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I. Type A320-100 Series Transport Category Airplanes

Model A320-111, Approved December 15, 1988

Engines

Two CFMI model CFM-56-5A1 jet engines

Fuel:

See CFM-56-5 Installation Manual - Document CFM 2026

NOMENCLATURE	SPECIFICATION		
	FRANCE	U.S.A	U.K.
Kerosene	Air 3405C	ASTM D 1655 (JET A1) (JET A)	DERD 2494
Wide Cut	Air 3407	ASTM D 1655 (JET B)	DERD 2454
	Air 3407 (TR4)	MIL-T 5624 JP4	DERD 2454
High Flash Point	Air 3404	MIL-T 5624 (JP5)	DERD 2452

Additives: See CFMI "Specific Operating Instructions."

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

Engine Limits

Engine Limitation	CFMI CFM56-5A1	
	Data Sheets E28NE (FAA)	
Static Thrust at Sea Level		
- Take-off (5 mn) (Flat rated 30 C)	11 120 daN (25,000 lb)	
- Maximum Continuous (Flat rated 25 C)	10 542 daN (23,600 lb)	
Maximum Engine Speed		
- N1 rpm (%)	5,100 (102)	
- N2 rpm (%)	15,183 (105)	
Maximum Gas Temperature (°C)		
- Take-off (5 mn)		890
- Max Continuous	855	
- Starting *	725	
Maximum Oil Temperature (Supply Pump Inlet) (°C)		
- Take-off, Stabilized	140	
- Transient (15 mn max)	155	
- Minimum Pressure (PSI)	13	
Approved Oils	See SB CFMI 79-001-OX	

* 4 Consecutive cycles of 2 minutes each

Auxiliary Power Unit (APU)

GARRETT AIRESEARCH GTCP 36-300 (A)
(Specification 31-5306B)

APU Limits:

- Maximum Allowable Speed	69,204 rpm (107 %)
- Maximum Gas Temperature at turbine outlet (ISA + 35 C)	
rated output	638° C
overtemp. shutdown	711° C
(Maximum on starting)	1038° C

Approved oils:

See GARRETT Report GT-7800

Usable Capacity: 5.8 liters

Airspeed Limits (Indicated Airspeed - IAS - Unless otherwise Stated:

- Maximum Operating Mach - MMO: 0.82
- Maximum Operating Speed - VMO: 350 kt
- Maneuvering Speed VA: See Chapter 2.0 of the DGAC-approved Flight Manual
- Extended Flaps/Slats Speed - VFE

Configuration	Slats/Flaps	VFE (Kt)	
1	18/0	230	Intermediate Approach Take-off
	*18/10	215	
2	22/15	200	Take-off and Approach
3	22/20	185	Take-off, Approach, and Landing
Full	27/35	177	Landing

* Auto flap retraction at 210 kt in Take-off configuration.

Landing Gear:

- VLE - Extended: 280 Kt/Mach 0.67
- VLO - Extension; 250 kt
- Retraction: 220 kt

Tire Limit Speed (Ground Speed) = 195.5 kt (225 mph)

Minimum Control Speed:

- VMCA (Air): 105 kt
- VMCG (Ground): 102 kt (all config.)

Center of Gravity Range (% Mean Aerodynamic Chord): See the appropriate DGAC-Approved Airplane Flight Manual, U.S. Version.

Maximum Weights:

VARIANT	000 (BASIC)	
	(KG)	(LBS)
Max. Ramp Weight	68,400	150,820
Max. Take-off Weight	68,000	149,940
Max. Landing Weight	63,000	138,915
Max. Zero Fuel Weight	59,000	130,100

Minimum Weight:

VARIANT	000 (BASIC)	
	(KG)	(LBS)
Minimum Weight	36,750	81,030

Minimum Crew:

2 Pilots

Maximum Passengers:

179

Maximum Baggage:

CARGO COMPARTMENT	MAXIMUM LOAD	
	(KG)	(LBS)
Forward	3,402	7,501
Aft	4,536	10,002
Rear (Bulk)	1,500	3,308

For the positions and the loading conditions authorized in each position (references of containers, pallets, and associated weights), see Weight and Balance Manual, ref. 00D080A0001/C1S Chapter 1.10.

Fuel Capacity (0.8 kg/liter):

2-Tank Airplane				
Tank	Usable Fuel		Unusable Fuel	
	Liters (kgs)	Gallons (lbs)	Liters (Kgs)	Gallons (lbs)
Wing	15,843	4,185	57.3	15.1
Total	(12,674)	(27,946)	(45.8)	(101.0)

3-Tank Airplane				
Tank	Usable Fuel		Unusable Fuel	
	Liters (kgs)	Gallons (lbs)	Liters (Kgs)	Gallons (lbs)
Wing	15,843	4,185	58.9	15.6
	(12,674)	(27,946)	(47.1)	(103.9)
Center	8,250	2,179	23.2	6.1
	(6,600)	(14,484)	(19.6)	(43.2)
TOTAL	24,093	6,364	82.1	21.7
	(19,274)	(42,430)	(65.7)	(147.1)

Oil Capacity:

CFMI CFM56-5A1 - Engine Oil Capacity, 10 quarts/engine (9.46 liters).

Hydraulic Fluids:

- Type IV - Specification NSA 30.7110.
- Capacity (Reservoirs and Systems):

System	Liters	Gallons
Green	100	26
Yellow	75	20
Blue	60	16

Pressure: 3000 ± 200 PSI (207 ± 14 bar).

Tires:

- See Airbus Service Bulletin (SB) A320-32-1007.

Maximum Operating Altitude:

- 39,100 feet (12,000 m) clean.
- 20,000 feet (6,500 m) Slats/Flaps extended.

Equipment:

The equipment required by the applicable requirements shall be installed.

Equipment approved for installation are listed in the definition of the reference model and the modification applicable to it. Refer to Type Certification Standard Equipment List 00D000A0101/C1S.

Other Information:

See Data Pertinent to all A320 models.

II. Type A320-200 Series Transport Category Airplanes

Model A320-211, Approved December 15, 1988;

Model A320-231, Approved July 6, 1989;

Model A320-212, Approved November 26, 1990;

Model A320-232, Approved November 12, 1993;

Model A320-233, Approved November 17, 1995;

Model A320-214, Approved December 12, 1996.

Engines:

Model A320-211, Two CFMI Model CFM-56-5A1 jet engines;

Model A320-231, Two IAE Model V2500-A1 jet engines;

Model A320-212, Two CFMI Model CFM56-5A3 jet engines;

Model A320-232, Two IAE Model V2527-A5 jet engines;

Model A320-233, Two IAE Model V2527E-A5 jet engines;

Model A320-214, Two CFMI Model CFM56-5B4 or CFM56-5B4/2 jet engines.

