

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

A46NM
Revision 10
Airbus

A330-200 Series:
Models: A330-201, A330-202,
A330-203, A330-223, A330-243

A330-300 Series:
Models: A330-301, A330-321,
A330-322, A330-323, A330-341,
A330-342, A330-343

March 19, 2007

FAA TYPE CERTIFICATE DATA SHEET NO. A46NM

This data sheet which is part of Type Certificate No. A46NM prescribes conditions and limitations under which the product for which the Type Certificate was issued meets the airworthiness requirements of the US Federal Aviation Regulations.

Type Certificate Holder: Airbus
1, Rond-Point Maurice Bellonte
31707 Blagnac
France

I. Type A330-200 Series Transport Category Airplanes:

- Airbus A330-201 - approved April 1, 2003
- Airbus A330-202 - approved March 31, 1998
- Airbus A330-203 - approved November 1, 2002
- Airbus A330-223 - approved June 21, 1999
- Airbus A330-243 - approved December 21, 2000

Model:	Definition of Reference Airplane by Airbus Documents:
A330-201	FAA A330-201 Type Design, ref. EAL 415.1338/02 Issue 1, dated November 6, 2002, for type definition
A330-202	FAA A330-202 Type Design, ref. AI/EA-N 415.0531/98 Issue 3, dated May 25, 1998, for type definition and Type Certification Standard Equipment List, ref. 00G000A0102/COS.
A330-203	FAA A330-203 Type Design, ref. EAL 415.1988/02 Issue 2, dated August 5, 2002, for type definition
A330-223	FAA A330-223 Type Design, ref. AI/EA-N 415.1223/98 Issue 2, dated August 20, 1998, for type definition and Type Certification Standard Equipment List, ref. 00G000A0123/COS.
A330-243	FAA A330-243 Type Design, ref. AI/EA-N 415.2406/98 Issue 1, dated December 11, 1998, for type definition and Type Certification Standard Equipment List, ref. 00G000A0143/COS.

Engines:

Airplane Model	Engine Model:	Engine Type Certificate:
A330-201	Two GE-CF6-80E1A2 turbojet engines	FAA-Type Certificate E41NE
A330-202	Two GE-CF6-80E1A4 turbojet engines	FAA-Type Certificate E41NE
A330-203	Two GE-CF6-80E1A3 turbojet engines	FAA-Type Certificate E41NE
A330-223	Two PW 4168A turbojet engines	FAA-Type Certificate E36NE
A330-243	Two RR 772B-60 turbojet engines	FAA-Type Certificate E39NE

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Fuel:

See Section III, Data pertinent to All Model A330-200 and A330-300 Series airplanes.

Engine Limits:

Engine Limitations	A330-201 CF6-80E1A2 FAA Data Sheet E41NE	A330-202 CF6-80E1A4 FAA Data Sheet E41NE	A330-203 CF6-80E1A3 FAA Data Sheet E41NE	A330-223 PW 4168A FAA Data Sheet E36NE	A330-243 RR 772B-60 FAA Data Sheet E39NE
Static Thrust at Sea Level					
• Take-off (5 mn) ¹ (flat rated 30° C)	64,530 lbs	66,870 lbs	68, 530 lbs	68,600 lbs	71,100 lbs
• maximum continuous (flat rated 25° C)	60,400 lbs	60,400 lbs	60,400 lbs	59,357 lbs	63,560 lbs
Maximum Engine Speed					
• N1 rpm (%)	3,835 (115.5%)	3,835 (115.5%)	3,835 (115.5%)	3,600	3,861 (99%)
• N2 rpm (%)	11,105 (113%)	11,105 (113%)	11,105 (113%)	10,450	10,611 (100%)
Maximum Gas Temperature					
• Take-off (5mn) ¹	1,787° F (975° C)	1,787° F (975° C)	1,787° F (975° C)	1,157° F (625° C)	1,652° F (900° C)
• Maximum Continuous	1,724° F (940° C)	1,724° F (940° C)	1,724° F (940° C)	1,112° F (600° C)	1,562° F (850° C)
• Starting ²	1,598° F (870° C)	1,598° F (870° C)	1,598° F (870° C)	1,148° F (620° C)	1,562° F (850° C)
Maximum Oil Temperature (Supply Pump Outlet) °C					
• Continuous Operation	320° F (160° C) 347° F (175° C)	320° F (160° C) 347° F (175° C)	320° F (160° C) 347° F (175° C)	325° F (163° C) 350° F (177° C)	374° F (190° C) 374° F (190° C)
• Transient (15 mn max.)	10.0 psid (69 Kpa)	10.0 psid (69 Kpa)	10.0 psid (69 KPa)	70.0 psid (482.6 KPa)	24.0 psid
• Minimum Oil Pressure (PSI)					
Approved oils	Brand Names: See GE Service Bulletin 79-001 Specification: See GE specification D50TF1, Class B	Brand Names: See GE Service Bulletin 79-001 Specification: See GE specification D50TF1, Class B	Brand Names: See GE Service Bulletin 79-001 Specification: See GE specification D50TF1, Class B	Oils conforming to P&W Turbojet engine Service Bulletin 238, latest revision.	-Aeroshell Turbine Oil (Royco) 500, 555, 560 -Mobil Jet Oil II 254, 291 -Exxon Turbo Oil 2197

Table references:

(1) 10 minutes at take-off thrust allowed only in case of engine failure (at take-off or during go around).

(2) 4 consecutive cycles of 2 minutes each.

Airspeed Limits

See Section III, Data pertinent to All Model A330-200 and A330-300 Series airplanes.

Center of Gravity Limits:

See Section III, Data pertinent to All Model A330-200 and A330-300 Series airplanes.

Datum:

See Section III, Data pertinent to All Model A330-200 and A330-300 Series airplanes.

Leveling Means:

See Section III, Data pertinent to All Model A330-200 and A330-300 Series airplanes.

Maximum Weight:

Model A330-200 Airplane	A330-201/-202/-203/-223/-243		A330-223
Weight Variant	020 (Basic) kg / lb	050 (MOD 51802) kg / lb	052 (MOD 51804) kg / lb
Maximum Take-off Weight, MTOW	230,000 / 507,150	230,000 / 507,150	233,000 / 513,765
Maximum Landing Weight, MLW	180,000 / 396,900	180,000 / 396,900	182,000 / 401,300
Maximum Zero Fuel Weight, MZFW	168,000 / 370,440	168,000 / 370,440	170,000 / 374,850

Minimum Crew:

See Section III, Data pertinent to All Model A330-200 and A330-300 Series airplanes.

Number of Seats:

The maximum number of passengers approved for emergency evacuation is:
375 passengers with a 3 pairs of Type A and 1 pair Type 1 exits configuration, and
379 passengers with a 4 pairs of Type A exits configuration.

Maximum Baggage:

Cargo Compartment	Maximum Load (kg / lb)
Forward	18,869 / 41,606
Aft	15,241 / 33,606
Rear	3,468 / 7,646

For the positions and the loading conditions authorized in each position (references of containers, pallets and associated weight) see weight and Balance Manual: Airbus Document 00G080A0006/C2S for A330-200 airplanes.

Fuel Capacity:

Tank	3 Tank Airplane			
	Usable Fuel		Unusable Fuel	
	liters	gallons	liters	gallons
Wing	91,300	24,121	348	70
Center	41,560	10,980	83	21.9
Trim Tank	6,230	1,646	6	1.6
Total	139,090	36,746	437	115.5

Maximum Operating Altitude:

See Section III, Data pertinent to All Model A330-200 and A330-300 Series airplanes.

Control Surface Movements:

See Section III, Data pertinent to All Model A330-200 and A330-300 Series airplanes.

Manufacturer's Serial Numbers:

See Section III, Data pertinent to All Model A330-200 and A330-300 Series airplanes.

Import Requirements:

See Section III, Data pertinent to All Model A330-200 and A330-300 Series airplanes.

