



AGÊNCIA NACIONAL DE AVIAÇÃO CIVIL - BRASIL

TYPE CERTIFICATE DATA SHEET Nº EA-8302

Type Certificate Holder:

THE BOEING COMPANY
Seattle, WA - 98124
USA

EA-8302-19

Sheet 01

BOEING

767-200 SERIES

767-300 SERIES

767-300F SERIES

04 August 2010

This data sheet, which is part of Type Certificate No. 8302, prescribes conditions and limitations under which the product, for which the Type Certificate was issued, meets the airworthiness requirements of the Brazilian Aeronautical Regulations.

I - Model 767-200 Series (Transport Category): Model 2Q4, approved on 23 June 1983; Model 205, approved on 18 August 1986; Model 241, approved on 30 June 1987; Models 219 and 283, approved on 17 October 1994; Model 216, approved on 31 August 1995; Model 2B1, approved on 31 August 1998; Model 231, approved on 26 May 2006; Model 27G approved on 25 September 2007.

ENGINE

Model 2Q4: two General Electric CF6-80A
Models 205 and 231: two Pratt & Whitney JT9D-7R4D
Model 241: two General Electric CF6-80C2B2
Models 283 and 2B1: two Pratt & Whitney PW4056
Models 219 and 216: two General Electric CF6-80A2
Model 27G two General Electric CF6-80C2B4F

The GE CF6-80A engines may be intermixed with CF6-80A2 engines with appropriate limitation as indicated in the applicable Airplane Flight Manual.

FUEL

ASTM D-1655 grades Jet A, Jet A1, or jet B; MIL-T-5624 grades JP-4 or JP-5; MIL-T-83133 grade JP-8; or, fuels conforming to Pratt & Whitney Service Bulletin 2016 (FAA approved), for P&W engines, and to General Electric Specification D50TF2 (FAA approved), for GE engines.

ENGINE LIMITS

Maximum static thrust for 5 min at sea level and standard condition:

- CF6-80 A: 48 000 lb (213.5 kN)
- CF6-80 A2: 50 000 lb (222.5 kN)
- CF6-80C2B2: 52 500 lb (233.5 kN)
- CF6-80C2B4F: 57 280 lb (255.2 kN)
- JT9D-7R4D: 48 000 lb (213.5 kN)
- PW-4056: 56 750 lb (252.8 kN)

For other ratings and limitations see engine Type Certificate Data Sheets - EM 8303 (ANAC) or E13NE (FAA), for GE engines; EM-8604 (ANAC) or E3NE (FAA), for Pratt & Whitney JT9D engines; EM-9114 (ANAC) or E24NE (FAA) for Pratt & Whitney engines - or the applicable Airplane Flight Manual.

OIL Synthetic type conforming to GE Specification 50TF1 classes A or B or P&W Specification No. 521 - Service Bulletins GE-79-1 and P&W 238 list approved brand oils.

AIRSPEED LIMITS (CAS)

Maximum operating (V_{mo}):	360 kt
Maximum operating (M_{mo}):	0.86 M
Design diving speed. (V_D):	420 kt to 17 854 ft
(linear variation between the points)	0.91 M above 23 000 ft
Maximum for stability characteristics (V_{FC}):	390 kt to 17 854 ft
(linear variation between the points)	382 kt at 23 000 ft
	0.87 M above 26 000 ft
L. G. extended (V_{le}):	270 kt/0.82 M
L. G. operation (V_{lo}):	270 kt/0.82 M

For other airspeed limits, see the applicable Airplane Flight Manual.

C. G. RANGE See the appropriate FAA-Approved Flight Manual.

MAXIMUM WEIGHT See the appropriate FAA-Approved Flight Manual.

