

Japan Civil Aviation Bureau
Ministry of Land, Infrastructure, Transport and Tourism

No. 37 Rev. 15
BOEING
777-200
777-300
777-300ER
777F
June 3, 2026

Type Certificate Data Sheet

No.37

This data sheet, which is part of Type Certificate No.37, prescribes conditions and limitations under which the product for which the type certificate was issued meets the airworthiness requirements of the Japan Civil Aeronautics Law and Regulations.

Type Certificate Holder: The Boeing Company
 737 Logan Ave. N
 Renton, WA 98057-0000, U.S.A.

1. Model 777-200 Series (Transport Category) Airplane, Approved May 12, 1998

Engines: 2 Pratt and Whitney Turbofan Model: PW4074, PW4074D, PW4077, PW4077D or PW4090
 (Engine Type Approval No.576)
 2 General Electric Turbofan Model: GE90-94B
 (Engine Type Approval No. 611)
 Authorization for engine intermix is contained in the appropriate JCAB approved Airplane
 Flight Manual.

Fuel: Pratt and Whitney Engines:
 Fuels conforming to:
 ASTM D-1655 grades Jet-A and Jet A-l,
 MIL-T-5624 grade JP-5, and
 MIL-T-83133 grade JP-8 are acceptable.
 Fuels produced to other specifications and having properties meeting the requirements of the
 above specifications are acceptable. The fuel and any fuel additives must conform to the latest
 approved version of P&W Service Bulletin 2016.

 General Electric Engines:
 Fuels conforming to:
 ASTM D-1655 grades Jet-A and Jet A-l,
 MIL-T-5624 grade JP-5, and
 MIL-T-83133 grade JP-8 and
 Fuels produced to other specifications and having properties meeting the requirements of the
 above specifications are acceptable. The fuel and any fuel additives must conform to the latest
 approved version of GE Aviation Turbine Fuels Specification D50TF2.

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1.Model 777-200 (cont'd)

Engine Ratings & Operating Limits: Pratt & Whitney Engines:
See the JCAB approved Flight Manual for engine ratings and operating limits. The normal 5 minute takeoff time limit may be extended to 10 minutes for engine out contingency if permitted by the Limitations Section of the JCAB approved Airplane Flight Manual.

General Electric Engines:
See the JCAB approved Flight Manual for engine ratings. See the JCAB approved Airplane Flight Manual and Note 4 for engine operating limits. The normal 5 minute takeoff time limit may be extended to 10 minutes for engine out contingency if permitted by the Limitations Section of the JCAB approved Airplane Flight Manual.

Airspeed Limits: VMO/MMO = 330KIAS/.87M.
For other airspeed limits, see the appropriate JCAB approved Airplane Flight Manual.

CG Range: See the appropriate JCAB approved Airplane Flight Manual.

Maximum Weights: See the appropriate JCAB approved Airplane Flight Manual.

<u>Model</u>	<u>Eligible Serial Numbers</u>
777-246	27364-27366, 27651-27653, 27656, 27657, 32889-32896, 33394-33396
777-281	27027-27037, 27938, 28276-28279, 29029, 32646, 32647, 33406, 33407, 33414, 33415, 40900-40904
777-289	27636-27642

PERTINENT DATA

Minimum Crew: Two (2): pilot and copilot

Maximum Passengers: 440

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

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

Minimum Required
Fuel: See appropriate JCAB approved Airplane Flight Manual.

Maximum Operating Altitude: 43,100 feet

Certification Basis: Civil Aeronautics Regulations Annex 1

Part III of the TAIKUSEI-SHINSA-YORYO (JCAB Airworthiness Standards) dated April 17, 1995 (equivalent to Part 25 of the Federal Aviation Regulations Amendment 25-1 through 25-71).

14CFR part 25 of the Federal Aviation Regulations:
Amendment 25-72 through 25-82, except for:
14CFR 25.571(e)(1) which remains at amendment 25-71 level,
14CFR 25.1457 at amendment 25-124 applicable to Line Number 858 and on.
14CFR 25.1459 at amendment 25-124 applicable to Line Number 858 and on.

Optional Design Regulations:
Ditching: 14CFR 25.801, 25.1411(d), (e), (f), (g) and 25.1415
Ice Protection: 14CFR 25.1419

14 CFR part 26:
Based on 14 CFR §21.101(g) for changes made to TCs applicable provisions of 14 CFR part 26 are included in the certification basis. For any future 14 CFR part 26 amendments, the holder of this TC must demonstrate compliance with the applicable sections
Compliance has been found for the following regulations at Amendment 26-0: §26.11

1.Model 777-200 (cont'd)

Compliance has been found for the following regulations at Amendment 26-1: §26.43, 26.45, 26.47, and 26.49

Compliance has been found for the following regulations at Amendment 26-3: §26.33 and §26.39

Civil Aeronautics Regulations Annex 2 Chapter 2 (equivalent to ICAO Annex 16 Volume I Chapter 3) for Noise Requirements

Civil Aeronautics Regulations Annex 3, effective on November 17, 2011 (equivalent to ICAO Annex 16 Volume II Amendment 7) for Fuel Venting and Exhaust Emissions Requirements.

Note: GE90-94B engine model with Performance Enhanced Combustor (PEC) comply with the ICAO Annex 16, Volume II Part III, Chapter 2, paragraph 2.3.2d (CAEP/6).

PW4074, PW4074D, PW4077, PW4077D and PW4090 engine models comply with the ICAO Annex 16, Volume II Part III, Chapter 2, paragraph 2.3.2c (CAEP/4)

Exemptions from 14 CFR part 25:

1. Floor Warpage for Flight Deck Seats Exemption from 14CFR 25.562(b)(2). (Exemption No. 5436, April 1, 1992).
2. Partial Exemption from 14CFR 25.1435(b)(1), Hydraulic Proof Pressure Test. (Exemptions No. 5758, Oct. 1, 1993 and No. 5758A, Oct. 29, 1993).
3. Partial Exemption from 14CFR 25.901(c), No single powerplant or auxiliary power unit failure will jeopardize the safe operation of the airplane. (Exemption No. 7955, January 17, 2003). See Note 8.
4. Partial Time-Limited Exemption from 14CFR 25.853(a), appendix F, paragraph (a)(1)(i), Testing on Large Interior Panels, granted through November 28, 2011. (Exemption No.9791, November 28, 2008, Exemption No.9791B, March 1, 2010, Exemption No. 9791C, February 4, 2011)
5. (Reserved)
6. Time-Limited Exemption from 14CFR 25.1535 as specified in Appendix K, §K25.1.4(a)(3) as the regulation applies to low-fuel alerting for approval for extended operations (ETOPS) beyond 180 minutes, granted through January 11, 2015 (Exemption No. 10193, January 11, 2011) (Exemption No. 10193A, December 17, 2013)
7. Time-Limited Exemption from 14 CFR 25.901(c), Amendment 25-126 and 25.981(a)(3), Amendment 25-125, as they pertain to fuel-tank-ignition prevention associated with the FQIS, limited to design changes within the FQPU in support of parts obsolescence, for in-service Model 777-200 and -300 series airplanes prior to line number 562. (Exemption No. 10922, January 31, 2014)
8. Time-Limited Exemption from 14 CFR §§25.901(c) and 25.903(c), Appendix K, §K25.1.1 to part 25, and item 6 of Special Conditions 25-ANM-78 pertaining to an engine fan blade for airplanes equipped with PW4000-112 engines through March 4, 2027 for production, and March 4, 2028 for the fleet. (Exemption No. 19032, March 4, 2022) Refer : “Note J2”

Equivalent Safety Findings exist with respect to the following regulations:

14CFR 25.125(a)(2) and 25.149 - Landing Minimum Control Speed.