Certification Basis (A330-200):

- a. Part 25 of the FAR effective February 1, 1965, including the following:
 - Amendments 25-1 through 25-63, amendments 25-65, 25-66, 25-68, 25-69, 25-73, 25-75, 25-77, 25-78, 25-81, 25-82, 25-84 and 25-85
 - § 25.851 as amended by amendment 25-74
 - The following sections of Part 25 of the FAR as amended through amendment 25-72:

FAR 25.21	FAR 25.693
FAR 25.29	FAR 25.723
FAR 25.111	FAR 25.729
FAR 25.147	FAR 25.731
FAR 25.177	FAR 25.733
FAR 25.181	FAR 25.735
FAR 25.205	FAR 25.772
FAR 25.307	FAR 25.779
FAR 25.331	FAR 25.783
FAR 25.341	FAR 25.933
FAR 25.343	FAR25.979
FAR 25.345	FAR 25.1093
FAR 25.351	FAR 25.1381
FAR 25.361	FAR 25.1419
FAR 25.373	FAR 25.1522
FAR 25.395	FAR 25.1533
FAR 25.397	FAR 25.1543
FAR 25.415	FAR 25.1551
FAR 25.459	FAR 25.1581
FAR 25.571 (b)	FAR 25.1583
FAR 25.613 (Vertical stabilizer only)	FAR 25.1587
FAR 25.615 (Vertical stabilizer only)	

- b. Part 25 of the FAR amendment 25-64 with the following exceptions:
- Cockpit seats will not meet FAR 25.562 amendment 25-64 but will meet FAR 25.561
 - Compliance with 25.785(a), (b), and (c) at amendment 25-64 for front row seats in front of a bulkhead will be based on ensuring a 35 inch free head strike envelope.
- c. Special conditions in accordance with § 21.16 of the FAR.
1. Special conditions originally written for the A330-300 certification basis that are also included in the A330-200 certification basis: (published in the Federal Register April 15, 1993, Docket No. NM-75, Special Conditions No. 25-ANM-69)
 - (1) Operation without Normal Electrical Power
 - (2) Electronic Flight Control System (EFCS) failures and Mode Annunciation
 - (3) Command Signal Integrity
 - (4) Protection From Lightning and Unwanted Effects of High Intensity Radiated Fields (HIRF)
 - (5) Interaction of Systems and Structures
 - (6) Design Dive Speed
 - (7) Design Maneuver Requirements
 - (8) Limit Pilot Forces
 - (9) Tail plane Tank Emergency Landing Loads
 - (10) Limit Engine Torque
 - (11) Flight Characteristics
 - (12) Flight Envelope Protection
 - (13) Side Stick Controllers
 - (14) Computerized Airplane Flight Manual (AFM) Performance Information
 2. Special condition for the optional installation of the Lower Deck Mobile Crew Rest Compartment: (published in the Federal Register on January 6, 2005, Docket No. NM287, Special Condition No. 25-281-SC)

Lower Deck Mobile Crew Rest (LD-MCR) Compartment (optional installation)
- d. Part 34 of the FAR, effective September 10, 1990, including Amendment 34-1.
- e. Part 36 of the FAR, effective December 1, 1969, including Amendments 36-1 through 36-21.

- f. The technical requirements are complemented by the following guidance material:
For precision approach and landing,
1. AC 120-29
 2. AC 120-28C
- and for the automatic flight control system
1. AC 20-57A for automatic landing
 2. AC 25.1329-1A for cruise
- g. Equivalent safety findings have been made in accordance with FAR 21.21(b)(1) for the following paragraphs of the FAR:
- (1) 25.335(d) for design airspeeds
 - (2) 25.345 for high lift devices
 - (3) 25.349 for control surface loads
 - (4) 25.351(b) for unsymmetrical loads
 - (5) 25.371 for gyroscopic loads
 - (6) 25.373 for speed control devices
 - (7) 25.101(I); 25.105(c)(1); 25.109(a)(b)(c)(d)(e)(f); 25.113(a)(b)(c); 25.115(a); 25.735(f)(g)(h)(b) for rejected takeoff and landing performance
 - (8) 25.933(a)(1)(ii), 25.1309(b)(1) for flight critical thrust reverser
 - (9) 25.1203(d) for turbine overheat detection (RR Trent 700 powered A330-243 only)
 - (10) 25.1305(c)(6) Warning means for engine fuel filter contamination (RR Trent 700 powered A330-243 only)
 - (11) 25.1305; 25.1501(b) for APU system flight deck instrumentation
- h. Optional requirements elected:
- 25.801 for ditching.
 - 25.1419 for icing.

Note 1: Compliance with the FAA Required Modification List for Airbus Model A330 Aircraft as included under the Import Requirements section of TCDS Revision 4, dated March 21, 2000 or later TCDS revision, is necessary for an A330 aircraft to be found in a condition for safe operation.

- The FAA has accepted Model A330-223 aircraft in the Airbus as-delivered configuration for msn 609 and on as compliant with the applicable modifications of the A330 RML. FAA acceptance is based on the Airbus statement to the FAA (ref. Airbus letter EAL G03D0415493, dated July 9, 2004) that the RML modifications applicable to model A330-223 aircraft are either part of the FAA approved type design (ref. AI/EA-N 415.1223/98 Issue 2, dated August 20, 1998), required to be installed at aircraft delivery by DGAC/EASA AD, or required to be installed by Airbus on all A330-223 aircraft at time of delivery.

The Direction Generale de 'Aviation Civile (DGAC) of France originally type certificated the Airbus Model A330-200 series airplanes under its type certificate number DGAC-F TC 184. The FAA validated this product under U.S. Type Certificate Number A46NM. Effective September 28, 2003, the European Aviation Safety Agency (EASA) began oversight of this product on behalf of DGAC.

Production Basis:

See Section III, Data pertinent to All Model A330-200 and A330-300 Series airplanes.

Equipment:

- The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification.
- The following Airbus Documents defines the set of modifications which comprise the FAA certificated type design. These documents contain certain modifications determined necessary for FAA certification, including installation of ozone converters, fuel system improvements and thrust reverser modifications.
 - EAL 415.1338/02 Issue 1, dated November 6, 2002 for the A330-201
 - AI/EA-N 415.0531/98 Issue 3, dated May 25, 1998 for the A330-202
 - AI/EAL 415.1988/01 Issue 2, dated August 5, 2001 for the A330-203
 - AI/EA-N 415.1223/98 Issue 2, dated August 20, 1998 for the A330-223
 - AI/EA-N 415.2406/98 Issue 1, dated December 11, 1998 for the A330-243
- Equipment approved for installation is listed in the Certification Standard Equipment List
 - 00G000A0102/C0S for the A330-202.
 - 00G000A0123/C0S for the A330-223.
 - 00G000A0143/C0S for the A330-243.
- Cabin furnishings, equipment and arrangement shall conform to the following specification:
 - 00F252K0005/C01 for cabin seats,
 - 00F252K0006/C01 for galley,

- 00F252K0020/C01 for cabin attendant seats.

Hydraulic Fluids:

See Section III, Data pertinent to All Model A330-200 and A330-300 Series airplanes.

Auxiliary Power Unit (APU):

See Section III, Data pertinent to All Model A330-200 and A330-300 Series airplanes.

Tires:

See Section III, Data pertinent to All Model A330-200 and A330-300 Series airplanes.

Service Information:

See Section III, Data pertinent to All Model A330-200 and A330-300 Series airplanes.

Airplane Flight Manual:

Airplane operation must be in accordance with the EASA Approved Airplane Flight Manual (AFM), US version, listed below, or later EASA approved revision applicable to the specific airplane model, modification status and serial number.

All placards required by either the AFM, the applicable operating rules, or the certification basis must be installed in the airplane.

