

**DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION**

H4EU
Revision 17
SA330F
SA330G
SA330J
AS332C
AS332L
AS332L1
AS332L2
EC225LP
January 10, 2014

TYPE CERTIFICATE DATA SHEET NO. H4EU

This data sheet which is part of Type Certificate No. H4EU prescribes conditions and limitations under which the product for which the Type Certificate was issued meets the airworthiness requirements of the Federal Aviation Regulations.

Type Certificate Holder: Airbus Helicopters  
Aeroport International Marseille Provence  
13725 - Marignane - Cedex  
France

TC Holder Record: Eurocopter France changed name to Airbus Helicopters on January 1, 2014.

**I. Model SA330F (Transport Helicopter, Categories A and B), approved 23 June 1971.**

Engine 2 Turbomeca TURMO IV A

Engine Limits Sea level static - standard day conditions (59°F 29.92 in. hg.)

	Shaft HP	Max. Duration minutes	Gas Generator RPM	Power Turbine Inlet Temperature °C
Takeoff	1274	5	33,300	780
One engine inoperative (2 1/2 mn power rating)	1415	2 1/2	33,950	790
One engine inoperative (30 mn power rating)	1274	30	33,300	780
Maximum Continuous	1170	No Limit	32,800	750
Maximum Transient		1/2	34,100	800
Starting (During (Before		1/2 1/2		750 150 (max.)

100% = 33,500 r.p.m.

Nominal Free Turbine Speed is: 22,840 r.p.m.

Maximum Weight 14,800 lb. (Category A and Category B)

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**II. Model SA330G (Transport Helicopter, Categories A and B), approved 15 May 1974.**

(Same as Model SA 330F except for more powerful engines and increase in weight).

Engines 2 Turbomeca TURMO IV C

Engine Limits See level static - standard day conditions (59°F 29.92 in. hg.)

	Shaft HP	Max. Duration minutes	Gas Generator RPM	Power Turbine Inlet Temperature °C
Takeoff	1495	5	33,450	780
One engine inoperative (2 1/2 mn power rating)	1555	2 1/2	33,800	790
One engine inoperative (30 mn power rating)	1380	30	32,900	740
Maximum Continuous	1260	No Limit	32,400	705
Maximum Transient		1/2	34,100	790
Starting (During Before)		1/2		750 150 (max.)

100% = 33,500 r.p.m.

Nominal Free Turbine Speed is: 22,840 r.p.m.

Maximum Weights 15,400 lb. (Category A and Category B)

**III. Model SA330J (Transport Helicopter, Categories A and B), approved 9 June, 1976.**

(Same as Model SA330G except for maximum weight)

Maximum Weight 16,300 lb. (Category A and B)

**INFORMATION PERTINENT TO ALL SA330 MODELS ONLY**

M.G.B. Limits Nominal Free Turbine Speed: 22,840 r.p.m.

Maximum Torque (Takeoff) 2 x 108,5 mdaN (2427 hp.)

Maximum Continuous Torque 2 x 78 mdaN (1742 hp.)

Maximum Torque (One Engine Inoperative) 156 mdaN (1742 hp.)

(Torques based on torquemeter shaft r.p.m. of 7960)

Rotor Limits Maximum: 310 r.p.m.

Minimum: 220 r.p.m. when IAS is below 108 knots.

240 r.p.m. when IAS is above 108 knots.

See Rotorcraft Flight Manual for other limits.

Airspeed Limits Never exceed 167 knots CAS at minimum weight. Variation of VNE with weight and altitude is in the Rotorcraft Flight Manual.

C.G. Range Longitudinal: + 177 inches to + 194.7 inches

Lateral: Right 3.55 inches

Left 3.15

See Rotorcraft Flight Manual for external load C.G. range.

**INFORMATION PERTINENT TO ALL SA330 MODELS ONLY** (cont'd)

Datum	185 inches forward of center reference on the cabin floor (main rotor centroid).
Leveling Means	Leveling plates on each side of fuselage.
Minimum Crew	The minimum crew required for IFR operation consists of 2 pilots. For Category A consists of 2 pilots. (For VFR operation). For Category B consists of 1 pilot. (For VFR operation).
Maximum Passengers	19 (Limited by emergency exits available).
Total Fuel Capacity	414 U.S. Gallons LH Group = 240 U.S. Gal. at 217.3 inches RH Group = 174 U.S. Gal. at 155.1 inches (See NOTE 1 for data on system fuel and oil).

## Fuel

SPECIFICATION (Latest Amendment)			
FRENCH	NATO	U.S.A.	U.K.
AIR 3405 TRO	F.34		D. eng. RD 2453 AVTUR/FS.11
		ASTM Jet A	
	F.35	ASTM Jet A-1	D. eng. RD 2494 AVTUR
AIR 3407 TR4	F.40	MIL-T.5624 (JP.4)	D. eng. RD2454 AVTAG FS II
	F.45	ASTM Jet B	D. eng. RD 2486 AVTAG
AIR 3404 TR5	F.42		
	F.44	MIL-T-5624	D. eng. RD 2498 AVCAT

Anti-icing additive must be used in accordance with the DGAC-approved Rotorcraft Flight Manual. (See NOTE 4).

The following fuel additives are approved for use:

- Phillips PFA/55 MB, MIL-I-27686 (as revised), or French AIR 3652 (as revised), anti-icing additive in quantity up to 0.15 percent in volume (with or without glycerin).
- Shell ASA-3 antistatic additive in quantity up to 0.0001 percent in volume.

## Oil Engine.

ENGINE OIL	SPECIFICATION (Latest Amendment)				Obs.
	FRENCH	NATO	U.S.A.	U.K.	
Normal	AIR 3513	0.148	MIL-L-7808		S Y N T H E T I C OILS
	AIR 3514	0.150			
		0.156	MIL-L-23699		
		0.149		D. eng. RD. 2487	
	AIR 3517	0.159			
ALTER- NATE OILS	AIR 3515	0.135	AERO SHELL TURBINE OIL 3	D. eng. RD. 2490	M I N E R A L OILS
			ESSO AVIATION Utility Oil F		
			CALTEX JET Engine Oil Medium Heavy		

**INFORMATION PERTINENT TO ALL SA330 MODELS ONLY** (cont'd)

CAUTION: All AIR 3513 and AIR 3514 oils may be mixed together. Oils other than AIR 3513 and AIR 3514 must not be mixed. If a change in the type of oil used is made, the system must be flushed and the filter element cleaned. The type of oil used must be indicated on the tank near the filler port.