Fuel:

See Installation Manual - Documents CFM 2026 or IAE-0043

NOMENCLATURE	SPECIFICATION		
	FRANCE	U.S.A	U.K.
Kerosene	Air 3405C	ASTM D 1655 (JET A1) (JET A)	DERD 2494
Wide Cut	Air 3407	ASTM D 1655 (JET B)	DERD 2454
	Air 3407 (TR4)	MIL-T 5624 (JP4)	DERD 2454
High Flash Point	Air 3404	MIL-T 5624 (JP5)	DERD 2452

Additives: See CFMI "Specific Operating Instructions", CFM TPOI-13 or IAE V2500 "Installation and Operation Manual" IAE-0043, 4.5

*Note: JP4 is not suitable for Double Annular Combustor (DAC) engines.

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

Engine Limits:

Engine Limitation	<u>CFMI CFM56-5A1</u> Data Sheets E28NE (FAA)	<u>CFMI CFM56-5A3</u> Data Sheets E28NE (FAA)	<u>CFMI CFM56-5B4 /-5B4/2</u> Data Sheets E37NE E38NE (FAA)	<u>IAE V2500-A1</u> Data Sheets E31NE (FAA)	<u>IAE V2527-A5 or V2527E-A5</u> Data Sheets E40NE (FAA)
Static Thrust at Sea Level - Take-off (5 mn) (Flat rated 30°C) - Maximum Cont. (Flat rated 25°C)	11 120 daN (25,000 lb) 10 542 daN (23,600 lb)	11 787 daN (26,500 lb) 10 542 daN (23,600 lb)	12 010 daN (27,000 lb) 10 840daN (24,370 lb)	11 030 daN (24,800 lb) 9 890 daN (22,240lb)	**11 030 daN (24,800 lb) 9 890 daN (22,240lb)
Maximum Engine Speed - N1 rpm (%) - N2 rpm (%)	5,100 (102) 15,183(105)	5,100 (102) 15,183(105)	5,200 (104) 15,183(105)	5,465 (100) 14,915(100)	5,650 (100) 14,950(100)
Max Gas Temp.(°C) - Take-off (5 mn) -Max Cont. - Starting*	890 855 725	Eng. limit/ ECAM 915/890 880/855 725/725	950 915 725	635 610 635	645 610 650
Maximum Oil Temp. (Supply Pump Inlet; °C) -Takeoff, Stabilized -Transient (15 mn max) Min. Press. (PSI)	140 155 13	140 155 13	140 155 13	155 165 60	155 165 60
Approved oils	See SB CFMI 79-001- 0X	See SB CFMI 79-001- 0X	See SB CFMI 79-001- 0X	See doc IAE 0043 (MIL-L 23699)	See doc IAE 0043 (MIL-L 23699)

* 4 consecutive cycles of 2 minutes each.

** 10 minute at take-off thrust allowed in case of engine failure (at take-off and during go-around)

Auxiliary Power Unit (APU)

GARRETT AIRESEARCH GTCP 36-300 (A) (Standard)
(Specification 31-5306B)

APIC APS 3200 (Option - Mod 22562)
(Specification ESR 0802, Rev A)

APU Limits:

GTCP 36-300 (A)

- Maximum Allowable Speed	69,204 rpm (107 %)
- Maximum Gas Temperature at turbine outlet (ISA + 35°C) rated output	638°C
overtemp. shutdown	711°C
(Maximum on starting)	1038°C)

APS 3200

- Maximum Rotor Speed	49,300 rpm	(105 %)
- Maximum EGT	742°C	
- Maximum for Start	900°C at altitudes below 25000 ft	
	982 C at altitudes below 25000 ft	

Approved oils:

See GARRETT Report GT-7800 or in conformity with MIL-L-IAS, MIL-L23699 or DERD 2487 for the GTCP 36-300, Usable Capacity: 5.8 liters

See APIC Maintenance Manual for approved oils for the APS 3200.

Airspeed Limits (Indicated Airspeed - IAS - Unless otherwise Stated:

- Maximum Operating Mach - MMO: 0.82
- Maximum Operating Speed - VMO: 350 kt
- Maneuvering Speed VA: See Chapter 2.0 of the DGAC-approved Flight Manual
- Extended Flaps/Slats Speed - VFE

Configuration	Slats/Flaps	VFE (Kt)	
1	18/0	230	Intermediate Approach Take-off
	*18/10	215	
2	22/15	200	Take-off and Approach
3	22/20	185	Take-off, Approach, and Landing
Full	27/35	177	Landing

* Auto flap retraction at 210 kt in Take-off configuration.

Landing Gear:

- VLE - Extended: 280 Kt/Mach 0.67
- VLO - Extension; 250 kt
- Retraction: 220 kt

Tire Limit Speed (Ground Speed) = 195.5 kt (225 mph)

Minimum Control Speed:

- VMCA (Air) and VMCG (Ground): See TAB program issue M or N with associated A/C performances module

Center of Gravity Range (% Mean Aerodynamic Chord):

See DGAC approved Airplane Flight Manual, U.S. version.

Maximum Weights:

FAA Approved Weight Variants	000 BASIC	001	003	007	008	009	010
A320-211	YES	YES	YES		YES	YES	
A320-212	YES		YES		YES	YES	
A320-214	YES		YES	YES	YES	YES	YES
A320-231	YES		YES		YES	YES	
A320-232	YES		YES	YES	YES	YES	YES
A320-233	YES		YES	YES	YES	YES	YES

VARIANT	000	001	003	007	008	009	010
	BASIC (KG) (LBS)	(KG) (LBS)	(KG) (LBS)	(KG) (LBS)	(KG) (LBS)	(KG) (LBS)	(KG) (LBS)
Max. Ramp Weight	73900 162949	68400 150822	75900 167360	77400 170667	73900 162950	75900 167360	77400 170667
Max. Take-off Weight	73500 162068	68000 143325	75500 166478	77000 169785	73500 162068	75500 166478	77000 169785
Max. Landing Weight	64500 142223	64500 142223	64500 142223	64500 142223	64500 142223	64500 142223	64500 142223
Max. Zero Fuel Weight	60500 133403	60500 133403	60500 133403	60500 133403	61000 134505	61000 134505	61000 134505

Minimum Weight:

VARIANT	All	
	(KG)	(LBS)
Minimum Weight	37,230	82,080

Minimum Crew:

2 Pilots

Maximum Passengers:

179

Maximum Baggage:

CARGO COMPARTMENT	MAXIMUM LOAD	
	(KG)	(LBS)
Forward	3,402	7,501
Aft	4,536	10,002
Rear (Bulk)	1,500	3,308

For the positions and the loading conditions authorized in each position (references of containers, pallets, and associated weights), see Weight and Balance Manual, ref. 00D080A0001/C1S Chapter 1.10.

Fuel Capacity (0.8 kg/liter):

Tank	Usable Fuel		Unusable Fuel	
	Liters (kgs)	Gallons (lbs)	Liters (Kgs)	Gallons (lbs)
Wing	15,609 (12,487)	4,124 (27,534)	58.9 (47.1)	15.6 (103.9)
Center	8,250 (6,600)	2,179 (14,484)	23.2 (19.6)	6.5 (41.0)
TOTAL	23,859 (19,087)	6,304 (42,087)	82.1 (65.7)	20.8 (144.9)

Oil Capacity:

CFMI CFM56-5A/5B - Engine Oil Capacity, 10 quarts/engine (9.46 liters).