Model A330 Aircraft	Airbus Document Reference	Revision No.	Date
-201	STL 33000	1	March 10, 2003
-202	AI/ST-F 33000	2	January 6, 1999
-203	AI/ST-F 33000	1	October 24, 2002
-223	AI/ST-F 33000	2	January 6, 1999
-243	AI/ST-F 33000	2	March 15, 2000

Environmental requirements for noise:

See Section III, Data pertinent to All Model A330-200 and A330-300 Series airplanes.

II. Airbus A330-300 Series Transport Category Airplanes:

Airbus A330-301 - approved October 21, 1993

Airbus A330-321 - approved June 21, 1999

Airbus A330-322 - approved June 21, 1999

Airbus A330-323 - approved October 8, 1999:

Airbus A330-341 – approved December 21, 2000

Airbus A330-342 - approved December 21, 2000

Airbus A330-343 - approved December 21, 2000

Model:	Definition of Reference Airplane by Airbus Documents:
A330-301	FAA A330-301 Type Design, ref. AI/EA-N 415.1181/96 Issue 3, dated July 16, 1997 for type definition and Type Certification Standard Equipment list, ref. 00G000A0101/C0S.
A330-321	FAA A330-321 Type Design, ref. AI/EA-N 415.1184/96 Issue 3, dated June 25, 1998 for type definition and Type Certification Standard Equipment list, ref. 00G000A0121/C0S.
A330-322	FAA A330-322 Type Design, ref. AI/EA-N 415.1183/99 Issue 3, dated June 25, 1998 for type definition and Type Certification Standard Equipment list, ref. 00G000A0121/C0S.
A330-323	FAA A330-323 Type Design, ref. AI/EA-N 415.1630/99 Issue 1, dated July 20, 1999 for type definition and Type Certification Standard Equipment list, ref. 00G000A0123/C3S.
A330-341	FAA A330-341 Type Design, ref. AI/EA-N 415.1187/96 Issue 2, dated December 11, 1998 for type definition and Type Certification Standard Equipment list, ref. 00G000A0141/C0S.
A330-342	FAA A330-341 Type Design, ref. AI/EA-N 415.1182/96 Issue 2, dated December 11, 1998 for type definition and Type Certification Standard Equipment list, ref. 00G000A0141/C0S.
A330-343	FAA A330-343 Type Design, ref. AI/EA-N 415.2027/99 Issue 1, dated October 22, 1999 for type definition and Type Certification Standard Equipment list, ref. 00G000A0143/C3S.

Engines:

Airplane Model:	Engine Model:	Engine Type Certificate:
A330-301	Two GE-CF6-80E1A2 turbojet engines	FAA-Type Certificate E41NE
A330-321	Two PW 4164 turbojet engines	FAA-Type Certificate E36NE
A330-322	Two PW 4168 turbojet engines	FAA-Type Certificate E36NE
A330-323	Two PW 4168A turbojet engines	FAA-Type Certificate E36NE
A330-341	Two RR Trent 768-60 turbojet engines	FAA-Type Certificate E39NE
A330-342	Two RR Trent 772-60 turbojet engines	FAA-Type Certificate E39NE
A330-343	Two RR Trent 772B-60 turbojet engines	FAA-Type Certificate E39NE

Fuel:

See Section III, Data pertinent to All Model A330-200 and A330-300 Series airplanes.

Engine Limits:

Engine Limitations	A330-301 CF6-80E1A2 FAA Data Sheet E41NE
Static Thrust at Sea Level • Take-off (5 mn) ¹ (flat rated 30°) • maximum continuous (flat rated 25° C)	64,530 lbs 60,400 lbs
Maximum Engine Speed • N1 rpm (%) • N2 rpm (%)	3,835 (115.5%) 11,105 (113%)
Maximum Gas Temperature • Take-off (5mn) ¹ • Maximum Continuous • Starting ²	1,787° F (975° C) 1,724° F (940° C) 1,598° F (870° C)
Maximum Oil Temperature (Supply Pump Outlet) °C • Continuous Operation • Transient (15 mn max.) • Minimum Oil Pressure (PSI)	320° F (160° C) 347° F (175° C) 10.0 psid (69 KPa)
Approved oils	See SB CFMI 79-001 or GE specification D50TF1 Class B

Engine Limitations	A330-321 PW 4164 FAA Data Sheet E36NE	A330-322 PW 4168 FAA Data Sheet E36NE	A330-323 PW 4168A FAA Data Sheet E36NE
Static Thrust at Sea Level • Take-off (5 mn) ¹ (flat rated 30°) • maximum continuous (flat rated 25° C)	64,500 lbs 55,800 lbs	68,600 lbs 59,357 lbs	68,600 lbs 59,357 lbs
Maximum Engine Speed • N1 rpm (%) • N2 rpm (%)	3,600 (101%) 10,450 (103%)	3,600 (101%) 10,450 (103%)	3,600 (101%) 10,450 (103%)
Maximum Gas Temperature • Take-off (5mn) ¹ • Maximum Continuous • Starting ²	1,157° F (625° C) 1,112° F (600° C) 1,148° F (620° C)	1,157° F (625° C) 1,112° F (600° C) 1,148° F (620° C)	1,157° F (625° C) 1,112° F (600° C) 1,148° F (620° C)
Maximum Oil Temperature (Supply Pump Outlet) °C • Continuous Operation • Transient (15 mn max.) • Minimum Oil Pressure (PSI)	325° F (163° C) 350° F (177° C) 70.0 psid (482.6 KPa)	325° F (163° C) 350° F (177° C) 70.0 psid (482.6 KPa)	325° F (163° C) 350° F (177° C) 70.0 psid (482.6 KPa)
Approved oils	See P&W Service Bulletin 238, latest revision.		

Engine Limitations	A330-341 Trent 768-60 FAA Data Sheet E39NE	A330-342 Trent 772-60 FAA Data Sheet E39NE	A330-343 Trent 772B-60 FAA Data Sheet E39NE
Static Thrust at Sea Level • Take-off (5 mn) ¹ (flat rated 30°) • maximum continuous (flat rated 25° C)	67,500 lbs 60,410 lbs	71,100 lbs 63,560 lbs	71,100 lbs 63,560 lbs
Maximum Engine Speed • N1 rpm (%) • N2 rpm (%)	3,861 (99%) 10,611 (100%)	3,861 (99%) 10,611 (100%)	3,861 (99%) 10,611 (100%)
Maximum Gas Temperature • Take-off (5mn) ¹ • Maximum Continuous • Starting ²	1,652° F (900° C) 1,562° F (850° C) 1,562° F (850° C)	1,652° F (900° C) 1,562° F (850° C) 1,562° F (850° C)	1,652° F (900° C) 1,562° F (850° C) 1,562° F (850° C)
Maximum Oil Temperature (Supply Pump Outlet) °C • Continuous Operation • Transient (15 mn max.) • Minimum Oil Pressure (PSI)	374° F (160° C) 374° F (175° C) 24.0 psid	374° F (160° C) 374° F (175° C) 24.0 psid	374° F (160° C) 374° F (175° C) 24.0 psid
Approved oils	-Aeroshell Turbine Oil (Royco) 500, 555, 560, Mobil Jet Oil II 254, 291, Exxon Turbo Oil 2197		

Table references:

(1) 10 minutes at take-off thrust allowed only in case of engine failure (at take-off or during go-around).

(2) 4 consecutive cycles of 2 minutes each.

Center of Gravity Limits: See Section III, Data pertinent to All Model A330-200 and A330-300 Series airplanes.

Datum: See Section III, Data pertinent to All Model A330-200 and A330-300 Series airplanes.

Leveling Means: See Section III, Data pertinent to All Model A330-200 and A330-300 Series airplanes.