Oil Capacity	Engines 2 x 3.17 U.S. Gal. at 108.5 inches. MGB 5.8 U.S. Gal. at 219.7 inches. IGB 0.2 U.S. Gal. at 492.4 inches. TGB 0.37 U.S. Gal. at 543.7 inches.
Maximum Altitude	16,500 feet - see Rotorcraft Flight Manual for added limitations.
Import Requirements	<p>U.S. Airworthiness Certificate may be issued on the basis of a French Certificate of Airworthiness for Export signed by a representative of the Direction Generale de l'Aviation Civile (DGAC) containing the following statement:</p> <p>"The rotorcraft covered by this certificate has been examined and found to comply with U.S. FAR Part 29, including:</p> <ul style="list-style-type: none"> <li>- for Models F and G, amendments 29-1 through 29-5.</li> <li>- for Models J, amendments 29-1 through 29-9 plus para. 29.951(c), 29.1183 and 29.1305(a)(16) of amendment 29-10.</li> </ul> <p>Plus Special Conditions No. 29-29-EU-5 dated 19 August 1970 and criteria for compliance with FAR 29.141 for IFR operation in FAA letter to SGAC dated 15 February 1971 and conforms to Type Certificate No. H4EU.</p> <p>This helicopter is eligible for import only when the Overhaul Manual is available per FAR 29.1529 and 21.29(a)(3) as amended by Amendment FAR 21.25.</p>
Equipment	<p>The basic required equipment (see List Number 330A.04.1155, 17 September 1970 as revised) as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the helicopter for certification.</p> <p>In addition, the following items of equipment are required:</p> <ul style="list-style-type: none"> <li>- DGAC(formerly SGAC) approved Rotorcraft Flight Manual.</li> <li>- One clock for each pilot with sweep second pointer.</li> <li>- One gyroscope bank and pitch indicator for each required pilot, non-tumbling for IFR (original approval with SFENA 4286.V3, four inches diameter).</li> <li>- One gyroscopic direction indicator for each required pilot (original approval with SFIM CG121PN 54794.1 for co-pilot: COLLINS PN 101 Type 331A3G PN 522-2638-009 for pilot, three inches diameter).</li> <li>- One rate of climb indicator for each required pilot (original approval with Badin 29.336.1 Type 740-1).</li> </ul>

**IV. Model AS332C (Transport Helicopter, Category A & B), approved October 14, 1981.**

(Same as SA330J except for Maximum Weight; Engines; Landing gear and drive system improvements; Main and Tail Rotor Blades).

Engines 2 Turbomeca MAKILA 1A.

Engine Limits Sea level static-standard day conditions (59°F 29.92 in. hg.).

	Power shaft HP	Gas generator RPM	Exhaust Gas Temp. °C
Takeoff	1662	33,200	775 785 (with MOD. 22305)
One Engine Inoperative (2 1/2 mn power rating)	1756	34,000	810
One Engine Inoperative (30 mn power rating)	1662	33,200	775
Maximum Continuous	1515	32,500	735

Refer to Flight Manual for transients.

M.G.B. Limits Two Engines operative  
Maximum Continuous: 81% (1820 kw)  
Maximum: 100% (2235 kw)

One Engine Inoperative  
Maximum 30 minutes: 66% (1470 kw)  
Maximum: 69% (1550 kw)  
Over torque (transient): 74% (1650 kw)

Rotor Limits Power-on flight = rated 265 r.p.m. (NR between 245 and 275 r.p.m.)

Power-off flight: maximum: stabilized: 290 r.p.m.  
transient: 310 r.p.m.  
minimum: 220 r.p.m. if IAS is equal to or less than 100 kt  
245 r.p.m. if IAS is above 100 kt

Airspeed Limits Never exceed speed VNE Power-on: 167 kt at zero pressure-altitude.  
Never exceed speed VNE Power-off: 150 kt at zero pressure-altitude.

See Rotorcraft Flight Manual for decrease of these values with altitude and weight.

Maximum Weight 18960 lb. (Category A and Category B) (See Notes 7 and 8)

C.G. Range Longitudinal = 181.10 in. to 196.85 in.  
Lateral = R.H.: 3.55 in.  
= L.H.: 3.15 in.

Datum 183.36 in. forward of main rotor centreline.

Leveling Means Level support plate on R.H. side of fuselage.  
Graduated plate for plumb line on L.H. side.

Minimum Crew VFR conditions: 2 pilots  
IFR conditions: 2 pilots

**IV. Model AS332C (Transport Helicopter, Category A & B)** (cont'd)

Maximum Passengers	19 (Limited by emergency exits available)
Total Fuel Capacity	411.6 U.S. Gallons
	Longitudinal tank, R.H. = 62. U.S. Gallons at 180.1 in. L.H. = 65. U.S. Gallons at 180.1 in.
	Tansverse tank, FWD = 107. U.S. Gallons at 139.8 in. AFT = 112. U.S. Gallons at 220.5 in.
	5th tank Rear = 65. U.S. Gallons at 249.6 in.
	See NOTE 1 for data on unusable fuel.
Fuel	Refer to Flight Manual for approved fuels and additive specification.
Oil	See Rotorcraft Flight Manual for approved engine and gearbox oils. Also see appropriate Engine Maintenance Manual for applicable procedure if engine oil specification or brand is changed.
Oil Capacity	Engines 2 x 2 U.S. Gallons at 108.5 in. MGB 5.17 U.S. Gallons at 219.7 in. IGB 0.16 U.S. Gallons at 492.4 in. TGB 0.38 U.S. Gallons at 543.7 in.
Maximum Altitude	20,000 feet

**V. Model AS332L (Transport Helicopter, Category A & B), approved February 18, 1982.**

(Same as AS 332C except 30 inch fuselage extension: increased passenger seats; and increased maximum altitude).

