



Maximum Oil Temperature (Supply Pump Outlet) °C • Continuous Operation, Stabilized • Transient (15 mn max.) Minimum Oil Pressure • Minimum Pressure (PSI)	320° F (160° C)  347° F (175° C)  10.0 psid (69 KPa )
Approved oils, Brand Names, Specification	Brand Names: See GE Service Bulletin 79-001 Specification: See GE specification D50TF1, Class B

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 (Indicated Airspeed, IAS, unless otherwise stated):

- Maximum Operating Limit Speed/Mach,  $V_{MO}/M_{MO}$  360 KIAS / .86 M
- Design Diving Speed,  $V_D$  365 KIAS / .93 M
- Design Maneuvering Speed,  $V_A$  Refer to AFM Limitations 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),  $V_{L0}$  250 KIAS/.55M
- Maximum Speed with Landing Gear Locked Down,  $V_{LE}$  250 KIAS/.55M
- Tire Limit Speed (Ground Speed) 203 KTS

Center of Gravity Limits:

See Section III, Data pertinent to All A330-200 and A330-300 Models.

Datum:

See Section III, Data pertinent to All A330-200 and A330-300 Models.

Leveling Means:

See Section III, Data pertinent to All A330-200 and A330-300 Models.

Maximum Weight:

Variant	020 (Basic) kg/lb
Maximum Ramp Weight	230,900/509,042
Maximum Take-off Weight, MTOW	230,000/507, 150
Maximum Landing Weight, MLW	180,000/396,900
Maximum Zero Fuel Weight, MZFW	168,000/370,440

Minimum Crew:

See Section III, Data pertinent to All A330-200 and A330-300 Models.

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 Industrie Document 00G080A0006/C2S for A330-202.

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 A330-200 and A330-300 Models.

Control Surface Movements:

See Section III, Data pertinent to All A330-200 and A330-300 Models.

Manufacturer's Serial Numbers:

See Section III, Data pertinent to All A330-200 and A330-300 Models.

Import Requirements:

See Section III, Data pertinent to All A330-200 and A330-300 Models.

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	FAR 25.979
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. In accordance with § 21.16 of the FAR, the following special conditions are part of the original A330 certification basis, and were published in the Federal Register April 15, 1993, (Docket No. NM-75, Special Conditions No. 25-ANM-69), and are also be part of the A330-200 certification basis:

- (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

- 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
- h. Optional requirements elected:
- 25.801 for ditching.
  - 25.1419 for icing.

Production Basis:

See Section III, Data pertinent to All A330-200 and A330-300 Models.

Equipment:

- The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification. Airbus Industrie Document AI/EA-N 415.053/98, Issue 1, dated March 16, 1998 defines the set of modifications which comprise the certificated type design. This document contains certain modifications determined necessary for FAA certification for the installation of ozone converters, fuel system improvements and thrust reverser modifications.
- Equipment approved for installation is listed in the Certification Standard Equipment List 00G000A0102/COS.
- 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

Other Information Applicable to A330-200 Series Airplanes:

Hydraulic Fluids:

See Section III, Data pertinent to All A330-200 and A330-300 Models.

Auxiliary Power Unit (APU):

See Section III, Data pertinent to All A330-200 and A330-300 Models.

Tires:

See Section III, Data pertinent to All A330-200 and A330-300 Models.

Airplane Flight Manual:

Refer to Airbus Industrie Document AI/EV-O 33000 issued November 17, 1993, applicable to the specific airplane model and serial number.

Service and Operating Information:

See Section III, Data pertinent to All A330-200 and A330-300 Models.

Notes:

See Section III, Data pertinent to All A330-200 and A330-300 Models.

**II. Airbus A330-300 Series Transport Category Airplanes:****Airbus A330-301 - approved October 21, 1993:**

A330-301: Definition of reference airplane by Airbus Industrie Document:  
AI/EA-N 415.1181/96 Issue 3, dated July 16, 1997 for type definition  
and 00G000A0101/C0S for equipment list.