SERIAL NUMBERS ELIGIBLE

Model 2Q4:	22921 through 22923
Model 205:	23057 and 23058
Model 241:	23801 through 23806
Model 283:	24727 and 24728
Model 219:	23326 through 23328 and 24150
Model 216:	23623, 23624 and 24973
Model 2B1:	25421
Model 231	22569
Model 27G	27048

II - Model 767-300 Series (Transport Category), Models 341 and 3Y0, approved on 16 November 1991; Model 3P6, approved on 31 August 1995; Model 375, approved on 29 October 1999, Model 33A approved on 01 June 2004, Model 322 approved 29 March 2007, Models 330, 3S1, 31A and 38E approved on 25 September 2007; Models 328 and 383 approved on 23 October 2007.

ENGINE

Models 341 and 375:	two General Electric CF6-80C2B6F
Model 3P6:	two General Electric CF6-80C2B4
Models 3Y0 and 322:	two Pratt & Whitney PW4060 or PW4060C
Model 33A:	two Pratt & Whitney PW4060C or PW4060 or two General Electric CF6-80C2B6F
Models 330 and 31A	two Pratt & Whitney PW4060 or PW4060C
Models 3S1 and 38E	two General Electric CF6-80C2B6F
Models 328	two General Electric CF6-80C2B6F
Models 383	two Pratt & Whitney PW4060 or PW4060C

FUEL ASTM D-1655 grades Jet A, A1, or jet B; MIL -T 5624 grades JP-4 or JP-5; MIL -T-83133 grade JP-8; or, fuels conforming to Pratt & Whitney Service Bulletin 2016 (FAA approved), for P&W engines, and to General Electric Specification D50TF2 (FAA approved), for GE engines.

ENGINE LIMITS

Maximum static thrust for 5 min at sea level and standard condition:

- CF6-80C2B4: 57 900 lb (254.5 kN)
- CF6-80C2B6F: 61 500 lb (273.5 kN)
- PW4060: 60 000 lb (267.0 kN)
- PW4060C: 60 000 lb (267.0 kN)

For other ratings and limitations see engine Type Certificate Data Sheets - EM 8303 (ANAC) or E13NE (FAA), for GE engines; EM-9114 (ANAC) or E24NE (FAA) for Pratt & Whitney engines - or the applicable Airplane Flight Manual.

OIL

Synthetic type conforming to GE Specification 50TF1 classes A or B or P&W Specification No. 521 - Service Bulletins GE-79-1 and P&W 238 list approved brand oils.

AIRSPEED LIMITS (CAS)

Maximum operating (V_{mo}):	360 kt
Maximum operating (M_{mo}):	0.86 M
Design diving speed. (V_D):	420 kt to 17 854 ft
(linear variation between the points)	0.91 M above 23 000 ft
Maximum for stability characteristics (V_{FC}):	390 kt to 17 600 ft
(linear variation between the points)	382 kt at 23 000 ft
	0.87 M above 26 000 ft
L. G. extended (V_{le}):	270 kt/0.82 M
L. G. operation (V_{lo}):	270 kt/0.82 M

For other airspeed limits, see the applicable Airplane Flight Manual.

CG RANGE

See the appropriate FAA-Approved Flight Manual.

MAXIMUM WEIGHT

See the appropriate FAA-Approved Flight Manual.

SERIAL NUMBERS ELIGIBLE

Model 341:	24752, 24753, 24843 and 24844
Model 3P6:	23764, 24349, 24484, 24485, 24495, 24496, 24983 through 24985, 25241, 25269, 25354, 26233, 26235, 23236 and 26238.
Model 3Y0:	24947, 24948, 24952, 24953, 24999, 25000, 25411, 26200, 26204 through 26208.
Model 375:	24082 thru 24087, 24306, 24307, 24574, 24575, 25120 and 25121.
Model 33A:	25403, 27376, 27477, 27909, 27377 and 27468.
Model 322	25280, 25287
Model 330	25208
Model 3S1	25221
Model 31A	27619
Model 38E	25132
Model 328	27427
Model 383	24846 and 24849

III - Model 767-300F Series (Freighter Category), Model 316F, approved on 29 July 2002.**ENGINE**

Model 316F: two General Electric CF6-80C2B7F or CF6-80C2B6F

FUEL

ASTM D-1655 grades Jet A, A1, or jet B; MIL -T 5624 grades JP-4 or JP-5; MIL -T-83133 grade JP-8; or, fuel to General Electric Specification D50TF2 (FAA approved), for GE engines.