Engines	2 Turbomeca MAKILA 1A.																				
Engine Limits	Sea level static-standard day conditions (50°F 29.92 in. hg.)																				
	<table> <thead> <tr> <th></th> <th>Power shaft HP</th> <th>Gas generator RPM</th> <th>Exhaust Gas Temp. °C</th> </tr> </thead> <tbody> <tr> <td>Takeoff</td> <td>1662</td> <td>33,200</td> <td>775 785 (with Mod. 22305)</td> </tr> <tr> <td>One Engine Inoperative (2 1/2 mn power rating)</td> <td>1756</td> <td>34,000</td> <td>810</td> </tr> <tr> <td>One Engine Inoperative (30 mn power rating)</td> <td>1662</td> <td>33,200</td> <td>775</td> </tr> <tr> <td>Maximum Continuous</td> <td>1515</td> <td>32,500</td> <td>735</td> </tr> </tbody> </table> <p>Refer to Flight Manual for transients.</p>		Power shaft HP	Gas generator RPM	Exhaust Gas Temp. °C	Takeoff	1662	33,200	775 785 (with Mod. 22305)	One Engine Inoperative (2 1/2 mn power rating)	1756	34,000	810	One Engine Inoperative (30 mn power rating)	1662	33,200	775	Maximum Continuous	1515	32,500	735
	Power shaft HP	Gas generator RPM	Exhaust Gas Temp. °C																		
Takeoff	1662	33,200	775 785 (with Mod. 22305)																		
One Engine Inoperative (2 1/2 mn power rating)	1756	34,000	810																		
One Engine Inoperative (30 mn power rating)	1662	33,200	775																		
Maximum Continuous	1515	32,500	735																		
M.G.B. Limits	<p>Two engines operative:</p> <p>Maximum continuous: 81% (1820 kw) Maximum: 100% (2235 kw)</p> <p>One Engine inoperative:</p> <p>Maximum 30 minutes: 66% (1470 kw) Maximum: 69% (1550 kw) Over torque transient: 74% (1650 kw)</p>																				
Rotor Limits	<p>Power-on flight: rated 265 r.p.m. (NR between 245 and 275 r.p.m.)</p> <p>Power-off flight: Maximum: stabilized: 290 r.p.m. transient: 310 r.p.m. minimum: 220 r.p.m. if IAS is equal to or less than 100 kt 245 r.p.m. if IAS is above 100 kt</p>																				

**V. Model AS332L (Transport Helicopter, Category A & B) (cont'd)**

Airspeed Limits	Never exceed speed V <sub>NE</sub> Power-on: 167 kt at zero pressure-altitude. Never exceed speed V <sub>NE</sub> Power-off: 150 kt at zero pressure-altitude.
	See Rotorcraft Flight Manual for decrease of these values with altitude and weight.
Maximum Altitude	20,000 feet

**VI. Model AS 332L1 (Transport Helicopter, Category A & B), approved November 25, 1987.**

(Same as AS 332L except 2 Turbomeca MAKILA 1A1 engines).

Engines	2 Turbomeca MAKILA 1A1.		
Engine Limits	Sea level static-standard day conditions (50°F 29.92 in. hg.)		
	Power shaft HP	Gas generator RFM	Exhaust Gas Temp. °C
Takeoff	1819	33,350	795
One Engine Inoperative (2 1/2 mn power rating)	1877	34,000	830
One Engine Inoperative (30 mn power rating)	1783	33,200	785
Maximum Continuous	1588	32,300	735

Refer to Flight Manual for transients.

M.G.B. Limits	Two engines operative:
	Maximum Continuous: 81% (1820 kw)
	Maximum: 100% (2235 kw)
	One Engine inoperative:
	Maximum 30 minutes: 66% (1470 kw)
	Maximum: 69% (1550 kw)
	Over torque transient: 74% (1650 kw)

Rotor Limits	Power-on flight: rated 265 r.p.m. (NR between 245 and 275 r.p.m.)
	Power-off flight: maximum: stabilized: 290 r.p.m. transient: 310 r.p.m.
	minimum: 220 r.p.m. if IAS is equal to or less than 100 kt 245 r.p.m. if IAS is above 100 kt

Airspeed Limits	Never exceed speed V <sub>NE</sub> Power-on: 167 kt at zero pressure-altitude. Never exceed speed V <sub>NE</sub> Power-off: 145 kt at zero pressure-altitude.
	See Rotorcraft Flight Manual for decrease of these values with altitude and weight.
Maximum Altitude	25,000 feet.

**INFORMATION PERTINENT TO AS 332L & AS 332L1 MODELS ONLY**

Maximum Weight	18,960 lb. (Category A and Category B) (See Note 8 for AS332L)
C.G. Range	Forward: 173.2 in. for weight equal to or less than 15,430 lbs. 177.9 in. for weight equal to 18,960 lbs.  Aft: 192.9 in for weight equal to or less than 15,430 lb. 190.9 in for weight equal to 18,960 lb.  Lateral: R.H.: 3.55 in. L.H.: 3.15 in.
Datum	183.8 in. forward of main rotor centreline.
Leveling Means	Level support plate on R.H. side of fuselage. Graduated plate for plumb line on L.H. side.
Minimum Crew	VFR conditions: 2 pilots IFR conditions: 2 pilots
Maximum Passengers	24
Total Fuel Capacity	550. U.S. Gallons.  Longitudinal tank, R.H. = 62 U.S. Gallons at 180.1 in. L.H. = 65 U.S. Gallons at 180.1 in.  Tansverse tank, FWD = 107 U.S. Gallons at 139.8 in. AFT = 112 U.S. Gallons at 220.3 in.  5th tank Rear = 65 U.S. Gallons at 249.6 in. 7th tank 139 U.S. Gallons at 112.20 in. See NOTE 1 for data on unusable fuel.
Fuel	Refer to Flight Manual for approved fuels and additive specification.
Oil	See Rotorcraft Flight Manual for approved engine and gearbox oils. Also see appropriate Engine Maintenance Manual for applicable procedure if engine oil specification or brand is changed.
Oil Capacity	Engines 2 x 2 U.S. Gallons at 108.5 in. MGB 5.17 U.S. Gallons at 219.7 in. IGB 0.16 U.S. Gallons at 492.4 in. TGB 0.38 U.S. Gallons at 543.7 in.