IAE V2500-A5 - Engine Oil Capacity, 7 quarts/engine (6.6 liters)

Hydraulic Fluids:

- Type IV - Specification NSA 30.7110.
- Capacity (Reservoirs and Systems):

System	Liters	Gallons
Green	100	26
Yellow	75	20
Blue	60	16

Pressure: 3000 ± 200 PSI (207 ± 4 bar).

Tires:

- See Airbus Service Bulletin (SB) A320-32-1007.

Maximum Operating Altitude:

- 39,100 feet (12,000 m) clean.
- 20,000 feet (6,500 m) Slats/Flaps extended.

Equipment:

The equipment required by the applicable requirements shall be installed.

Equipment approved for installation are listed in the definition of the reference model and the modification applicable to it. Refer to Type Certification Standard Equipment List 00D000A0101/C1S.

Refer to A320 Note 4 section “NOTES (A320)” for list of A320 airplane model FAA Type Definitions.

Other Information:

See Data Pertinent to all A320 models.

III. Type A321-100/200 Series Transport Category Airplanes

Model A321-111, Approved December 20, 1995;

Model A321-112, Approved December 20, 1995;

Model A321-131, Approved December 20, 1995;

Engines:

Model A321-111, Two CFMI Model CFM56-5B1 or CFM56-5B1/P jet engines;

Model A321-112, Two CFMI Model CFM56-5B2 or CFM56-5B2/P jet engines;

Model A321-131, Two IAE Model V2530-A5 jet engines

See Note 14 in "NOTES (A321)" for description of "P" engine designations

Fuel:

See Installation Manual - Documents CFM 2026 or IAE-0043

NOMENCLATURE	SPECIFICATION		
	FRANCE	U.S.A	U.K.
Kerosene		MIL-T83133A (JP8)	
Kerosene	Air 3405C	ASTM D 1655 (JET A1) (JET A)	DERD 2494
Wide Cut	Air 3407	ASTM D 1655 (JET B)	DERD 2454
	Air 3407 (TR4)	MIL-T 5624 (JP4)	DERD 2454
High Flash Point	Air 3404	MIL-T 5624 (JP5)	DERD 2452

Additives: See CFMI "Specific Operating Instructions," CFM TPOI-13 or
IAE V2500 "Installation and Operating Manual" IAE-0043, 4.5

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

Engine Limits

Engine Limitation	CFMI CFM56-5B1 or -5B1/P Data Sheets E37NE E38NE (FAA)	CFMI CFM56-5B2 or -5B2/P Data Sheets E37NE E38NE (FAA)
Static Thrust at Sea Level - Take-off (5 mn) (Flat rated 30°C) Maximum Continuous (Flat rated 25°C)	13 344 daN (30,000 lb) 12 940 daN (29,090 lb)	13 789 daN (31 000 lb) 12 940 daN (29,090 lb)
Maximum Engine Speed - N1 rpm (%) - N2 rpm (%)	5,200 (104) 15,183 (105)	5,200 (104) 15,183 (105)
Maximum Gas Temperature (°C) - Take-off (5 mn) - Max Continuous - Starting *	950 915 725	950 915 725
Maximum Oil Temperature (Supply Pump Inlet; °C) - Take-off, Stabilized - Transient (15 mn max) Min. Press. (PSI)	140 155 13	140 155 13
Approved Oils	See SB CFMI 79-001-OX	See SB CFMI 79-001-OX

Engine Limitation	IAE V2530-A5 Data Sheets E40NE (FAA)
Static Thrust at Sea Level - Take-off (5 mn) (Flat rated 30°C) Maximum Continuous (Flat rated 25°C)	13 300 daN (29,900 lb) 11 988 daN (26,950 lb)
Maximum Engine Speed - N1 rpm (%) - N2 rpm (%)	5,650 (100) 14,950 (100)
Maximum Gas Temperature (°C) - Take-off (5 mn) - Max Continuous - Starting *	645 610 650
Maximum Oil Temperature (Supply Pump Inlet; °C) - Take-off, Stabilized - Transient (15 mn max) Min. Press. (PSI) Approved Oils	155 165 60 See Doc IAE 0043 Sec 4.9 (MIL-L-23699)

* 4 Consecutive cycles of 2 minutes each.
10 minutes at take-off thrust allowed only in case of engine failure (at take-off or during go-around)

Auxiliary Power Unit (APU)

GARRETT AIRESEARCH GTCP 36-300 (A) (Standard)
(Specification 31-5306B)

APIC APS 3200 (Option - Mod 22562)
(Specification ESR 0802, Rev A)

APU Limits:

GTCP 36-300 (A)
- Maximum Allowable Speed 69,204 rpm (107 %)
- Maximum Gas Temperature
at turbine outlet (ISA + 35°C)
 rated output 638°C
 overtemp. shutdown 711°C
 (Maximum on starting 1038°C)

APS 3200
- Maximum Rotor Speed 49,300 rpm (105 %)
- Maximum EGT 742°C
- Maximum for Start 900°C at altitudes below 25000 ft
 982 C at altitudes below 25000 ft

Approved oils:

See GARRETT Report GT-7800 or in conformity with MIL-L-IAS, MIL-L23699 or DERD 2487 for the GTCP 36-300, Usable Capacity: 5.8 liters

See APIC Maintenance Manual for approved oils for the APS 3200

Airspeed Limits (Indicated Airspeed - IAS - Unless otherwise Stated:

- Maximum Operating Mach - MMO: 0.82
- Maximum Operating Speed - VMO: 350 kt
- Maneuvering Speed VA: See Chapter 2.0 of the DGAC-approved Flight Manual
- Extended Flaps/Slats Speed - VFE

Configuration	Slats/Flaps	VFE (Kt)	
1	18/0	230	Intermediate Approach Take-off
	18/10	215	
2	22/14	205	Take-off and Approach
		215*	
3	22/21	195	Take-off, Approach, and Landing
Full	27/25	190	Landing

* See A321 Note 12

Landing Gear:

- VLE - Extended: 280 Kt/Mach 0.67
- VLO - Extension: 250 kt
- Retraction: 220 kt

Tire Limit Speed (Ground Speed) = 195.5 kt (225 mph)

Minimum Control Speed:

- VMCA (Air): 105 kt
- VMCG (Ground): 102 kt (all config.)

Center of Gravity Range (% Mean Aerodynamic Chord):

See DGAC approved Airplane Flight Manual, U.S. version.