ENGINE LIMITS

Maximum static thrust for 5 min at sea level and standard condition:

- CF6-80C2B7F: 60 030 lb (267.0 kN)

- CF6-80C2B6F: 60 030 lb (267.0 kN)

For other ratings and limitations see engine Type Certificate Data Sheets - EM 8303 (ANAC) or E13NE (FAA), for GE engines;

- or the applicable Airplane Flight Manual.

OIL

Synthetic type conforming to GE Specification D50TF1 classes A or B - Service Bulletins GE-79-1 .

AIRSPEED LIMITS (CAS)

Maximum operating (V_{mo}): 360 kt

Maximum operating (M_{mo}): 0.86 M

Design diving speed. (V_D): 420 kt to 17 854 ft
(linear variation between the points) 0.91 M above 23 000 ft

Maximum for stability characteristics (V_{FC}): 390 kt to 17 600 ft

(linear variation between the points) 382 kt at 23 000 ft
0.87 M above 26 000 ft

L. G. extended (V_{le}): 270 kt/0.82 M

L. G. operation (V_{lo}): 270 kt/0.82 M

For other airspeed limits, see the applicable Airplane Flight Manual.

C. G. RANGE

See the appropriate FAA-Approved Flight Manual.

MAXIMUM WEIGHT

See the appropriate FAA-Approved Flight Manual.

SERIAL NUMBERS ELIGIBLE

Model 316F: 29881, 30780 and 34245.

DATA PERTINENT TO ALL MODELS:**DATUM**

Sta. 0.0 located 92.5 in (234.95 cm) forward of airplane nose.

LEVELING MEANS

Two inclinometers, plumb bob support and target (scale), left main gear well.

BALANCE ARM REFERENCE LINE

B767-200 Series: 92.5 in (234.95 cm) forward of airplane nose.

B767-300 Series: 28.5 in (72.39 cm) aft of airplane nose.

The balance arm is used for location of airplane and components CG (see Weight and Balance Manual).

MEAN AERODYNAMIC CHORD

237.5 in (603.25 cm); MAC leading edge at 913.2 in (2 319.53 cm) from balance arm reference line.

MINIMUM CREW

Two: pilot and copilot.

MAXIMUM PASSENGERS

255 for 767-200 with 2 pairs of type A plus of type III exits.

290 for 767-200/300 with 2 pairs of type A plus 2 pairs of type III exits or, for 767-300 with 3 pairs of type A plus 1 pair of type III exits.

330 for 767-300 with 3 pairs of type A plus 1 pair of type I exits.

351 for 767-300 with 3 pair of type A plus 1 pair of type I exits and 8 flight attendants.

See Note 6 for type III exit requirements.

MAXIMUM BAGGAGE/CARGO

See applicable Weight and Balance Manual.

FUEL CAPACITY (USABLE)

US Gal.

Liter

kg

Main tanks:	12 140	45 955	36 764
Center aux. tanks:	4 560	17 260	13 808
Increased aft center aux. tanks	3 750	14 195	11 356
Increased forward center aux. tanks	3 690	13 970	11 716
Totals	24 140	91 380	73 104

Standard center aux. tanks are basic to all aircraft but not used on those with maximum takeoff weight 282 000 lb (127 912 kg).

Increased aft center auxiliary tanks are installed on all 767-200ER and -300 ER.

Increased forward center auxiliary tanks are additionally installed on the -200ER and -300ER with maximum takeoff weight 387 000 lb (175 540 kg)

Density considered in the above table is 0.8 kg/l..