**VII. Model AS 332L2 (Transport Helicopter, Category A&B), approved May 28, 1993.**

The Model AS 332L2 is derived from the AS 332L1 with the following major modifications:

- \* Modified main rotor gear box with new oil cooling system;
- \* Incorporated new design spheriflex main rotor hub and modified main rotor blades;
- \* Modified intermediate and tail rotor gear boxes;
- \* Extended fuselage containing some composite components and shortened tail boom allowing increased passenger capacity;
- \* Incorporated advanced technology avionics containing dual duplex AFCS and EFIS;
- \* Upgraded Makila IA2 engines with FADEC, increased performance, and unique 30-sec/2-min emergency power ratings.

**Engines**

2 Turbomeca MAKILA 1A2

**VII. Model AS 332L2 (Transport Helicopter, Category A&B)** (cont'd)Engine Limits.

Sea level static-standard day conditions (59°F 29.92 in.hg.).

	Power shaft HP	Gas generator $\Delta$ rpm %	Exhaust Gas Temp. °C
Takeoff	1844	0	825
Maximum Continuous	1656	-2.7	770
One Engine Inoperative (30 sec power rating)	2108	+4.5	N/A
One Engine Inoperative (2 min power rating)	1966	+ 2	870
One Engine Inoperative (continuous power rating)	1903	+ 1	840

Refer to Flight Manual for transients.

Note: The gas generator speed limits are specified as percentage deviations from the takeoff rating (takeoff rating = 33220 rpm)

M.G.B. Limits.

Two Engines operative	
Maximum Continuous	77%
Maximum 5 minutes	100%
Overtorque (transient)	110%
One Engine Inoperative	
Maximum Continuous	68.4%
Maximum 2 minutes	70.6%
Maximum 30 seconds	74.8%

Rotor Limits.

Power-on flight	
Rated	265 r.p.m.
Maximum	275 r.p.m.
Minimum	245 r.p.m.
Minimum transient	220 r.p.m.
Power-off flight	
Maximum	290 r.p.m.
Maximum transient	310 r.p.m.
Minimum	220 r.p.m. if IAS is equal to or less than 100 kt 245 r.p.m. if IAS is above 100 kt

Airspeed Limits.

Never exceed speed $V_{NE}$	
Power-on:	170 kt
Power-off:	150 kt

See Rotorcraft Flight Manual for decrease of these values with altitude and temperature.

Maximum Weight.

9300 kg. (Category A and Category B)

C.G. Range.

Longitudinal:	Forward:	173.2 in.
	Aft	195. in.
	R.H.	2. in.
	L.H.	2. in.

See Rotorcraft Flight Manual for decrease of forward C.G. limit with weight

**VII. Model AS 332L2 (Transport Helicopter, Category A&B)** (cont'd)

<u>Datum.</u>	Longitudinal: 183.8 in. forward of main rotor centerline Lateral: aircraft symmetry plane
<u>Leveling Means.</u>	Level support plate on R.H. side of fuselage. Graduated plate for plumb line on L.H. side.
<u>Minimum Crew.</u>	VFR conditions: 1 pilot IFR conditions: 2 pilots
<u>Maximum Passengers.</u>	25
<u>Total Fuel Capacity.</u>	540 U.S. Gallons at 172.6 in.  R.H. tank group: 298 U.S. Gallons.  - Longitudinal tank: 62 U.S. Gallons at 180.1 in. - Transverse tank: 107 U.S. Gallons at 139.8 in. - 7th tank: 129 U.S. Gallons at 112.2 in.  L.H. tank group: 242 U.S. Gallons.  - Longitudinal tank: 65 U.S. Gallons at 180.1 in. - Transverse tank: 112 U.S. Gallons at 220.5 in. - 5th tank: 65 U.S. Gallons at 249.6 in.  See NOTE 1 for data on unusable fuel.

Fuel.Normal Fuels:

FUEL TYPE	NATO CODE	SPECIFICATION (Latest issue or amendment)				ANTI-ICING ADDITIVE INCLUDED
		US	UK	FRENCH	CHINA	
Kerosene-50 (AVTUR FS.II) JP-8	F-34	MIL-T-83 133 JP-8	D.ENG.RD 2453	AIR 3405 F-34	-	YES
Kerosene-50 (AVTUR) JET-A1	F-35	ASTM-D-1655 JET-A1	D.ENG.RD 2494	AIR 3405 F-35	-	NO (*)
Kerosene JET-A	-	ASTM-D-1655 JET-A	-	-	-	NO (*)
High Flash Point (AVCAT) JP-5	F-43	-	D.ENG.RD 2498	AIR 3404 F-43	-	NO (*)
High Flash Point (AVCAT FS II) JP-5	F-44	MIL-T-5624 JP-5	D.ENG.RD 2452	AIR 3404 F-44	-	YES
PRC3 (Standard PRC N°3 Jet Fuel)	-	-	-	-	GB 6537-94	NO (*)

(\*) Anti-icing additive must be used in accordance with the DGAC-approved Rotorcraft Flight Manual.

The following fuel additives are approved for use:

- Anti-icing additive:

NATO symbol S748, AIR 3652, MIL-I-27686, DERD 2451 (AL-31), SH0369 (T1301).

Use the latest index number in force.

Maximum concentration: 0.15 percent in volume.

- Anti-static additive:

SHELL ASA-3 at a maximum concentration of 0.0001 percent in volume.

