 kg Rear hold: 80 kg Forward cabin floor: 150 kg Rear cabin floor: 310 kg
20.	Rotor Blade Control Movement	For rigging information refer to Maintenance Manual
21.	Auxiliary Power Unit (APU)	n/a
22.	Life-limited Parts	The AS 350 Master Servicing Manual Chapter 4 "Airworthiness Limitations", originally approved by DGAC FR and subsequently by EASA (or DGCA-F), contains limitations which are mandatory.

IV. Operating and Service Instructions

1.	Flight Manual	- AS 350 B3 Arriel 2B Flight Manual, approved by DGAC FR on 24 December 1997 plus rapid revision RR 1A (after modifications AMS 072803 and 072808), or later (DGAC FR and subsequently EASA) approved revisions (reference: in English language). - AS 350 B3 Arriel 2B1 Flight Manual, approved by DGAC FR on 16 July 2004, or later (DGAC FR and subsequently EASA) approved revision (reference: in English language). - AS 350 B3e Flight Manual, in English (for a/c incorporating mod. OP-4305 – Arriel 2D engine installation – and additional modifications to the tail rotor control system – see point 2 in section V. Notes), EASA-approved 17 June 2011, or later approved revisions - AS 350 B3e Flight Manual, in French (for a/c incorporating mod. OP-4305 – Arriel 2D engine installation – and additional modifications to the tail rotor control system - see point 2 in section V. Notes), EASA-approved 17 June 2011, or later approved revisions
2.	Maintenance Manual	- AS 350 B3 Master Servicing Manual - AS 350 Maintenance 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 Flight Manual.
3.	Structural Repair Manual	AS 350 Repair Manual
4.	Weight and Balance Manual	Refer to approved RFM

5.	Illustrated Parts Catalogue	AS 350 B3 Illustrated Parts Catalogue
6.	Service Letters and Service Bulletins	As published by Eurocopter or Airbus Helicopters
7.	Required Equipment	Refer to EASA-approved Rotorcraft Flight Manual and related supplements for other approved mandatory and optional equipment and Master Minimum Equipment List.

V. Notes

1. Manufacturer's eligible serial numbers:
   for AS 350 B3: s/n 2968, s/n 3063, and subsequent.
   for AS 350 B3: s/n 4201, and subsequent for aircraft incorporating modification OP-3369 (2 370 kg weight extension).
   for AS 350 B3: s/n 4767, and subsequent for aircraft incorporating modification OP-4305 (with or without modification OP-3369).
   The aircraft, the s/n of which are listed in Airbus Helicopters document:
   - L102-001 are manufactured under Helibras license;
   - L 102-002 are manufactured under AE-MS license.
2. The commercial designation is: Ecureuil
   The commercial designation related to particular modifications (MOD):
   - OP-4305 (Arriel 2D engine installation), and additionally,
   - 07-5601 (Tail rotor control mechanism modification),
   - 07-5600 (Tail rotor blade reinforcement),
   - 07-8551 (Tail Gear Box control lever modification)

   is H125 (previously AS 350 B3e).
3. For helicopters fitted with:
   - Arriel 2B engine and Pre-MOD 072810; or,
   - Arriel 2B1 or Arriel 2D engine, and Post-Mod 073368 and Pre-MOD AL-4236;

   en route altitude is 20 000 ft (6 096m).