14CFR 25.331(d), 25.333, 25.335(d), 25.341, 25.345, 25.349(b), 25.351(b), 25.371, 25.373, 25.391, and 25.427 - Design Gust Criteria.

(Reserved)

(Reserved)

(Reserved)

(Reserved)

14CFR 25.562(b)(2) - Emergency Landing Dynamic Conditions

14CFR 25.785(f)(3) - for Flexible Interior Items Track Mounted 1.33 Fitting Factor.

14CFR 25.791(a) and 14CFR 25.853(d) - “No Smoking” Limitation in the passenger Component (documented in FAA Memorandum No. 1nm-103-115-05)

14CFR 25.803(c) - for Inoperative Floor Proximity Light System during the Full Scale Evacuation Demonstration.

14CFR 25. 811 - Exterior Exit Markings

14CFR 25.811(f) - Door Sill Reflectance

14CFR 25. 819- Lower Lobe Attendant Rest (LLAR)

1. Model 777-200 (cont'd)

14CFR 25.853(a) - Adhesives used in interior panel bent joint potting applications (documented in TAD ELOS Memo PS08-0670-C-1)

14 CFR 25.853(a) and (d) Compartment Interiors (Documented in TAD ELOS Memorandum PS13-1000-C-5)

14CFR 25.869(a)(4) - for Fiber Optic Cables used in the Model 777.

14CFR 25.933(a)(1)(ii) - Inflight Thrust Reverser Deployment Demonstration.

14CFR 25.981, Amdt 25.125 - Fuel tank ignition prevention (see Note 8)

14CFR 25.981, Amdt 25-125 - for the Fuel Tank Flammability Rule (FTFR). (documented in ELOS Memo PS05-0177-P-2)

14CFR 25.1182(a) and 25.1183(a) - for Fire Resistant Requirement for Hydraulic Components Located in the Strut Aft Fairing.

14CFR 25.1183(a)- Fire Resistance of Power Door Opening System on Engine Compartments (GE Engines)

14CFR 25.1303(c)(1) - Overspeed Aural Warning.

14CFR 25.1305(c)(7) - Warning Means for Engine Oil Filter Indication Contamination. (PW engines only)

14CFR 25.1351(b)(5) - for Flight Controls DC Power.

14CFR 25.1387(b)and(c) - for Forward Position Light.

14CFR 25.1389(b)(3) - for Red and Green Position Lights Aft Lamps Only.

14CFR 25.1441(c) Crew Determination of the Quantity of Oxygen Available in the Lavatory Passenger Service Units Bottles (documented in ELOS Memo PS13-0901-ES-1)

14CFR 25.1443(c) Determination of Minimum Oxygen Flow for the Lavatory Oxygen System (documented in TAD ELOS Memo TS13-0005-S-1)

14CFR 25.1459(a)(2) - for Flight Data Recorder Accelerometers.

14CFR 25.1529, 25.1729 - Inclusion of Airworthiness Limitations within the Boeing ICA manuals (Documented in TAD ELOS Memo TC6918SE-T-G-8)

14 CFR 25.1549(b) Powerplant and Auxiliary Power Unit Instruments (Documented in TAD ELOS Memorandum AT00010BA-T-S-1)

14 CFR 25.1555(d)(1) Engine and Auxiliary Power Unit (APU) Fire Switch Handle Design (documented in ELOS Memo PS06-0496-F-18)

14CFR 25. (several sections) Use of 1g Speed Instead of Minimum Speed in the Stall as a Basis for Compliance. (All 14CFR 25 Sections, except structural, dealing with stall speeds/related factors for turbojet airplanes).

Special Conditions with respect to the following subjects apply to the Model 777-200:
Special Condition No.25-ANM-78, published in the Federal Register November 10, 1993, addressed the following issues:

1. Operation without Normal Electrical Power
2. Integrated Command Signal Integrity
3. Protection from Lightning and High-Intensity Radiated Fields Protection
4. Effect of Flight Control Systems on Structure
5. Design Maneuver Requirements
6. Limit Engine Torque Loads for Sudden Engine Stoppage
7. Flight Characteristics Compliance via Handling Qualities Rating Method
8. Electronic Flight Control System - Control Surface Awareness

Note: (Special Condition on lighting is no longer part of the Type Certificate as a result of Boeing's voluntary compliance with 14CFR Amendment 25-80 which resulted in issuance of 25.1316, "System Lightning Protection").

Special Conditions No. 25-ANM-84A, effective on October 8 2003, addressed airplane type design approval for Extended Range Operation With Two-Engine Airplanes (ETOPS).

(Reserved)

(Reserved)

(Reserved)

(Reserved)

Special Conditions No. 25-230-SC, effective on April 9, 2003, addressed Overhead Crew Rest Compartments

(Reserved)

(Reserved)

(Reserved)

Special Conditions No. 25-367-SC, effective on February 7, 2008, addressed Seats With

1. Model 777-200 (cont'd)

Non-Traditional, Large, Non-Metallic Panels
 Special Conditions No. 25-503-SC, effective on November 18, 2013, addressed Aircraft Electronic System Security Protection From Unauthorized Internal Access
 Special Conditions No. 25-504-SC, effective on November 18, 2013, addressed Aircraft Electronic System Security Protection From Unauthorized External Access
 (Reserved)
 Special Conditions No. 25-687-SC, effective to design changes applied for after May 31, 2017, addressed Non-Rechargeable Lithium Batteries. See the applicability section of these special conditions for more information on which design changes must meet them.
 (Reserved)
 (Reserved)
 (Reserved)

2. Model 777-300 Series (Transport Category) Airplane, Approved June 26, 1998

Engines: 2 Pratt and Whitney Turbofan Model: PW4090
 (Engine Type Approval No.576)

Fuel: Pratt & Whitney Engines:
 Fuels conforming to:
 ASTM D-1655 grades Jet-A and Jet A-I,
 MIL-T-5624 grade JP-5, and
 MIL-T-83133 grade JP-8 are acceptable.
 Fuels produced to other specifications and having properties meeting the requirements of the above specifications are acceptable. The fuel and any fuel additives must conform to the latest approved version of P&W Service Bulletin 2016.

Engine Ratings & Operating Limits: Pratt & Whitney Engines:
 See the JCAB approved Flight Manual for engine ratings and operating limits. The normal 5 minute takeoff time limit may be extended to 10 minutes for engine out contingency if permitted by the Limitations Section of the JCAB approved Airplane Flight Manual.

Airspeed Limits: VMO/MMO = 330KIAS/.89M.
 For other airspeed limits, see the appropriate JCAB approved Airplane Flight Manual.

CG Range: See the appropriate JCAB approved Airplane Flight Manual.

Maximum Weights: See the appropriate JCAB approved Airplane Flight Manual.

<u>Model</u>	<u>Eligible Serial Numbers</u>
777-346	27654, 27655, 28393-28397
777-381	27039-27040, 27939, 28272-28275

PERTINENT DATA

Minimum Crew: Two (2): pilot and copilot
 One flight attendant is required at each door no.3 overwing exit.

Maximum Passengers: 550 For passenger capacity above 500, an 11th flight attendant is required at each door no.3 exit.

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

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

Minimum Required Fuel: See appropriate JCAB approved Airplane Flight Manual.

2.Model 777-300 (cont'd)

Maximum Operating Altitude: 43,100 feet

Certification Basis: Civil Aeronautics Regulations Annex 1

Part III of the TAIKUSEI-SHINSA-YORYO (JCAB Airworthiness Standards) dated April 17, 1995 (equivalent to Part 25 of the Federal Aviation Regulations Amendment 25-1 through 25-71).