DUPONT STADIS 450 at a maximum concentration of 0.0003 percent in volume.

Oil.

See Rotorcraft Flight Manual for approved engine and gearbox oils.

Also see appropriate Engine Maintenance Manual for applicable procedure if engine oil specification or brand is changed.

Oil Capacity.

Engines 2 x 1.3 U.S. Gallons at 108.3 in.

MGB 6.3 U.S. Gallons at 216.8 in.

IGB 0.2 U.S. Gallons at 492.5 in.

TGB 0.4 U.S. Gallons at 543.7 in.

Maximum Altitude.

20,000 feet.

**VIII. Model EC 225LP (Transport Helicopter, Category A&B), approved January 30, 2008.**

ENGINES 2 Turboméca Makila 2A or  
2 Turboméca Makila 2A1

FUELS

Normal Fuels:

FUEL TYPE	NATO CODE	SPECIFICATION (Latest issue or amendment)				ANTI-ICING ADDITIVE INCLUDED
		US	UK	FRENCH	CHINA	
Kerosene-50 (AVTUR FS.II) JP-8	F-34	MIL-T-83 133 JP-8	D.ENG.RD 2453	AIR 3405 F-34	-	YES
Kerosene-50 (AVTUR) JET-A1	F-35	ASTM-D-1655 JET-A1	D.ENG.RD 2494	AIR 3405 F-35	-	NO (*)
Kerosene JET-A	-	ASTM-D-1655 JET-A	-	-	-	NO (*)
High Flash Point (AVCAT) JP-5	F-43	-	D.ENG.RD 2498	AIR 3404 F-43	-	NO (*)
High Flash Point (AVCAT FS II) JP-5	F-44	MIL-T-5624 JP-5	D.ENG.RD 2452	AIR 3404 F-44	-	YES
PRC3 (Standard PRC N°3 Jet Fuel) (not allowed for APU operation (if Fitted))	-	-	-	-	GB 6537-94	NO (*)

VIII. **Model EC 225LP (Transport Helicopter, Category A&B)** (Cont'd)

Replacement Fuels:

FUEL TYPE	NATO CODE	SPECIFICATION (Latest issue or amendment)				ANTI-ICING ADDITIVE INCLUDED
		US	UK	FRENCH	CHINA	
Wide cut (AVTAG FS II) JP-4 OAT < +40°C	F-40	MIL-T-5624 JP-4	D.ENG.RD 2454	AIR 3407 F-40	-	YES
Wide cut JET-B OAT < +40°C	-	ASTM-D-1655 JET-B	-	-	-	NO (*)

(\*) Anti-icing additive must be used in accordance with the EASA-approved Rotorcraft Flight Manual.

The following fuel additives are approved for use:

- Anti-icing additive:

EGME type: NATO symbol S748, AIR 3652, MIL-I-27686, DERD 2451 (AL-31), SH0369 (T1301).

Di-EGME type: NATO symbol S-1745, AIR 3652, MIL-I-85470, DERD 2451 (AL-41).

Use the latest index number in force.

Maximum concentration: 0.15 percent in volume.

Minimum concentration: 0.10 percent in volume.

- Anti-static additive:

SHELL ASA-3 at a maximum concentration of 0.0001 percent in volume.

DUPONT STADIS 450 at a maximum concentration of 0.0003 percent in volume.

-Fungicide additive (BIOBOR J.F and DATHON) according to conditions specified in the Maintenance Manual.

ENGINE AND TRANSMISSIONS APPROVED OILS

See Rotorcraft Flight Manual for list of approved oils.

HYDRAULIC FLUIDS

MIL-H-83282/A or H-537 (recommended)

AIR 3520 or MIL-H-5606 or H-515

**VIII. Model EC 225LP (Transport Helicopter, Category A&B) (Cont'd)**
**ENGINE LIMITS**

Sea level static-standard day conditions (59°F 29.92 in.hg.).

	Power shaft HP	Gas generator Δ rpm %	Exhaust Gas Temp. °C
TakeOff Power(TOP)	1746	0	796 801*
Maximum Continuous Power (MCP)	1746	-2.92	749 754*
One Engine Inoperative (30 sec power rating) (OEI HI)	2356 2382*	+3.54	N/A N/A*
One Engine Inoperative (2 min power rating) (OEI LO)	2225 2237*	+1.56	N/A 847*
One Engine Inoperative (continuous power rating) (OEI CT)	2108 2156*	+0.80	799 814*

\*Values for Makila 2A1

Refer to Flight Manual for transients.

Note: The gas generator speed limits are specified as percentage deviations from the takeoff rating (takeoff rating = 33200 rpm)

**TRANSMISSION TORQUE LIMITS**

100% torque corresponds to 2610 kw at a rotor speed of 100 % NR (265 rpm).

All Engines Operative:

<b>AEO rating</b>	<b>MGB Torque (%)</b>
Max Transient	110
TakeOff Power (TOP) (5 min) (IAS < 45 kt)	100
Max Continuous Power in hover (MCP) (IAS < 40 kt)	85.4
Max Continuous Power (MCP) (IAS > 60 kt)	82.7

Between 40 and 60 kt: linear decrease of the MCP limit according to speed.

One Engine inoperative:

<b>OEI rating</b>	<b>MGB Torque (%)</b>
OEI HI (30 sec)	78.4
OEI LO (2 min)	71.9
OEI CT (unlimited)	63.4

**ROTOR SPEED LIMITS**

Power on:

Maximum	275 rpm
Minimum	246 rpm
Min transient	220 rpm

**VIII. Model EC 225LP (Transport Helicopter, Category A&B) (Cont'd)**

Power off:

Max transient	310 rpm (20 sec)
Maximum	290 rpm
Minimum	246 rpm (IAS > 100Kt)
	220 rpm (IAS < 100Kt)

**AIRSPPEED LIMITS**Never exceed speed  $V_{NE}$ :

Power-on	175 kt
Power-off	150 kt

See Rotorcraft Flight Manual for decrease of these values with altitude and temperature.

See Rotorcraft Flight Manual for other approved airspeed limits.