* * *

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SECTION 8: EC 130 B4

I. General

1.	Type/ Model/ Variant	
	1.1 Type	EC 130
	1.2 Model	EC 130 B4
	1.3 Variant	n/a
2.	Airworthiness Category	Small Rotorcraft
3.	Manufacturer	Airbus Helicopters Aéroport International Marseille Provence 13725 Marignane CEDEX, France
4.	Type Certification Application Date	to JAA: 23 March 1998
5.	State of Design Authority	EASA (pre EASA: DGAC FR, France)
6.	Type Certificate Date by DGAC FR	14 December 2000 (JAA recommendation date: same)
7.	Type Certificate n°	EASA.R.008 (former DGAC FR: 157)
8.	Type Certificate Data Sheet n°	EASA.R.008 (former DGAC FR: 157) (based on JAA data sheet No JAA/27/00/003, Issue 6, dated June 2004)
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	23 March 1998
2.	Airworthiness Requirements	JAR 27, Issue 1, dated 6 September 1993, and Orange Paper Amdt. 27/98/1, effective 16 February 1998. Note: Administrative requirements (e.g. ANR) may apply.
3.	Special Conditions	High intensity radiated field (HIRF)
4.	Exemptions	- Rear seat bench with regard to JAR 27.562(*) and JAR 27.785(*) (a),(b),(j) - Fuel systems with regard to JAR 27.952 (a),(c),(d),(f),(g) (*): see Note 2
5.	Deviations	none
6.	Equivalent Safety Findings	- Main gearbox oil filter by pass - Powerplant instrument markings
7.	Requirements elected to comply	none
8.	Environmental Protection Requirements	
	8.1 Noise Requirements	see TCDSN EASA.R.008
	8.2 Emission Requirements	n/a
9.	Operational Suitability Data (OSD)	see SECTION 10 below

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III. Technical Characteristics and Operational Limitations

1. Type Design Definition — Document 350A047053

2. Description
Main rotor: three (3) blades
Tail rotor: Fan-in-fan, ten (10) blades
Fuselage: composite and metal-sheet monocoque
Landing gear: skid type
Powerplant: one turbo-shaft engine
Designed as a derivative of model AS 350 B3.

3. Equipment — As per compliance with JAR 27 requirements and included in the original Type Design Standard or indicated on the Section 2 - Limitations of the RFM

4. Dimensions

4.1 Fuselage
Length: 10.68 m
Width hull: 2.03 m
Height: 3.61 m

4.2 Main Rotor — Diameter: 10.69 m, 3 blades

4.3 Tail Rotor — Diameter: 1.00 m, 10 blades

5. Engine

5.1 Model — Safran Helicopter Engines (former: Turbomeca)
1 x Model Arriel 2B1

5.2 Type Certificate — TC/TCDS n°: EASA.E.001 (former DGAC FR n° M19)

5.3 Limitations

5.3.1 Installed Engine Limitations and Transmission Torque Limits

	Limit TQ on shaft [Nm]	Gas generator NG * [%]	Min. guaranteed PWR [kW]	Temperature T4** [°C]
Max. transient	*reserved*	102.3 (+1)	- - -	865 (10 sec)
Max. TOP (5 min)	*reserved*	101.1 (0)	*reserved*	915
MCP	*reserved*	97.1 (-4)	*reserved*	849

Notes: - * 100% = 52 110 rpm
- ** Max. continuous during starting: 750°C

5.3.2 Transmission Torque Limits

- Max. transient (5 sec): 104%
- Max. take-off: 100%
- Max. continuous: 92.7%

100% TQ corresponds to 536 kW at 6 000 rpm engine speed = 386 rpm MR speed.