14CFR part 25 of the Federal Aviation Regulations:
 Amendment 25-72 through 25-86, except for
 14CFR 25.201 which remains at Amendment 25-83,
 14CFR 25.203 which remains at Amendment 25-83,
 14CFR 25.571(e)(1), which remains at amendment 25-71 level (remains from 777-200 certification basis),
 14CFR 25.335(d) which remains at Amendment 25-85,
 14CFR 25.853(d)(3), which remains at Amendment 25-82,
 14CFR 25.1457 at amendment 25-124 applicable to Line Number 858 and on,
 14CFR 25.1459 at amendment 25-124 applicable to Line Number 858 and on,

14 CFR part 26:

Based on 14 CFR §21.101(g) for changes made to TCs applicable provisions of 14 CFR part 26 are included in the certification basis. For any future 14 CFR part 26 amendments, the holder of this TC must demonstrate compliance with the applicable sections

Compliance has been found for the following regulations at Amendment 26-0: §26.11

Compliance has been found for the following regulations at Amendment 26-1: §26.43, 26.45, 26.47, and 26.49

Compliance has been found for the following regulations at Amendment 26-3: §26.33 and §26.39

Civil Aeronautics Regulations Annex 2 Chapter 2 (equivalent to ICAO Annex 16 Volume I Chapter 3) for Noise Requirements

Civil Aeronautics Regulations Annex 3, effective on November 17, 2011 (equivalent to ICAO Annex 16 Volume II Amendment 7) for Fuel Venting and Exhaust Emissions Requirements.

Note: PW4090 engine model comply with the ICAO Annex 16, Volume II Part III, Chapter 2, paragraph 2.3.2c (CAEP/4).

Optional Design Regulations:

Ditching: 14CFR 25.801, 25.1411(d), (e), (f), (g) and 25.1415

Ice Protection: 14CFR 25.1419

Exemptions from 14CFR part 25:

1. Floor Warpage for Flight Deck Seats Exemption from 14CFR 25.562(b)(2). (Exemption No. 5436, April 1, 1992 and No.5436A, January 3, 1997)..
2. Partial Exemption from 14CFR 25.1435(b)(1), Hydraulic Proof Pressure Test. (Exemption No. 6504, September 3, 1996).
3. Partial Exemption from 14CFR 25.901(c), No single powerplant or auxiliary power unit failure will jeopardize the safe operation of the airplane. (Exemption No. 7955, January 17, 2003). See Note 8.
4. Partial Time-Limited Exemption from 14CFR 25.853(a), appendix F, paragraph (a)(1)(i), Testing on Large Interior Panels, granted through November 28, 2011. (Exemption No.9791, November 28, 2008, Exemption No.9791B, March 1, 2010, Exemption No. 9791C, February 4, 2011)
5. (Reserved)
6. Time-Limited Exemption from 14 CFR 25.901(c), Amendment 25-126 and 25.981(a)(3), Amendment 25-125, as they pertain to fuel-tank-ignition prevention associated with the FQIS, limited to design changes within the FQPU in support of parts obsolescence, for in-service Model 777-200 and -300 series airplanes prior to line number 562. (Exemption No. 10922, January 31, 2014)
7. Time-Limited Exemption from 14 CFR §§25.901(c) and 25.903(c), Appendix K, §K25.1.1 to part 25, and item 6 of Special Conditions 25-ANM-78 pertaining to an

2.Model 777-300 (cont'd)

engine fan blade for airplanes equipped with PW4000-112 engines through March 4, 2027 for production, and March 4, 2028 for the fleet. (Exemption No. 19032, March 4, 2022) Refer : “Note J2”

Equivalent Safety Findings exist with respect to the following regulations:

14CFR 25.201 - Stall Demonstration (documented in TAD ELOS Memo AT3908SE-T-F-8)

14CFR 25.201(d) - Stall identification/characteristics (documented in TAD ELOS Memo AT3907SE-T-F-8)

14CFR 25.203 - Stall Characteristics (documented in TAD ELOS Memo AT3908SE-T-F-8)

14CFR 25.203(a) - Stall identification/characteristics (documented in TAD ELOS Memo AT3907SE-T-F-8)

14CFR 25.331(d), 25.333, 25.341, 25.345, 25.349(b), 25.351(b), 25.371, 25.373, 25.391, and 25.427 - Design Gust Criteria.

(Reserved)

(Reserved)

(Reserved)

(Reserved)

14CFR 25.785(f)(3) - for Flexible Interior Items Track Mounted 1.33 Fitting Factor.

14CFR 25.791(a) and 14CFR 25.853(d)- “No Smoking” Limitation in the passenger Component

(documented in FAA Memorandum No. 1nm-103-115-05)

14CFR 25.803(c) - for Inoperative Floor Proximity Light System during the Full Scale Evacuation Demonstration.

(Reserved)

14CFR 25.810 - Off - wing Escape System / Bottle Loss During Landing Gear Collapse

14CFR 25.811(f)- Door Sill Reflectance

14CFR 25.811(f)- Exterior Exit Marking

(Reserved)

14CFR 25.853(a) - Adhesives used in interior panel bent joint potting applications (documented in TAD ELOS Memo PS08-0670-C-1)

14 CFR 25.853(a) and (d) Compartment Interiors (Documented in TAD ELOS Memorandum PS13-1000-C-5)

14CFR 25.869(a)(4) - for Fiber Optic Cables used in the Model 777.

14CFR 25.933(a)(1)(ii) - Inflight Thrust Reverser Deployment Demonstration.

14CFR 25.981, Amdt 25.125 - Fuel tank ignition prevention (see Note 12)

14CFR 25.981, Amdt 25-125 - for the Fuel Tank Flammability Rule (FTFR). (documented in ELOS Memo PS05-0177-P-2)

14CFR 25.1182(a) and 25.1183(a) - for Fire Resistant Requirement for Hydraulic Components Located in the Strut Aft Fairing.

14CFR 25.1303(c)(1) - Overspeed Aural Warning.

14CFR 25.1305 and 25.1501(b) - APU Instrumentation and Monitoring Requirements.

14CFR 25.1305(c)(7) - Warning Means for Engine Oil Filter Indication Contamination.

14CFR 25.1351(b)(5) - for Flight Controls DC Power.

14CFR 25.1387(b) and (c) - for Forward Position Light.

14CFR 25.1389(b)(3) - for Red and Green Position Lights Aft Lamps Only.

14CFR 25.1441(c) Crew Determination of the Quantity of Oxygen Available in the Lavatory Passenger Service Units Bottles (documented in ELOS Memo PS13-0901-ES-1)

14CFR 25.1443(c) Determination of Minimum Oxygen Flow for the Lavatory Oxygen System (documented in TAD ELOS Memo TS13-0005-S-1)

14CFR 25.1459(a)(2) - for Flight Data Recorder Accelerometers.

14CFR 25.1529, 25.1729 - Inclusion of Airworthiness Limitations within the Boeing ICA manuals (Documented in TAD ELOS Memo TC6918SE-T-G-8)

14 CFR 25.1549(b) Powerplant and Auxiliary Power Unit Instruments (Documented in TAD ELOS Memorandum AT00010BA-T-S-1)

14 CFR 25.1555(d)(1) Engine and Auxiliary Power Unit (APU) Fire Switch Handle Design (documented in ELOS Memo PS06-0496-F-18)

14CFR 25. (several sections) Use of 1g Speed Instead of Minimum Speed in the Stall as a Basis for Compliance. (All 14 CFR 25 Sections, except structural, dealing with stall speeds/related factors for turbojet airplanes).