Engines:

A330-301 2 GE-CF6-80E1A2.  
Refer to engine FAA-Type Certificate E41NE

Fuel:

See Section III, Data pertinent to All A330-200 and A330-300 Models.

Engine Limits:

Engine Limitations	CF6-80E1A2 FAA Data Sheet E41NE
Static Thrust at Sea Level • Take-off (5 mn) <sup>1</sup> (flat rated 30° C) • maximum continuous (flat rated 25° C)	64,530 lbs  60,040 lbs
Maximum Engine Speed • N1 rpm (%) • N2 rpm (%)	3,835 (115.5%) 11,105 (113%)
Maximum Gas Temperature • Take-off (5mn) <sup>1</sup> • Maximum Continuous • Starting <sup>2</sup>	1,787° F (975° C) 1,724° F (940° C) 1,598° F (870° C)
Maximum Oil Temperature (Supply Pump Outlet) °C • Take-off, Stabilized • Transient (15 mn max.) • Minimum 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

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

- Maximum Operating Limit Speed/Mach,  $V_{MO}/M_{MO}$  360 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 KTS

**Center of Gravity Limits:**

See Section III, Data pertinent to All A330-200 and A330-300 Models.

**Datum:**

See Section III, Data pertinent to All A330-200 and A330-300 Models.

**Leveling Means:**

See Section III, Data pertinent to All A330-200 and A330-300 Models.

**Maximum Weight:**

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

**Minimum Crew:**

See Section III, Data pertinent to All A330-200 and A330-300 Models.

**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	22,861/50,400
Aft	18,507/40,800
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 Ref. 00G080A0006/C3S for A330-301 airplanes.

Fuel Capacity:

Tank	2 Tank Airplane			
	Usable Fuel		Unusable Fuel	
	liters (kg)	gallons (lb)	liters (kg)	gallons (lb)
Wing	91,056 (72,845)	24,054 (164,052)	348	70 (41)
Trim Tank	6,115 (4891)	1,614	6	1.6 (11)
Total	97,171	25,669	354	88 (600)

Maximum Operating Altitude:

See Section III, Data pertinent to All A330-200 and A330-300 Models.

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 A330-200 and A330-300 Models.

Manufacturer's Serial Numbers:

See Section III, Data pertinent to All A330-200 and A330-300 Models.

Import Requirements:

See Section III, Data pertinent to All A330-200 and A330-300 Models.

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. FAA Special conditions issued for the A330 in accordance with Section 21.16 of the FAR and published in the Federal Register April 15, 1993, (Docket No. NM-75, Special Conditions No. 25-ANM-69), as follows:
- (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
- 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
- h. Optional requirements elected:
- 25.801 for ditching.
  - 25.1419 for icing.

Production Basis:

See Section III, Data pertinent to All A330-200 and A330-300 Models.

Equipment:

- The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification. Airbus Industrie Document AI/EA-N 415.1181, issue 3, dated July 16, 1997 defines the set of modifications which comprise the certificated type design. This document contains certain modifications determined necessary for FAA certification for the installation of ozone converters, fuel system improvements and thrust reverser modifications.
- Equipment approved for installation is listed in the Certification Standard Equipment List 00G000A0101/C0S.
- 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

Other Information Applicable to A330-300 Series Airplanes:Hydraulic Fluid:

See Section III, Data pertinent to All A330-200 and A330-300 Models.

Auxiliary Power Unit (APU):

See Section III, Data pertinent to All A330-200 and A330-300 Models.

Tires:

See Section III, Data pertinent to All A330-200 and A330-300 Models.

Airplane Flight Manual:

Refer to Airbus Industrie Document AI/EV-O 33000 issued November 17, 1993, applicable to the specific airplane model and serial number.

Service and Operating Information:

See Section III, Data pertinent to All A330-200 and A330-300 Models.

Notes:

See Section III, Data pertinent to All A330-200 and A330-300 Models.

