European Aviation Safety Agency

EASA

TYPE-CERTIFICATE DATA SHEET EASA.A.004

AIRBUS A330

AIRBUS
1 Rond-point Maurice Bellonte
31707 Blagnac
France

For models:	A330-201	A330-223	A330-301	A330-321	A330-341
	A330-202	A330-243	A330-302	A330-322	A330-342
	A330-203	A330-223F	A330-303	A330-323	A330-343
		A330-243F			

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SECTION 1: GENERAL (ALL MODELS)

1. Data Sheet No: A.004

2. Airworthiness Category: Large Aeroplanes

3. Performance Category: A

4. Certifying Authority: EASA

5. Type Certificate Holder: AIRBUS
1 Rond-point Maurice Bellonte
31707 Blagnac, France

6. ETOPS:

The Type Design, system reliability and performance of A330 model(s) were found capable for Extended Range Operations when configured, maintained and operated in accordance with the current revision of the ETOPS Configuration, Maintenance and Procedures (CMP) document, LR2/EASA: AMC 20-6/CMP.
This finding does not constitute an approval to conduct Extended Range Operations (operational approval must be obtained from the responsible Authority).

The following table provides details on the ETOPS approvals.

Variant	Engine Type	120 Min Approval Date	180 Min Approval Date	Beyond 180 Min* Approval Date	Note
A330-301	GE CF6-80E1A2	29 April 1994	06 February 1995	13 October 2009	
A330-302	GE CF6-80E1A4	N/A	17 June 2004	13 October 2009	
A330-303	GE CF6-80E1A3	N/A	17 June 2004	13 October 2009	
A330-321	PW 4164	06 February 1995	04 August 1995	13 October 2009	
A330-321	PW 4164-1D	N/A	N/A	04 February 2011	
A330-322	PW 4168	06 February 1995	04 August 1995	13 October 2009	
A330-322	PW 4168-1D	N/A	N/A	04 February 2011	
A330-323	PW 4168A	N/A	22 April 1999	13 October 2009	
A330-323	PW 4168A-1D	N/A	04 June 2009	13 October 2009	
A330-323	PW 4170	N/A	04 June 2009	13 October 2009	
A330-341	RR Trent 768-60	15 December 1995	17 June 1996	13 October 2009	
A330-342	RR Trent 772-60	15 December 1995	17 June 1996	13 October 2009	
A330-343	RR Trent 772B-60	N/A	21 October 1999	13 October 2009	
A330-343	RR Trent 772C-60	N/A	20 April 2006	13 October 2009	
A330-201	GE CF6-80E1A2	N/A	19 November	13 October 2009	
A330-202	GE CF6-80E1A4	N/A	27 April 1998	13 October 2009	
A330-203	GE CF6-80E1A3	N/A	30 November	13 October 2009	
A330-223	PW 4168A	N/A	13 July 1998	13 October 2009	
A330-223	PW 4168A-1D	N/A	04 June 2009	13 October 2009	
A330-223	PW 4170	N/A	04 June 2009	13 October 2009	
A330-223F	PW 4170	N/A	09 July 2010	N/A	
A330-243	RR Trent 772B-60	N/A	03 February 1999	13 October 2009	
A330-243	RR Trent 772C-60	N/A	19 April 2006	13 October 2009	
A330-243F	RR Trent 772B-60	N/A	09 July 2010	N/A	

* Note: Refer to the Airplane Flight Manual and ETOPS CMP document for maximum diversion time/distance.

SECTION 2: A330-300 SERIES

I. General

1. Aeroplane: Airbus A330-300

II. Certification Basis

1. Reference Application Date for EASA Certification:
   15 June 1988

2. EASA Certification Date (JAA recommendation):
   (DGAC-F TC 184 remains a valid reference for models certified before 28 September 2003).

   A330-301: 21 October 1993
   A330-321: 02 June 1994
   A330-322: 02 June 1994
   A330-341: 22 December 1994
   A330-342: 22 December 1994
   A330-323: 22 April 1999
   A330-343: 13 September 1999
   A330-302: 17 May 2004
   A330-303: 17 May 2004

3. EASA Certification Basis:

   JAR 25 Change 13 effective on October 5, 1989 with the following exceptions:
   Deviation on limited areas for compliance against paragraphs 25.561 and 25.562 such as:
   - Compliance at change 12 for wing tank outside the fuselage contour
   - For showing compliance with JAR 25.785 (a)(b)(c), the front row seats located behind a bulkhead are not tested according to JAR 25.562(c)(5)(6). Instead, a minimum 35 inches distance between the seats and the bulkhead is considered an acceptable alternative

   JAR AWO Change 1
   NPA JAR AWO-3 (Take-off in low visibility)
   OP 91/1 for discrete gust

4. Special Conditions:

   SC G-5 Resistance to fire terminology (NPA 25D-181)
   SC G-7 Function and reliability testing
   SC A-1 Discrete gust requirements (NPA 25C-205)
   SC A-2 Interaction of systems and structure (NPA 25C-199)
   SC A-3 Design manoeuver requirements
   SC A-4 Design dive speed
   SC A-5 Limit pilot forces and torque
   SC A-7 Stalling speeds for structural design
   SC A-11 Aeroelastic stability requirements (NPA 25B, C, D-236)
   SC F-1 Stalling and scheduled operating speeds
   SC F-2 Motion and effects of cockpit controls
   SC F-3 Static longitudinal stability
   SC F-4 Static directional and lateral stability
   SC F-5 Flight envelope protections
   SC F-6 Normal load factor limiting system
   SC S-3 Landing gear warning (NPA 25D-162)

SC S-6 Lightning protection indirect effects
SC S-10 Effects of external radiations upon aircraft systems
SC S-13 Autothrust system
SC S-16 Control signal integrity
SC S-18 Electronic flight controls
SC S-20 Emergency electrical power (NPA 25D, F-179)
SC S-23 Electrical wiring and miscellaneous electrical requirements (NPA 25D, F-191)
SC S-24 Doors (NPA 25D, F-251)
SC S-38 Towbarless towing
SC P-1 FADEC
SC P-2 Trim tank
SC P-27 Flammability Reduction System (applicable from June 2010)
SC E-2 Crew rest
SC E-5.1 Lower deck Lavatory (applicable from August 2000)
SC E-8.1 Lower deck stowage area (applicable from August 2000)
SC E-11 Bulk crew rest compartment (applicable from January 2002)
SC E-19 F/C sliding screens (applicable from September 2003)
SC H-01 Enhanced Airworthiness Programme for Aeroplane Systems - ICA on EWIS (applicable from May 2010)

5. Equivalent Safety Findings:

SC F-8 and SC S-21 have been found to provide an equivalent safety level to JAR 25 accelerate-stop and brakes qualification requirements (NPA 25 B, D, G 244)
CRI S-45 provides an equivalent level of safety to JAR 25.1549(a)
CRI S-48 provides an equivalent level of safety to JAR AWO 313
CRI P-9 provides an equivalent level of safety to JAR 25.1203(d)
CRI E-15 provides an equivalent level of safety to JAR 25.772 (applicable from July 2002)
CRI E-18 provides an equivalent level of safety to JAR 25.819(f) (applicable from November 2003)

6. Environmental Requirements:

Environmental requirements for noise and vented fuel:
ICAO Annex 16 Volume I – Part II, Chapter 4 for Noise. Compliance with Chapter 4 had originally been demonstrated through MOD 55005. Compliance with Chapter 4 is now achieved without MOD 55005.
(See EASA TCDSN A.004 for details)
ICAO Annex 16 Volume II (Vented Fuel) - Part II, Chapter 2

7. ETOPS Technical Conditions:

For the Extended Twin-Engine Airplane Operations, the applicable technical conditions are contained in AMC 20-6 (AMJ 120-42 / IL 20) and JAA CRI G-6, G-106, EASA CRI G-8.