**CENTER OF GRAVITY LIMITS**

Longitudinal:

Forward	173.2 in.
Aft	194.8 in.

Lateral:

R.H.	2.3 in.
L.H.	2.3 in.

See Rotorcraft Flight Manual for decrease of C.G. limits with weight.

**EMPTY WEIGHT C.G. RANGE**

None

**DATUM**

Longitudinal:	183.8 in. forward of main rotor centerline
Lateral:	aircraft symmetry plane

**LEVELING MEANS**

Level support plate on R.H. side of fuselage.  
 Graduated plate for plumb line on L.H. side.

**MAXIMUM WEIGHT**

11000 kg  
 11200 kg with external load

**VIII. Model EC 225LP (Transport Helicopter, Category A&B) (Cont'd)**

## ALTITUDE LIMITS

	EC 225 LP - Standard	EC 225 LP – MPAI* equipped
Take-off and landing	OAT from -30°C to -12°C: -6000 ft density altitude +7400 ft density altitude OAT from -12°C to ISA + 40°C (without exceeding +50°C): - 2000 ft pressure altitude + 7400 ft density altitude	OAT from -30°C to -12°C: -6000 ft density altitude +11,000 ft density altitude OAT from -12°C to ISA + 40°C (without exceeding +50°C): - 2000 ft pressure altitude + 11,000 ft density altitude
En route	OAT from -30°C to -12°C: - 6000 ft density altitude + 20,000 ft pressure altitude OAT from -12°C to ISA + 40°C (without exceeding +50°C): - 2000 ft pressure altitude + 20,000 ft pressure altitude	OAT from -30°C to -12°C: - 6000 ft density altitude + 20,000 ft pressure altitude OAT from -12°C to ISA + 40°C (without exceeding +50°C): - 2000 ft pressure altitude + 20,000 ft pressure altitude

## AMBIENT TEMPERATURE LIMITS

	EC 225 LP - Standard	EC 225 LP – MPAI* equipped
	-30°C to ISA +40°C limited to +50°C	-30°C to ISA +40°C limited to +50°C

MPAI\*: Multi-Purpose Air Intakes

## MINIMUM FLIGHT CREW

2 pilots

## NUMBER OF SEATS

2 Crew  
19 Passengers

## FUEL CAPACITY

766 U.S. Gallons at 193.5 in.

R.H. tank group: 453 U.S. Gallons

- Internal tanks without optional 6<sup>th</sup> centre tank 290 U.S. Gallons at 135.7 in.
- Longitudinal tank: 57 U.S. Gallons at 180.1 in.
- Transverse tank: 106 U.S. Gallons at 139.8 in.
- 7th tank (transverse front): 127 U.S. Gallons at 112.2 in.
- Internal tanks with optional 6<sup>th</sup> centre tank 374 U.S. Gallons at 145.7 in.
- R.H. sponson tank 79 U.S. Gallons at 269.9 in.

L.H. tank group: 313 U.S. Gallons

- Internal tanks 234 U.S. Gallons at 218.1 in.
- Longitudinal tank: 60 U.S. Gallons at 180.1 in.
- Transverse tank: 110 U.S. Gallons at 220.5 in.
- 5th tank (transverse rear): 64 U.S. Gallons at 249.6 in.
- L.H. sponson tank 79 U.S. Gallons at 269.9 in.

**VIII. Model EC 225LP (Transport Helicopter, Category A&B) (Cont'd)**

See Flight Manual for other approved fuel tanks configurations.

See NOTE 1 for data on unusable fuel.

**OIL CAPACITY**

Engines	2 x 1.3 U.S. Gallons at 108.3 in.
MGB	7.1 U.S. Gallons at 216.8 in.
IGB	0.16 U.S. Gallons at 492.5 in.
TGB	0.4 U.S. Gallons at 543.7 in.

**MANUFACTURER'S SERIAL NUMBERS**

2600 and subsequent of EC225LP version.

**INFORMATION PERTINENT TO ALL MODELS****Certification Basis**

For Models SA330F, SA330G, SA330J.

FAR 21.29, FAR 29 effective 1 February, 1965 including:

- for Models F and G, amendments 29-1 through 29-5.
- for Model J, amendments 29-1 through 29-9 plus para. 29.951(c), 29.1183 and 29.1305(a)(16) of amendment 29.10

Plus FAA Special Conditions No. 29-29-EU-5 dated 19 August 1970 and criteria for compliance with FAR 29.141 for IFR operation transmitted to SGAC by FAA letter dated 15 February 1971.

For Models AS332C, AS332L, and AS332L1

FAR 21.29. FAR 29 effective 1 February 1965 including amendments 29-1 to 29-9, plus paragraph 29.951(c), 29.1183 and 29.1304(a)(16) of amendment 29-10.

Applicant has elected to comply with FAR 29 amendments 29-10 through 29-16, except FAR 29.397 at amendment 29-12 as concerns rotor brake; and the Airworthiness Criteria for Helicopter Instrument Flight dated December 15, 1978.

Date of Application for Type Certificate: 15 December 1969.

For Model AS332L2

FAR 21.29.

FAR 29 effective February 1, 1965, including Amendments 29-1 to 29-9, plus paragraph 29.305, 29.307, 29.571, 29.603, 29.605, 29.609, 29.610, 29.629, 29.691(c), 29.1183, 29.1305(a)(16) and 29.1529 through Amendment 29-10.

The applicant has elected to comply with FAR 29 Amendments 29-10 through 29-16, except paragraph 29.397 at Amendment 29-12 as concerns the rotor brake; and the Airworthiness Criteria for Helicopter Instrument Flight dated December 15, 1978.

FAR Part 36 Noise Standards amended by Amendments 36-1 through 36-18.

Special Conditions No. 29-ASW-1, Docket No. 90-ASW-4, effective January 23, 1991, containing provisions for the protection of electrical/electronic systems for high intensity radiated fields.

Special Condition No. 29-ASW-2, Docket No. 92-ASW-5, effective October 27, 1992, containing additional safety standards for 30-Second Contingency Rating certification.