**III. Data Pertinent to All A330-200 and A330-300 Models:**Fuel:

Nomenclature	Specification		
	United States	France	United Kingdom
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

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

Center of Gravity Limits:

Refer to DGAC-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

- 41,100 feet (12,496 m) slats and flaps retracted (clean)
- 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°

Manufacturer's Serial Numbers

A330 aircraft, all series and models, are produced in France under production approval P09 issued by the DGAC to Airbus Industrie.

Import Requirements

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). For issuance of an airworthiness certificate in accordance with § 21.183(c) the Direction Generale De L'Aviation Civile (DGAC) must certify that the aircraft conforms to its U.S. type design (Type Certificate Number A46NM) and is in condition for safe operation. In that regard, the DGAC will certify that the aircraft complies with all applicable mandatory continuing airworthiness information (MCAI) it has issued.

The U.S. airworthiness certification basis for aircraft type certificated under FAR Section 21.29 exported from countries other than the country of manufacture (e.g. third party country) is FAR 21.183(d). For issuance of an airworthiness certificate in accordance with § 21.183(d), the FAA certificating inspector, or other authorized person, must find, among other things, that the product is in a condition for safe operation. In order to make that finding, the FAA certificating inspector or other authorized person should contact the Manager, FAA International Branch, Transport Airplane Directorate prior to issuance to determine whether showing compliance with certain MCAI is necessary to support a finding that the airplane is in a condition for safe operation.

**Production Basis:**

A330 aircraft, all series and models, are produced in France under production approval P09 issued by the DGAC to Airbus Industrie.

**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	650 °C
Starting	1250 °C

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

**Tires:**

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

**Service and Operating Information:**

- Service and repair instructions (bulletins, letters, etc...), the structural repair manual, aircraft flight manual, and overhaul and maintenance manuals which contain a statement that the document is DGAC approved are accepted by the FAA and are considered as FAA approved. These approvals pertain to the type design only.
- Service Bulletins which have been approved under the authority of DGAC Design Organization Approval No. C01 (or, since Nov. 1996, approved under the authority of JAA Design Organization Approval No. F.JA.02), constitute DGAC approval and, therefore, FAA approval. The changes specified in the Service Bulletin have been approved by the DGAC when they are major, or under the authority of DGAC Design Organization Approval No.C01/F.JA.02 when they are minor. These approvals pertain to the type design only.
- Airplane operation must be in accordance with the DGAC-Approved Airplane Flight Manual (AFM), US version, Airbus Industrie Document AI/EV-O 33000 issued November 17, 1993, applicable to the specific airplane model and serial number.
- Weight & Balance Manual - Refer to Airbus Industrie Documents 00G080A0006/C2S for A330-202 and 00G080A0006/C3S for A330-301. See Note 1 for information on Weight and Balance.

See Note 3 for reference to the Instructions for Continued Airworthiness required under § 21.50 for service life limits on components, required inspections and inspection intervals, and certification maintenance requirements.

**Notes:**

**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.

**Note 2:** Airplane operation must be in accordance with the applicable FAA approved Airplane Flight Manual. All placards required by either the FAA approved AFM, the applicable operating rules, or the certification basis must be installed in the airplane.

**Note 3:** Instructions For Continued Airworthiness:

- Component Life Limitations are provided in chapter 05, “Time Limits and Maintenance Checks”, of the A330 Aircraft Maintenance Manual (AMM), approved by the DGAC.
- Maintenance criteria to comply with Certification Maintenance Requirements (CMR's) for systems are listed in Certification Maintenance Requirements Document 955.2074/93, included in Airbus Industrie Document 00F050A0003/C01 and as Appendix 1 to the Maintenance Review Board Report.
- Maintenance criteria to comply with certification requirements for structures are listed in Airbus Industrie Document 95A.0089/97, included in Airbus Industrie Document 00F050A0003/C01 and as Appendix 1 to the Maintenance Review Board Report.
- Maintenance Review Board Report 00G050A0002/C01.

**Note 4:** If modification 42792, Autoland CAT III approval FMGEC L5 standard, is embodied the aircraft is qualified for CAT III precision approach. This does not constitute operational approval.

...END...