8. A330-302; A330-303; A330-323; A330-342 WV22&52; A330-343 models only:

8.1 Special Condition / Equivalent Safety Finding:
The following requirements are in addition of Special Conditions / ESF identified in paragraphs 4/5 above:
- SC F-8.1 is applicable instead of SC F-8
- ESF S-148 (JAR NPA AWO-8) replaces S-48

8.2 ETOPS Technical Conditions:
For the Extended Twin-Engine Airplane Operations, the applicable technical conditions are contained in AMC 20-6 (AMJ 120-42 / IL 20) and JAA CRI G-106, EASA CRI G-8.

III. Technical Characteristics and Operational Limitations

Two turbo-fan, medium to long range, twin-aisle, large category airplane.

1. A330-300 powered by General Electric engines

1.1 Type Design Definition:

A330-301: 00G000A0301/C00
A330-302: 00G000A0302/C00
A330-303: 00G000A0303/C00

1.2 Engines

A330-301: Two (2) General Electric CF6-80E1A2 turbofan engines
A330-302: Two (2) General Electric CF6-80E1A4 or CF6-80E1A4/B turbofan engines
A330-303: Two (2) General Electric CF6-80E1A3 turbofan engines

1.2.1 Engine Limits:

Engine Limits Data Sheet E41NE (FAA) IM.E.007 (EASA)	A330-301 CF6-80E1A2	A330-302		A330-303 CF6-80E1A3
		CF6-80E1A4	CF6-80E1A4/B	
Static thrust at sea level: - take-off (5mn) * - maximum continuous	 64,530 lbs 60,400 lbs	 66,870 lbs 60,400 lbs	 68,530 lbs 60,400 lbs	 68,530 lbs 60,400 lbs
Approved oils: conform to GE specification D50TF1 Class B or GE Service Bulletin 79-1				

***** May be extended to 10 mn in the event of a power unit having failed or been shut down: see notes in Engine TCDS.

Other engine limitations: See the relevant Engine Type Certificate Data Sheet.

Note: Thrust “Bump” function capability for A330-302 (option):
When CF6-80E1A4/B engines are installed, the thrust “Bump” function can be activated for take-off (Mod 52776).

1.3 Fuel

NOMENCLATURE	SPECIFICATION
KEROSENE: refer to GE Specification D50TF2	JET A, JETA-1, JP5, JP8 , N°3 JET Fuel, TS-1, RT

Additives: See GE "Specific Operating Instructions", installation manual.
The above mentioned fuels and additives are also suitable for the APU.

1.4 Limit Speeds:
Refer to approved Airplane Flight Manual.

1.5 Centre of Gravity Range:
Refer to approved Airplane Flight Manual.

1.6 Maximum Certified Weights:

Valid for A330-301 only

Variant (MOD)	000 (BASIC)	001 (42200)	002 (42600)	003 (44270)	004 (44849)	010 (44308)	051 (51806)
MTOW (T)	212	184	212	215	215(*) 209	217	212
MLW (T)	174	174	177	177	182 177(*)	179	187
MZFW (T)	164	164	167	167	172 167(*)	169	175

(*) Linear variation between those weights

Valid for A330-302 and A330-303 only

Variant (MOD)	050 (51805)	052 (51807)	054 (201648)
MTOW (T)	230	233	235
MLW (T)	185	187	187
MZFW (T)	173	175	173

Valid for A330-302 only

Variant (MOD)	053 (52924)
MTOW (T)	205
MLW (T)	185
MZFW (T)	173

1.7 Note:
Aircraft model conversion:
A330-301 can be converted into A330-303 by application of Airbus Service Bulletin A330-00-3036 covering modification 53107.

2. A330-300 powered by Pratt & Whitney engines

2.1 Type Design Definition:

A330-321: 00G000A0321/C00
A330-322: 00G000A0322/C00
A330-323: 00G000A0323/C00

2.2 Engines:

A330-321: Two (2) Pratt & Whitney 4164 turbofan engines
A330-321: Two (2) Pratt & Whitney 4164-1D turbofan engines
A330-322: Two (2) Pratt & Whitney 4168 turbofan engines
A330-322: Two (2) Pratt & Whitney 4168-1D turbofan engines
A330-323: Two (2) Pratt & Whitney 4168A turbofan engines
A330-323: Two (2) Pratt & Whitney 4168A-1D turbofan engines
A330-323: Two (2) Pratt & Whitney 4170 turbofan engines

2.2.1 Engine Limits:

Engine Limits Data Sheet E36NE (FAA) M-IM37 (DGAC)	A330-321 PW4164/ PW4164-1D	A330-322 PW4168/ PW4168-1D	A330-323	
			PW4168A/ PW4168A-1D	PW4170
Static thrust at sea level: - take-off (5mn) * - maximum continuous	 64,500 lbs 55,800 lbs	 68,600 lbs 59,357 lbs	 68,600 lbs 59,357 lbs	 70,000 lbs 59,357 lbs
Approved oils: see Pratt & Whitney engine Service Bulletin N°238, latest revision				

***** 10 minutes at take-off thrust allowed only in case of engine failure (at take-off or during go-around in accordance with DGAC "Fiche de caractéristiques moteur".

Other engine limitations: See the relevant Engine Type Certificate Data Sheet.

Note: Thrust reverser and Exhaust System
Installation of Thrust Reverser and Exhaust System (Reverser Assembly P/N 70M001, Nozzle Assembly P/N 76A008 and Exhaust Plug Assembly P/N 75A001) on PW4164, PW4164-1D, PW4168, PW4168-1D, PW4168A, PW4168A-1D and PW4170 engines according to FAA STC SE825NE is approved.

2.3 Fuel:

NOMENCLATURE	SPECIFICATION
KEROSENE: refer to PWA 522 Specification (PW SB N° 2016)	JET A, JET A-1,JP5,JP8 ,N°3 JET Fuel, TS-1, RT

Note: The above mentioned fuels and additives are also suitable for the APU.

2.4 Limit Speeds:
Refer to approved Airplane Flight Manual.

2.5 Centre of Gravity Range:
Refer to approved Airplane Flight Manual.

2.6 Maximum Certified Weights:

Valid for A330-321 and A330-322 only

Variant (MOD)	000 Basic	002 (42600)	003 (44270)	004 (44849)	010 (43308)	011 (44803)	012 (45086)	013 (46688)
MTOW (T)	212	212	215	215 (*) 209	217	212	218	215
MLW (T)	174	177	177	(*) 182 177	179	177	182	177
MZFW (T)	164	167	167	(*) 172 167	169	167	172	167

(*) Linear variation between those weights

Valid for A330-323 only

Variant (MOD)	020 Basic	022 (47785)	025 (49651)	050 (51805)	052 (51807)	054 (201648)
MTOW (T)	230	233	217	230	233	235
MLW (T)	185	187	179	185	187	187
MZFW (T)	173	175	169	173	175	173

2.7 Note
Aircraft model conversion:
A330-321 can be converted into A330-322 by application of Airbus Service Bulletin A330-00-3013 covering modification 46661.