Maximum Weights:A321-100:

VARIANT	000 BASIC		002 Mod 24178		003 Mod 24899	
	(KG)	(LBS)	(KG)	(LBS)	(KG)	(LBS)
Max. Take-off Weight	83,000	182,819	83,000	182,819	85,000	187,225
Max. Landing Weight	73,500	161,894	74,500	164,097	74,500	164,097
Max. Zero Fuel Weight	69,500	153,084	70,500	155,286	70,500	155,286

Minimum Weight:

VARIANT	All	
	(KG)	(LBS)
Minimum Weight	47,500	104,625

Minimum Crew:

2 Pilots

Maximum Passengers:

220

Maximum Baggage:

CARGO COMPARTMENT	MAXIMUM LOAD	
	(KG)	(LBS)
Forward	5,670	12,489
Aft	5,670	12,489
Rear (Bulk)	1,497	3,297

For the positions and the loading conditions authorized in each position (references of containers, pallets, and associated weights), see Weight and Balance Manual, ref. 00E080A0001/C1S Chapter 1.10.

Fuel Capacity (0.8 kg/liter):

3-Tank Airplane				
Tank	Usable Fuel		Unusable Fuel	
	Liters (kgs)	Gallons (lbs)	Liters (Kgs)	Gallons (lbs)
Wing	15,500 (12,400)	4,100 (27,313)	22.6 (18)	6 (39.6)
Center	8,200 (6,560)	2,169 (14,449)	23.2 (18.6)	6.1 (40.97)
TOTAL	23,700 (18,960)	6,270 (41,762)	45.8 (36.6)	12.1 (80.62)

Oil Capacity:

CFMI CFM56-5B - Engine Oil Capacity, 10 quarts/engine (9.46 liters).

IAE V2500-A5 - Engine Oil Capacity, 7 quarts/engine (6.6 liters)

Hydraulic Fluids:

- Type IV - Specification NSA 30.7110.
- Capacity (Reservoirs and Systems):

System	Liters	Gallons
Green	100	26
Yellow	75	20
Blue	60	16

Pressure: 3000 ± 200 PSI (207 ± 4 bar).

Tires:

- See Airbus Service Bulletin (SB) A320-32-1007.

Maximum Operating Altitude:

- 39,100 feet (12,000 m) clean.
- 20,000 feet (6,500 m) Slats/Flaps extended.

Equipment:

The equipment required by the applicable requirements shall be installed.

Equipment approved for installation are listed in the definition of the reference model and the modification applicable to it. Refer to Type Certification Standard Equipment Schedule Lists:

- 00E000A0007/C1S for A321-111 Model
- 00E000A0006/C1S for A321-112 Model
- 00E000A0004/COS for A321-131 Model

Refer to A321 Note 4 for list of A321 airplane model FAA Type Definitions.

Other Information:

See Data Pertinent to all A321 models.

IV. Type A319-100 Series Transport Category Airplanes

Model A319-112, Approved August 30, 1996;

Model A319-111, Approved June 20, 1997;

Model A319-113, Approved June 20, 1997;

Model A319-114, Approved June 20, 1997;

Model A319-131, Approved June 20, 1997;

Model A319-132, Approved June 20, 1997;

Engines:

Model A319-111, Two CFMI Model CFM56-5B5 or CFM56-5B5/P jet engines;

Model A319-112, Two CFMI Model CFM56-5B6 or CFM56-5B6/P jet engines;

Model A319-113, Two CFMI Model CFM56-5A4 jet engines;

Model A319-114, Two CFMI Model CFM56-5A5 jet engines;

Model A319-131, Two IAE Model V2522-A5 jet engines;

Model A319-132, Two IAE Model V2524-A5 jet engines;

Fuel:

See Installation Manual - Documents CFM 2026 or IAE-0043

NOMENCLATURE	SPECIFICATION		
	FRANCE	U.S.A	U.K.
Kerosene		MIL-T83133A (JP8)	
Kerosene	Air 3405C	ASTM D1655 (Jet A1) (JetA)	DERD 2494
Wide Cut	Air 3407	ASTM D 1655 (JET B)	DERD 2454
	AIR 3407 (TR4)	MIL-T 5624 (JP4)	DERD 2454
High Flash Point	AIR 3404	MIL-T 5624 (JP5)	DERD 2452

Additives: See CFMI " Specific Operating Instructions," CMF TPOI-13 or IAE V2500 "Installation and Operating Manual" IAE-0043, 4.5

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

Engine Limits:

Engine Limitation	CFMI CFM56-5B5 or -5B5/P Data Sheets E37NE E38NE (FAA)	CFMI CFM56-5B6 or -5B6/P Data Sheets E37NE E38NE (FAA)	CFMI CFM56-5A4 Data Sheets E28NE (FAA)
Static Thrust at Sea Level - Take-off (5 mn)	9 786 daN (22,000 lb)	10 453 daN (23,500 lb)	9 786 daN (22,000 lb)
(Flat rated 30°C) Maximum Continuous (Flat rated 25°C)	9 008 daN (20,250 lb)	9 008 daN (20,250 lb)	9 195 daN (20,670 lb)
Maximum Engine Speed - N1 rpm (%) - N2 rpm (%)	5,200 (104) 15,183 (105)	5,200 (104) 15,183 (105)	5,100 (102) 15,183 (105)
Maximum Gas Temperature (°C) - Take-off (5 mn) - Max Continuous - Starting *	950 915 725	950 915 725	Eng. limit/ ECAM 915/890 880/855 725/725
Maximum Oil Temperature (supply pump inlet; °C) - Take-off, Stabilized - Transient (15 mn max) Min. Press. (PSI)	140 155 13	140 155 13	140 155 13
Approved Oils	See SB CFMI 79-001-0X	See SB CFMI 79-001-0X	See SB CFMI 79-001-0X

Engine Limitation	CFMI CFM56-5A5 Data Sheets E28NE (FAA)	IAE V2522-A5 Data Sheets E40NE (FAA)	IAE V2524-A5 Data Sheets E40NE (FAA)
Static Thrust at Sea Level - Take-off (5 mn)	10 453 daN (23,500 lb)	9 959 daN (22 290 lb)	10 577 daN (23,780 lb)
(Flat rated 30°C) Maximum Continuous (Flat rated 25°C)	9 195 daN (20,670 lb)	8 540 daN (19,20 lb)	8 540 daN (19,20 lb)
Maximum Engine Speed - N1 rpm (%) - N2 rpm (%)	5,100 (102) 15,183 (105)	5,650 (100) 14,950 (100)	5,650 (100) 14,950 (100)
Maximum Gas Temperature (°C) - Take-off (5 mn) - Max Continuos - Starting *	Eng. limit/ ECAM 915/890 880/855 725/725	645 610 650	645 610 650
Maximum Oil Temperature (supply pump inlet; °C) - Take-off, Stabilized - Transient (15 mn max) Min. Press. (PSI)	140 155 13	155 165 60	155 165 60
Approved Oils	See SB CFMI 79-001-0X	See Doc IAE 0043 Sec 4.9 (MIL-L-23699)	See Doc IAE 0043 Sec 4.9 (MIL-L-23699)

* 4 consecutive cycles of 2 minutes each.