6. Fluids (Fuel/ Oil/ Additives)

6.1 Fuel — Refer to approved RFM

6.2 Oil — Refer to approved RFM

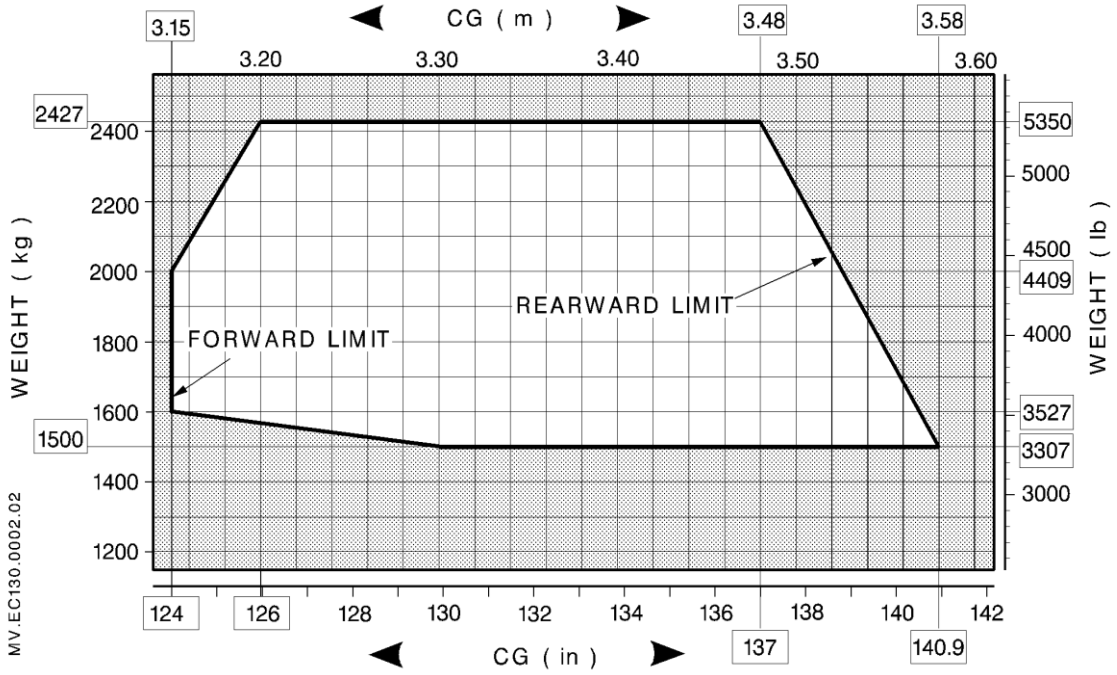
6.3 Additives — Refer to approved RFM

7. Fluid capacities

7.1 Fuel
Fuel tank capacity: 540 litres
Usable fuel: 538.7 litres
Unusable fuel: 1.3 litre

7.2 Oil — Refer to approved RFM

7.3	Coolant System Capacity	n/a
8.	Air Speed Limitations	V_{NE} power-on: 155 KIAS for PA=0 less 3 kt/1 000 ft V_{NE} power-off: 125 KIAS for PA=0 less 3 kt/1 000 ft
9.	Rotor Speed Limitations	Power on: Maximum 405 rpm Minimum 375 rpm Power off: Maximum 430 rpm (audio warning above 410 rpm) Minimum 320 rpm (audio warning below 360 rpm)
10.	Maximum Operating Altitude and Temperature	
10.1	Altitude	TKOF/LDG: refer to approved RFM En route: 23 000 ft PA (7 010 m)
10.2	Temperature	Minimum: -20°C or -40°C after modification 076302 Maximum: ISA +35°C limited to +50°C
11.	Operating Limitations	- Day VFR - Night VFR, if modification 07-3664 is installed - Aerobatic manoeuvres are prohibited - Flights under icing and in freezing rain are prohibited - Flights in falling snow are prohibited except if sand filter is installed (see RFMS 9-14)
12.	Maximum Mass	2 427 kg
13.	Centre of Gravity Range	Longitudinal C.G. limits



Lateral C.G Limits
L.H. limit: 100 mm
R.H. limit: 100 mm

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

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15.	Levelling Means	Mechanical floor
16.	Minimum Flight Crew	1 pilot (left seat)
17.	Maximum Passenger Seating Capacity	- 6 (2 in the front and 4 in the rear) - 7 (3 in the front and 4 in the rear) after modification OP-3673
18.	Passenger Emergency Exit	2 (two), one on each side of the fuselage
19.	Maximum Baggage/ Cargo Loads	Loading 300 kg/m² except 145 kg/m² for rear cargo compartment. Max. load in: R.H. cargo compartment: 130 kg L.H. cargo compartment: 155 kg Rear cargo compartment: 80 kg Forward cabin floor: 405 kg Rear cabin floor: 495 kg
20.	Rotor Blade Control Movement	For rigging information refer to Maintenance Manual
21.	Auxiliary Power Unit (APU)	n/a
22.	Life-limited Parts	The EC 130 Master Servicing Manual, Chapter 4 "Airworthiness Limitations", originally approved by DGAC FR and subsequently by EASA (or DGCA FR), contains limitations which are mandatory.