3. A330-300 powered by Rolls Royce engines

3.1 Type Design Definition:

A330-341: 00G000A0341/C00
A330-342: 00G000A0342/C00
A330-343: 00G000A0343/C00

3.2 Engines:

A330-341: Two (2) Rolls Royce Trent 768-60 turbofan engines
A330-342: Two (2) Rolls Royce Trent 772-60 turbofan engines
A330-343: Two (2) Rolls Royce Trent 772B-60 turbofan engines
A330-343: Two (2) Rolls Royce Trent 772C-60 turbofan engines

3.2.1 Engine Limits:

Engine Limits Data Sheet 1050 (CAA) E.042 (EASA)	A330-341 Trent 768-60	A330-342 Trent 772-60	A330-343 Trent 772B-60	A330-343 Trent 772C-60
Static thrust at sea level: - take-off (5mn) * - maximum continuous	 67,500 lbs 60,410 lbs	 71,100 lbs 63,560 lbs	 71,100 lbs 63,560 lbs	 71,100 lbs 63,560 lbs
Approved oils: See Rolls Royce Service Bulletin RB.211-12-F139, latest revision				

* The take-off rating and the associated operating limitations may be used for up to 10 minutes in the event of an engine failure (see notes in Engine TCDS).

Other engine limitations: See the relevant Engine Type Certificate Data Sheet.

3.3 Fuel:

NOMENCLATURE	SPECIFICATION
KEROSENE: refer to RR Operating Instruction defined in RR Manuel F-Trent A330	JET A, JET A-1, JET B, JP 4, JP5, JP8, N°3 JET fuel, TS-1, RT

Note: The above mentioned fuels and additives are also suitable for the APU.

3.4 Limit Speeds:
Refer to approved Airplane Flight Manual.

3.5 Centre of Gravity Range:
Refer to approved Airplane Flight Manual.

3.6 Maximum Certified Weights

Valid for A330-341 and A330-342 only

Variant (MOD)	000	002 (42600)	003 (44270)	004 (44849)	010 (43308)	011 (44803)	012 (45086)	013 (46688)	014 (48377)
MTOW (T)	212	212	215	215 (*) 209	217	212	218	215	205
MLW (T)	174	177	177	(*)182 177	179	177	182	177	182
MZFW (T)	164	167	167	(*)172 167	169	167	172	167	172

(*) Linear variation between those weights

Valid for A330-342 only

Variant (MOD)	022 (47785)	052 (51807)	054 (201648)
MTOW (T)	233	233	235
MLW (T)	187	187	187
MZFW (T)	175	175	173

Valid for A330-343 only

Variant (MOD)	020 Basic	022 (47785)	024 (48350)	050 (51805)	052 (51807)	054 (201648)
MTOW (T)	230	233	205	230	233	235
MLW (T)	185	187	185	185	187	187
MZFW (T)	173	175	173	173	175	173

3.7 Note

It is feasible for A330-343 to be fitted with RR Trent 772 engines by application of Service Bulletin 72-3008 (Mod 49684) and to be reverted to RR Trent 772B engines installation by Service Bulletin 72-3009 (Mod 49685).

Aircraft model conversion:
A330-343 can be converted into A330-342 by application of Airbus Service Bulletin A330-00-3039 covering modification 50943.

4. Data pertinent to all A330-300 series

4.1 Fuel quantity (0.8 kg/ liter):

TANK	2-TANK AIRPLANE		
	Usable fuel liters (kg)		Unusable fuel liters (kg)
	A330-301 A330-321/-322 A330-341/-342 A330-342 except WV22 & 52	A330-302/-303 A330-323 A330-343 A330-342 WV22 A330-342 WV52	All models
WING	91764 (73 411)	91300 (73 040)	348 (279)
TRIM TANK	6 121 (4 897)	6 230 (4 984)	6 (5)
TOTAL	97 885 (78 308)	97 530 (78 024)	354 (284)

4.2 Minimum Flight Crew:
Two (2): Pilot and Co-pilot

4.3 Maximum Seating Capacity:
The maximum number of passengers approved for emergency evacuation is:
- 375 basic (3 Type A and 1 Type 1 doors installed)
- 440 option (4 Type A doors installed – Mod 40161)

See interior layout drawing for the maximum passenger capacities approved for each aeroplane when delivered.

4.4 Cargo compartment loading:

Cargo compartment	Maximum load (kg)
Forward	22861
Aft	18507
Rear (bulk)	3468

For the positions and the loading conditions authorized in each position (references of containers, pallets and associated weights), see Weight and Balance Manual ref. 00G080A0006/C3S.

4.5 Environmental Flight Envelope:
Refer to approved Airplane Flight Manual.

4.6 Other Limitations:
Refer to approved Airplane Flight Manual.

4.7 Auxiliary Power Unit (APU):
One GARRETT GTCP 331-350C (Specification 31-7677A)
Oils: refer to applicable approved Manual

4.8 Equipment:

The equipment required by the applicable requirements shall be installed.
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

4.9 All Weather Capabilities:

A330-301:

- If modification 42390 is embodied the aircraft is qualified to Cat 2 precision approach
- If modification 42792 is embodied the aircraft is qualified to Cat 3 precision approach and autoland

A330-321 / A330-322:

- If modification 43397 is embodied the aircraft is qualified to Cat 3 precision approach and autoland

A330-323:

- Aircraft Type Design is approved for Cat 3 precision approach and autoland

A330-341 / A330-342:

- Aircraft Type Design is approved for Cat 3 precision approach and autoland

A330-343:

- Aircraft Type Design is approved for Cat 3 precision approach and autoland

A330-302 / A330-303:

- Aircraft Type Design is approved for Cat 3 precision approach and autoland

4.10 Wheels and Tyres:

Refer to Airbus Service Bulletin A330-32-3004.

4.11 Hydraulics:

Fluid specifications: TYPE IV (NSA 307-110).

4.12 Maintenance Instructions and Airworthiness Limitations:

- Limitations applicable to Safe Life Airworthiness Limitation Items are provided in the A330 Airworthiness Limitations Section (ALS) sub-parts 1-2 and 1-3 approved by EASA;
- Limitations applicable to Damage Tolerant Airworthiness Limitation Items are provided in the A330 Airworthiness Limitations Section (ALS) Part 2 approved by EASA;
- Certification Maintenance Requirements are provided in the A330 Airworthiness Limitations Section (ALS) Part 3 approved by EASA;

- Limitations applicable to Ageing System Maintenance are provided in the A330 Airworthiness Limitation Section (ALS) Part 4 approved by EASA;
- Fuel Airworthiness Limitations are provided in the A330 Airworthiness Limitations Section (ALS) Part 5 approved by EASA;
- Maintenance Review Board Report.