** 10 minutes at take-off thrust allowed in case of engine failure (at take off and during go around).

Auxiliary Power Unit (APU)

GARRETT AIRESEARCH GTCP 36-300(A) (Standard)
(Specification 31-5306B)

APIC APS 3200 (Option - Mod 22562)
(Specification ESR 0802, Rev A)

APU Limits:GTCP 36-300 (A)

- Maximum Allowable Speed	69,204 rpm (107 %)
- Maximum Gas Temperature at turbine outlet (ISA + 35°C)	
rated output	638°C
overtemp. shutdown	711°C
(Maximum on starting)	1038°C

APS 3200

- Maximum Rotor Speed	49,300 rpm	(105 %)
- Maximum EGT	742°C	
- Maximum for Start	900°C at altitudes below 25000 ft	
	982 C at altitudes below 25000 ft	

Approved oils:

See GARRETT Report GT-7800 or in conformity with MIL-L-IAS, MIL-L23699 or DERD 2487 for the GTCP 36-300, Usable Capacity: 5.8 liters

See APIC Maintenance Manual for approved oils for the APS 3200

Airspeed Limits (Indicated Airspeed - IAS - Unless Otherwise Stated:

- Maximum Operating Mach	- MMO: 0.82
- Maximum Operating Speed	- VMO: 350 kt
- Maneuvering Speed VA: See Chapter 2.0 of the DGAC-approved Flight Manual	
- Extended Flaps/Slats Speed	- VFE

Configuration	Slats/Flaps	VFE (kt)	
1	18/0	230	Intermediate Approach Take-off
	*18/10	215	
2	22/15	200	Take-off and Approach
3	22/20	185	Take-off, Approach, and Landing
Full	27/40	177	Landing

* Auto flap retraction at 210 kt in Take-off configuration.

Landing Gear:

- VLE - Extended:	280 kt/Mach 0.67
- VLO - Extension:	250 kt
- Retraction:	220 kt

Tire Limit Speed (Ground Speed) = 195.5 kt (225 mph)

Center of Gravity Range (% Mean Aerodynamic Chord): See DGAC-Approved Airplane Flight Manual, U.S. Version.
Maximum Weights:

VARIANT	000 BASIC		001 Mod 25328	
	(KG)	(LBS)	(KG)	(LBS)
Max. Take-Off Weight	64,000	140,999	70,000	154,185
Max. Landing Weight	61,000	134,361	61,000	134,361
Max. Zero Fuel Weight	57,000	125,551	57,000	125,551

Minimum Weight:

VARIANT	All	
	(KG)	(LBS)
Minimum Weight	36,280	79,912

Minimum Crew:

2 Pilots

Maximum Passengers:

145

Maximum Baggage:

CARGO COMPARTMENT	MAXIMUM LOAD	
	(KG)	(LBS)
Forward	2,268	4,996
Aft	3,020	6,652
Rear (Bulk)	1,497	3,297

For the positions and the loading conditions authorized in each position (references of containers, pallets, associated weights), see Weight and Balance Manual, Ref. 00J080A0001/C1S Chapter 1.10.

Fuel Capacity (0.8 kg/liter)

Tank	Usable Fuel		Unusable Fuel	
	Liters (kgs)	Gallons (lbs)	Liters (Kgs)	Gallons (lbs)
Wing	15,609 (12,487)	4,124 (27,534)	58.9 (47.1)	15.6 (103.9)
Center	8,250 (6,600)	2,180 (14,553)	23.2 (18.6)	6.5 (41.0)
TOTAL	23,859 (19,087)	6,304 (42,087)	82.1 (65.7)	20.8 (144.9)

Oil Capacity

CFMI CFM56-5B - Engine Oil Capacity, 10 quarts/engine (9.46 liters).

IAE V2500-A5 - Engine Oil Capacity, 7 quarts/engine (6.6 liters)

Hydraulic Fluids:

- Type IV - Specification NSA 30.7110.
- Capacity (Reservoirs and Systems):

System	Liters	Gallons
Green	100	26
Yellow	75	20
Blue	60	16

Pressure: 3000 ± 200 PSI (207 ± 4 bar)

Tires:

- See Airbus Service Bulletin (SB) A320-32-1007

Maximum Operating Altitude:

- 39,100 feet (12,000 m) clean.
- 20,000 feet (6,500 m) Slats/Flaps extended.

Equipment:

The equipment required by the applicable requirements shall be installed.

Equipment approved for installation are listed in the definition of the reference model and the modifications applicable to it.

Refer to Type Certification Standard Equipment Lists:

- 00J000A0012/COS for A319-111 Model
- 00J000A0004/COS for A319-112 Model
- 00J000A0113/COS for A319-113 Model
- 00J000A0114/COS for A319-114 Model
- 00J000A0131/COS for A319-131 Model
- 00J000A0132/COS for A319-132 Model

Refer to A319 Note 4 for list of A319 airplane model FAA Type Definitions.

Other Information:

See "Data Pertinent to all A319 models.

V. DATA PERTINENT TO ALL A319 MODELS

Datum:

Station 0 (100 inches forward of fuselage nose).

Reference Mean Aerodynamic Chord (MAC):

165.10 inches / 4.1935 m (leading edge of MAC: Sta. 700.85 inches).

Leveling Means:

Clinometer on the cabin seat track rails.

Serial Numbers Eligible:

A319 aircraft, all series, all models, are produced in Hamburg (Germany) under approval I-A9 issued by LBA to Airbus Industrie.

A German Export Certificate of Airworthiness endorsed as noted under "Import Requirement," must be submitted for each individual aircraft for which application for U.S. certification is made.

Import Requirements:

A FAA Standard Airworthiness Certificate may be issued on the basis of a German Export Certificate of Airworthiness, signed by a representative of the Luftfahrt-Bundesamt (LBA) of Germany, containing the following statement: "The Airplane covered by this certificate has been examined, tested, and found to conform to the Type Design approved under Type Certificate No. A28NM and to be in condition for safe operation."

Certification Basis:

- a. Part 25 of the FAR effective February 1, 1965, including Amendments 25-1 through 25-56 thereto.
- b.1 Except where superseded by the following sections of Part 25 as amended by amendments 25-1 through 25-56:
 - 25-58 (Section 25.812(e))
 - 25-63 (Section 25.25 (a)(3))
 - 25-67 (Section 25.807 (c)(7))
 - (in application to FAA order 8110.4A)
- b.2 Except due to the elect to comply with FAR 25 Amendment 86:
 - 25.305(d), 25.321(c)/(d), 25.331(a)/(d), 25.333(a)/(c), 25.335(d), 25.341,
 - 25.343 (b)(1)(ii), 25.345(a)/(c), 25.349(b), 25.351(b), 25.371, 25.373(a),
 - 25.391(e), 25.427, 25.445(a), 25.571(b)(2)/(b)(3), 25.1517.
- b.3 Except due to the elect to comply with portions of FAR 25.562, Amendment 64, for the passenger seats only. FAR paragraphs 25.562(c)(5), (c)(6) do not apply.
- c. Part 34 of the FAR effective Sept. 10, 1990, including amendment 34-1.
- d. Part 36 of the FAR effective December 1, 1965, including amendments 36-1 through 36-20 hereto.
- e. FAA Special Conditions issued for the A320 in accordance with Section 21.16 of the FAR and published in the Federal Register as follows:
 - (1) January 27, 1989:
 - Electronic Flight Controls
 - Active Controls
 - Engine Controls and Monitoring
 - Protection from Lightning and Unwanted Effects of Radio Frequency (RF) Energy
 - Flight Characteristics
 - Flight Envelope Protection
 - Side Stick Controllers
 - Flight Recorder
 - (2) June 9, 1989:
 - Computerized AFM
- f. For precision approach and landing, the applicable technical requirements are complemented by AC 120-29 and AC 120-28c.

