

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

A1NM
BOEING
767-200 Series
767-300 Series
Revision 7
February 20, 1990

TYPE CERTIFICATION DATA SHEET A1NM

This data sheet, which is part of Type Certificate No. A1NM, prescribes conditions and limitations under which the product for which the type certificate was issued meets the airworthiness requirements of the Federal Aviation Regulations.

Type Certificate Holder: The Boeing Company
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from
Jim Cook

AINM
BOEING
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I - Model 767-200 (Approved July 30, 1982)

Engines: 2 Pratt and Whitney JT9D-7R4D, JT9D-7R4E, JT9D-7R4E4 or PW4052, or 2 General Electric CF6-80A, CF6-80A2, or CF6-80C2-B2 or -B4. The General Electric CF6-80A engines may be intermixed with CF6-80A2 engines with appropriate limitations as noted in the FAA Approved Airplane Flight Manual

Fuel: Pratt and Whitney Engines: Fuels conforming to the latest version of P & W Service Bulletin 2016
General Electric Engines: Fuel conforming to GE Specification D50TF2.
All Engines: ASTM D-1655 grades JET A, JET A1, OR JET B.
MIL-T-5624 grades JP-4 or JP-5.
MIL-T-83133 grades JP-8.

Engine Ratings & Operating Limits: For engine ratings and operating limits see engine TC Data Sheet No. E3NE for the P&W JT9D-7R4D, -7R4E, or -7R4E4, TC Data Sheet E13NE for the GE CF6-80A, CF6-80A2, or CF6-80C2, TC Data Sheet E24NE for the PW4052, or the FAA Approved Airplane Flight Manual.

Airspeed Limits: VD = 420 KCAS to 17,854 ft/.91M above 23,000 ft, linear variation between these points.
VFC = 390 KCAS to 17,600 ft/382 KCAS at 23,000 ft/.87M above 26,000 ft, linear variation between these points.
VMO = 360 KCAS/.86M (CAA Regulatory Requirement is MMO = 0.84M)
VLE = 270 KCAS/.82M
VLO = 270 KCAS/.82M

For other airspeed limits, see the appropriate FAA Approved Airplane Flight Manual,

CG Range: See the appropriate FAA Approved Flight Manual.

Maximum Weights: See the appropriate FAA Approved Flight Manual.

Model Eligible Serial Numbers

767-201	23897-23902
767-204	22980, 22981, 23072, 23250, 23807, 24013, 24239, 24457
767-205	23057, 23058
767-209	22681, 22682
767-216	23623, 23624
767-219	23326-23328, 24150
767-222	21862-21880

<u>Model</u>	<u>Eligible Serial Numbers (continued)</u>
767-223	22307-22336
767-231	22564-22573
767-232	22213-22227
767-233	22517-22528, 24142-24145, 24323-24325
767-238	23304-23306, 23309, 23402, 23403, 23896
767-241	23801-23806
767-246	23212-23214
767-258	22972-22975
767-260	23106, 23107, 23916
767-266	23178-23180
767-269	23280-23282
767-275	22683, 22684
767-277	22692-22696
767-281	22785-22790, 23016-23022, 23431-23434, 23140-23147
767-238	23973, 23974
767-250	24733, 24734
767-2J6	23307, 23308, 23744, 23745, 24007, 24157
767-2N0	24713
767-2Q4	22921-22923
767-2Q8	24448
767-2S1	23494

11 - Model 767-300 (Approved September 22, 1986)

Engines: 2 Pratt and Whitney JT9D-7R4D, JT9D-7R4E, JT9D-7R4E4, PW4056, or PW4060; or
2 General Electric CF6-80A2, or CF6-80C2-B2, -B4, or -B6, or CF6-80C2-B2F or
-B6F; or 2 Rolls Royce RB211-524H36.

Fuel: Pratt and Whitney Engines: Fuels conforming to the latest version of P & W Service Bulletin 2016
General Electric Engines: Fuel conforming to GE Specification D50TF2.
Rolls Royce Engines: See Rolls Royce "Operating Instructions RB211-524H on the Boeing 767-300"
All Engines: ASTM D-1655 grades JET A, JET A1, OR JET B.
MIL-T-5624 grades JP-4 or JP-5.
MIL-T-83133 grades JP-8.

Engine Ratings & Operating Limits: For engine ratings and operating limits see engine TC Data Sheet No. E3NE for the P&W JT9D-7R4D, -7R4E, or -7R4E4, TC Data Sheet E13NE for the GE CF6-80A2, or CF6-80C2, TC Data Sheet E24NE for the PW4056, TC Data Sheet E30NE for the Rolls Royce RB211-524H36, or the FAA Approved Airplane Flight Manual.