For unusable and trapped fuel, CG arms, constraints on CG limits, density variations and overwing fueling, consult the applicable Weight and Balance Manual.

OIL CAPACITY

For engine, APU, IDG and starter oil capacities (drainable and trapped), consult the applicable Weight and Balance Manual.

MAXIMUM OPERATING ALTITUDE

43 100 ft (19 505 m).

CONTROL SURFACE MOVEMENTS

Control surfaces must be rigged in accordance with Boeing drawings 251T1001, 251T2001, 251T3001, 251T4001, 254T7001, 257T4001, 256T1001, 256T2001 and 256T3001.

IMPORT REQUERIMENTS

A Brazilian Airworthiness Certificate may be issued on the basis of the FAA Export Airworthiness Certificate (or a third country Export Airworthiness Certificate, in case of used aircraft exported from such country), signed by an FAA representative (or a third country airworthiness authority representative), containing the following statement:

"The airplane covered by this certificate has been examined and found to conform with the Brazilian approved type design established per ANAC Type Certificate No. 8302, and is in condition for safe operation".

The Brazilian Special Requirements for importation of the airplanes are listed in the latest version of the ANAC Acceptance Report H.10-0460-14 or later revisions. (See note 4)

CERTIFICATION BASIS

RBHA 25 corresponding to the 14 CFR Part 25 Amendments 25-1 through 25-37; plus Amendments 25-38 through 25-45, except portions of Amendment 25-38 (Sections 25.979(d) & (e); 25.1143(e)), Amendment 25-40 (Sections 25.901(b)(I)(i); 25.1091(e); 25.1093(b)), Amendment 25-41 (Section 25.1438) and Amendment 25-42 (Section 25.109); plus Amendment 25-46 (Sections 25.345; 25.351(a); 25.697; 25.803; 25.901(d); 25.1103(a), (b)(2), (d), (e) & (f); 25.1142; 25.1522); Amendment 25-49 (Section 25.733) and Amendment 25-54 (Sections 25.365(e)(1) & (2); 25.629).

Exemption from RBHA 25 (767-200 and 767-300):

- Exemption No. 4725 from 25.785(h): Allows one seat for a required flight attendant to be located near the overwing Type III exits.

RBHA 36 corresponding to the 14 CFR Part 36 Amendment 36-1 through 36-12.

Special Federal Aviation Regulation 27 (FAA)

Equivalent Safety Findings with respect to the following regulations:

- RBHA/14 CFR 25.1093(b)(1): Induction system Deicing and Anti-icing Protection
- RBHA/14 CFR 25.1103(d): Induction System Ducts and Air Duct Systems.
- RBHA/14 CFR 25.1181(a)(6): Designated Fire Zones; Regions Included.
- RBHA/14 CFR 25.1305(a)(4), (a)(6), (c)(1) and (c)(3): Powerplant Instruments.
- RBHA/14 CFR 25.1387(b) and (c): Position Light system Dihedral Angles.
- RBHA/14 CFR 25.1393: Minimum Intensities in Any Vertical Plan of Forward and Rear Navigation Lights
- RBHA/14 CFR 25.1395: Maximum Intensities in Overlapping Beams of Forward and Rear Navigation Lights
- RBHA/14 CFR 25.1549(b): Powerplant and Auxiliary Power Unit Instruments.
- RBHA/14 CFR 25.365(e)(2): Pressurized Cabin Loads.
- RBHA/14 CFR 25.803(c)(8): Emergency Evacuation Demonstration.
- RBHA/14 CFR 25.807(a)(7) (iv) and (c): Passenger Emergency Exits.
- RBHA/14 CFR 25.809: Emergency Exit Arrangement.
- RBHA/14 CFR 25.813(c): Emergency Exit Access.
- RBHA/14 CFR 25.107 (d), (e)(1)(iv), (e)(4): Minimum unstick speed (767-300 series only).