For the automatic flight control system, the applicable technical requirements are complemented by AC 20-57A for automatic landing and by AC 25.1329-1A for cruise.

Use of JAR AWO where applicable to the requirements above, is acceptable.

- g. The following paragraphs of the FAR have been complied with through equivalent safety demonstrations:
- 25.101, 25.105, 25.109, 25.113, 25.115, 25.735, for rejected takeoff and landing performance
 - 25.783(f) for passenger doors
 - 25.807(c) for maximum passenger capacity
 - 25.813(a) emergency exit access for a single 13 inch aisle
 - 25.933(a), 25.1309(b) for thrust reversing system
 - 25.811(e)(3) Type III emergency exit marking.
- h. Optional Requirements elected:
- 25.801 for ditching
 - 25.1419 for icing

Service Information:

- All Airbus Industrie Service Bulletins will be DGAC-approved and will carry a statement to that effect. This statement may be interpreted as "FAA Approved." All Service Bulletins that are subject to a "Consigne de Navigabilite" of the DGAC will carry a statement to that effect.

- Service Bulletins which have been approved under the authority of DGAC Design Organization Approval No.C01, (F-JA-02 for JAA) 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 when they are minor.

- The Structural Repair Manual is DGAC-Approved and carries a statement to that effect. This statement is to be interpreted as constituting FAA approval.

- Other available service documents for the Airbus include:

- a. Illustrated Parts Catalog
- b. Wiring Diagram Manual
- c. Maintenance Manual

VI. NOTES (A319)

Note 1 - Weight and Balance

- a. Current weight and balance report including list of equipment, entitled "Aircraft Inspection Report" included in certificated empty weight, and loading instructions, must be in each aircraft at the time of original certification and at all times thereafter, except in the case of operators having an approved weight control system. Airbus Industrie report, " Weight and Balance Manual," contains loading information for each airplane and interior arrangement configuration as delivered. This report contains, or refers to, information relative to location of all passengers and crew member seats, location and capacity of all cargo and baggage compartments, buffets, storage spaces and coat rooms, location and capacity of lounges, lavatories, and the required placards in the passenger compartment.
- b. The airplane must be loaded so that the CG is within specified limits at all times, considering fuel loading usage, gear retraction and movement of crew and passengers from their assigned positions.
- c. The weights of system fuel and oil, as defined below, and hydraulic fluid, all of which must be included in the airplane empty weight, are listed for each airplane in the Weight and Balance Manual specified in paragraph a. above.
- d. System fuel is the weight of all fuel required to fill a lines and tanks up to zero-fuel point on the fuel gauges in the most critical flight attitude, including the unusable tank fuel as defined by FAR part 26.959. (The usable fuel in the crossfeed manifold lines, manifolds, and engine that is not part of the system fuel must be included in the total usable fuel to obtain correct weight and CG for take-off.)
- e. The unusable fuel is that amount of fuel in the tanks which is unavailable to the engines under critical flight conditions as defined in FAR Part 25.959. This "unusable" fuel is included in System Fuel as indicated in paragraph d. above, and need not be accounted for separately.

f. System oil is the weight of all remaining in the engine, constant speed drive, lines, and tanks after subtracting the oil in the tanks which is above the standpipe (zero gauge) levels. The engine oil capacities shown elsewhere in this data sheet include only the usable oil for which the tanks must be placarded.

Note 2:

The aircraft must be operated in accordance with the DGAC-approved FAA Airplane Flight Manual. ("DGAC-approved" is considered equivalent to "FAA-approved".)

Note 3:

Life limitations are provided in the Chapter V of the A320 Maintenance Manual approved by DGAC.

Note 4:

The A319 basic definition for U.S. import certification is contained in the following documents:

- AI/EA-S 413.0969/96 for A319-111 model
- AI/EA-S 413.1012/96 for A319-112 model
- AI/EA-S 413.3100/96 (Mod 25699 supplement) for A319-112 model
- AI/EA-S 413.2504/96 for A319-113 model
- AI/EA-S 413.2505/96 for A319-114 model
- AI/EA-S 413.0393/97 for A319-131 model
- AI/EA-S 413.0396/97 for A319-132 model

Note 5:

Maintenance criteria to comply with certification requirements for systems are given in Airbus Industrie Document AI/ST4/955.061/89 "Certification Maintenance Requirements (FAA version)" (CMR).

Maintenance criteria to comply with certification requirements for structure are given in Airbus Industrie Document AI/SE-M4/95A.0252/96 "Structural Inspection Requirements".

This does not constitute operational approval.

Note 6:

If modification 25469 is embodied on models with CFM engines, the airplane is qualified for CAT III B precision approach. This does not constitute operational approval.

Note 7:

Modification 25303 (for CFM engine) or 25302 (for IAE engine) are part of the FAA Type Design and shall be implemented on any A319 aircraft entered on the U.S. register, before the individual U.S. standard Certificate of Airworthiness can be issued.

Note 8:

If modification 25800 is embodied on models with CFM56-5B engines, the engine performance is improved. The engine denomination changes to /P.

CFM56-5B/"non-P" engine can be intermixed with CFM56-5B/P engine on the same aircraft.

VII. DATA PERTINENT TO ALL A320 MODELS

Datum:

Station 0 (100 inches forward of fuselage nose).

MAC:

165.10 inches (leading edge of MAC: Sta. 700.85 inches).

Leveling Means:

Clinometer on the cabin seat track rails.

Serial Numbers Eligible:

A320 aircraft, all series, all models, are produced in Blagnac (France) under approval P09 issued by DGAC to Airbus Industrie.

A French "Certificat de Navigabilite pour Exportation," endorsed as noted under "Import Requirement," must be submitted for each individual aircraft for which application for U.S. certification is made.

Import Requirements:

A FAA Standard Airworthiness Certificate may be issued on the basis of a French "Certificat de Navigabilite pour Exportation," signed by a representative of the Direction Generale de l'Aviation Civile (DGAC) of France, containing the following statement: "The Airplane covered by this certificate has been examined, tested, and found to conform to the Type Design approved under Type Certificate No. A28NM and to be in condition for safe operation."