Airspeed Limits: VD = 420 KCAS to 17,854 ft/.91M above 23,000 ft, linear variation between these points.
VFC = 390 KCAS to 17,600 ft/382 KCAS at 23,000 ft/.87M above 26,000 ft, linear variation between these points.
VMO = 360 KCAS/.86M (CAA Regulatory Requirement is MMO = 0.84M)
VLE = 270 KCAS/.82M
VLO = 270 KCAS/.82M

For other airspeed limits, see the appropriate FAA Approved Airplane Flight Manual.

CG Range: See the appropriate FAA Approved Flight Manual.

Maximum Weights: See the appropriate FAA Approved Flight Manual.

<u>Model</u>	<u>Eligible Serial Numbers</u>
767-323	24032-24046
767-332	23275-23279, 23435-23438, 24075-24080
767-336	24334, 24335
767-338	24146, 24316, 24317, 24407, 24531
767-341	24752, 24753
767-346	23215-23217, 23645, 23961-23966, 24498
767-366	24541, 24542
767-375	24082-24087, 24306, 24307

<u>Model</u>	<u>Eligible Serial Numbers (continued)</u>
767-381	23756-23759, 24002-24006, 24350, 24351, 24400, 24415-24417, 24632
767-383	24318, 24357, 24358, 24475, 24476
767-31A	24428
767-3G5	24257-24259
767-3P6	23764, 24349, 24484, 24485, 24495, 24496
767-3Z9	23765, 24628

DATA PERTINENT TO ALL MODELS

Minimum Crew: Two (2) pilot and copilot

Maximum Passengers: 255 (767-200) with 2 pairs of Type A plus 1 pair of Type III exits.
290 (767-200/300) with 2 pairs of Type A plus 2 pairs of Type III exits.
290 (767-300) with 3 pairs of Type A plus 1 pair of Type III exits.
255 (767-300) with 3 pairs of Type A plus 1 pair of Type I exits.
(See Note 6 for Type III Exit requirements.)

Maximum Baggage/
Cargo: See appropriate Weight and Balance Manual.

Fuel and Oil
Capacities: See appropriate Weight and Balance Manual.

Minimum Required
Fuel: See appropriate FAA Approved Flight Manual.

Maximum Operating
Altitude: 43,100 feet

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

Datum: Sta 0.0, located 92.5 in forward of airplane nose (B.S. 92.5).

MAC: 237.5 inches

Control Surface
Movements: Control surfaces must be rigged in accordance with Boeing Drawings 251T1001, 251T2001, 251T3001, 251T4001, 254T7001, 257T4001, 256T1001, 256T2001, 256T3001.

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**Certification
Basis:**

Type Certification Basis, Boeing Model 767.

Part 25 of the Federal Aviation Regulations, Amendment 25-1 through 25-37.

Part 36 of the Federal Aviation Regulations, Amendment 36-1 through 36-12.

Special Federal Aviation Regulation 27.

FAR 25 Amendment 25-38 through 25-45, except portions of Amendment 25-38 (Section 25.979(d) and (e) and Section 25.1143(e)) Amendment 40 (Sections 25.901(b)(1)(i), 25.1091(e) and 25.1093(b)); Amendment 41 (Section 25.1438); and Amendment 42 (Section 25.109).

FAR 25.345 Amendment 46, FAR 25.351(a) Amendment 46, FAR 25.365(e), (1), (2) Amendment 54, FAR 25.629 Amendment 46, FAR 25.697 Amendment 46, FAR 25.733 Amendment 49, FAR 25.803 Amendment 46, FAR 25.901(d) Amendment 46, FAR 25.1103(a)(b)(2), (d)(e)(f) Amendment 46, FAR 25.1142 Amendment 46, FAR 25.1522 Amendment 46.

**Exemption from FAR 25:
767-200 and 767-300**

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

Equivalent safety findings exist with respect to the following regulations:

FAR 25.1093(b)(1) - Induction System Deicing and Anti-icing Provisions

FAR 25.1103(d) - Induction System Ducts and Air Duct Systems

FAR 25.1103(e) - Induction System Ducts and Air Duct Systems

RB211-524H Installation only.

FAR 25.1181(a)(6) - Designated Fire Zones; Regions Included

FAR 25.1203 - Fire Detector System for Compartment Surrounding the Turbine and Jetpipe (Zone 4A/4B) RB211-524H Installation only.