2. Model 777-300 (cont'd)

Special Conditions with respect to the following subjects apply to the Model 777-300:
Special Condition No. 25-ANM-78, published in the Federal Register November 10, 1993, addressed the following issues:

1. Operation without Normal Electrical Power
2. Integrated Command Signal Integrity
3. Protection from Lightning and High-Intensity Radiated Fields Protection
4. Effect of Flight Control Systems on Structure
5. Design Maneuver Requirements
6. Limit Engine Torque Loads for Sudden Engine Stoppage
7. Flight Characteristics Compliance via Handling Qualities Rating Method
8. Electronic Flight Control System - Control Surface Awareness

Note: (Special Condition on lightning is no longer part of the Type Certificate as a result of Boeing's voluntary compliance with 14CFR Amendment 25-80 which resulted in issuance of 25.1316, "System Lightning Protection").

Special Condition No. 25-ANM-84A, effective on October 8, 2003, addressed airplane type design approval for Extended Range Operation With Two-Engine Airplanes (ETOPS).

(Reserved)

(Reserved)

(Reserved)

(Reserved)

(Reserved)

(Reserved)

(Reserved)

Special Conditions No. 25-367-SC, effective on February 7, 2008, addressed Seats With Non-Traditional, Large, Non-Metallic Panels

Special Conditions No. 25-503-SC, effective on November 18, 2013, addressed Aircraft Electronic System Security Protection From Unauthorized Internal Access

Special Conditions No. 25-504-SC, effective on November 18, 2013, addressed Aircraft Electronic System Security Protection From Unauthorized External Access

(Reserved)

Special Conditions No. 25-687-SC, effective to design changes applied for after May 31, 2017, addressed Non-Rechargeable Lithium Batteries. See the applicability section of these special conditions for more information on which design changes must meet them.

(Reserved)

(Reserved)

(Reserved)

3. Model 777-300ER Series (Transport Category) Airplane, Approved June 14, 2004

Engines: 2 General Electric Turbofan Model: GE90-115B
(Engine Type Approval No. 611-2)

Fuel: General Electric Engines:
Fuels conforming to:
ASTM D-1655 grades Jet-A and Jet A-I,
MIL-T-5624 grade JP-5, and
MIL-T-83133 grade JP-8 are acceptable.
Fuels produced to other specifications and having properties meeting the requirements of the above specifications are acceptable. The fuel and any fuel additives must conform to the latest approved version of GE Aviation Turbine Fuels Specification D50TF2.

Engine Ratings & Operating Limits: General Electric Engines:
See the JCAB approved Flight Manual for engine ratings. See the JCAB approved Airplane Flight Manual and Note 4 for engine operating limits. The normal 5 minute takeoff time limit may be extended to 10 minutes for engine out contingency if permitted by the Limitations Section of the JCAB approved Airplane Flight Manual.

3. Model 777-300ER (cont'd)

Airspeed Limits: VMO/MMO = 330KIAS/.89M.
For other airspeed limits, see the appropriate JCAB approved Airplane Flight Manual.

CG Range: See the appropriate JCAB approved Airplane Flight Manual.

Maximum Weights: See the appropriate JCAB approved Airplane Flight Manual.

<u>Model</u>	<u>Eligible Serial Numbers</u>
777-346ER	32430-32437, 36126-36130
777-381ER	27038, 27041, 27940, 28281, 32648-32651, 33416, 34892-34895, 37948-37951, 40686, 40687, 60136, 60137, 60381, 61512, 61513, 61514, 61515, 61516, 61517

PERTINENT DATA

Minimum Crew: Two (2): pilot and copilot
One flight attendant is required at each door No.3 overwing exit.

Maximum Passengers: 550. For passenger capacity above 500, an 11th flight attendant is required at each door 3 exit.

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

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

Minimum Required
Fuel: See appropriate JCAB approved Airplane Flight Manual.

Maximum Operating
Altitude: 43,100 feet

Certification Basis: Civil Aeronautics Regulations Annex 1

Part IIIIII of the TAIKUSEI-SHINSA-YORYO (JCAB Airworthiness Standards) dated April 17, 1995 (equivalent to Part 25 of the Federal Aviation Regulations Amendment 25-1 through 25-71).

Part 25 of the Federal Aviation Regulations:

Amendment 25-72 through 25-98, except for:

14CFR 25.3(b)(2) at Amendment 25-120 level,

14CFR 25.831 (a) and (g) which remains at Amendment 25-86 level,

14CFR 25.841 (a) which remains at Amendment 25-86 level,

14CFR 25.853(d)(3), which remains at amendment 25-82 level,

14CFR 25.1457 at amendment 25-124 applicable to Line Number 858 and on,

14CFR 25.1459 at amendment 25-124 applicable to Line Number 858 and on.

14CFR 25.1517 is not part of the TC.

14CFR 25.1535 at amendment 25-120

14 CFR part 26:

Based on 14 CFR §21.101(g) for changes made to TCs applicable provisions of 14 CFR part 26 are included in the certification basis. For any future 14 CFR part 26 amendments, the holder of this TC must demonstrate compliance with the applicable sections

Compliance has been found for the following regulations at Amendment 26-0: §26.11

Compliance has been found for the following regulations at Amendment 26-1: §26.43, 26.45, 26.47, and 26.49

Compliance has been found for the following regulations at Amendment 26-3: §26.33 and §26.39

Civil Aeronautics Regulations Annex 2 Chapter 2 (equivalent to ICAO Annex 16 Volume I Chapter 3) for Noise Requirements

Civil Aeronautics Regulations Annex 3, effective on November 17, 2011 (equivalent to ICAO Annex 16 Volume II Amendment 7) for Fuel Venting and Exhaust Emissions Requirements.

3. Model 777-300ER (cont'd)

Note: GE90-115B engine model comply with the ICAO Annex 16, Volume II Part III, Chapter 2, paragraph 2.3.2d (CAEP/6).

Optional Design Regulations:

Ditching: 14CFR 25.801, 25.1411(d), (e), (f), (g) and 25.1415
Ice Protection: 14CFR 25.1419

Exemptions from 14CFR part 25:

1. Floor Warpage for Flight Deck Seats Exemption from 14CFR 25.562(b)(2).
(Exemption No. 5436, April 1, 1992 and No.5436A, January 3, 1997 and No.5436B November 15,2000)..
2. Partial Exemption from 14CFR 25.1435(b)(1), Hydraulic Proof Pressure Test.
(Exemption No. 7478, April 9, 2001).
3. Partial Exemption from 14CFR 25.901(c), Thrust Control Malfunction Accommodation and Single Failures of Thrust Levers
(Exemption No. 7955, January 17, 2003). See Note 8.
4. Partial Time-Limited Exemption from 14CFR 25.853(a), appendix F, paragraph (a)(1)(i), Testing on Large Interior Panels, granted through November 28, 2011.
(Exemption No.9791, November 28, 2008, Exemption No.9791B, March 1, 2010, Exemption No. 9791C, February 4, 2011)
5. (Reserved)
6. Time-Limited Exemption from 14CFR 25.1535 as specified in Appendix K, §K25.1.4(a)(3) as the regulation applies to low-fuel alerting for approval for extended operations (ETOPS) beyond 180 minutes, granted through January 11, 2015 (Exemption No. 10193, January 11, 2011) (Exemption No. 10193A, December 17, 2013)
7. Partial Exemption from 14 CFR 25.813(e), Installation of Doors between Passenger Compartments (Exemption No. 17634, November 3, 2017)
8. (Reserved)
9. (Reserved)