SECTION 3: A330-200 SERIES

I. General

1. Aeroplane: Airbus A330-200

II. Certification Basis

1. Reference Application Date for EASA Certification:
   23 January 1996

2. EASA Certification Date (JAA recommendation):
   (DGAC-F TC 184 remains a valid reference for models certified before 28. September 2003)

   A330-201: 31 October 2002
   A330-202: 31 March 1998
   A330-203: 20 November 2001
   A330-223: 13 July 1998
   A330-243: 11 January 1999

3. EASA Certification Basis:

   JAR 25 Change 13 effective on October 5, 1989 with the following exceptions:
   - Paragraph 25.561 is applied at change 12 for wing tanks outside the fuselage contour
   - For showing compliance with JAR 25.785(a)(b)(c), the front row seats located behind a bulkhead are not tested according to JAR 25.562(c)(5)(6). Instead, a minimum 35 inches distance between the seats and the bulkhead is considered as an acceptable alternative

   The following JAR 25 paragraphs are applicable at change 14:
   JAR 25.21 Proof of compliance
   JAR 25.29 Empty weight and corresponding center of gravity
   JAR 25.101 Performance - General
   JAR 25.111 Take-off path
   JAR 25.125 Landing
   JAR 25.145 Longitudinal control
   JAR 25.147 Directional and lateral control
   JAR 25.149 Minimum control speed
   JAR 25.175 demonstration of static longitudinal stability
   JAR 25.177 Static directional and lateral stability
   JAR 25.181 Dynamic stability
   JAR 25.205 Stalls : critical engine inoperative
   JAR 25.251 Vibration and buffeting
   JAR 25.253 High speed Characteristics
   JAR 25.305 Strength and deformation
   JAR 25.307 Proof of structure
   JAR 25.321 Flight loads - general
   JAR 25.331 Symmetric manoeuvring conditions
   JAR 25.333 flight envelope
   JAR 25.335 design airspeeds
   JAR 25.341 Gust and turbulence loads
   JAR 25.343 Design fuel and oil loads
   JAR 25.345 High lift devices

JAR 25.349	Rolling conditions
JAR 25.351	Yawing manoeuvring conditions
JAR 25.361	Engine and APU torque
JAR 25.371	Gyroscopic loads
JAR 25.373	Speed control devices
JAR 25.391	Control surfaces loads – general
JAR 25.395	Control system
JAR 25.397	Control system loads
JAR 25.415	Ground gust condition
JAR 25.427	Unsymetrical loads
JAR 25.459	Special devices
JAR 25.571	Damage tolerance
JAR 25.603	Materials: applicable to vertical stabilizer only
JAR 25.613	Material strength properties and design values applicable to vertical stabilizer only
JAR 25.615	Design values: applicable to vertical stabilizer only
JAR 25.679	Control system gust locks
JAR 25.723	Shock absorption tests
JAR 25.729	Landing Gear retracting mechanism
JAR 25.731	Wheels
JAR 25.733	Tyres
JAR 25.735	Brakes
JAR 25.772	Pilot compartment door
JAR 25.777	Cockpit controls
JAR 25.779	Motion and effect of cockpit control
JAR 25.783	Doors
JAR 25.851	Fire extinguishers
JAR 25.863	Flammable fluid fire protection
JAR 25.867	Fire protection: other components
JAR 25X899	Electrical bonding and protection against lightning and static electricity: applicable to vertical stabilizer only
JAR 25.963(g)	Fuel tanks access covers (fuel center tank only)
JAR 25.979	Pressure fuelling system
JAR 25.1303	Flight and navigation instruments
JAR 25.1381	Instrument lights
JAR 25.1415	Ditching equipment
JAR 25.1419	Flight in icing condition
JAR 25.1533	Additional operating limitations
JAR 25.1543	Instrument markings, general
JAR 25.1551	Oil quantity indicator

JAR AWO change I plus:
- orange paper AWO 91/1
- NPA JAR AWO 3
- NPA JAR AWO 8 (CRI S-148)

4. Special Conditions:

SC G-105	Resistance to fire
SC G-7	Function and reliability testing
SC A-2	Interaction of systems and structure
SC A-3	Design manoeuver requirements
SC A-4	Design dive speed VD
SC A-5	Limit pilot forces and torque
SC A-7	Stalling speeds for structural design

SC A-11	Aeroelastic stability requirements
SC F-101	Stalling and scheduled operating speeds
SC F-2	Motion and effects of cockpit controls
SC F-3	Static longitudinal stability
SC F-4	Static directional and lateral stability
SC F-5	Flight envelope protections
SC F-6	Normal load factor limiting system
SC S-6	Lightning protection indirect effects
SC S-10	Effects of external radiations upon aircraft systems
SC S-10.1	Effects of external radiations upon aircraft systems
SC S-10.2	Effects of external radiations upon aircraft systems
SC S-13	Autothrust system
SC S-16	Control signal integrity
SC S-18	Electronic flight control
SC S-20	Emergency electrical power
SC S-23	Electrical wiring and miscellaneous electrical requirements
SC S-38	Towbarless towing
SC P-1	FADEC
SC P-2	Trim Tank
SC P-27	Flammability Reduction System (applicable from June 2010)
SC E-2	Underfloor Crew rest compartment
SC E-5.1	Lower Deck Lavatory (applicable from August 2000)
SC E-8.1	Lower Deck Stowage Area (applicable from August 2000)
SC E-11	Bulk crew rest compartment (applicable from January 2002)
SC E-19	F/C sliding screens (applicable from September 2003)
SC H-01	Enhanced Airworthiness Programme for Aeroplane Systems - ICA on EWIS (applicable from May 2010)

5. Equivalent Safety Findings:

SC F-8.1 and SC S-21 have been found to provide an equivalent safety level to JAR 25 accelerate-stop and brakes qualification requirements (NPA 25 B, D, G 244)
CRI S-45 provides an equivalent level of safety to JAR 25.1549(a)
CRI P-9 provides an equivalent level of safety to JAR 25.1203(d)
CRI E-15 provides an equivalent level of safety to JAR 25.772 (applicable from July 2002)
CRI E-18 provides an equivalent level of safety to JAR 25.819(f) (applicable from November 2003)

6. Environmental Requirements:

Environmental requirements for noise and vented fuel:
ICAO Annex 16 Volume I – Part II, Chapter 4 for Noise. Compliance with Chapter 4 had originally been demonstrated through MOD 55005. Compliance with Chapter 4 is now achieved without MOD 55005.
(See EASA TCDSN A.004 for details)
ICAO Annex 16 Volume II (Vented Fuel) - Part II, Chapter 2

7. ETOPS Technical Conditions:

For the Extended Twin-Engine Airplane Operations, the applicable technical conditions are contained in AMC 20-6 (AMJ 120-42 / IL 20) and JAA CRI G-106, EASA CRI G-8.

III. Technical Characteristics and Operational Limitations

Two turbo-fan, medium to long range, twin-aisle, large category airplane.

1. A330-200 powered by General Electric engines

1.1 Type Design Definition:

A330-201: 00G000A0201/C00
A330-202: 00G000A0202/C00
A330-203: 00G000A0203/C00

1.2 Engines:

A330-201: Two (2) General Electric CF6-80E1A2 turbofan engines
A330-202: Two (2) General Electric CF6-80E1A4 or CF6-80E1A4/B turbofan engines
A330-203: Two (2) General Electric CF6-80E1A3 turbofan engines

1.2.1 Engine Limits:

Engine Limits Data Sheet E41NE (FAA) IM.E.007 (EASA)	A330-201 CF6-80E1A2	A330-202 CF6-80E1A4	A330-202 CF6-80E1A4/B	A330-203 CF6-80E1A3
Static thrust at sea level: - take-off (5mn) * - maximum continuous	 64,530 lbs 60,400 lbs	 66,870 lbs 60,400 lbs	 68,530 lbs 60,400 lbs	 68,530lbs 60,400 lbs
Approved oils: conform to GE specification D50TF1 Class B or GE Service Bulletin 79-1				

***** may be extended to 10 mn in the event of a power unit having failed or been shut down: see notes in Engine TCDS.

Other engine limitations: See the relevant Engine Type Certificate Data Sheet.