FAR 25.1305(a)(4), (a)(6), (c)(1) and (c)(3) - Powerplant Instruments

FAR 25.1387(b) and (c) - Position Light System Dihedral Angles

FAR 25.1393 - Minimum Intensities in Any Vertical Plan of Forward and Rear Position Lights

FAR 25.1395 - Maximum Intensities in Overlapping Beams of Forward and Rear Position Lights

FAR 25.1549(b) - Powerplant and Auxiliary Power Unit Instruments

FAR 25.803(c)(8) - Emergency Evacuation Demonstration

FAR 25.807(a)(7)(iv) and (c) - Passenger Emergency Exits

FAR 25.809 - Emergency Exit Arrangement

FAR 25.813(c) - Emergency Exit Access

FAR 1.2 (Abbreviations and symbols); FAR's 25.21, 25.103, 25.107, 25.119, 25.121, 25.125, 25.145, 25.147, 25.149, 25.161, 25.175, 25.177, 25.201, 25.207, 25.735, 25.773, 25.1323, 25.1325; FAR 36 Appendix C - Use of the 1g Stall Speed instead of Minimum Speed in the stall as a basis for determining compliance.

Equivalent safety findings which apply only to the Model 767-300 series exist with respect to the following regulations:

FAR 25.107(d), (e)(1)(iv), (e)(4) - Minimum unstick speed

**Certification
Basis: (continued)**

Special Conditions with respect to the following subjects apply to the Model 767-200 and 767-300 with Pratt and Whitney PW4000 series engines installed. Compliance with these special conditions has also been shown for the General Electric CF6-80C2 FADEC engine and Rolls Royce RB211-524H36 engine installations.

Lightning Protection
Protection from Unwanted Effects of Radio Frequency (RF) Energy
Propulsion Control System

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

Compliance with the following optional requirements has been established:

Ditching Provisions	25.801	(Over water operation can be approved when the aircraft has been equipped and installation has been approved according to FAR 25.801)
Ice Protection Provisions	25.1419	

Production Basis: Production Certificate 700.

Required Equipment: The basic required equipment as prescribed in the applicable Federal Aviation Regulations must be installed in the aircraft.

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.

Note 1. 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 FAA approved loading system for weight and balance control.

Note 2. Airplane operation must be in accordance with the FAA Approved Airplane Flight Manual. All placards required by either FAA Approved Airplane Flight Manual, the applicable operating rules, or the Certification Basis must be installed in the airplane.

Note 3. Required structural inspections and the retirement times for safe-life parts are listed in the FAA Approved Airworthiness Limitations Section (Section 9) of Boeing Document D622T001.

- Note 4. Systems and powerplant Certification Maintenance Requirements (CMR's): The CMR's are listed in either the FAA approved Section 9 of Boeing Maintenance Planning Data Document D622T001 or the applicable engine Type Certificate Data Sheet. The more restrictive requirement from these two documents shall be in force, except that the RB211-524H engine Type Certificate Data Sheet E30NE requirements shall be superseded by the following:
- 1) No dispatch allowed with faults which generate either the "ENG # REV POS" or "ENG # CONTROL" EICAS status message.
 - 2) No dispatch allowed with faults which generate "ENG # EEC C1" EICAS status message on more than one engine.
 - 3) Continued operation with faults which generate "ENG # EEC C1" EICAS status message shall not exceed 7 days.
- Note 5. Crew procedures identified as required by engineering failure analyses in 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 inches 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 FAR 25.812.
 3. The seat pitch at the seat row that provides access to each overwing exit from the main aisle must be not less than 36 inches.
 4. A maximum of 2 inches of seat cushion may encroach into the actual projected opening of the exit, provided the cushion can be readily compressed to clear the opening.
- Note 7. The type design reliability and performance of this airplane has been evaluated in accordance with FAA Advisory Circular 120-42A 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. There are service bulletins which call for modifications which do not comply with the Type Certification Basis. These service bulletins are listed in Boeing Document D624T001 titles "Service Bulletin 767". The records of airplanes imported into the USA should be reviewed to be sure that further modifications are accomplished to ensure compliance, if the non FAA-approved service bulletins modifications have been installed.

Note 9. The Engine Indication and Crew Alerting System (EICAS) provides displays of engine parameters, crew messages of non-normal conditions, 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.
- STATUS - White message appears on EICAS Status page, provides readiness for dispatch information which require crew awareness prior to dispatch.
- Maintenance - White message appears on ECS/MSG page of EICAS, for use of maintenance personnel only.

Note 10. Airplane line numbers 231 and subsequent were manufactured after August 20, 1988 (Reference FAR 121.312(a)(1), Amendment 121-198). See Service Bulletin Index, D6-30300, for cross reference of line number to serial number.

Note 11. The Pratt and Whitney PW4000 series, General Electric CF6-80C2 FADEC series, and Rolls Royce RB211-524H36 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>Engine Fault Level</u>		<u>EICAS Boeing Message - Category</u>	
<u>RB-211-524H</u>	<u>PW4000</u>	<u>CF6-80C2 FADEC</u>	
C	A	C	ENG CONTROL - ADVISORY
C1	B	C1	ENG EEC C1 - STATUS
C2	C	C2	ENG EEC C2 - Maintenance

- END -