Maximum Weight:

Model A330 Airplane	A330-301/-321/-322/-341/-342		A330-301
Weight Variant	000 (Basic) kg / lb	002 (MOD 42600) kg / lb	001 (MOD 42200) kg / lb
Maximum Take-off Weight, MTOW	212,000 / 467,460	212,000 / 467,460	184,000 / 405,720
Maximum Landing Weight, MLW	174,000 / 383,670	177,000 / 390,285	174,000 / 383,670
Maximum Zero Fuel Weight, MZFW	164,000 / 361,620	167,000 / 368,235	164,000 / 361,620

Model A330 Airplane	A330-323/-343		A330-323	
Weight Variant	020 (Basic) kg / lb	022 (MOD 47785) kg / lb	050 (MOD 51805) kg / lb	052 (MOD 51807) kg / lb
Maximum Take-off Weight, MTOW	230,000 / 507,150	233,000 / 513,765	230,000 / 507,150	233,000 / 513,765
Maximum Landing Weight, MLW	185,000 / 407,925	187,000 / 412,335	185,000 / 407,925	187,000 / 412,335
Maximum Zero Fuel Weight, MZFW	173,000 / 381,465	175,000 / 385,875	173,000 / 381,465	175,000 / 385,875

Minimum Crew: See Section III, Data pertinent to All Model A330-200 and A330-300 Series airplanes.

Number of Seats:

The maximum number of passengers approved for emergency evacuation is: 375 passengers with a 3 pair Type A and 1 pair Type 1 exit configuration, and 379 passengers with a 4 pair Type A exit configuration.

Maximum Baggage:

Cargo Compartment	Maximum Load (kg / lb)
Forward	22,861 / 50,408
Aft	18,507 / 40,808
Rear	3,468 / 7,647

For the positions and the loading conditions authorized in each position (references of containers, pallets and associated weight) see Weight and Balance Manual Ref. 00G080A0006/C3S for A330-300 airplanes.

Fuel Capacity:

Model	Two Tank Airplane					
	Usable Fuel				Unusable fuel	
	A330-301/-321/-322/-341/-342		A330-323/-343		All Models	
Tank	Liters (kg)	Gallons (lb)	liters (kg)	gallons (lb)	liters (kg)	gallons (lb)
Wing	91,764 (73,411)	24,244 (161,871)	91,300 (73,040)	24,122 (161,053)	348 (279)	92 (615)
Trim	6,121	1,617	6,230	1,646	6	1.6
Tank	(4,897)	(10,798)	(4,984)	(10,990)	(5)	(11)
Total	97,885 (78,308)	25,861 (172,669)	97,530 (78,024)	25,768 (172,043)	354 (284)	94 (626)

Maximum Operating Altitude:

See Section III, Data pertinent to All Model A330-200 and A330-300 Series airplanes.

Control Surface Movements: *(Total one-way travel in each direction of each movable control surface on the aircraft.)*

See Section III, Data pertinent to All Model A330-200 and A330-300 Series airplanes.

Manufacturer's Serial Numbers:

See Section III, Data pertinent to All Model A330-200 and A330-300 Series airplanes.

Import Requirements:

See Section III, Data pertinent to All Model A330-200 and A330-300 Series airplanes.

Certification Basis (A330-300):

- a. Part 25 of the FAR effective February 1, 1965, including the following:
 - Amendments 25-1 through 25-63, amendments 25-65, 25-66, 25-77
- b. Part 25 of the FAR amendment 25-64 with the following exceptions:
 - Cockpit seats will not meet FAR 25.562 amendment 25-64 but will meet FAR 25.561
 - Compliance with 25.785(a), (b), and (c) at amendment 25-64 for front row seats in front of a bulkhead will be based on ensuring a 35 inch free head strike envelope.
- c. Special conditions in accordance with § 21.16 of the FAR.
 1. Special conditions published in the Federal Register on April 15, 1993, (ref. Docket No. NM-75, Special Conditions No. 25-ANM-69):
 - (1) Operation without Normal Electrical Power
 - (2) Electronic Flight Control System (EFCS) failures and Mode Annunciation
 - (3) Command Signal Integrity
 - (4) Protection From Lightning and Unwanted Effects of High Intensity Radiated Fields (HIRF)
 - (5) Interaction of Systems and Structures
 - (6) Design Dive Speed
 - (7) Design Maneuver Requirements
 - (8) Limit Pilot Forces
 - (9) Tail plane Tank Emergency Landing Loads

- (10) Limit Engine Torque
- (11) Flight Characteristics
- (12) Flight Envelope Protection
- (13) Side Stick Controllers
- (14) Computerized Airplane Flight Manual (AFM) Performance Information

2. Special condition for the optional installation of the Lower Deck Mobile Crew Rest Compartment:
(published in the Federal Register on January 6, 2005, Docket No. NM287, Special Condition No. 25-281-SC)

Lower Deck Mobile Crew Rest (LD-MCR) Compartment (optional installation)

- d. Special Federal Aviation regulation FAR Part 34, effective September 10, 1990.
- e. Part 36 of the FAR as amended by amendments 36-1 through 36-20.
- f. The technical requirements are complemented by the following guidance material:
For precision approach and landing,
 - 1. AC 120-29
 - 2. AC 120-28C
 and for the automatic flight control system
 - 1. AC 20-57A for automatic landing
 - 2. AC 25.1329-1A for cruise
- g. Equivalent safety findings have been made in accordance with FAR 21.21(b)(1) for the following paragraphs of the FAR:
 - (1) 25.335(d) for design airspeeds
 - (2) 25.345 for high lift devices
 - (3) 25.349 for control surface loads
 - (4) 25.351(b) for unsymmetrical loads
 - (5) 25.371 for gyroscopic loads
 - (6) 25.373 for speed control devices
 - (7) 25.101(I); 25.105(c)(1); 25.109(a)(b)(c)(d)(e)(f); 25.113(a)(b)(c); 25.115(a); 25.735(f)(g)(h)(b) for rejected takeoff and landing performance
 - (8) 25.933(a)(1)(ii), 25.1309(b)(1) for flight critical thrust reverser
 - (9) 25.1203(d) for turbine overheat detection (RR Trent 700 powered A330-341, -342, -343 only)
 - (10) 25.1305(c)(6) Warning means for engine fuel filter contamination (RR Trent 700 powered A330-341, -342 and -343 only)
 - (11) 25.1305; 25.1501(b) for APU system flight deck instrumentation
- h. Optional requirements elected:
 - 25.801 for ditching.
 - 25.1419 for icing.

Note 1: Compliance with the FAA Required Modification List for Airbus Model A330 Aircraft as included under the Import Requirements section of TCDS Revision 4, dated March 21, 2000 or later TCDS revision, is necessary for an A330 aircraft to be found in a condition for safe operation.

- The FAA has accepted Model A330-323 aircraft in the Airbus as-delivered configuration for msn 524 and on as compliant with the applicable modifications of the A330 RML. FAA acceptance is based on the Airbus statement to the FAA (ref. Airbus letter EAL G01M03003568 issue 2, dated June 24, 2003) that the RML modifications applicable to model A330-323 aircraft are either part of the FAA approved type design (ref. AI/EA-N 415.1630/99 Issue 1, dated July 20, 1999), required to be installed at aircraft delivery by DGAC AD, or required to be installed by Airbus on all Model A330-323 aircraft at time of delivery.

The Direction Generale de 'Aviation Civile (DGAC) of France originally type certificated the Airbus Model A330-300 series airplanes under its type certificate number DGAC-F TC 184. The FAA validated this product under U.S. Type Certificate Number A46NM. Effective September 28, 2003, the European Aviation Safety Agency (EASA) began oversight of this product on behalf of DGAC.

Production Basis:

See Section III, Data pertinent to All Model A330-200 and A330-300 Series airplanes.