Certification Basis

- a. Part 25 of the FAR effective February 1, 1965, including Amendments 25-1 through 25-56 thereto.
- b. Special Federal Aviation Regulation (SFAR) No.27 effective February 1, 1974, including Amendments 27-1 through 27-5.
- c. Part 36 of the FAR effective December 1, 1969, including Amendments 36-1 through 36-12.
- d. FAA Special Conditions issued for the A320 in accordance with Section 21.16 of the FAR and published in the Federal Register, as follows:
 - (1) January 27, 1989:
 - Electronic Flight Controls
 - Active Controls
 - Engine Controls and Monitoring
 - Protection from Lightning and Unwanted Effects of Radio Frequency (RF) Energy
 - Flight Characteristics
 - Flight Envelope Protection
 - Side Stick Controllers
 - Flight Recorder.
 - (2) June 9, 1989:
 - Computerized Airplane Flight Manual
- e. For precision approach and landing, the applicable technical requirements are complemented by AC 120-29 and AC 120-28c.

For the automatic flight control system, the applicable technical requirements are complemented by AC 20-57A for automatic landing and by AC 25.1329-1A for cruise.

Use of JAR AWO where applicable to the requirements above, is acceptable.

- f. The following paragraphs of the FAR have been complied with through equivalent safety demonstrations:
 - 25.783(e) for cargo doors
 - 25.783(f) for passenger doors and bulk cargo door
 - 25.813(c) for emergency exit access
 - 25.811(e)(3) Type III emergency exit marking.
- g. Optional Requirements elected:
 - 25.801 for ditching.
 - 25.1419 for icing.

Service Information:

- All Airbus Industrie service bulletins will be DGAC-approved and will carry a statement to that effect. This statement may be interpreted as "FAA Approved". All service bulletins that are subject to a Consigne de Navigabilite of the DGAC will carry a statement to that effect.

- Service Bulletins which have been approved under the authority of DGAC Design Organization Approval No.C01, (F-JA-02 for JAA) 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 when they are minor.

- The Structural Repair Manual is DGAC-Approved and carries a statement to that effect. This statement is to be interpreted as constituting FAA approval.

- Other available service documents for the Airbus include:

- a. Illustrated Parts Catalog
- b. Wiring Diagram Manual
- c. Maintenance Manual.

VIII. NOTES (A320)

Note 1 - Weight and Balance

a. Current weight and balance report including list of equipment, entitled "Aircraft Inspection Report" included in certificated empty weight, and loading instructions, must be in each aircraft at the time of original certification and at all times thereafter, except in the case of operators having an approved weight control system. Airbus Industrie report, "Weight and Balance Manual," contains loading information for each airplane and interior arrangement configuration as delivered. This report contains, or refers to, information relative to location of all passengers and crew member seats, location and capacity of all cargo and baggage compartments, buffets, storage spaces and coat rooms, location and capacity of lounges, lavatories, and the required placards in the passenger compartment.

b. The airplane must be loaded so that the CG is within specified limits at all times, considering fuel loading usage, gear retraction and movement of crew and passengers from their assigned positions.

c. The weights of system fuel and oil, as defined below, and hydraulic fluid, all of which must be included in the airplane empty weight, are listed for each airplane in the Weight and Balance Manual specified in paragraph a. above.

d. System fuel is the weight of all fuel required to fill a lines and tanks up to zero-fuel point on the fuel gauges in the most critical flight attitude, including the unusable tank fuel as defined by FAR part 26.959. (The usable fuel in the crossfeed manifold lines, manifolds, and engine that is not part of the system fuel must be included in the total usable fuel to obtain correct weight and CG for take-off.)

e. The unusable fuel is that amount of fuel in the tanks which is unavailable to the engines under critical flight conditions as defined in FAR Part 25.959. This "unusable" fuel is included in System Fuel as indicated in paragraph d. above, and need not be accounted for separately.

f. System oil is the weight of all remaining in the engine, constant speed drive, lines, and tanks after subtracting the oil in the tanks which is above the standpipe (zero gauge) levels. The engine oil capacities shown elsewhere in this data sheet include only the usable oil for which the tanks must be placarded.

Note 2:

The aircraft must be operated in accordance with the DGAC-approved FAA Airplane Flight Manual. ("DGAC-approved" is considered equivalent to "FAA-approved".)

Note 3:

Life limitations are provided in the Chapter V of the A320 Maintenance Manual approved by DGAC.

Note 4:

The A320 basic definition for U.S. import certification is contained in the following documents:

- AI/A 414.282/88 for the A320 Models -111 and -211
- AI/EA-A 413.628/89 for the A320 Model -231
- AI/EA-A 412.1631/90 for the A320 Model -212
- AI/EA-A 414.0665/93 for the A320 Model -232
- AI/EA-S 413.2143/95 for the A320 Model -233
- AI/EA-S 413.0150/95 for the A320 Model -214
- AI/EA-S 413.3004/96 (supplement) for the A320 Model -214.

Note 5:

Maintenance criteria to comply with certification requirements for systems are given in Airbus Industrie Document AI/ST4/955.061/89 "Certification Maintenance Requirements (FAA version)" (CMR).

Maintenance criteria to comply with certification requirements for structure are given in Airbus Industrie Document AI/SE-M4/95A.0252/96 "Structural Inspection Requirements".

This does not constitute operational approval.

Note 6:

If modification 20758 is embodied, the airplane is certified for CAT III B precision approach (fail operational) and landing. This does not constitute an operational approval.

Note 7:

All Models of A320 airplanes manufactured after January 1, 1997 must have either modification 25302 (for IAE engines) or 25303 (for CFM engines) installed, before the individual U.S. standard Certificate of Airworthiness can be issued.

Note 8:

If modification 25800 is embodied on models with CFM56-5B engines, the engine performance is improved. The engine denomination changes to /P.

CFM56-5B/"non-P" engine can be intermixed with CFM56-5B/P engine on the same aircraft.

IX. DATA PERTINENT TO ALL A321 MODELS

Datum:

Station 0 (100 inches forward of fuselage nose).

MAC:

165.10 inches (leading edge of MAC: Sta. 700.85 inches).

Leveling Means:

Clinometer on the cabin seat track rails.

Serial Numbers Eligible:

A321 Aircraft, all series, all models, are produced in Hamburg (Germany) under approval 1-A9 issued by LBA to Airbus Industrie.

A German Export Certificate of Airworthiness endorsed as noted under "Import Requirement", must be submitted for each individual aircraft for which application for U.S. certification is made.

Import Requirements:

A FAA Standard Airworthiness Certificate may be issued on the basis of a German Export Certificate of Airworthiness, signed by a representative of the Luftfahrt-Bundesamt (LBA) of Germany, containing the following statement: "The airplane covered by this certificate has been examined, tested, and found to conform to the type design approved under Type Certificate No. A28NM and to be in condition for safe operation."

Certification Basis (A321-100 and A321-200)

- a. Part 25 of the FAR effective February 1, 1965, including amendments 25-1 through 25-56 thereto.
- b.1. Except where superseded by the following sections of Part 25 as amended by amendments 25-1 through:
 - 25-58 (Section 25.812(e))
 - 25-63 (Section 25.25(a)(3))
 - 25-67 (Section 25.807(c)(7))
 - 25-70 (Section 25.1411(a)(2))
- b.2. Except due to the elect to comply with portions of FAR 25.562, Amendment 64, for the passenger seats only. FAR paragraphs 25.562(c)(5) and 25.562(c)(6) do not apply.
- c. Part 34 of the FAR effective September 10, 1960, including amendments 34-1 .