IV. Operating and Service Instructions

1.	Flight Manual	- EC 130 B4 Flight Manual (in English), approved by DGAC FR on 29 November 2000, or later approved revision. - EC 130 B4 Flight Manual (in French), approved by DGAC FR on 27 May 2002, or later approved revision.
2.	Maintenance Manual	- EC 130 B4 Master Servicing Manual – Chapter 04 (Airworthiness Limitations), approved by DGAC FR on 6 December 2000, or later EASA (DGAC FR) approved revision/edition (in English) - EC 130 Maintenance Manual
3.	Structural Repair Manual	EC 130 B4, T2 Structural Repair Manual
4.	Weight and Balance Manual	Refer to approved RFM
5.	Illustrated Parts Catalogue	EC 130 B4 Illustrated Parts Catalogue
6.	Service Letters and Service Bulletins	As published by Eurocopter or Airbus Helicopters
7.	Required Equipment	

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

V. Notes

1. Manufacturer's eligible serial numbers:
   For EC 130 B4: s/n 3358, and subsequent.
2. OP-3640 is compliant with JAR 27.785 and FAR 27.562, Amdt. 32 (CRD 350ABN0071 issue c), unless further modifications have been performed.

* * *

SECTION 9: EC 130 T2

I. General

1.	Type/ Model/ Variant	
	1.1 Type	EC 130
	1.2 Model	EC 130 T2
	1.3 Variant	n/a
2.	Airworthiness Category	Small Rotorcraft
3.	Manufacturer	Airbus Helicopters Aéroport International Marseille Provence 13725 Marignane CEDEX, France
4.	Type Certification Application Date	14 October 2010
5.	State of Design Authority	EASA
6.	EASA Type Certification Date	25 May 2012

II. Certification Basis

1.	Reference Date for determining the applicable requirements	23 March 1998
2.	Airworthiness Requirements	
	2.1	JAR 27 1st issue, dated 6 September 1993, and Orange Paper Amdt. 27/98/1, effective 16 February 1998.
	2.2 for a/c incorporating MOD. 074581 (new tail boom: structure and flight controls)	as above (2.1) with the following requirements of CS 27 Amdt. 3 of 11 December 2012 as replacement of the same numbered paragraphs of JAR 27 1st issue, dated 6 September 1993 and Orange Paper Amdt. 27/98/1, effective 16 February 1998: - for the rear engine compartment: §305, §307, §351 (rear engine cowling), §471, §473-a, §501, §603, §609, §610, §613, §1529; - for the tailboom: §305, §307, §471, §473 (a), §501, §571(metallic cone LH and RH skins), §573 (composite spacer, Fenestron one-shot structure),§603, §609, §610, §613, §1529 with addition of §351, §1041, §1043, §1045, §1194 for the specific rear transmission fairing including thermal shield area; - for the fenestron structure: §305, §307, §411, §471, §473 (a), §501, §571 (metallic cone LH and RH skins), §573 (composite spacer, Fenestron one-shot structure)§603, §609, §610, §613, §725-a, §1529; - for the cooling aspects of rear transmission: §1041, §1043, §1045.
3.	Special Conditions	- High intensity radiated field - Rotor drive system endurance test for HIP rating
4.	Exemptions	none
5.	Deviations	none
6.	Equivalent Safety Findings	- Main gearbox oil filter by pass - Powerplant instrument markings
7.	Requirements elected to comply	none
8.	Environmental Protection Requirements	
	8.1 Noise Requirements	see TCDSN EASA.R.008

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8.2 Emission Requirements n/a

9. Operational Suitability Data (OSD) see SECTION 10 below

III. Technical Characteristics and Operational Limitations

1. Type Design Definition Document 350A047422

2. Description
Main rotor: three (3) blades
Tail rotor: Fan-in-fan ten (10) blades
Fuselage: Composite and metal-sheet monocoque
Landing gear: skid type
Powerplant: one turbo-shaft engine
Designed as a derivative of model EC 130 B4.