Equipment:

- The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification.
- The following Airbus Documents defines the set of modifications which comprise the FAA certificated type design. This document contains certain modifications determined necessary for FAA certification, including installation of ozone converters, fuel system improvements and thrust reverser modifications.
 - AI/EA-N 415.1181/96 Issue 3, dated July 16, 1997 for the A330-301
 - AI/EA-N 415.1184/96 Issue 3, dated June 25, 1998 for the A330-321
 - AI/EA-N 415.1183/96 Issue 3, dated July 25, 1998 for the A330-322
 - AI/EA-N 415.1630/99 Issue 1, dated July 20, 1999 for the A330-323
 - AI/EA-N 415.1187/96 Issue 2, dated December 11, 1998 for the A330-341
 - AI/EA-N 415.1182/99 Issue 2, dated December 11, 1998 for the A330-342
 - AI/EA-N 415.2027/99 Issue 1, dated October 22, 1999 for the A330-343
- Equipment approved for installation is listed in the Certification Standard Equipment List
 - 00G000A0101/C0S for the A330-301.
 - 00G000A0121/C0S for the A330-321 and -322.
 - 00G000A0123/C3S for the A330-323.
 - 00G000A0141/C0S for the A330-341 and -342.
 - 00G000A0143/C3S for the A330-343.
- Cabin furnishings, equipment and arrangement shall conform to the following specification:
 - 00F252K0005/C01 for cabin seats,
 - 00F252K0006/C01 for galley,
 - 00F252K0020/C01 for cabin attendant seats

Hydraulic Fluid:

See Section III, Data pertinent to All Model A330-200 and A330-300 Series airplanes.

Auxiliary Power Unit (APU):

See Section III, Data pertinent to All Model A330-200 and A330-300 Series airplanes.

Tires:

See Section III, Data pertinent to All Model A330-200 and A330-300 Series airplanes.

Service Information:

See Section III, Data pertinent to All Model A330-200 and A330-300 Series airplanes.

Airplane Flight Manual:

Airplane operation must be in accordance with the EASA-Approved Airplane Flight Manual (AFM), US version, listed below, or later EASA approved revision applicable to the specific airplane model, modification status and serial number. All placards required by either the AFM, the applicable operating rules, or the certification basis must be installed in the airplane.

Aircraft Model A330	Airbus Document Reference.	Revision No.	Date
-301	AI/EV-O 33000	3	January 6, 1999
-321, -322	AI/ST-F 33000	2	January 6, 1999
-323	AI/ST-F 33000	4	May 18, 2001
-341, -342	AI/ST-F 33000	3	March 15, 2000
-343	AI/ST-F 33000	2	March 15, 2000

Environmental requirements for noise:

See Section III, Data pertinent to All Model A330-200 and A330-300 Series airplanes.

III. Data Pertinent to All Model A330-200 and A330-300 Series airplanes:**Fuel:**

Aircraft	Nomenclature	Specification		
		United States	France	United Kingdom
A330-201 A330-202 A330-203 A330-301	Kerosene (conform to GE specification D50TF2 with current exception of JP4 and JET B)	ASTM D 1655 (JET A) (JET A1)	AIR 3405C	DERD 2494/2453
A330-223 A330-321 A330-322 A330-323	Fuel and fuel additives conforming to the latest applicable issue of FAA approved Pratt & Whitney Turbojet Engine Service Bulletin 2016 may be used separately or mixed in any proportions without adversely affecting the engine operation or power output.			
A330-243 A330-341 A330-342 A330-343	Approved fuel and additives are identified in the relevant Operating instructions defined in the Rolls Royce Manual F-Trent – A330			

(a) Additives: According to GE "Specific Operating Instructions", installation manual. The above mentioned fuels are also suitable for the APU.

Airspeed Limits (Indicated Airspeed, IAS, unless otherwise stated):

- Maximum Operating Limit Speed/Mach, V_{MO}/M_{MO} 330 KIAS / .86
- Design Diving Speed, V_D 365 KIAS / .93
- Design Maneuvering Speed, V_A Refer to AFM Performance Section

- Maximum Flaps/Slats Extended Speed or Operating Speed, V_{FE}

Configuration	Slats/Flaps/Ailerons °	V_{FE} (kt)	
1	16/0/0	240	Intermediate Approach
	16/8/0	215	Take-off
1 + F	16/8/5	205	Take-off
2	20/14/10	196	Take-off and Approach
3	23/22/10	186	Take-off, Approach, and Landing
FULL	23/32	180	Landing

- Minimum Control Speed, V_{MC} Refer to AFM performance Section.
(Performance Engineering Program/OCTOPUS)

Landing Gear Speeds:

- Maximum Speed with Landing Gear Operating (Extension and Retraction) V_{LO} 250 KIAS / .55M
- Maximum Speed with Landing Gear Locked Down, V_{LE} 250 KIAS / .55M
- Tire Limit Speed (Ground Speed) 203 KIAS (235mph)

Center of Gravity Limits:

Refer to EASA-Approved Airplane Flight Manual, US Version, Limitations Section for center of gravity envelope. Note: 0% MAC is located 1359.59 in. (34.532m) from the datum line

Datum:

The aircraft reference zero datum point is located 251.29 in. (6.3825 m) forward of the nose section, 275.6 in. (7m) under the fuselage centerline (datum line).

Leveling Means:

Inclinometer on cabin seat track rails (refer to WBM chapter 1.80).

Minimum Crew:

2 - Pilots

Maximum Operating Altitude

Basic: 41,100 feet (12,527 m) slats and flaps retracted (clean)
Option: 41,450 feet (12,634 m) slats and flaps retracted (clean) with modification 52536
20,000 feet (6,096 m) slats or slats/flaps extended.

Control Surface Movements: (Total one-way travel in each direction of each movable control surface on the aircraft.)

Control Surface	Maximum Travel
Aileron	+25 /- 25°
#1 Spoilers	Speed Brake 23°
	Lift Dumper 35°
#2,3 Spoilers	Roll 35°
	Speed Brake 30°
	Lift Dumper 50°
#4,5,6 Spoilers	Roll 35°
	Speed Brake 30°
	Lift Dumper 50°
Aileron Droop	10°
Flaps	32°
Slats	23°
Stabilizers	+2°/-14°
Elevator	+15°/-30°
Rudder	+30°/-30°

Environmental requirements for noise:

ICAO Annex 16 Volume 1 – Chapter 3, or Chapter 4 with Modification 55005.

Manufacturer's Serial Numbers/Production Basis:

A330 aircraft, all series and models, are produced in France under production approval FR.21G.0035 (formerly FG 035) issued by the DGAC (on behalf of EASA) to Airbus.

Import Requirements:

The FAA can issue a U.S. airworthiness certificate based on an French Export Certificate of Airworthiness (Export C of A) signed by a representative of the Direction Generale de 'Aviation Civile (DGAC) of France on behalf of the European Community. The Export C of A should contain the following statement (in the English language): "The aircraft covered by this certificate has been examined, tested, and found to conform to the Type Design approved under FAA Type Certificate No. A46NM as defined in TCDS A46NM revision 4 (or later revision) and to be in condition for safe operation."

The U.S. airworthiness certification basis for aircraft type certificated under FAR Section 21.29 and exported by the country of manufacture is FAR Section 21.183(c) or 21.185(c). The U.S. airworthiness certification basis for aircraft type certificated under FAR Section 21.29 exported from countries other than the country manufacture (e.g., third party country) is FAR Sections 21.183(d) or 21.185(b). These sections provide that U.S. airworthiness certificates are issued only if the Administrator finds "that the aircraft conforms to the type design and is in a condition for safe operation." Notwithstanding that FAR sections 21.183(d) and 21.185(b) do not specifically address or require certification by the foreign civil airworthiness authority of the country of manufacture, such certification is the only practical way for an applicant to show, and the FAA to find conformity to the FAA-approved type design and condition for safe operation. Additional guidance is contained in FAA Advisory Circular (AC) 21-23, Airworthiness Certification of Civil Aircraft, Engines, Propellers, and Related Products Imported into the United States.