Special Conditions with respect to the following subjects apply to the Model 767-200 and 767-300:

- Special Condition No. 25-NM-18 on Lightning Protection, Protection from Unwanted Effects of Radio Frequency (RF) Energy and Propulsion Control system for Pratt & Whitney PW4000 series engines and General Electric CF6-80C2 FADEC engine.

**CERTIFICATION BASIS
(Cont.)**

- Special Condition No. 25-ANM-20 for installation of a longitudinal partition.

Compliance with the following optional requirements has been established:

- Ditching Provisions: RBHA/14 CFR 25.801 (Overwater operation can be approved when the aircraft has been equipped and installation has been approved according to RBHA/14 CFR 25.801).
- Ice Protection Provisions: RBHA/14 CFR 25.1419.

The 767-300F (Freighter) Type Certification Basis includes the following requirements in addition to the 767-300 certification basis detailed above.

- 25.561 Amendment 25-64: Applies to seats for supernumeraries, galley and rigid barrier.
- 25.783 Amendment 25-72: Applies to main deck cargo door.

Exemption from RBHA/14 CFR 25:

- Exemption N° 5993 - Exemption from 25.807(c)(1) and 25.857(e) - Allows for the carriage of up to seven persons including the flight crew members, when the airplane is equipped with a floor level exit with escape slide, and a right hand flight crew window emergency exit that is operable from the outside.
- Exemption N° 5993A - Exemption from 25.807(f)(1) - Allows for the carriage of persons other than light crewmembers. In lieu of an escape slide, the emergency evacuation assist means at the entry door shall be an inertial reel descent device and harness provided for each occupant.

Equivalent Safety Findings exist with respect to the following regulations:

- RBHA/14 CFR 25.1447(c)(1) and 25.1447(c)(3) - Equipment Standards for Oxygen Dispensing Units.

SERVICE INFORMATION

Boeing Document D634T201 "Structural Repair Manual" is FAA-approved. Service Bulletins and other service information when FAA-approved will carry a statement to that effect.

PRODUCTION BASIS

Production Certificate 700 (FAA)

REQUIRED EQUIPMENT

The basic required equipment, as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the airplane.

NOTES:

NOTE 1 Weight and balance. A current Weight & Balance Report must be in each aircraft at the time of original airworthiness certification and at all times thereafter except in the case of an operator having an approved loading system for weight and balance control.

NOTE 2 Markings and placards. The airplane must be operated in accordance with the FAA approved Airplane Flight Manual and the applicable Brazilian AFM Supplement (see paragraph Import Requirements above) approved by the ANAC.
The FAA-approved Airplane Flight Manuals, applicable for the aircraft models included in this Type Certificate Data Sheet, are the following:

**NOTE 2
(Cont.)**

<u>Model</u>	<u>AFM Doc. No.</u>	<u>Model</u>	<u>AFM Doc. No.</u>
767-2Q4	D6T11321.2Q4	767-2B1	D6T-11320.2YO
767-205	D6T11320.205	767-341	D6T11321.341
767-241	D6T11321.241	767-3P6	D6T11321.3P6
767-283	D6T11320.283	767-3YO	D6T11320.3YO
767-219	D6T11321.219	767-375	D6T11321.375
767-216	D6T11321.216	767-33A	D6T11320.33A1 or D6T11321.36Q
767-231	D6T11321.231	767-316F	D611321.316F
767-27G	D6T11321.27G	767-322	D6T11320.322K
767-330	D6T11320.3Q8	767-3S1	D6T11321.3S11
767-31A	D6T11320.31A	767-38E	D6T11321.316
767-328	D6T11321.341	767-383	D6T11320.383

All placards required by either the FAA approved AFM, the applicable operating rules or the certification basis must be installed in the aircraft. Required placards in Portuguese are listed on Section 8 of the ANAC Acceptance Report H.10-0460-14 or later revision.