Equivalent Safety Findings exist with respect to the following regulations:

14CFR 25.201(d) - Stall Demonstration

14CFR 25.203(a) - Stall Characteristics

14CFR 25.251(a) (b), PS15-0568-F-1 - Finding for Vibration / Buffeting Compliance Criteria, Vibration/Buffeting Compliance Criteria, Modifications to Boeing 777 Aircraft

14CFR 25.335(b) - Dive Speed Definition with Dive Speed Protection

(Reserved)

(Reserved)

(Reserved)

(Reserved)

(Reserved)

14CFR 25.571(b) - Freedom from Wide Spread Structural Fatigue Damage

(Reserved)

14CFR 25.613 - Material strength properties and material design values (documented in Transport Airplane Directorate ELOS Memo AT3907SE-T-A-15)

14CFR 25.723(a) - Shock Absorption

14CFR 25.791(a) and 14CFR 25.853(d)- "No Smoking" Limitation in the passenger Component (documented in FAA Memorandum No. 1nm-103-115-05)

14CFR 25.809(b)(2) and 14CFR 25.810(a)(1) - Escape Slide Inflation Times

14CFR 25.810 - Off-wing Escape System/Bottle Loss During Landing Gear Collapse

14CFR 25.811 - Exterior Exit Marking

14CFR 25.811(f)- Door Sill Reflectance

(Reserved)

14CFR 25.831(a) - Airplane Operation with Air Conditioning Packs Off During Takeoff

14CFR 25.853(a) - Adhesives used in interior panel bent joint potting applications (documented in TAD ELOS Memo PS08-0670-C-1)

14 CFR 25.853(a) and (d) Compartment Interiors (Documented in TAD ELOS Memorandum PS13-1000-C-5)

14CFR 25.869(a)(4) - for Fiber Optic Cables used in the Model 777.

14CFR 25.933(a)(1)(ii) - Inflight Thrust Reverser Deployment Demonstration.

14CFR 25.934 - Thrust Reverser Installation for Engine Endurance Testing

3. Model 777-300ER (cont'd)

14CFR 25.981, Amdt 25.125 - Fuel tank ignition prevention (see Note 12)
 14CFR 25.981, Amdt 25-125 - for the Fuel Tank Flammability Rule (FTFR). (documented in ELOS Memo PS05-0177-P-2)
 (Reserved)
 14CFR 25.1182(a) and 25.1183(a) – for Fire Resistant Requirement for Hydraulic Components Located in the Strut Aft Fairing.
 14CFR 25.1183(a) – Fire Resistance of Power Door Opening system on Engine Compartments (GE Engines)
 14CFR 25.1303(c)(1) - Overspeed Aural Warning.
 14CFR 25.1305 and 25.1501(b) - APU Instrumentation and Monitoring Requirements.
 14CFR 25.1351(b)(5) - for Flight Controls DC Power.
 14CFR 25.1389(b)(3) and 25.1395 - Red & Green Position Lights (documented in TAD ELOS Memo AT3908SE-T-SE-25)
 14CFR 25.1441(c) Crew Determination of the Quantity of Oxygen Available in the Lavatory Passenger Service Units Bottles (documented in ELOS Memo PS13-0901-ES-1)
 (Reserved)
 (Reserved)
 14CFR 25.1443(c) Determination of Minimum Oxygen Flow for the Lavatory Oxygen System (documented in TAD ELOS Memo TS13-0005-S-1)
 14CFR 25.1443(d) Portable Pulse Oxygen System (documented in ELOS Memo TC6918SE-T-ES-20)
 14CFR 25.1459(a)(2) - for Flight Data Recorder Accelerometers.
 14CFR 25.1529, 25.1729 - Inclusion of Airworthiness Limitations within the Boeing ICA manuals (Documented in TAD ELOS Memo TC6918SE-T-G-8)
 14CFR 25.1549(b) Powerplant and Auxiliary Power Unit Instruments (Documented in TAD ELOS Memorandum AT00010BA-T-S-1)
 14CFR 25.1555(d)(1) Engine and Auxiliary Power Unit (APU) Fire Switch Handle Design (documented in ELOS Memo PS06-0496-F-18)
 14CFR 25. (several sections) Use of 1g Speed Instead of Minimum Speed in the Stall as a Basis for Compliance.
 14CFR 25 Appendix K25.2.2(b)(1) and (d), Amdt 25-120 – Early Extended Operations (ETOPS) Approval of GE90-110B1/-115B Modification when Early ETOPS was not the Basis of the Airplane-Engine Combination's ETOPS Type Design Approval (documented in ELOS Memorandum PS21-0254-EE-1)

Special Conditions with respect to the following subjects apply to the Model 777-300ER:

Special Condition No.25-ANM-78, published in the Federal Register November 10, 1993, addressed the following issues:

1. Operation without Normal Electrical Power
2. Integrated Command Signal Integrity
3. Protection from Lightning and High-Intensity Radiated Fields Protection
4. Effect of Flight Control Systems on Structure
5. Design Maneuver Requirements
6. Limit Engine Torque Loads for Sudden Engine Stoppage
7. Flight Characteristics Compliance via Handling Qualities Rating Method
8. Electronic Flight Control System - Control Surface Awareness

Note: (Special Condition on lightning is no longer part of the Type Certificate as a result of Boeing's voluntary compliance with 14CFR Amendment 25-80 which resulted in issuance of 25.1316, "System Lightning Protection").

Special Condition No. 25-ANM-84A, effective on October 8, 2003, addressed airplane type design approval for Extended Range Operation With Two-Engine Airplanes (ETOPS).

Special Conditions No. 25-07-12-SC, effective on June 1, 2007, Lithium Ion Battery Installation
 (Reserved)

(Reserved)

Special Conditions No. 25-230-SC, effective on April 9, 2003, addressed Overhead Crew Rest Compartments

Special Conditions No. 25-260-SC, effective on April 14, 2004, addressed Overhead Crew Rest Compartment Occupiable During Taxi, Takeoff , and Landing.

(Reserved)

3. Model 777-300ER (cont'd)

(Reserved)

Special Conditions No. 25-367-SC, effective on February 7, 2008, addressed Seats With Non-Traditional, Large, Non-Metallic Panels

Special Conditions No. 25-503-SC, effective on November 18, 2013, addressed Aircraft Electronic System Security Protection From Unauthorized Internal Access

Special Conditions No. 25-504-SC, effective on November 18, 2013, addressed Aircraft Electronic System Security Protection From Unauthorized External Access

(Reserved)

(Reserved)

Special Conditions No. 25-687-SC, effective to design changes applied for after May 31, 2017, addressed Non-Rechargeable Lithium Batteries. See the applicability section of these special conditions for more information on which design changes must meet them.

(Reserved)

(Reserved)

(Reserved)

(Reserved)

JCAB Additional Requirements:

Attachment to JCAB letter KOKU-KU-KI-140, dated June 9, 2004

4- Model 777F Series (Transport Category) Approved November 1, 2018

Engines: 2 General Electric Turbofan Model: GE90-110B1
(Engine Type Approval No.611-3)

Fuel: General Electric Engines:
Fuels conforming to:
ASTM D-1655 grades Jet-A and Jet A-1,
MIL-T-5624 grade JP-5, and
MIL-T-83133 grade JP-8, and
Fuels produced to other specifications and having properties meeting the requirements of the above specifications are acceptable. The fuel and any fuel additives must conform to the latest approved version of GE Aviation Turbine Fuels Specification D50TF2.