FAA Required Modification List for Airbus Model A330 Aircraft:

Prior to issuance of a Standard Airworthiness Certificate on any Airbus A330 model aircraft, all modifications shown on the (Model A330) Required Modification List (RML) with compliance times already **past**, must be accomplished before the aircraft can be found to be in a condition for safe operation.

Note 1: RML modifications with compliance times already past means that relative to the date of issuance of an Airworthiness Certificate for an individual aircraft, the compliance time of the RML item in calendar time and/or flight hours and/or flight cycles has been exceeded.

All **future** required modifications shown on the RML must be incorporated into the operator's maintenance or inspection program prior to placement of the aircraft into operation [just as for future airworthiness limitations listed in the Airworthiness Limitation Section (ALS)]. These future RML modifications must be incorporated prior to the compliance time specified in the RML and must remain with the airplane records. In the event of any transfer of the airplane to another operator these RML requirements must continue to be complied with and incorporated into the new operator's maintenance program.

Note 2: Future RML modifications means that relative to the date of issuance of an Airworthiness Certificate for an individual aircraft, the compliance time of the RML item in calendar time and/or flight hours and/or flight cycles has not yet been exceeded.

Prior to issuance of a Standard Airworthiness Certificate on any Airbus A330 model aircraft, the following note must be placed on the Airworthiness Certificate:

“CONTINUED AIRWORTHINESS: Type Certificate Data Sheet (TCDS) A46NM, Revision 4, dated March 21, 2000, contains the “FAA Required Modification List (RML)” that must be complied with for this aircraft to remain in a condition for safe operation. The RML is part of the permanent record for this aircraft; it must remain with the aircraft data and continue to be complied with in the event of transfer to another operator.”

Note 3: The RML was finalized through its publication in TCDS Revision 4 and requirements will not be added by later TCDS revisions. Therefore, the RML in TCDS A46NM Revision 4 or any later TCDS revision are equivalent and acceptable for compliance. All future modifications that the FAA determines must be accomplished on U.S. registered aircraft will be addressed by issuance of an Airworthiness Directive (AD).

Authority for these required modifications is given per the airworthiness certification provisions of 49 U.S.C. 44704 (c), which states “the Administrator may include in an airworthiness certificate terms required in the interest of safety”. “Terms required in the interest of safety” include actions to correct unsafe conditions issued by the foreign authority of the state of design that also meet FAA criteria for corrective action. This law also gives the FAA the authority to adopt FAR § 21.183(c) and (d), which form the regulatory basis for the issue of standard U.S. airworthiness certificates on imported products. 14 CFR §21.183(c) and (d) provide that airworthiness certificates are issued only if the Administrator finds “that the aircraft conforms to the type design and is in a condition for safe operation.” The modifications identified in the list below are required in the interest of safety and are necessary for this airplane to be in a condition for safe operation.

A Notice of Policy Statement announcing the FAA’s policy with respect to foreign mandatory continued airworthiness information, when no aircraft of the affected design are currently operating in the U.S. was published in the Federal Register on May 11, 1998

Alternative Methods of Compliance to an RML modification:

For each RML modification, an alternative method of compliance (AMOC) or adjustment of the compliance time may be used if approved by the Manager, International Branch, ANM-116, FAA Transport Airplane Directorate; 1601 Lind Avenue Southwest; Renton, Washington 98055; telephone (425) 227-1263; fax (425) 227-1149. Operators shall submit their request through an appropriate FAA Principle Maintenance Inspector, who may add comments and then send it to the Manager, International Branch.

FAA Compliance findings to the A330 RML:

The FAA has accepted:

- (1) Model A330-323 aircraft in the Airbus as-delivered configuration for msn 524 and on as compliant with the applicable modifications of the A330 RML. FAA acceptance is based on the Airbus statement to the FAA (ref. Airbus letter EAL G01M03003568 issue 2, dated June 24, 2003) that the RML modifications applicable to model A330-323 aircraft are either part of the FAA approved type design (ref. AI/EA-N 415.1630/99 Issue 1, dated July 20, 1999), required to be installed at aircraft delivery by DGAC/EASA AD, or required to be installed by Airbus on all A330-323 aircraft at time of delivery.
- (2) Model A330-223 aircraft in the Airbus as-delivered configuration for msn 609 and on as compliant with the applicable modifications of the A330 RML. FAA acceptance is based on the Airbus statement to the FAA (ref. Airbus letter EAL G03D0415493, dated July 9, 2004) that the RML modifications applicable to model A330-223 aircraft are either part of the FAA approved type design (ref. AI/EA-N 415.1223/98 Issue 2, dated August 20, 1998), required to be installed at aircraft delivery by DGAC/EASA AD, or required to be installed by Airbus on all A330-223 aircraft at time of delivery.

FAA Required Modification List (RML) for the Airbus Model A330 Aircraft:

The RML for the A330 is composed of items 1A through 40B as listed on the following pages.

A330 Required Modification List (RML)

RML #	DGAC CN #	Mod #	Mandatory Action	Applicable To:	S/B #	S/B REV(s)	Compliance Time
1A	1996-006-024(B)R1	42409	FUSELAGE - REINFORCE JOINT AT FRAMES 48 - 53.2	Airplanes without mod 43475 or without SB A330-21-3027	53-3015	1 or higher	Frames 53/53.1/53.2: Prior to 5800 total flight cycles. For frames 48 to 52: Prior to 15600 total flight cycles.
1B	1996-006-024(B)R1	42409	FUSELAGE - REINFORCE JOINT AT FRAMES 48 - 53.2	Airplanes with mod 43475 or with SB A330-21-3027	53-3015	1 or higher	Frames 53/53.1/53.2 prior to 5300 total flight cycles. For frames 48 to 52 prior to 14100 total flight cycles.
2	1997-265-056(B)R1	N/A	REVISE AMM AIRWORTHINESS LIMITS.	ALL Model A330 Airplanes	AMM CHAPTER 5	8 or higher	Prior to C of A Issuance
3	1998-539-088(B)	N/A	REPLACE FRANKENJURA EYE-END ON ELEVATOR SERVOCONTRLS	ALL Model A330 Airplanes	AOT 27-24	1 or higher	Prior to 7/09/99 or C of A Issuance; whichever occurs later
4	1999-111-093(B)	45870 AND 46231 AND 46891	INSTALL WIRING FOR E-BRAKE SHUTOFF VALVE	ALL Model A330 Airplanes	29-3054 AND 32-3083R2	3054: 0 or higher 3083: 2 or higher	Prior to 7/31/01 or C of A Issuance; whichever occurs later
5	1999-123-092(B)	43724, OR 44661, OR 44662	FLIGHT MANAGEMENT COMPUTER REPLACEMENT	ALL Model A330 Airplanes	22-3011, OR 22-3009, OR 22-3010	All SB's revision 1 or higher	Prior to 6/30/99 or C of A Issuance; whichever occurs later
6	1999-142-097(B)	46170, OR 46596	FLIGHT CONTROL UNIT CHANGE	Airplanes with Mod. 44887 OR with SB 22-3012	22-3021, OR 22-3020	1 or higher	Prior to 6/30/99 or C of A Issuance; whichever occurs later
7	1999-144-094(B)R1	45977	REPLACE RAT ACTUATOR	Airplanes with Sundstrand RAT	29-3057	1 or higher	Prior to 12/31/00 or C of A Issuance; whichever occurs later
8	1999-331-098(B)	42447	REPLACE NLG HINGE FITTING BRACKETS	ALL Model A330 Airplanes	52-3046	1 or higher	Prior to 01/21/01 or C of A Issuance; whichever occurs later
9A	1999-350-100(B)R1	46904, AND 46905	REPLACE PIVOT PINS & BELLCRANK ASSEMBLIES	-202, -223, -243, -323, -343	32-3095	1 or higher	The Later of (a) and (b): (a) Prior to 4800 total flight cycles or within 5 years since new; which ever occurs first; and (b) Prior to 06/08/01
9B	1999-350-100(B)R1	46902, AND 46903	REPLACE PIVOT PINS & BELLCRANK ASSEMBLIES	ALL Model A330 Airplanes	32-3096	1 or higher	Prior to 10 years since new or C of A Issuance; whichever occurs later
9C	1999-350-100(B)R1	46904, AND 46905	REPLACE PIVOT PINS & BELLCRANK ASSEMBLIES	-301, -321, -322, -341, -342	32-3095	1 or higher	The Later of (a) and (b): (a) Prior to 6500 total flight cycles or within 5 years since new; which ever occurs first; and (b) Prior to 06/08/01
10A	1999-406-103(B)	45307	REPLACE HORIZONTAL HYDRAULIC BRACKET	All Airplanes, except -202, with mod 43475 OR with SB 21-3027	53-3088	0 or higher	Prior to 7880 total flight cycles or 30700 total flight hrs; whichever occurs first