Note: Thrust “Bump” function capability for A330-202 (option):
When CF6-80E1A4/B engines are installed, the thrust “Bump” function can be activated for take-off (Mod 52776).

1.3 Fuel:

NOMENCLATURE	SPECIFICATION
KEROSENE: refer to GE Specification D50TF2	JET A, JETA-1,JP5,JP8, N°3 JET fuel, TS-1, RT

Additives: See GE "Specific Operating Instructions", installation manual.
Note: The above mentioned fuels and additives are also suitable for the APU.

1.4 Limit Speeds:
Refer to approved Airplane Flight Manual.

1.5 Centre of Gravity Range:
Refer to approved Airplane Flight Manual.

1.6 Maximum Certified Weights:

Variant (MOD)	020 (BASIC)	021 (46892)	022 (47784)	023 (47888)	024 (49819)	026 (51712)
Validity	A330-201 A330-202 A330-203	- A330-202 -	- A330-202 A330-203	A330-201 A330-202 A330-203	A330-201 - -	- - A330-203
MTOW (T)	230	230	233	233	202	192
MLW (T)	180	182	182	180	180	180
MZFW (T)	168	170	170	168	168	168

Variant (MOD)	050 (51802)	051 (51803)	052 (51804)	053 (53109)	054 (54106)	055 (54107)	056 (55813)
Validity	A330-201 A330-202 A330-203	- - A330-203	A330-201 A330-202 A330-203	A330-202	A330-201 A330-202 A330-203	A330-201 A330-202 A330-203	A330-201 A330-202 A330-203
MTOW (T)	230	192	233	210	230	192	233
MLW (T)	180	180	182	180	182	182	180
MZFW (T)	168	168	170	168	170	170	168

Valid for A330-201/-202/-203

Variant (MOD)	057 (58859 for Production) (201436 for Retrofit)	058 (58860 for Production) (201437 for Retrofit)	059 (57439)	060 (57440)	061 (200561)
MTOW (T)	236	238	202	220	230
MLW (T)	182	182	182	182	182
MZFW (T)	170	168	170	170	168

1.7 Note:
A330-202 can be fitted with CF6-80E1A2 engines by application of Service Bulletin 72-003 (Mod 46549), and can be reverted to CF6-80E1A4 engines installation by Service Bulletin 72-3005 (Mod 47332).

Aircraft model conversion:

- A330-203 can be converted into A330-202 by application of Airbus Service Bulletin A330-00-3034 covering modification 53335
- A330-201 can be converted into A330-202 by application of Airbus Service Bulletin A330-00-3051 covering modification 55917

2. A330-200 powered by Pratt & Whitney engines

2.1 Type Design Definition:

A330-223: 00G000A0223/C00

2.2 Engines:

A330-223: Two (2) Pratt & Whitney 4168A turbofan engines
A330-223: Two (2) Pratt & Whitney 4168A-1D turbofan engines
A330-223: Two (2) Pratt & Whitney 4170 turbofan engines

2.2.1 Engine Limits:

Engine Limits Data Sheet E36NE (FAA) M-IM37 (DGAC)	A330-223		
	PW4168A	PW4168A-1D	PW4170
Static thrust at sea level: - take-off (5mn) * - maximum continuous	 68,600 lbs 59,357 lbs	 68,600 lbs 59,357 lbs	 70,000 lbs 59,357 lbs
Approved oils: see Pratt & Whitney engine Service Bulletin N°238, latest revision			

***** 10 minutes at take-off thrust allowed only in case of engine failure (at take-off or during go-around in accordance with DGAC "Fiche de caractéristiques moteur".

Other engine limitations: See the relevant Engine Type Certificate Data Sheet.

Note: Thrust reverser and Exhaust System
Installation of Thrust Reverser and Exhaust System (Reverser Assembly P/N 70M001, Nozzle Assembly P/N 76A008 and Exhaust Plug Assembly P/N 75A001) on PW4164, 4168, 4168A, 4168A-1D and 4170 engines according to FAA STC SE825NE is approved.

2.3 Fuel:

NOMENCLATURE	SPECIFICATION
Kerosene: refer to PWA 522 specification (PW SB N° 2016)	JET A, JET A-1, JP5,JP8,N°3 JET fuel, TS -1, RT

Note: The above mentioned fuels and additives are also suitable for the APU.

2.4 Limit Speeds:
Refer to approved Airplane Flight Manual.

2.5 Centre of Gravity Range:
Refer to approved Airplane Flight Manual.

2.6 Maximum Certified Weights:

Variant (MOD)	020 Basic	021 (46892)	022 (47784)	023 (47888)	050 (51802)	052 (51804)	054 (54106)
MTOW (T)	230	230	233	233	230	233	230
MLW (T)	180	182	182	180	180	182	182
MZFW (T)	168	170	170	168	168	170	170

Variant (MOD)	055 (54107)	056 (55813)	057 (58859 for Production) (201436 for Retrofit)	058 (58860 for Production) (201437 for Retrofit)
MTOW (T)	192	233	236	238
MLW (T)	182	180	182	182
MZFW (T)	170	168	170	168

Variant (MOD)	059 (57439)	060 (57440)	061 (200561)
MTOW (T)	202	220	230
MLW (T)	182	182	182
MZFW (T)	170	170	168

3. A330-200 powered by Rolls Royce engines

3.1 Type Design Definition:

A330-243: 00G000A0243/C00

3.2 Engines:

A330-243: Two (2) Rolls Royce Trent 772B-60 turbofan engines or
two (2) Rolls Royce Trent 772C-60 turbofan engines

3.2.1 Engine Limits:

Engine Limits Data Sheet 1050 (CAA) E.042 (EASA)	A330-243 Trent 772B-60	A330-243 Trent 772C-60
Static thrust at sea level:		
- take-off (5mn) *	71,100 lbs	71,100 lbs
- maximum continuous	63,560 lbs	63,560 lbs
Approved oils: see Rolls Royce Service Bulletin RB.211-12-F139, latest revision		

***** The take-off rating and the associated operating limitations may be used for up to 10 minutes in the event of an engine failure (see notes in Engine TCDS).

Other engine limitations: See the relevant Engine Type Certificate Data Sheet.

3.3 Fuel:

NOMENCLATURE	SPECIFICATION
KEROSENE: refer to RR Operating Instruction defined in RR Manuel F-Trent A330	JET A, JET A-1,JET B,JP 4,JP5,JP8 ,N°3 JET fuel,TS-1,RT

Note: The above mentioned fuels and additives are also suitable for the APU.

3.4 Limit Speeds:
Refer to approved Airplane Flight Manual.

3.5 Centre of Gravity Range:
Refer to approved Airplane Flight Manual.

3.6 Maximum Certified Weights:

Variant (MOD)	020 (BASIC)	021 (46892)	022 (47784)	023 (47888)	024 (49819)
MTOW (T)	230	230	233	233	202
MLW (T)	180	182	182	180	180
MZFW (T)	168	170	170	168	168

Variant (MOD)	025 (50864)	026 (51712)	027 (54519)	050 (51802)	052 (51804)	054 (54106)
MTOW (T)	220	192	220	230	233	230
MLW (T)	182	180	180	180	182	182
MZFW (T)	170	168	168	168	170	170

Variant (MOD)	055 (54107)	056 (55813)	057 (58859 for Production) (201436 for Retrofit)	058 (58860 for Production) 201437 for Retrofit)
MTOW (T)	192	233	236	238
MLW (T)	182	180	182	182
MZFW (T)	170	168	170	168

Variant (MOD)	059 (57439)	60 (57440)	061 (200561)
MTOW (T)	202	220	230
MLW (T)	182	182	182
MZFW (T)	170	170	168

4. Data pertinent to all A330-200 series

4.1 Fuel quantity (0.8 kg/ liter):

TANK	3-TANK AIRPLANE	
	Usable fuel liters (kg)	Unusable fuel liters (kg)
WING	91300 (73040)	348 (279)
CENTER	41 560 (33 248)	83 (67)
TRIM TANK	6 230 (4 984)	6 (5)
TOTAL	139 090 (111 272)	437 (350)

4.2 Minimum Flight Crew:
Two (2): Pilot and Co-pilot

4.3 Maximum Seating Capacity:
The maximum number of passengers approved for emergency evacuation is:
- 375 basic (3 Type A and 1 Type 1 doors installed);
- 406 option (4 Type A doors installed – Mod 40161).