3. Equipment As per compliance with EC 130 T2 certification basis and included in the original Type Design Standard or indicated on the section 2 - Limitations of the RFM.

4. Dimensions

4.1 Fuselage
Length: 10.68 m
Width hull: 2.03 m
Height: 3.61 m

4.2 Main Rotor Diameter: 10.69 m, 3 blades

4.3 Tail Rotor Diameter: 1.00 m, 10 blades

5. Engine

5.1 Model
Safran Helicopter Engines (former: Turbomeca)
1 x Model Arriel 2D

5.2 Type Certificate TC/TCDS n°: EASA.E.001

5.3 Limitations

5.3.1 Installed Engine Limitations and Transmission Torque Limits:

	Limit TQ on shaft [Nm]	Gas generator *** NG ** (Δ Ng) [%]	Min. guaranteed PWR * [kW]	Temperature T45 [°C]
Max. transient (20 sec)	- - -	102.8 (+1)	- - -	- - -
Max. TOP (5 min) **** Max. TOP (30 min) HIP ****	951	101.7 (0)	597.5	949
MCP	773	97.7 (-4)	485.7	905

Notes:
- * ISA, ground level at 386 rpm MR speed.
- ** 100% = 52 110 rpm.
- *** As the actual Ng limitations depend on ambient conditions, the operational limitations are the Δ Ng values. Ng values correspond to the maximum Ng reached in the whole flight domain.
- **** Use of 'TOP (30 min)' power is limited to 30 min. continuous use. Cumulated use per flight of 'TOP (5 min)' and 'TOP (30 min)' powers is limited to 60 min.

5.3.2 Transmission Torque Limits
- Max. transient (5 sec): 104%
- Max. take-off: 100%
- Max. continuous: 81.3%

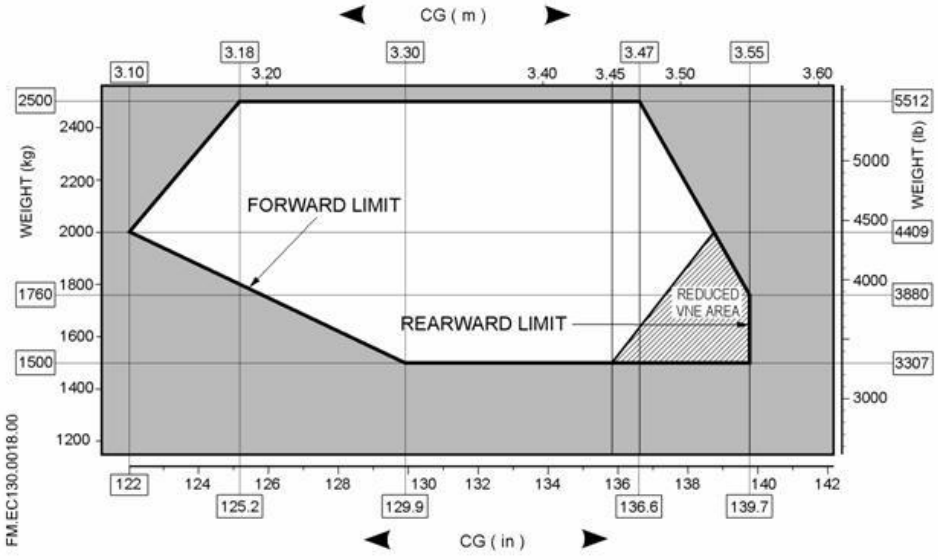
100% TQ corresponds to 598 kW at 386 rpm MR speed.