- d. Part 36 of the FAR effective December 1, 1965, including amendments 36-1 through 36-20 thereto.
- e. FAA Special Conditions issued for the A320 in accordance with Section 21.16 of the FAR and published in the Federal Register as follows:
 - 1) January 27, 1989:
 - Electronic Flight Controls
 - Active Controls
 - Engine Controls and Monitoring
 - Protection from Lightning and Unwanted Effects of Radio Frequency (RF) Energy
 - Flight Characteristics
 - Flight Envelope Protection
 - Side Stick Controllers
 - Flight Recorder.
 - (2) June 9, 1989
 - Computerized Airplane Flight Manual
- f. For precision approach and landing, the applicable technical requirements are complemented by AC 120-29 and AC 120-28c.

For the automatic flight control system, the applicable technical requirements are complemented by AC 20-57A for automatic landing and by AC 25.1329-1A for cruise.

Use of JAR AWO where applicable to the requirements above, is acceptable.

- g. The following sections of the FAR have been complied with through equivalent safety demonstrations in addition to the equivalent safety findings applicable from the original A320 certification basis:
 - 25.101, 25.105, 25.109, 25.113, 25.115, 25.735, for rejected take-off and landing performance
 - 25.305, 25.331, 25.333, 25.335, 25.341, 25.345, 25.349, 25.351, 25.371, 25.373, 25.391, 25.427, for design gust criteria
 - 25.783(e) bulk cargo door
 - 25.783(f) for passenger doors
 - 25.807(c) for maximum passenger capacity
 - 25.933(a) for thrust reversing system.
- h. Optional requirements elected:
 - 25.801 for ditching.
 - 25.1419 for icing.

Service Information:

- All Airbus Industrie service bulletins will be DGAC-approved and will carry a statement to that effect. This statement may be interpreted as "FAA Approved". All service bulletins that are subject to a Consigne de Navigabilite of the DGAC will carry a statement to that effect.

- Service Bulletins which have been approved under the authority of DGAC Design Organization Approval No.C01, constitute DGAC approval and, there-fore, 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 when they are minor.

- The Structural Repair Manual is DGAC-Approved and carries a statement to that effect. This statement is to be interpreted as constituting FAA approval.

-Other available service documents for the Airbus include:

- a. Illustrated Parts Catalog
- b. Wiring Diagram Manual
- c. Maintenance Manual.

X. NOTES (A321)Note 1 - Weight and Balance

a. Current weight and balance report including list of equipment, entitled "Aircraft Inspection Report" included in certificated empty weight, and loading instructions, must be in each aircraft at the time of original certification and at all times thereafter, except in the case of operators having an approved weight control system. Airbus Industrie report, "Weight and Balance Manual," contains loading information for each airplane and interior arrangement configuration as delivered. This report contains, or refers to, information relative to location of all passengers and crew member seats, location and capacity of all cargo and baggage compartments, buffets, storage spaces and coat rooms, location and capacity of lounges, lavatories, and the required placards in the passenger compartment.

b. The airplane must be loaded so that the CG is within specified limits at all times, considering fuel loading usage, gear retraction and movement of crew and passengers from their assigned positions.

c. The weights of system fuel and oil, as defined below, and hydraulic fluid, all of which must be included in the airplane empty weight, are listed for each airplane in the Weight and Balance Manual specified in paragraph a. above.

d. System fuel is the weight of all fuel required to fill a lines and tanks up to zero-fuel point on the fuel gauges in the most critical flight attitude, including the unusable tank fuel as defined by FAR part 26.959. (The usable fuel in the crossfeed manifold lines, manifolds, and engine that is not part of the system fuel must be included in the total usable fuel to obtain correct weight and CG for take-off.)

e. The unusable fuel is that amount of fuel in the tanks which is unavailable to the engines under critical flight conditions as defined in FAR Part 25.959. This "unusable" fuel is included in System Fuel as indicated in paragraph d. above, and need not be accounted for separately.

f. System oil is the weight of all remaining in the engine, constant speed drive, lines, and tanks after subtracting the oil in the tanks which is above the standpipe (zero gauge) levels. The engine oil capacities shown elsewhere in this data sheet include only the usable oil for which the tanks must be placarded.

Note 2:

The aircraft must be operated in accordance with the DGAC-approved FAA Airplane Flight Manual. ("DGAC-approved" is considered equivalent to "FAA-approved".)

Note 3:

Life limitations are provided in the Chapter V of the A320 Maintenance Manual approved by DGAC.

Note 4:

The A321 basic definition for U.S. import certification is contained in the following documents:

- 00E000A0010/C11 for A321-111 model
- 00E000A0011/C11 for A321-112 model
- 00E000A0012/C11 for A321-131 model
- AI/EA-S 413.3365/96 (supplement) for A321-111/112/131 models
- AI/EA-S 413.0401/97 for A321-211 model
- AI/EA-S 413.0399/97 for A321-231 model.

Note 5:

Maintenance criteria to comply with certification requirements for systems are given in Airbus Industrie Document AI/ST4/955.061/89 "Certification Maintenance Requirements (FAA version)" (CMR).

Maintenance criteria to comply with certification requirements for structure are given in Airbus Industrie Document AI/SE-M4/95A.0252/96 "Structural Inspection Requirements".

This does not constitute operational approval.

Note 6:

Door 2 and/or Door 3 may be derated to Type III.

Note 7:

If modifications 24173 and 22853 are embodied on models with IAE engines, the aircraft is qualified for Cat II precision approach. This does not constitute operational approval.

Note 8:

If modification 24064 is embodied on models with CFM engines, the aircraft is qualified for Cat III precision approach. This does not constitute operational approval.

Note 9:

If modification 24066 is embodied on models with IAE engines, the aircraft is qualified for Cat III precision approach. This does not constitute operational approval.

Note 10:

If modification 25199 is embodied on models with CFM engines, the aircraft is qualified for Cat III B precision approach. This does not constitute operational approval.

Note 11:

If modification 25200 is embodied on models with IAE engines, the aircraft is qualified for Cat III B precision approach. This does not constitute operational approval.

Note 12:

If FWC Standard D2 and FAC standard BAM 0510 are fitted on A321 aircraft, VFE speed in configuration 2 is increased from 205kts to 215kts (as identified by speed limitation placard installed by modification 24641).

Note 13:

Modifications 25302 (for IAE engine) and 25303 (for CFM engine) are part of the FAA Type Design, and shall be implemented on any A321 aircraft entered on the U.S. register, before the individual U.S. standard Certificate of Airworthiness be issued.

Note 14:

If modification 25800 is embodied on models with CFM56-5B engines, the engine performance is improved. The engine denomination changes to /P.

CFM56-5B/"non-P" engine can be intermixed with CFM56-5B/P engine on the same aircraft.

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