A330 Required Modification List (RML)

RML #	DGAC CN #	Mod #	Mandatory Action	Applicable To:	S/B #	S/B REV(s)	Compliance Time
10B	1999-406-103(B)	45307	REPLACE HORIZONTAL HYDRAULIC BRACKET	All Airplanes, except -202, without mod 43475 OR without SB 21-3027	53-3088	0 or higher	Prior to 8620 total flight cycles or 33600 total flight hrs; whichever occurs first
10C	1999-406-103(B)	45307	REPLACE HORIZONTAL HYDRAULIC BRACKET	-202	53-3088	0 or higher	Prior to 8540 total flight cycles or 33300 total flight hrs, whichever occurs first
11	1999-442-104(B)	46820, OR 46865	PASSENGER/ CREW DOOR FRAME LININGS	ALL Airplanes with mod 44461 OR 44462 OR 44463 OR 44464 OR 44465	25-3096	1 or higher	Prior to 11/03/05 or C of A Issuance; whichever occurs later
12A	1999-449-105(B)	45899	REINFORCE FRAME 40	-202, -223	53-3093	2 or higher	Prior to 9700 Total flight cycles or 28800 total flight hours; whichever occurs first
12B	1999-449-105(B)	45899	REINFORCE FRAME 40	-301, -321,-322, -341, -342	53-3093	1 or higher	Prior to 7320 total flight cycles or 26130 total flight Hours; whichever occurs first
13	1999-508-106(B)	41652, OR 43904	MODIFY LOWER SECTIONS OF FRAME 48 TO 53.2	ALL Model A330 Airplanes	53-3062	0 or higher	Prior to 2300 Total flight cycles or C of A Issuance; whichever occurs later
14	95-053-009(B)R3	44049	REPLACE HYDRAULIC SENSE LINES	Airplanes equipped with PW model 4164 or 4168 engines	29-3019	1 or higher	Prior to 10/31/97 or C of A Issuance; whichever occurs later
15	95-248-022(B)	42607	MOD - FUSELAGE STRINGER 39	ALL Model A330 Airplanes	53-3021	0 or higher	Prior to 3800 total flight cycles
16	96-106-030(B)	41849 OR 43364	AFT CARGO COMPARTMENT DOOR	ALL Model A330 Airplanes	52-3023	0 or higher	Prior to 6000 total flight cycles
17	96-134-031(B)R2 AND 97-266-057(B)	[45271]; OR [44143 AND SB-A330-32-3070R0]	LANDING GEAR FREE FALL EXTENSION ELECTRIC CIRCUIT	ALL Model A330 Airplanes	[32-3048R3] OR [32-3048R0, R1 or R2 AND 32-3070R0)	-3048:3 or higher, OR 3048: 0,1, or 2 AND 3070: 0 or higher	Prior to 3/23/99 or C of A Issuance; whichever occurs later
18	96-136-032(B)R1	43689 AND 44603	ELECTRICAL POWER-APU FUEL PUMPS ELEC SUPPLY	ALL Model A330 Airplanes	28-3041	3 or higher	Prior to 3/1/98 or C of A Issuance; whichever occurs later
19	96-159-033(B)R2	44173, OR 44237	MLG- SHORTENING MECHANISM BELLCRANK	ALL Model A330 Airplanes without Mod 43029 installed	32-3047	2 or higher	Prior to 1/07/99 or C of A Issuance; whichever occurs later

A330 Required Modification List (RML)

RML #	DGAC CN #	Mod #	Mandatory Action	Applicable To:	S/B #	S/B REV(s)	Compliance Time
20	96-184-036(B)R2	46558	ICE PROTECTION-WING ANTI ICE VALVES	ALL Model A330 Airplanes	S/B 30-3020	-3020: 0 or higher	Prior to C of A Issuance
21	97-004-041(B)	43697, OR 43761	REAR FUSELAGE CARGO DOOR FRAME	ALL Model A330 Airplanes	53-3048	0 or higher	Prior to 7000 total flight cycles
22	97-154-049(B)R1	44457 AND 45022	RADIO ANTENNA ALTIMETER "THOMSON"	ALL Model A330 Airplanes fitted with Radio Altimeter P/N 9599-607-19501	34-3044 AND 21-3053 AND 92-3017	All S/Bs: 0 or higher	Prior to 10/31/98 or C of A Issuance; whichever occurs later
23	97-178-051(B)	44918	A/C RAM AIR OUTLET DUCT	ALL Model A330 Airplanes	21-3059	0 or higher	Prior to 6/30/98 or C of A Issuance; whichever occurs later
24	97-179-052(B)	45088, OR 45087	FWD FLAP TRACKS	ALL Model A330 Airplanes	57-3048	1 or higher	Prior to 3500 total flight hours
25	97-204-053(B)	41856, OR 45224	FWD FUSELAGE-REINFORCE DBLR/OUTFLOW VALVE	ALL Model A330 Airplanes	53-3084	0 or higher	Prior to 7500 total flight cycles
26	97-361-058(B)R2	44511 AND 41671	MLG-SHORTENING MECHANISM BELLCRANK BOLTS	ALL Model A330 Airplanes without Mod 43029 installed	32-3056	1 or higher	Prior to 12000 total flight cycles on the MLG
27	97-386-060(B)	45077 OR 45564	HOT TRANSFO-RECTIFIERS OPERATION	ALL Model A330 Airplanes	24-3019	1 or higher	Prior to 12/31/98 or C of A Issuance; whichever occurs later
28	98-022-062(B)R1	46115	PNEUMATIC LEAK DETECTION SYSTEM WIRING	ALL Model A330 Airplanes	AOT 36-04 OR SB 36-3012	AOT: 0 or higher -3012: 0 or higher	Prior to 12/16/98 or C of A Issuance; whichever occurs later
29	98-023-063(B)	43441, OR 41848	CENTER FUSELAGE REINFORCE FR 53.3/53.5	ALL Model A330 Airplanes with Mod. 40161	53-3039	1 or higher	Prior to 10000 total flight cycles
30	98-024-064(B)	44360, OR 44440	REINFORCE KEEL ANGLE OF FRONT SPAR FR40	All Airplanes with Mod. 41652	57-3046	0 or higher	Prior to 4000 total flight cycles
31	98-098-065(B)	[42351 AND 42353 AND 43438]; OR 41848	REINFORCE DOORFRAMES/ EMERGENCY EXITS	Airplanes with Mod. 40161	53-3023	0 or higher	Prior to 10000 total flight cycles

A330 Required Modification List (RML)