Engine Ratings & Operating Limits: General Electric Engines:
See the JCAB approved Airplane Flight Manual for engine ratings. See the JCAB approved Airplane Flight Manual and Note 6 for engine operating limits. The normal 5 minute takeoff time limit may be extended to 10 minutes for engine out contingency if permitted by the Limitations Section of the JCAB approved Airplane Flight Manual.

Airspeed Limits: VMO/MMO = 330KEAS/.89M.
For other airspeed limits, see the appropriate JCAB approved Airplane Flight Manual.

CG Range: See the appropriate JCAB approved Airplane Flight Manual.

Maximum Weights: See the appropriate JCAB approved Airplane Flight Manual.

<u>Model</u>	<u>Eligible Serial Numbers</u>
777F	40684, 42704, 42705, 60403, 60404, 62084, 62086, 62632, 62693, 62694-62697, 62770, 62824, 65756, 65757

PERTINENT DATA

Minimum Crew: Two (2): pilot and copilot.

Maximum Passengers: For 777F total persons capacity is limited to: Maximum of eleven (11) persons per Exemption 9779 and limitations outlined in the JCAB approved Airplane Flight Manual.

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

4. 777F (cont'd)

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

Minimum Required Fuel: See appropriate JCAB approved Airplane Flight Manual.

Maximum Operating Altitude: 43,100 feet

Certification Basis: Civil Aeronautics Regulations Annex 1:
 TAIKUSEI-SHINSA-YORYO (JCAB Airworthiness Inspection Manual) Part III dated July 6,
 2006 (equivalent to Title 14, Code of Federal Regulations (14 CFR) part 25 as amended by
 Amendments 25-0 through 25-117), with the exceptions listed below:

<u>SECTION NO.</u>	<u>TITLE</u>	<u>AT AMDT. 25-</u>
25.3(b)(2)	Special provisions for ETOPS type design approvals	120
25.103	Performance – stalling speed	108
25.107	Takeoff speeds	108
25.111	Takeoff path	115
25.119	Landing Climb: All engines operating	108
25.121	Climb: One Engine Inoperative	108
25.125	Landing	108
25.143	Controllability and Maneuverability General	108
25.149	Minimum control speed	108
25.201	Stall demonstration	108
25.207	Stall warning	108
25.233	Directional stability and control	108
25.237	Wind velocities	108
25.473	Ground load conditions and assumptions	103
25.613	Material strength properties and design values	112 (1)
25.723	Shock Absorption Test	103
25.731	Wheels	72 (2)
25.735	Brakes	92 (3)
25.773	Pilot Compartment View	108 (4)
25.783	Doors	114 (5)
25.807	Passenger Emergency Exits	114 (6)
25.812	Emergency Lighting	116 (7)
25.813	Emergency Exit Access	116
25.820	Lavatory Doors	114
25.841(a)	Pressurized Cabins	86
25.853	Compartment Interiors	116
25.855	Cargo or Baggage Compartments	116
25.856	Thermal/Acoustic insulation materials	111
25.869	Fire Protection: Systems	113
25.981(a)(b)	Fuel Tank temperature	102
25.1001(f)	Fuel jettisoning system	108
25.1141	Powerplant Controls: General	115
25.1305	Powerplant Instruments	115
25.1323	Airspeed Indicating System	109
25.1325	Static Pressure Systems	108
25.1353	Electrical Equipment & Installation	113 (8)
25.1411	Safety Equipment: General	116
25.1431	Electronic Equipment	113 (9)
25.1439	Protective Breathing Equipment	115
25.1447	Oxygen Dispensing Units	116
25.1457	Cockpit Voice Recorder	124 (10)
25.1459	Flight Data Recorder	124 (10)
25.1516	Other Speed Limitations	105
25.1527	Ambient Air Temperatures and Operating Altitude	105
25.1535	ETOPS Approval	120
25.1583	Operating Limitations	105
25.1585	Operating Procedures	105
25.1587	Performance Information	108

4. 777F (cont'd)

- (1) Comply with Amendment 25-112 except that Not Significant changes comply with 25.613(c) at Amdt 25-72: existing doors, wing, keel/wheelwell, fairings, empennage, landing gear, propulsion structure, lower lobe cargo structure, flight controls, high lift
- (2) Main and nose wheels from both suppliers (Messier-Bugatti and Goodrich) are unchanged. (Goodrich nose wheel is unchanged, but the TSO load rating for the wheel has been increased compared to the 777-200LR due to increased loads on the 777F). 14 CFR 25.731(a), (b), (c) amendment 72 for wheels, tires, brakes, and landing gear systems.
- (3) Complies with Amendment 25-92 due to Not Significant changes to brake control cable (rerouting of cable runs 3" inboard due to installation of the new aluminum floor beams) and unchanged main wheel brakes and reassessed for landing brake kinetic energy for increased landing weights, Landing gear systems and Hydraulic controls – mechanical.
- (4) Complies with Amendment 25-108 except for the window heat control unit which remains at amendment level 25-72.
- (5) Complies at Amendment 25-114 for the new Main Deck Cargo Door only. All other pressurized doors remain at amendment 25-88.
- (6) Complies with Amendment 25-114 for weights only. Escape systems are not effected by this change and comply with 25-94
- (7) Complies with amendment 116 except for: 25.812(g) is not applicable to 777F. Physical lighting of the emergency escape means complies with 25.812(h) at amendment 25-88.
- (8) Complies with Amendment 25-113 except for Avionics – SATCOM complies with Amendment 25-42 for 25.1353(a) due to Not Significant changes to the system
- (9) Complies with Amendment 25-113 except for Avionics – SATCOM complies with Amendment 25-0 for 25.1431(a), (c) due to Not Significant changes to the system. Avionics- CVR and FDR comply with Amendment 25-0 for 25.1431(c). Cabin Systems – PAS complies with Amendment 25-0 for 25.1431
- (10) Compliance to amendment 25-124 applicable to Line Number 858 and on.

Following Optional Design Regulations have been complied with:

Ditching: 14 CFR 25.801, 25.1411(d), (e), (f) and 25.1415

Ice Protection: 14 CFR 25.1419

Exemptions from 14 CFR part 25:

1. Floor Warpage for Flight Deck Seats Exemption from 14 CFR 25.562(b)(2).
(Exemption No. 5436, April 1, 1992 and No. 5436A, January 3, 1997 and No. 5436B, November 15, 2000).
2. Partial Exemption for the following regulations (Exemption No. 9779, October 31, 2008)
 - a. Partial Exemption from 14 CFR 25.785(j), Seat Back Hand hold
 - b. Partial Exemption from 14 CFR 25.857(e), Class E Cargo Compartments
 - c. Partial Exemption from 14 CFR 25.1447(c)(1), Equipment standards for oxygen dispensing units
(Also Exemption No. 9779A, September 15, 2009)
3. Partial Exemption from 14 CFR 25.901(c), Thrust Control Malfunction Accomodation and Single Failures of Thrust Levers (Exemption No. 7955, January 17, 2003)
4. Partial Time-Limited Exemption from 14 CFR §25.853(a), appendix F, paragraph (a)(1)(i), Testing on Large Interior Panels, granted through November 28, 2011. (Exemption No. 9791, November 28, 2008, Exemption No. 9791B, March 1, 2010 , Exemption No. 9791C, February 4, 2011)
5. Time-Limited Exemption from 14 CFR 25.1535 as specified in Appendix K, §K25.1.4(a)(3) as the regulation applies to low-fuel alerting for approval for extended operations (ETOPS) beyond 180 minutes, granted through January 11, 2015 (Exemption No. 10193, January 11, 2011)
(Exemption No. 10193A, December 17, 2013)
6. (Reserverd)

The following regulations have been complied by Equivalent Level of Safety:

14 CFR 25.201(d), Amdt 25-84 – Stall Demonstration

14 CFR 25.203(a), Amdt 25-84 – Stall Characteristics\

14 CFR 25.251(a) (b), PS15-0568-F-1 - Finding for Vibration / Buffeting Compliance Criteria, Vibration/Buffering Compliance Criteria, Modifications to Boeing 777 Aircraft

14 CFR 25.335(b), Amdt 25-91 – Dive Speed Definition with Dive Speed Protection

14 CFR 25.341, Amdt 25-86 – Design Gust Criteria

14 CFR 25.343, Amdt 25-86 – Design Gust Criteria

4. 777F (cont'd)

14 CFR 25.345, Amdt 25-91 – Design Gust Criteria
 14 CFR 25.371, Amdt 25-91 – Design Gust Criteria
 14 CFR 25.373, Amdt 25-86 – Design Gust Criteria
 14 CFR 25.391, Amdt 25-86 – Design Gust Criteria
 (Reserved)
 14 CFR 25.571(b), Amdt 25-96 – Freedom from Wide Spread Structural Fatigue Damage
 14 CFR 25.791(a), Amdt 25-72 – “No Smoking” Limitation in the Passenger Compartment
 14 CFR 25.809(b)(2), Amdt 25-72 – Escape Slide Inflation Times
 14 CFR 25.810(a)(1), Amdt 25-88 - Escape Slide Inflation Times
 14 CFR 25.811, Amdt 25-79 - Exterior Exit Marking
 14 CFR 25.811(f), Amdt 25-88 - Door Sill Reflectance
 14 CFR 25.831(g), Acceptable High Temperature Physiological Environment During Failure Conditions. (documented in ELOS Memo PS05-0020-ES-3)
 14 CFR 25.853(d), Amdt 25-83 - “No Smoking” Limitation in the Passenger Compartment
 14 CFR 25.853(a) and (d) Compartment Interiors (Documented in TAD ELOS Memorandum PS13-1000-C-5)
 14 CFR 25.855, Amdt 25-116 - Inadvertent Smoke Detection in Lower Lobe Cargo Compartments
 14 CFR 25.857, Amdt 25-93 - Inadvertent Smoke Detection in Lower Lobe Cargo Compartments
 14 CFR 25.858(a), Amdt 25-93 – Inadvertent Smoke Detection in Lower Lobe Cargo Compartments
 14 CFR 25.933(a)(1)(ii), Amdt 25-72 - Inflight Thrust Reverser Deployment Demonstration.
 14 CFR 25.934, Amdt 25-23 – Thrust Reverser Installation for Engine Endurance Testing
 14 CFR 25.981, Amdt 25-125 - Fuel tank ignition prevention (see Note 12)
 14 CFR part 25.981, Amdt 25-125 - for the Fuel Tank Flammability Rule (FTFR). (documented in ELOS Memo PS05-0177-P-2)
 (Reserved)
 14 CFR 25.1182(a), Amdt 25-11 - for Fire Resistant Requirement for Hydraulic Components Located in the Strut Aft Fairing
 14 CFR 25.1183(a), Amdt 25-57 – Fire Resistance of Power Door Opening system on Engine Compartments (GE Engines)
 14 CFR 25.1303(c)(1), Amdt 25-90 - Overspeed Aural Warning.
 14 CFR 25.1305, Amdt 25-72 - APU Instrumentation and Monitoring Requirements.
 14 CFR 25.1351(b)(5), Amdt 25-72 - for Flight Controls DC Power.
 14 CFR 25.1389(b)(3), Amdt 25-0 – Red & Green Position Lights, Aft Lamps Only.
 14 CFR 25.1435(a),(b)(1), Amdt 25-104 - Hydraulic Systems (documented in ELOS Memo PS05-0020-S-1)
 14 CFR 25.1443(c), Amdt 25-0 - Determination of Minimum Oxygen Flow for the Lavatory Oxygen System (Documented in TAD ELOS Memo TS13-0005-S-1)
 14 CFR 25.1459(a)(2), Amdt 25-65 - for Flight Data Recorder Accelerometers
 14 CFR 25.1529, 25.1729 and Appendix H – Formatting of Boeing Instructions for Continued Airworthiness Manuals-Airworthiness Limitations (Documented in TAD ELOS Memo TC6918SE-T-G-8)
 14 CFR 25.1549(b) Powerplant and Auxiliary Power Unit Instruments (Documented in TAD ELOS Memorandum AT00010BA-T-S-1)
 14 CFR 25.1555(d)(1) Engine and Auxiliary Power Unit (APU) Fire Switch Handle Design (documented in ELOS Memo PS06-0496-F-18)
 14 CFR 25.1501(b), Amdt 25-42 - APU Instrumentation and Monitoring Requirements
 14 CFR 25. (several sections), Amdt 25-75 Use of 1g Speed Instead of Minimum Speed in the Stall as a Basis for Compliance.
 14 CFR 25 Appendix K25.2.2(b)(1) and (d), Amdt 25-120 – Early Extended Operations (ETOPS) Approval of GE90-110B1/-115B Modification when Early ETOPS was not the Basis of the Airplane-Engine Combination’s ETOPS Type Design Approval (documented in ELOS Memorandum PS21-0254-EE-1)

Special Conditions with respect to the following subjects apply to the Model 777F:
 Special Condition No. 25-ANM-78, effective on December 10, 1993, addressed the following subjects:

1. Operation without Normal Electrical Power
2. Integrated Command Signal Integrity
3. Protection from Lightning and High-Intensity Radiated Fields (HIRF) Protection
4. Effect of Flight Control Systems on Structure
5. Design Maneuver Requirements

4. 777F (cont'd)

6. Limit Engine Torque Loads for Sudden Engine Stoppage
7. Flight Characteristics Compliance via Handling Qualities Rating Method
8. Electronic Flight Control System - Control Surface Awareness

Note: (Special Conditions on lightning are no longer part of the Type Certificate as a result of Boeing's compliance with 14 CFR part 25 Amendment 25-80 which resulted in issuance of 25.1316, "System Lightning Protection").

Special Condition No. 25-ANM-84A, effective on October 8, 2003, addressed airplane type design approval for Extended Range Operation With Two-Engine Airplanes (ETOPS).

(Reserved)

(Reserved)

Special Conditions No. 25-503-SC, effective on November 18, 2013, addressed Aircraft Electronic System Security Protection From Unauthorized Internal Access

Special Conditions No. 25-504-SC, effective on November 18, 2013, addressed Aircraft Electronic System Security Protection From Unauthorized External Access

Special Conditions No. 25-687-SC, effective to design changes applied for after May 31, 2017, addressed Non-Rechargeable Lithium Batteries. See the applicability section of these special conditions for more information on which design changes must meet them.

(Reserved)

(Reserved)

(Reserved)

Continued Airworthiness and Safety Improvements for Transport Category Airplanes: IKUSEI-SHINSA-YORYO (JCAB Airworthiness Inspection Manual (AIM)) Part III-2 Chapter 2 "Enhanced Airworthiness Program for Airplane Systems" dated March 4, 2015 (equivalent to 14 CFR Part 26 Subpart B § 26.11 "Electrical wiring interconnection systems (EWIS) maintenance program", Amendments 26-0) are included in the certification basis.

14 CFR part 26:

Based on 14 CFR §21.101(g) for changes made to TCs applicable provisions of 14 CFR part 26 are included in the certification basis. For any future 14 CFR part 26 amendments, the holder of this TC must demonstrate compliance with the applicable sections

Compliance has been found for the following regulations at Amendment 26-0: 26.11

Compliance has been found for the following regulations at Amendment 26-6: 26.21

JCAB Additional Special Requirements:

Requirements for markings and placards as shown in JCAB Circular No.1-008.