**INFORMATION PERTINENT TO ALL MODELS** (Cont'd)

Type Certificate No. H4EU issued June 23, 1971; amended May 15, 1974, to add Model SA330G; amended June 9, 1976, to add Model SA330J; amended October 14, 1981, to add Model AS332C; amended February 18, 1982, to add Model AS332L; amended November 25, 1987, to add Model AS332L1. Amended May 28, 1993, to add Model AS332L2.

Date of application for AS332L2 Type Certificate: June 6, 1989.

The French Direction Generale de l'Aviation Civile (DGAC) originally type certificated this rotorcraft under its type certificate TC 56. The FAA validated this product under U.S. Type Certificate Number H4EU. Effective September 28, 2003, the European Aviation Safety Agency (EASA) began oversight of this product on behalf of the DGAC.

For Model EC225LP

14 CFR Part 21 paragraph 21.29

14 CFR Part 29 Amendments 29-1 to 29-25,

Plus paragraph 29.785 through Amendment 29-28

Plus paragraphs 29.963, 29.967, 29.973, 29.975 through Amendment 29-34

Plus paragraphs 29.25, 29.865 through Amendment 29-42

Plus paragraphs 29.1, 29.2, 29.49, 29.51, 29.53, 29.55, 29.59, 29.60, 29.61,

29.62, 29.64, 29.65, 29.67, 29.73, 29.75, 29.77, 29.79, 29.81, 29.83, 29.85,

29.87, 29.307, 29.337, 29.351, 29.361, 29.391, 29.395, 29.397, 29.401, 29.403,

29.413, 29.427, 29.501, 29.519, 29.547, 29.549, 29.561(c), 29.561(d), 29.563,

29.602, 29.610, 29.613, 29.621, 29.625, 29.629, 29.631, 29.663, 29.674,

29.727, 29.755, 29.775, 29.783, 29.787, 29.803, 29.805, 29.807, 29.809,

29.811, 29.855, 29.861, 29.901, 29.903, 29.908, 29.917, 29.923, 29.927,

29.954, 29.961, 29.965, 29.969, 29.971, 29.991, 29.997, 29.999, 29.1001,

29.1011, 29.1019, 29.1027, 29.1041, 29.1043, 29.1045, 29.1047, 29.1093,

29.1125, 29.1141, 29.1143, 29.1163, 29.1181, 29.1189, 29.1193, 29.1305,

29.1309, 29.1323, 29.1329, 29.1337, 29.1351, 29.1359, 29.1415, 29.1521,

29.1549, 29.1557, 29.1587, A29, B29, C29, D29 through Amendment 29-47

Protection from the effects of High Intensity Radiated Field has been accomplished in accordance with EASA Special Condition as defined in JAR-27/29 Interim Policy No. INT/POL/27,29/1, dated June 1, 1997.

Special Condition No. 29-022A-SC for Search and Rescue Automatic Flight Control System

14 CFR Part 36 Amendment 21 (ICAO Annex 16, Volume 1, Chapter 8)

Equivalent Safety Findings:

- TC2899RD-R-F-01; FAR 29.1303(j) Vne aural warning
- TC2899RD-R-F-02; FAR 29.1545(b)(4) Airspeed indicators markings
- TC2899RD-R-F-03; FAR 29.1549(b) Powerplant instruments markings
- TC2899RD-R-F-05; FAR 29.173, 175 Static Longitudinal Stability
- TC2899RD-R-F-06; FAR 29 Apdx B §IV IFR Static Longitudinal Stability – Airspeed stability
- TC2899RD-R-A-01; FAR 29.807(d)(2) Ditching emergency exits for passengers
- TC2899RD-R-P-01; FAR 29.923(a)(2) Rotor drive system and control mechanism tests

**INFORMATION PERTINENT TO ALL MODELS** (Cont'd)

## Import Requirements

The FAA can issue a U.S. airworthiness certificate based on a National Aviation Authority (NAA) Export Certificate of Airworthiness (Export C of A) signed by a representative of the French Direction Générale de l'Aviation Civile (DGAC) on behalf of the European Community.

The Export C of A should contain the following statement: "The aircraft covered by this certificate has been examined, tested, and found to comply with the type design approved under U.S. Type Certificate Number H4EU and to be in a condition for safe operation."

## Equipment

The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the helicopter for certification. Aerospatiale Report No. 332A.04.3254 lists required and regional equipment for the helicopter.

In addition the following item of equipment is required:

DGAC-approved AS332C Rotorcraft Flight Manual normal Revision 1 dated 25-09-81 with  pages (dated coded 81-38) or later approved revision.

DGAC-approved AS332L Rotorcraft Flight Manual normal, Revision 3, dated February 17, 1982, with  pages (date coded 82-07) or later approved revision.

DGAC-approved AS332L1 Rotorcraft Flight Manual normal, Revision 1, dated September 22, 1986, with  pages (date coded 86-22) or, later approved revision.

DGAC-approved AS332L2 Rotorcraft Flight Manual normal Revision 1, or later approved revision.

For Model EC225LP Standard:

EASA-approved EC225LP Rotorcraft Flight Manual, Normal Revision 9 dated January 30, 2008 or later approved revision.

For Model EC225LP MPAI variant:

EASA-approved EC225LP MPAI (Multi Purpose Air Intakes) equipped Rotorcraft Flight Manual, Normal Revision 16 dated January 30, 2008, or later approved revision.

## Empty Weight/C.G. Range

None

## Maximum Baggage

- a. The cabin floor area between station + 97.6 inches and +300.4 inches (except Models AS332L2 and EC225LP) or 304.3 inches (Models AS332L2 and EC225LP) is structurally satisfactory for a uniformly distributed loading of 164 lb/sq.ft.
- b. When the rear baggage compartment is installed per Eurocopter drawing 332A.82.0703 the maximum load is placarded on the floor and shelves.
- c. When the rear baggage compartment is installed per Eurocopter drawing 332A.82.0310 (Models AS 332L2 and EC225LP) the maximum load is placarded on the bulkhead and upholsterings.