RML #	DGAC CN #	Mod #	Mandatory Action	Applicable To:	S/B #	S/B REV(s)	Compliance Time
32	98-099-066(B)	42969 AND 45580	FUEL DENSITOMETERS - ATA 28	ALL Model A330 Airplanes	28-3044R1 OR 28-3053 and 28-3044R0	3044:1 or higher 3053: 0 or higher	Prior to 6 Years since new
33	98-101-068(B)	43306	MODIFY DOOR STOP FITTING ON PASS DOORS	ALL Model A330 Airplanes	53-3044	1 or higher	Prior to 10000 total flight cycles
34	98-268-073(B)R1	45534	REPLACE MLG DOOR	All Airplanes with MLG door S/N AA1001 to AA1196; or SPAA001 to SPAA015	52-3049	0 or higher	Prior to 2/18/00 or C of A Issuance; whichever occurs later
35	98-291-074(B)	44030, OR 43761	REINFORCE FRAME 65 REAR FUSELAGE	ALL Model A330-300 Airplanes	53-3058	2 or higher	Prior to 10000 total flight cycles
36	98-352-076(B)	46416	MOD MLG O/B PIN / BRAKE ROD TO MAIN STRUT	ALL Model A330 Airplanes	32-3084	2 or higher	Prior to 1/19/99 or C of A Issuance; whichever occurs later
37	98-454-082(B)	[43577]; OR [41652 AND 44440]; OR [41652 AND 44360]	LOWER KEELBEAM FITTING/FWD LOWER SHELL	ALL Model A330 Airplanes	57-3032	3 or higher	Prior to 6600 Total flight cycles or 21800 Total Flight Hrs, whichever occurs first
38A	98-484-081(B)R1	46472	REPLACE PIVOT PINS OF SLIDE LOCKING MECHANISM	All Airplanes with 44860 (Type 1 Emerg Exits)	52-3050	1 or higher	Prior to 3/12/00 or C of A Issuance; whichever occurs later
38B	98-484-081(B)R1	46471	REPLACE PIVOT PINS OF SLIDE LOCKING MECHANISM	All Airplanes with 44330 (Mid & Aft Pax Doors)	52-3050	1 or higher	Prior to 3/12/00 or C of A Issuance; whichever occurs later
38C	98-484-081(B)R1	46473	REPLACE PIVOT PINS OF SLIDE LOCKING MECHANISM	All Airplanes with 44332 (Type A Emerg Exits)	52-3050	1 or higher	Prior to 3/12/00 or C of A Issuance; whichever occurs later
39	98-507-085(B)	[45090], OR [45155], OR [45197], OR [45904], OR [45904 and 45905]	REPLACE-DIAPHRAGM FOR EMERGENCY ACTUATOR	ALL Model A330 Airplanes	52-3048	1 or higher	Prior to 12/16/01 or C of A Issuance; whichever occurs later
40A	98-538-087(B)R1	46353	MODIFY DOOR STAY MECHANISM EMERG EXITS	All Airplanes with 44332 (Type A Emerg Exits)	52-3051	1 or higher	Prior to 3/31/00 or C of A Issuance; whichever occurs later
40B	98-538-087(B)R1	46352	MODIFY DOOR STAY MECHANISM MID/AFT EXITS	All Airplanes with 44330 (Mid & Aft Pax Doors)	52-3051	1 or higher	Prior to 3/31/00 or C of A Issuance; whichever occurs later

Hydraulic Fluids:

Type IV - Specification NSA 30.7110

Auxiliary Power Unit (APU):

Garrett Airesearch	GTCP 331-350C (Specification 31-7677A)
Maximum Allowable Speed	(107%) 41,730 RPM
Maximum Gas Temperature: Turbine Outlet Temperature Starting	650 °C 1250 °C

Approved oils: See Garrett report GT-7800 or Garrett Maintenance Manual.

Tires: Refer to Airbus Service Bulletin (SB) A330-32-3004.

SERVICE INFORMATION:

Each of the documents listed below that contain a statement that it is approved by the European Aviation Safety Agency (EASA) - or for approvals made before September 28, 2003 - by the DGAC France, are accepted by the FAA and are considered FAA approved. Additionally, approvals issued by Airbus under the authority of EASA approved Design Organization EASA.21J.031 - or for approvals made before September 28, 2003 - under the authority of by DGAC Design Organization Approval No. C01 or JAA Design Organization Approval No. F.JA.02 are considered FAA approved. These approvals pertain to the type design only.

- Airbus Service Bulletins, except as noted below,
- Structural repair manuals,
- Vendor manuals referenced in Airbus service bulletins
- US version of Aircraft flight manuals,
- Repair Instructions.

Note: Design changes that are contained in Airbus Service Bulletins and that are classified as Level 1 Major in accordance with the US/France Bilateral Aviation Safety Agreement Implementation Procedures for Airworthiness must be approved by the FAA.

GENERAL NOTES: (All Models of A330 Series Airplanes)

- Note 1:** A current Weight and Balance report including list of the equipment included in the certificated empty weight, and loading instructions, when necessary, must be provided for each aircraft at the time of original airworthiness certification and at all times thereafter. Refer to Airbus Documents 00G080A0006/C2S for A330-200 series aircraft and 00G080A0006/C3S for A330-300 series aircraft.
- Note 2:** Instructions For Continued Airworthiness required under § 21.50 for service life limits on components, required inspections and inspection intervals, and certification maintenance requirements:
- A330 Maintenance Review Board Report 00G050A0002/C01 approved by the FAA;
 - Safe Life Airworthiness Limitation Items are provided in the A330 Airworthiness Limitation Section (ALS) sub-parts 1-2 and 1-3 and approved by EASA (Ref. Document 00G050AM091/C01);
 - Certification Maintenance Requirements (CMR's) are provided in the A330 Airworthiness Limitations Section (ALS) Part 3 approved by EASA (Document 00G050A0003/C01);
 - Damage Tolerant Airworthiness Limitation Items are provided in the A330 Airworthiness Limitations Section (ALS) Part 2 approved by EASA (Document 00G050A3301/C01)
 - Fuel Airworthiness Limitations are provided in the A330 Airworthiness Limitations Section (ALS) Part 5 approved by EASA (Document 95A.1932/05)
- Note 3:** Compliance with the FAA Required Modification List for Airbus Model A330 Aircraft as included under the Import Requirements section of TCDS Revision 4, dated March 21, 2000 or later TCDS revision, is necessary for an A330 aircraft to be found in a condition for safe operation. The FAA has accepted:
- Model A330-323 aircraft in the Airbus as-delivered configuration for msn 524 and on as compliant with the applicable modifications of the A330 RML.
 - Model A330-223 aircraft in the Airbus as-delivered configuration for msn 609 and on as compliant with the applicable modifications of the A330 RML.
- Note 4:** A330-301: If modification 42792, "Autoflight-FMGEC-Introduce L5 Standard on A330 Aircraft," is embodied the aircraft is qualified for CAT III precision approach and autoland. This does not constitute operational approval.

- Note 5:** A330-321 and A330-322: If modification 43397, “Autoflight-FMGEC-Certify CAT III Autoland for A330 with P&W engines,” is embodied, the aircraft is qualified for CAT III precision approach and autoland. This does not constitute an operational approval.
- Note 6:** A330-201, A330-202, A330-203,-223, -243, -323, -341, -342 and -343: The aircraft Type Design is qualified for CAT III precision approach and autoland. This does not constitute an operational approval.
- Note 7:** ETOPS: The Type Design reliability and performance of the airframe-engine combinations listed below have been evaluated in accordance with AC 120-42A and found suitable for (180 minute maximum diversion time) extended range operations when configured, maintained and operated in accordance with the approved airplane configuration CMP document. This finding does not constitute an FAA approval to conduct extended range operations. Operational approval must be obtained from the FAA by the operator.
- Model A330-323. The approved CMP is Airbus document AI/EA 5001, Revision 1, dated October 21, 1999.
 - Model A330-223. The approved CMP is Airbus document AI/EA 5001, Revision 2, dated July 12, 2004.
- Note 7:** “Enhanced” refers to those model A330 aircraft identified by Weight Variant (WV) 050 or WV 052. Aircraft with either of these WV’s have the modifications defined by Level 1 major change project: “Fly By Wire (FBW) and Structural Enhanced Changes installed in production.

...END...