See interior layout drawing for the maximum passenger capacities approved for each aeroplane when delivered.

4.4 Cargo compartment loading:

Cargo compartment	Maximum load (kg)
Forward	18869
Aft	15241
Rear (bulk)	3468

For the positions and the loading conditions authorized in each position (references of containers, pallets and associated weights), see Weight and Balance Manual ref. 00G080A0006/C2S.

4.5 Environmental Flight Envelope:
Refer to approved Airplane Flight Manual.

4.6 Other Limitations:
Refer to approved Airplane Flight Manual.

4.7 Auxiliary Power Unit (APU):
One GARRETT GTCP 331-350C (Specification 31-7677A)
Oils: refer to applicable approved Manuals

4.8 Equipment

The equipment required by the applicable requirements shall be installed.
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

4.9 All Weather Capabilities

A330-201 / A330-202 / A330-203:

- Aircraft Type Design is approved for Cat 3 precision approach and autoland

A330-223:

- Aircraft Type Design is approved for Cat 3 precision approach and autoland

A330-243:

- Aircraft Type Design is approved for Cat 3 precision approach and autoland

4.10 Wheels and Tyres

Refer to Airbus Service Bulletin A330-32-3004.

4.11 Hydraulics

Fluid specifications: TYPE IV (NSA 307-110).

4.12 Maintenance Instructions and Airworthiness Limitations

- Limitations applicable to Safe Life Airworthiness Limitation Items are provided in the A330 Airworthiness Limitations Section (ALS) sub-parts 1-2 and 1-3 approved by EASA;
- Limitations applicable to Damage Tolerant Airworthiness Limitation Items are provided in the A330 Airworthiness Limitations Section (ALS) Part 2 approved by EASA;
- Certification Maintenance Requirements are provided in the A330 Airworthiness Limitations Section (ALS) Part 3 approved by EASA;
- Limitations applicable to Ageing System Maintenance are provided in the A330 Airworthiness Limitation Section (ALS) Part 4 approved by EASA;
- Fuel Airworthiness Limitations are provided in the A330 Airworthiness Limitations Section (ALS) Part 5 approved by EASA;
- Maintenance Review Board Report.

4.13 Fuel tank flammability Reduction System (FRS)

If fitted, the centre fuel tank of aircraft which have made their first flight after 1st of January 2012 must be equipped in production with a fuel tank Flammability Reduction System (Modification 58723). This system shall remain installed and operative and can only be dispatched inoperative in accordance with the provisions of the MMEL revision associated with Modification 58723.

SECTION 4: A330-200 FREIGHTER SERIES

I. General

1. Aeroplane: Airbus A330-200F

II. Certification Basis

1. Reference Application Date for EASA Certification:
   30 August 2006

2. EASA Certification Date:

   A330-223F: 09 April 2010
   A330-243F: 09 April 2010

3. EASA Certification Basis:

   JAR 25 Change 13 effective on October 5, 1989 with the following exceptions:

   - Paragraph 25.561 is applied at change 12 for wing tanks outside the fuselage contour;
   - For showing compliance with JAR 25.785(a)(b)(c), the front row seats located behind a bulkhead are not tested according to JAR 25.562(c)(5)(6). Instead, a minimum 35 inches distance between the seats and the bulkhead is considered as an acceptable alternative.

   Plus following JAR 25 paragraphs applicable at change 14:

JAR 25.21	Proof of compliance
JAR 25.29 *	Empty weight and corresponding center of gravity
JAR 25.101	Performance - General
JAR 25.111	Take-off path
JAR 25.125	Landing
JAR 25.145	Longitudinal control
JAR 25.147	Directional and lateral control
JAR 25.149	Minimum control speed
JAR 25.175	Demonstration of static longitudinal stability
JAR 25.177	Static directional and lateral stability
JAR 25.181	Dynamic stability
JAR 25.205	Stalls : critical engine inoperative
JAR 25.251	Vibration and buffeting
JAR 25.253	High speed Characteristics
JAR 25.305	Strength and deformation
JAR 25.307	Proof of structure
JAR 25.321	Flight loads - general
JAR 25.331	Symmetric manoeuvring conditions
JAR 25.333	Flight envelope
JAR 25.335	Design airspeeds
JAR 25.341	Gust and turbulence loads
JAR 25.343	Design fuel and oil loads
JAR 25.345	High lift devices

JAR 25.349	Rolling conditions
JAR 25.351	Yawing manoeuvring conditions
JAR 25.361 *	Engine and APU torque
JAR 25.371	Gyroscopic loads
JAR 25.373	Speed control devices
JAR 25.391	Control surfaces loads – general
JAR 25.395	Control system
JAR 25.397 *	Control system loads
JAR 25.415	Ground gust condition
JAR 25.427	Unsymetrical loads
JAR 25.459 *	Special devices
JAR 25.571	Damage tolerance
JAR 25.603	Materials (applicable to vertical stabilizer only)
JAR 25.613	Material strength properties, design values (applicable to vertical stabilizer only)
JAR 25.615	Design values (applicable to vertical stabilizer only)
JAR 25.679 *	Control system gust locks
JAR 25.723	Shock absorption tests
JAR 25.729	Landing Gear retracting mechanism
JAR 25.731	Wheels
JAR 25.733	Tyres
JAR 25.735	Brakes
JAR 25.772	Pilot compartment door
JAR 25.777	Cockpit controls
JAR 25.779	Motion and effect of cockpit control
JAR 25.783	Doors
JAR 25.851	Fire extinguishers
JAR 25.863	Flammable fluid fire protection
JAR 25.867 *	Fire protection: other components
JAR 25X899	Electrical bonding and protection against lightning and static electricity (applicable to vertical stabilizer only)
JAR 25.963(g)	Fuel tanks access covers (fuel center tank only)
JAR 25.979 *	Pressure fuelling system
JAR 25.1303	Flight and navigation instruments
JAR 25.1381 *	Instrument lights
JAR 25.1415	Ditching equipment
JAR 25.1419 *	Flight in icing condition
JAR 25.1533	Additional operating limitations
JAR 25.1543 *	Instrument markings, general
JAR 25.1551 *	0il quantity indicator

* Paragraphs not modified between JAR 25 and CS 25 Amdt 1.