## Rotor Blades Control and Movement

For rigging information, refer to the Maintenance Manual appropriate to the model.

## Serial Numbers Eligible

See Import Requirements for specific model.

**INFORMATION PERTINENT TO ALL MODELS** (Cont'd)

## Service Information

Each of the documents listed below must state that it is approved by the European Aviation Safety Agency (EASA) or – for approvals made before September 28, 2003 – by the French Direction Générale de l'Aviation Civile (DGAC). Any such documents are accepted by the FAA and are considered FAA approved.

- Service Bulletin,
- Structural repair manuals,
- Vendor manuals,
- Aircraft flight manuals, and
- Overhaul and maintenance manuals.

This applies only to the acceptance of the type design data.

**NOTES**

- NOTE 1. (a) Current weight and balance report including list of required equipment and list of equipment included in certificated empty weight and loading instructions when necessary, must be provided for each helicopter at the time of original certification.
- (b) Unusable fuel, undrainable oil and all hydraulic fluid must be included in the certificated empty weight.

## UNUSABLE FUEL @ 6.6 lbs./gal.

Model	<u>LEFT HAND GROUP</u>		<u>RIGHT HAND GROUP</u>	
	Quantity <u>U.S. Gal.</u>	Weight <u>Lbs.</u>	Quantity <u>U.S. Gal.</u>	Weight <u>Lbs.</u>
330 Series	4.2	27.7	1.3	8.6
332	4.2	27.7	0.8	5.3
332L 332L1 332L2	4.2	27.7	1.9	12.6
225LP	1.65	10.9	2.18	14.4

- NOTE 2. The following placards must be displayed in front and in clear view of the pilot.

"THIS HELICOPTER MUST BE OPERATED IN COMPLIANCE WITH THE OPERATING LIMITATIONS SPECIFIED IN THE DGAC-APPROVED ROTORCRAFT FLIGHT MANUAL".

"THE 'AIRWORTHINESS LIMITATIONS' SECTION OF THE ROTORCRAFT MAINTENANCE MANUAL MUST BE COMPLIED WITH".

For Model AS332L2:

"THIS HELICOPTER IS APPROVED FOR DAY-TIME AND NIGHT-TIME VFR AND IFR OPERATIONS. "

"IT MUST BE OPERATED IN COMPLIANCE WITH THE OPERATING LIMITATIONS SPECIFIED IN THE DGAC-APPROVED ROTORCRAFT FLIGHT MANUAL".

"THE AIRWORTHINESS LIMITATIONS SPECIFIED IN THE ROTORCRAFT MAINTENANCE MANUAL MUST BE COMPLIED WITH".

For Model EC225LP:

"THIS HELICOPTER IS APPROVED FOR DAY-TIME AND NIGHT-TIME VFR AND IFR OPERATION. "

"IT MUST BE OPERATED IN COMPLIANCE WITH THE OPERATING LIMITATIONS SPECIFIED IN THE EASA-APPROVED ROTORCRAFT FLIGHT MANUAL".

"THE AIRWORTHINESS LIMITATIONS SPECIFIED IN THE ROTORCRAFT MAINTENANCE MANUAL MUST BE COMPLIED WITH".

The other placards as indicated in the Rotorcraft Flight Manual must be installed in the appropriate location.

- NOTE 3. Information essential to the proper maintenance of the helicopter is contained in the Manufacturer's Maintenance Manual provided with each helicopter, which specifies that service life limited parts be retired in accordance with Chapter 5 approved by the European Aviation Safety Agency (EASA) or – for approvals made before September 28, 2003 – by the French Direction Générale de l'Aviation Civile (DGAC).
- For the Model AS 332C, AS 332L, AS 332L1, AS 332L2 and EC225LP life limited components and their associated retirement times are contained in Section 5.99 titled "Airworthiness Limitations" of the Master Servicing Recommendations appropriate to the model.
- NOTE 4. To prevent icing of fuel system components all fuel in the tanks before takeoff must contain anti-icing additives in accordance with the Rotorcraft Flight Manual.
- NOTE 5. Model 330 J Helicopters equipped with the external cargo suspension installation in accordance with Aerospatiale drawing 330A.87.3004 meet the structural and design requirements of the certification basis when operated at 16,500 pounds total weight in accordance with the limits of the DGAC Approved Rotorcraft Flight Manual Code B Supplement No. 2 issue 2, dated June 13, 1979 or an approved later revision.
- NOTE 6. Composite main rotor blades P/N 330A.11.0020, 330A.11.0022, or 330A.11.0030 having the following serial numbers may be installed: Serial numbers less than 750 and greater than 1500 and 20,750 through 21,500. Refer to SA330 "Puma" Service Bulletin No. 01.31 amended February 11, 1981.
- NOTE 7. The Model AS 332C may be operated at a maximum gross weight of 18,400 lbs. when the following Aerospatiale modifications (AS 332 service bulletin No.) have been incorporated:
1. AMS 07.52.164 (See Maintenance Manual for service life limits).
  2. AMS 332A07.21.516 (S/B 63.01)
  3. AMS 332A07.52.169 (S/B 63.01)
  4. AMS 332A07.52.183 (S/B 63.01)
  5. AMS 332A07.21.497 (S/B 77.01)
  6. AMS 332A07.21.551 (S/B 22.01)
  7. AMS 332A07.21.541 (S/B 67.01) and
  8. Rotorcraft flight Manual AS 332C, Normal Revision 3, Code B (date code 87-07), DGAC - approved February 16, 1982 or later revision is required.
- NOTE 8. Models AS332C and AS332L may be operated at a maximum gross weight of 18,960 lb. when modifications listed in service bulletin No. S/B 01.03 have been incorporated. Rotorcraft Flight Manual AS332C and AS332L, normal revision 5, Code B (date code 84.32), DGAC approved May 13, 1985 or later revision is required.
- NOTE 9. Effective January 1, 2014, Eurocopter France name was changed to Airbus Helicopters.

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