NOTE 3

Continuing Airworthiness. Required structural inspections and the retirement times for safelife parts are listed in the FAA Approved Airworthiness Limitations Section (Section 9) of Boeing Document D622T001 (Maintenance Planning Data). Systems and powerplant Certification Maintenance Requirements (CMR) are listed in either the FAA approved Section 9 of Maintenance Planning Data (Document D622T001) or the applicable engine Type Certificate Data Sheet. The more restrictive from these two documents shall be in force.

NOTE 4

The differences of the Brazilian airplanes in relation to the basic FAA type design are summarized below:

- 1 - Brazilian Supplement to the FAA approved Airplane Flight Manual, i. e.: Brazilian Supplement no 1 for the B767-200 series approved on 18 May 1983, or Brazilian Supplement no 2 for the B767-300 series approved on 16 November 1991;
- 2 - Portuguese Markings and Placards; and
- 3 - Installation of two ADF systems, being one of them powered by the stand-by electric power.

NOTE 5

Crew procedures identified as required by engineering failure analysis is Boeing Document D230T405 must not be changed unless approved by FAA Engineering.

NOTE 6

The following requirements apply to the design features at the required Type III overwing emergency exits:

- 1- With one pair of Type III exits there must be an unobstructed cross aisle at least 20 in. wide between main aisles in close proximity to the overwing exit pair. With two pair of Type III exits the cross aisle must be in close proximity to both exit pairs.
- 2- Emergency lighting for the cross aisle must be provided in accordance with RBHA 25.812.
- 3- The access to Type III exit requirements established by the ANAC during the original certification of the 767-200 series and listed in the previous issues of this Type Certificate Data Sheet have been superseded by the RBHA 121.310(f)(3)(iii), which requests compliance with RBHA 25.813(c) dated 3 June 1992.

NOTE 7

The type design reliability and performance of this airplane has been evaluated in accordance with FAA Advisory Circular 120-42A and DAC IAC 3501 and found suitable for extended range operations when configured in accordance with Boeing Document D6T11604 "Configuration, Maintenance and Procedures for Extended Range (ER) Operation". This finding does not constitute approval to conduct extended range operations.

- NOTE 8** The Engine Indication and Crew Alerting System (EICAS) provides displays of engine parameters, crew messages of non-normal conditions and system status maintenance data. EICAS messages are divided into the following categories:
- WARNING: Red message, immediate crew action required.
- CAUTION: Amber message, immediate crew awareness and possible future crew action required.
- ADVISORY: Indented amber message, crew awareness and possible future crew action required.
- ADVISORY: White message appears on EICAS Status page, provides readiness for dispatch information which requires crew awareness prior to dispatch.
- MAINTENANCE: White message appears on ECS/MSG page of EICAS, for use of maintenance personnel only.
- NOTE 9** Airplane line numbers 231 and subsequent were manufactured after 20 August 1998, and airplane line numbers 322 and subsequent were manufactured after 20 August 1990 (Reference RHBA 121 312 (a)(1) and (2) and FAR 121 312 (a)(1) and (2) amendment 121 198). Airplanes 322 through 326 are exempt (Exemption No. 5176 A) by the FAA. See Service Bulletin Index, D6-30300, for cross-reference of line number to serial number.
- NOTE 10** The Pratt & Whitney PW4000 series and General Electric CF6-80C2 FADEC series engine type certificate data sheets define allowable dispatch criteria with certain faults present in the engine control system. The three fault categories defined in the engine type data sheets correspond to the following Boeing EICAS messages:

<u>ENGINES FAULT LEVEL</u>		<u>EICAS BOEING MESSAGE</u>
PW 4000	CF6-80C2F	
A	C	ENG. CONTROL - ADVISORY
B	C1	ENG. EEC C1 - STATUS
C	C2	ENG. EEC C2 – MAINTENANCE



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