<u>Plus requirements at CS 25 Amdt 1 for the following paragraphs derived from Part 21.A.101</u>

- For main deck cargo door

25.301, 25.303, 305, 25.307, 25.561, 25.571, 25.581, 25.601, 25.603, 25.605, 25.607, 25.609, 25.611, 25.613, 25.619, 25.621, 25.623, 25.625, 25.629, 25.843, 25.899, 25.1316, 25.1529, 25.1541, 25.1557

– For cargo floor

25.303, 25.305, 25.307, 25.365, 25.561, 25.571, 25.601, 25.603, 25.605, 25.607, 25.609, 25.611, 25.613, 25.619, 25.621, 25.625, 25.843

– For cargo barrier wall

25.303, 25.305, 25.307, 25.365, 25.561, 25.581, 25.601, 25.603, 25.605, 25.607, 25.609, 25.611, 25.613, 25.619, 25.621, 25.625, 25.853, 25.857, 25.1541, 25.1557

– For NLG attachment point / NLG bay

25.303, 25.305, 25.307, 25.571, 25.601, 25.603, 25.605, 25.607, 25.609, 25.611, 25.613, 25.619, 25.621, 25.625, 25.631, 25.729, 25.843

– For courier area

25.365*, 25.561, 25.562, 25.601, 25.603, 25.605, 25.611, 25.785,25.787, 25.789, 25.791, 25.803, 25.807, 25.809, 25.810, 25.811, 25.812, 25.813, 25.851, 25.853, 25.869, 25.899, 25.1353, 25.1360, 25.1365, 25.1411, 25.1415, 25.1421, 25.1431, 25.1441, 25.1443, 25.1445, 25.1447, 25.1449, 25.1453, 25.1529, 25.1541, 25.1557, 25.1561

* See reversions

– For MDCC class E

25.601, 25.603, 25.855, 25.857, 25.858, 25.863, 25.869, 25.1316, 25.1529, 25.1541, 25.1557

– For All aircraft

25.853, 25.855

<u>Plus requirements at CS 25 Amdt 4 for Main deck cargo door</u>

25.783

<u>Plus CS 25 Amdt 1 paragraphs elected by Airbus</u>

– All weather operation:

JAR AWO change I plus:

- Orange paper AWO 91/1,
- NPA JAR AWO 3,
- NPA JAR AWO 8 (CRI S-148).

Reversions:

Reversion to JAR 25.1309 at Change 13 for all the equipment part of the Product Level Change, except those linked to secondary changes (certified according to the pax certification basis without any request of reversion). For consistency JAR 25.1301 should also remain at change 13.
See letter ref. G03ME0729726 dated 24 Oct 2007

Reversion to JAR 25.365 (e)(f)(g) at Change 13 for the courier area.
See letter ref. G026RP0808390 dated 07 April 2008.

4. Special Conditions:

New Special Conditions for the A330-200F

E-124	Courier compartment
E-125	Class E cargo compartment fire protection of essential systems
E-127	Flammability standard for thermal / acoustic insulation materials

- The following original Special Condition CRIs applicable to the A330-200 defined in CRI G-101 issue 4 remain effective for the A330-200F

SC A-2	Interaction of systems and structure
SC A-3	Design manoeuvre requirements
SC A-4	Design dive speed VD
SC A-5	Limit pilot forces and torque
SC A-7	Stalling speeds for structural design
SC A-11	Aero-elastic stability requirements
SC F-101	Stalling and scheduled operating speeds
SC F-2	Motion and effects of cockpit controls
SC F-3	Static longitudinal stability
SC F-4	Static directional and lateral stability
SC F-5	Flight envelope protections
SC F-6	Normal load factor limiting system
SC G-105	Resistance to fire
SC P-1	FADEC
SC P-2	Trim Tank
SC S-6	Lightning protection indirect effects
SC S-10.2	Effects of external radiations upon aircraft systems
SC S-13	Auto-thrust system
SC S-16	Control signal integrity
SC S-18	Electronic flight control
SC S-20	Emergency electrical power
SC S-23	Electrical wiring and miscellaneous electrical requirements
SC S-38	Towbarless towing
SC H-01	Enhanced Airworthiness Programme for Aeroplane Systems - ICA on EWIS (applicable from May 2010)

5. Equivalent Safety Findings:

The following original ESF validated from A330-200 pax:

- CRI F-8.1 and CRI S-21 provide an equivalent safety level to JAR 25 accelerate-stop and brakes qualification requirements (NPA 25 B, D, G 244).
- CRI S-45 provides an equivalent level of safety to JAR 25.1549(a).
- CRI P-9 provides an equivalent level of safety to JAR 25.1203(d) for Rolls-Royce Trent 700 engines.
- CRI E-21 provides an equivalent level of safety to JAR 25.811(f)

Acceptable Means of Compliance specific to A330-200 Freighter

- CRI A-128 Rigid barrier wall emergency conditions

6. Environmental Standards:

EASA CS 36 for noise requirements
EASA CS 34 for engine emission and fuel venting

7. ETOPS Technical Conditions:
For the Extended Twin-Engine Airplane Operations, the applicable technical conditions are contained in AMC 20-6 (AMJ 120-42 / IL 20) and EASA CRI G-106F.

III. Technical Characteristics and Operational Limitations

Two turbo-fan, medium to long range, twin-aisle, large category airplane.

1. A330-200F powered by Pratt & Whitney engines

1.1 Type Design Definition:

A330-223F: 00G000A223F/C00 issue 1

1.2 Engines:

A330-223F:Two (2) Pratt & Whitney 4170 turbofan engines

1.2.1 Engine Limits:

Engine LimitsData Sheet E36NE (FAA) M-IM37 (DGAC)	A330-223F PW4170
Static thrust at sea level: - take-off (5mn) * - maximum continuous	 70,000 lbs 59,357 lbs
Approved oils: see Pratt & Whitney engine Service Bulletin N°238, latest revision	

***** 10 minutes at take-off thrust allowed only in case of engine failure (at take-off or during go-around in accordance with DGAC "Fiche de caractéristiques moteur".

Other engine limitations: See the relevant Engine Type Certificate Data Sheet.

1.3 Fuel:

NOMENCLATURE	SPECIFICATION
Kerosene: refer to PWA 522 specification (PW SB N° 2016)	JET A,JET A-1,JP5,JP8,N°3 JET fuel, TS -1, RT

Note: The above mentioned fuels and additives are also suitable for the APU.

1.4 Limit Speeds:
Refer to approved Airplane Flight Manual.

1.5 Centre of Gravity Range:
Refer to approved Airplane Flight Manual.

1.6 Maximum Certified Weights:

Variant (MOD)	000 Basic (range mode)	001 Payload mode	002 Dynamic payload modification
MTOW (T)	233	227	233
MLW (T)	182	187	187
MZFW (T)	173	178	173 to 178 (depending on TOW)

2. A330-200F powered by Rolls Royce engines

2.1 Type Design Definition:

A330-243F: 00G000A243F/C00 issue 1

2.2 Engines:

A330-243F:Two (2) Rolls Royce Trent 772B-60 turbofan engines

2.2.1 Engine Limits:

Engine Limits Data Sheet 1050 (CAA) E.042 (EASA)	A330-243 Trent 772B-60
Static thrust at sea level: - take-off (5mn) * - maximum continuous	 71,100 lbs 63,560 lbs
Approved oils: see Rolls Royce Service Bulletin RB.211-12-F139, latest revision	

***** The take-off rating and the associated operating limitations may be used for up to 10 minutes in the event of an engine failure (see notes in Engine TCDS).

Other engine limitations: See the relevant Engine Type Certificate Data Sheet.

2.3 Fuel:

NOMENCLATURE	SPECIFICATION
KEROSENE: refer to RR Operating Instruction defined in RR Manuel F-Trent A330	JET A, JET A-1,JET B,JP 4,JP5,JP8 ,N°3 JET fuel, TS-1, RT

Note: The above mentioned fuels and additives are also suitable for the APU.