6. Fluids (Fuel/ Oil/ Additives)

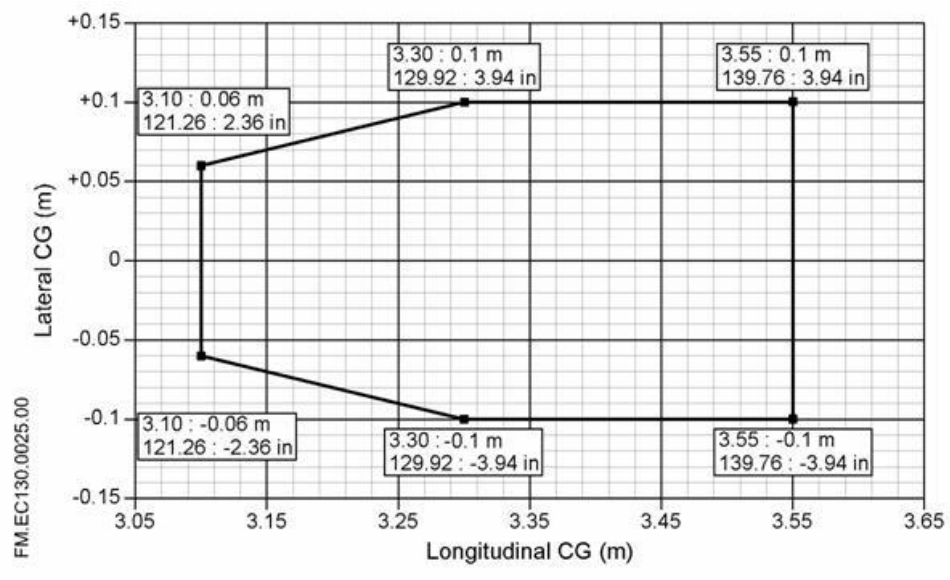
6.1 Fuel Refer to approved RFM

6.2 Oil Refer to approved RFM

6.3	Additives	Refer to approved RFM
7.	Fluid capacities	
7.1	Fuel	Fuel tank capacity: 540 litres Usable fuel: 538 litres
7.2	Oil	Refer to approved RFM
7.3	Coolant System Capacity	n/a
8.	Air Speed Limitations	V_{NE} power-on: - 155 KIAS at MSL less 3 kt/1 000 ft - 136 KIAS at MSL less 3 kt/2 000 ft below 12 750 ft PA for reduced V_{NE} area (refer to RFM) V_{NE} power-off: 125 KIAS at MSL less 3 kt/1 000 ft
9.	Rotor Speed Limitations	Power on: Maximum 405 rpm Minimum 375 rpm Power off: Maximum 430 rpm (audio warning above 410 rpm) Minimum 320 rpm (audio warning below 360 rpm)
10.	Maximum Operating Altitude and Temperature	
10.1	Altitude	TKOF/LDG: refer to approved RFM En route: 23 000 ft PA (7 010 m)
10.2	Temperature	Minimum: -40°C Maximum: ISA +35°C limited to +50°C
11.	Operating Limitations	- Day VFR - Night VFR, when additional equipment required by operational regulations is installed and serviceable - Aerobatic manoeuvres are prohibited - Flights under icing conditions and in freezing rain are prohibited - Flights in falling snow are prohibited except if sand filter is installed (see RFMS SUP.14) For more information refer to Flight Manual
12.	Maximum Mass	2 500 kg
13.	Centre of Gravity Range	Longitudinal C.G. limits



Lateral C.G Limits



14.	Datum	Longitudinal: the datum plane (STA 0) is located at 3 400 mm forward of MRH centre line. Lateral: aircraft symmetry plane
15.	Levelling Means	Mechanical floor
16.	Minimum Flight Crew	1 pilot (left seat)
17.	Maximum Passenger Seating Capacity	- 6 (2 in the front and 4 in the rear) - 7 (3 in the front and 4 in the rear) if modification OP-3673 or OP-3888 is installed.
18.	Passenger Emergency Exit	2 (two), one on each side of the fuselage
19.	Maximum Baggage/ Cargo Loads	Loading 300 kg/m², except 145 kg/m² for rear cargo compartment. Max. load in: R.H. cargo compartment: 130 kg L.H. cargo compartment: 155 kg Rear cargo compartment: 80 kg Forward cabin floor: 405 kg Rear cabin floor: 495 kg
20.	Rotor Blade Control Movement	For rigging information refer to Maintenance Manual
21.	Auxiliary Power Unit (APU)	n/a
22.	Life-limited Parts	The EC 130 Master Servicing Manual, Chapter 4 "Airworthiness Limitations", originally approved by DGAC FR and subsequently by EASA (or DGCA-F), contains limitations which are mandatory.

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IV. Operating and Service Instructions

1.	Flight Manual	EC 130 T2 Flight Manual (in English), EASA-approved on 25 May 2012, or later approved revision
2.	Maintenance Manual	- EC 130 Master Servicing Manual – Chapter 04 (Airworthiness Limitations Section), EASA-approved on 25 June 2012, or later approved revision/edition (in English). - EC 130 Maintenance Manual
3.	Structural Repair Manual	EC 130 B4, T2 Structural Repair Manual
4.	Weight and Balance Manual	Refer to approved RFM
5.	Illustrated Parts Catalogue	EC 130 T2 Illustrated Parts Catalogue
6.	Service Letters and Service Bulletins	As published by Eurocopter or Airbus Helicopters
7.	Required Equipment	Refer to EASA-approved Rotorcraft Flight Manual and related supplements for other approved mandatory and optional equipment and Master Minimum Equipment List.

V. Notes

1. Manufacturer's eligible serial numbers:
   For EC 130 T2: s/n 7355, and subsequent.
2. The commercial designation is: H130

* * *

SECTION 10: 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

I.2 MMEL - Certification Basis

For all models: JAR-MMEL Amdt.1, dated 1 August 2005

I.3 Flight Crew Data - Certification Basis

For all models:
- JAA/FAA/TCCA Common Procedures Document for conducting Operational Evaluation Boards, dated 10 June 2004
- EASA OEB – administrative and guidance procedures, dated 11 January 2010

II. OSD Elements

II.1 MMEL

For all models:
MMEL AS 350 and EC 130, Normal Revision 4, Issue 2, Date code 12-06,
dated 27 September 2015, or later EASA approved revisions

II.2 Flight Crew Data

For all models:
Flight Crew Data for Ecureuil Single Engine Family, AH Document 350ABN0286, issue A,
dated 22 October 2015, or later EASA approved revisions, including:
- Annex A: OSD Cover Sheet to Annex B – Division Mandatory Data – Non Mandatory Data
- Annex B: Operational Evaluation Board Report, Final Report, Rev. 4, dated 6 August 2012

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SECTION: ADMINISTRATIVE

I. Acronyms and Abbreviations

ALS	Airworthiness Limitations Section	MRH	Main Rotor Hub
Amdt.	Amendment	MSL	Mean Sea Level
B.L.	Butt Line	MSM	Maintenance Servicing Manual
TGB	Tail Gear Box	MTOP	Maximum Take-off Power
MGB	Main Gear Box	MTP	Maximum Transient Power
C.G.	Centre of Gravity	NG	Gas Generator
CR	(European) Commission Regulation	OSD	Operational Suitability Data
CRI	Certification Review Item	PA	Pressure Altitude
DGAC FR	Direction Générale de l'Aviation Civile - France	PWR	Power
HIRF	High Intensity Radiated Field	R.H.	right-hand
IAS	Indicated air speed	RFM	Rotorcraft Flight Manual
JAA	Joint Aviation Authorities	RFMS	Rotorcraft Flight Manual supplement
JAR	Joint Aviation Requirements	s/n	Serial Number
L.H.	left-hand	sec	Seconds
LDG	Landing	STA	Station
Max.	Maximum	TKOF	Take-Off
MCP	Maximum Continuous Power	TO	Take-Off
min	Minute	TOP	Take-Off Power
Min.	Minimum	TQ	Torque
MMEL	Master Minimum Equipment List	VFR	Visual Flight Rules
MOD	Modification	V_{NE}	Never Exceed Speed
MR	Main rotor		