2.4 Limit Speeds:
Refer to approved Airplane Flight Manual.

2.5 Centre of Gravity Range:
Refer to approved Airplane Flight Manual.

2.6 Maximum Certified Weights:

Variant (MOD)	000 Basic (range mode)	001 Payload mode	002 Dynamic payload modification
MTOW (T)	233	227	233
MLW (T)	182	187	187
MZFW (T)	173	178	173 to 178 (depending on TOW)

3. Data pertinent to all A330-200F series

3.1.1 Fuel quantity (0.8 kg/liter) with 58623 and without mod 200281:

TANK	2-TANK AIRPLANE	
	Usable fuel liters (kg)	Unusable fuel liters (kg)
WING	91300 (73040)	348 (279)
TRIM TANK	6 230 (4 984)	6 (5)
TOTAL	97530 (78024)	354 (284)

3.1.2 Fuel quantity (0.8 kg/liter) with mod 58623/200281 or without 58623:

TANK	3-TANK AIRPLANE	
	Usable fuel liters (kg)	Unusable fuel liters (kg)
WING	91300 (73040)	348 (279)
CENTER	41 560 (33 248)	83 (67)
TRIM TANK	6 230 (4 984)	6 (5)
TOTAL	139 090 (111 272)	437 (350)

3.2 Minimum Flight Crew:
Two (2): Pilot and Co-pilot

3.3 Maximum Seating Capacity:
A maximum of 12 supernumeraries may occupy the courier area located aft of the flight deck compartment. The total occupancy of the airplane is limited to 16 persons.

3.4 Cargo compartment loading:

Cargo compartment	Maximum load (kg)
Forward	18869
Aft	15241
Rear (bulk)	3468
MDC Compartment	65000 (range mode)

For the positions and the loading conditions authorized in each position (references of containers, pallets and associated weights), see Weight and Balance Manual ref. 00G080A0006/C2S.

3.5 Environmental Flight Envelope:
Refer to approved Airplane Flight Manual.

3.6 Other Limitations:
Refer to approved Airplane Flight Manual.

3.7 Auxiliary Power Unit (APU):
One GARRETT GTCP 331-350C (Specification 31-7677A)
Oils: refer to applicable approved Manuals

3.8 Equipment
The equipment required by the applicable requirements shall be installed.
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

3.9 All Weather Capabilities

A330-223F:
- Aircraft Type Design is approved for Cat 3 precision approach and autoland

A330-243F:
- Aircraft Type Design is approved for Cat 3 precision approach and autoland

3.10 Wheels and Tyres
Refer to Airbus Service Bulletin A330-32-3004. This SB will be updated to include the Freighter version prior to Entry Into service.

3.11 Hydraulics
Fluid specifications: TYPE IV (NSA 307-110).

3.12 Maintenance Instructions and Airworthiness Limitations
- Limitations applicable to Safe Life Airworthiness Limitation Items are provided in the A330 Airworthiness Limitations Section (ALS) sub-parts 1-2 and 1-3 approved by EASA;
- Limitations applicable to Damage Tolerant Airworthiness Limitation Items are provided in the A330 Airworthiness Limitations Section (ALS) Part 2 approved by EASA;
- Certification Maintenance Requirements are provided in the A330 Airworthiness Limitations Section (ALS) Part 3 approved by EASA;
- Limitations applicable to Ageing System Maintenance are provided in the A330 Airworthiness Limitation Section (ALS) Part 4 approved by EASA;
- Fuel Airworthiness Limitations are provided in the A330 Airworthiness Limitations Section (ALS) Part 5 approved by EASA;
- Maintenance Review Board Report.

SECTION 5: CHANGE RECORD

TCDS Issue No	TCDS Date	TCDS Changes	TC Date
18.0	27/11/09	Page 4 Section 1.6 – Update of CMP Document reference number – Introduction of ETOPS Beyond 180 Min (approval date: 13 October 2009) – Amendment Approval date 4 June 2009 for ETOPS 180 Min (A330-323 PW 4168A-1D and PW 4168A-1D) Page 6 Section 2.II.6 – Environmental Standards chapter re-arrangement Page 6 Section 2.II.7 & 2.II.8.2 – New Chapter title – Addition of CRI G-106 (2.II.7 only) – Addition of CRI G-8 Page 11 Section 2.III.3.2.1 – Introduction of reference to Approved Oil documentation Page 14 Section 2.III.4.12 – Introduction of reference to ALS 5, and deletion of Certification Document reference numbers Page 17 Section 3.II.7 – Environmental Standards chapter re-arrangement Page 17 Section 3.II.8 – Addition of CRI G-8 Page 21 Section 3.III.2.6 – Mod number corrected (Variant 060) Page 22 Section 3.III.3.2.1 – Introduction of reference to Approved Oil documentation Page 25 Section 3.III.4.12 – Introduction of reference to ALS 5, and deletion of Certification Document reference numbers Page 26 – Introduction of new Section 4 (Change Record)	17/05/04
19.0	30/03/10	Introduction of section 4 for A330-200 Freighter	09/04/10
20.0	11/06/10	Addition of CRI H-01 as Special Condition (Enhanced Airworthiness Programme for Aeroplane Systems - ICA for EWIS)	09/04/10
21.0	22/06/10	Addition of WV 001 for A330-200 Freighter	09/04/10
22.0	20/07/10	Addition of A330-200F ETOPS approval Addition of WV 061 for A330-200 passenger aircraft	09/04/10
23.0	18/07/10	Addition of WV 057 and 058 on the A330-200 Passenger aircraft. Addition of fuel quantity table (Section 4 § 3.1.2) due to the introduction of MOD 58623 & 200281. Correction of typo error for fuel quantity tables (section 3 § 4.1 & Section 4 § 3.1.1).	09/04/10
24.0	06/09/10	Correction of a typo error on Section 1 - § 6 - ETOPS table	09/04/10
25.0	27/09/10	Correction of typo error to remove ambiguity on A330-200 Freighter model (Section 4 - §1.1)	09/04/10
26.0	17/01/11	Addition of WV 057 and 058 on the A330-243 Passenger aircraft (RR models). Addition of WV 002 on the A330-200F. Addition of Special condition P27 for A330-200 and A330-300 Passenger aircraft.	09/04/10

TCDS Issue No	TCDS Date	TCDS Changes	TC Date
27.0	23/02/11	Addition of RT Fuel for use on GE, PW and RR engines and APU Addition of PW 4164-1D and PW4168-1D engines (MOD 58777 and 58776)	09/04/10
28.0	09/03/11	Correction of static take-off thrust (5 mn) number for A330-203 New Paragraph 3.III.4.13 Fuel tank flammability Reduction System (FRS) Update of Paragraph 6 in Section 2 and 3 (Environmental Requirements for Noise)	09/04/10
29.0	06/05/11	Addition of MOD 201436 to Variant 057 and addition of MOD 201437 to Variant 058 in Maximum Certified Weights for A330-201/-202/-203/-223/-243: Addition of PW4164-1D and PW4168-1D in the ETOPS table as a result of previous certification of MOD 58776 and 58777	09/04/10
30.0	26/10/11	Addition of Variant 054 in Maximum Certified Weights for A330-302/-303/-323/-342/-343 (Section 2.III.1.6, 2.III.2.6 and 2.III.3.6)	09/04/10