II. Type Certificate Holder Record

Type Certificate Holder	**Period**
Aerospatiale 37, Boulevard de Montmorency 75781 Paris CEDEX 16, France	From 27 October 1977 until 31 December 1991
Eurocopter France Aéroport International Marseille Provence 13725 Marignane CEDEX, France	From 1 January 1992 until 31 May 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

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III. Surrendered Models

Model	
AS 350 C	This helicopter model was certified by DGAC FR under Type Certificate n° 157 on 2 September 1977. The type design was surrendered and subsequently cancelled on 1 June 1997 following the cancellation of the certification of its Lycoming LTS 101-600 A turboshaft engine on 20 April 1987.
AS 350 D1	This helicopter model was certified by DGAC FR under Type Certificate n° 157 on 4 July 1978. The type design was surrendered and subsequently cancelled on 14 December 2000.

IV. Change Record

Issue	**Date**	**Changes**	**TC issue**
Issue 1	18 Oct 2005	Initial issue of EASA TCDS and supersedes DGAC FR TCDS No. 157, issue 16	Initial Issue, 18 October 2005
Issue 2	23 Jan 2007	AS 350B3 OP-3369 added, AS 350B2 VEMD added	- - -
Issue 3	12 Oct 2007	AS 350 B2 installed engine limits corrected; AS 350 B2 VEMD installed engine limits added; SBs for AS 350 B1, AS 350 B, and AS 350 BA conversion into AS 350 B2 added	- - -
Issue 4	23 Nov 2009	Engine TCDS references corrected; §865 removed from airworthiness requirements for AS 350 B3 OP-3369; transmission torque limits definitions corrected; SB for AS 350 BA conversion into AS 350 B2 added	- - -
Issue 5	17 Jun 2011	AS 350 B2 (VEMD) Flight Manual (reference in French language) added, limitations placard corrected, Arriel 2B1 installed engine limits corrected in AS 350 B3 and EC 130 B4 sections, AS 350B3 OP-4305 incorporated	- - -
Issue 6	25 May 2012	EC 130 T2 model added; note "**" under Arriel 2D installed engine limits table in AS 350 B3 section corrected; superseded DGAC FR TCDS issuance date corrected; TCDS format and editorial changes	Re-issued 25 May 2012
Issue 7	7 Jan 2014	Name change of Type Certificate holder from Eurocopter to Airbus Helicopters; duration of Arriel 2D maximum transient power corrected in AS 350 B3 and EC 130 T2 installed engine limits tables; reference to modification OP-3888 added in Maximum number of occupants (including flight crew) for EC 130 T2	Re-issued 7 January 2014
Issue 8	17 Jul 2014	AS 350B3 OP-4605 added	- - -
Issue 9	18 Mar 2015	Precisions added to the fuel quantities of AS 350 B3	- - -
Issue 10	15 Dec 2015	List of Acronyms completed, all Sections numbered; new "Operational Suitability Data" Section introduced.	- - -
Issue 11	9 Mar 2018	Review and correction of data, update to new format	- - -
Issue 12	14 Mar 2019	All Sections: reference to CRI removed; EC 130 B4, T2: in IV.2 Structural Repair Manual added; EC 130 T2: in II.2 certification basis updated following MOD 074581; AS 350 B3: in IV.1 RFM reference to Note V.2 2 corrected;	- - -

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