Requirements for contents of Airplane Flight Manual as shown in JCAB Circular No.1-001.

Environmental Requirements:

Civil Aeronautics Regulations Annex 2, Chapter 2-2 (equivalent to ICAO Annex 16, Volume I, Chapter 4) for Noise Requirements.

Civil Aeronautics Regulations Annex 3 (equivalent to ICAO Annex 16, Volume II) for Fuel Venting and Exhaust Emissions Requirements.

THE FOLLOWING INFORMATION AND NOTES APPLY TO ALL MODELS UNLESS OTHERWISE NOTED

Certification Maintenance

Requirements (CMRs) The CMR'S are listed in either the FAA approved Section 9 of Boeing Maintenance Planning Data Document D622W001-9 or the applicable engine Type Certificate Data Sheet. The more restrictive requirement from these two documents shall be in force.

Production Basis: Production Certificate 700. (See Note 11)

Leveling Means A plumb bob attachment and leveling provision scale are provided in the right hand body wheel well.

THE FOLLOWING INFORMATION AND NOTES APPLY TO ALL MODELS UNLESS OTHERWISE NOTED:
(cont'd)

Datum	Sta. 0.0, located 92.5 in forward of airplane nose (B.S. 92.5).																		
Mean Aerodynamic Chord	278.51 inches																		
Control Surface Movements	To insure proper operation of the airplane, the movement of the various control surfaces must be carefully controlled by proper rigging of the flight control systems. The airplane must, therefore, be rigged according to the following FAA-approved data: Boeing Drawing Numbers: <table><tr><td>251W1001</td><td>Rigging Instructions</td><td>Lateral Control</td></tr><tr><td>251W2001</td><td>Rigging Instructions</td><td>Elevator Control</td></tr><tr><td>251W3001</td><td>Rigging Instructions</td><td>Rudder Control</td></tr><tr><td>251W4001</td><td>Rigging Instructions</td><td>Stabilizer Trim Control System</td></tr><tr><td>256W2001</td><td>Systems Rigging</td><td>Leading Edge Slat</td></tr><tr><td>256W3001</td><td>Rigging Instructions</td><td>Drive System Flap Actuation</td></tr></table>	251W1001	Rigging Instructions	Lateral Control	251W2001	Rigging Instructions	Elevator Control	251W3001	Rigging Instructions	Rudder Control	251W4001	Rigging Instructions	Stabilizer Trim Control System	256W2001	Systems Rigging	Leading Edge Slat	256W3001	Rigging Instructions	Drive System Flap Actuation
251W1001	Rigging Instructions	Lateral Control																	
251W2001	Rigging Instructions	Elevator Control																	
251W3001	Rigging Instructions	Rudder Control																	
251W4001	Rigging Instructions	Stabilizer Trim Control System																	
256W2001	Systems Rigging	Leading Edge Slat																	
256W3001	Rigging Instructions	Drive System Flap Actuation																	
Required Equipment	The basic required equipment as prescribed in the applicable Japan Civil Aeronautics Law and Regulations must be installed in the aircraft.																		
Service Information	Boeing Documents D634W201 "777-200 Structural Repair Manual" and D634W210 "777-300 Structural Repair Manual", and D634W215 "777F Structural Repair Manual" are FAA-approved. This statement may be interpreted as constituting JCAB approval. Service Bulletins and other service information when FAA-approved will carry a statement to that effect. This statement may be interpreted as "JCAB-approved." All Service Bulletins that are subject to an Airworthiness Directive of the FAA 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 JCAB approved loading system for weight and balance control.																		
Note 2	Airplane operation must be in accordance with the JCAB approved Airplane Flight Manual. All placards required by either JCAB 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 D622W001-9. The inspection intervals for those inspections are based upon the curves contained in Boeing Document D101W801-36. The Boeing Commercial Airplanes Universal Airplane Network Security Operator Guidance, D925W704-04, contains required Instructions for Continued Airworthiness and security guidance that when followed meets compliance requirements of the Network Cybersecurity Special Conditions.																		
Note 4	(Reserved)																		
Note 5	The Models 777-200 and 777-300 have been evaluated in accordance with FAA Special Conditions Number 25-ANM-84, and found suitable for 180-minute Extended Range Operations with Two-Engine Airplanes (ETOPS) operations when operated and maintained in accordance with Boeing Document D044W054 "Model 777 ETOPS Configuration, Maintenance, and Procedures." This finding does not constitute approval to conduct ETOPS operations. The Model 777-300ER and 777F have been evaluated in accordance with FAA Special Conditions Number 25-ANM-84A, and found suitable for 180-minute Extended Range Operations with Two-Engine Airplanes (ETOPS) operations when operated and maintained in accordance with Boeing Document D044W054 "Model 777 ETOPS Configuration,																		

THE FOLLOWING INFORMATION AND NOTES APPLY TO ALL MODELS UNLESS OTHERWISE NOTED:**(cont'd)**

Maintenance, and Procedures.” This finding does not constitute approval to conduct ETOPS operations.

The Models 777-200 and 777-300ER have been evaluated in accordance with the type design requirements contained in FAA ETOPS Policy Letter EPL 20-1 dated March 21, 2000, and approved for 207-minute ETOPS when configured in accordance with Boeing Document D044W054. The use of 207-minute maximum diversion time is limited to a flight-by-flight exception basis from normal 180-minute ETOPS operations, as authorized in the FAA policy letter. This finding does not constitute approval to conduct 207-minute ETOPS operations.

The airplane/engine combinations 777-200/GE90-94B, 777-200/PW4090, 777-300ER/GE90-115B, and 777F/GE90-110B1 have been evaluated in accordance with the type design requirements of 14 CFR 25.3(b)(2) and 25.1535 and found suitable for greater than 180-minute ETOPS operations when operated and maintained in accordance with Boeing Document D044W054 "Model 777 Configuration, Maintenance, and Procedures." This finding does not constitute approval to conduct ETOPS operations.

- Note 6 For General Electric engines only: The engines must be operated at idle for at least 10 minutes prior to shutdown after static operation at N1 settings greater than 70%. This Limitation applies to static operation only; under normal operation conditions, the idle cooling instructions contained in the engine manufacturers operating instructions are acceptable.
- Note 7 The Model 777 has been approved to operate in “Reduced Vertical Separation Minimum” (RVSM) airspace. Continued airworthiness and operational approval aspects of RVSM must be constructed according to Advisory Circular (AC) 91-RVSM, titled “Approval of Aircraft and Operators for Flight in Airspace Above Flight Level (FL) 290 Where a 1,000 Foot Vertical Separation Minimum is Applied.”
- Note 8 The JCAB has determined that the occurrence of any uncontrollable high thrust failure condition, or any of the associated causal failure listed within the Boeing 777 Maintenance Planning Document, “may endanger the safe operation of an airplane” and hence are reportable under JCAB Circular No.6-001.
- Note 9 Mandatory replacement times, inspection intervals, related inspection procedures and all critical design configuration control limitations for the fuel tank system determined during the Special Federal Aviation Regulation No. 88 program and for compliance with 14 CFR 25.981 are listed in the FAA-approved Airworthiness Limitations and Certification Maintenance Requirement, Section 9, of Boeing 777 Maintenance Planning Data Document D622W001-9, Revision February 2006 or later FAA-approved revision. All Models 777-200, -300, and -300ER series airplanes, production line number 569 and on, must comply with Revision March 2006, or a later FAA-approved revision. The JCAB has issued TCD-7318-2008 based on FAA AD 2008-11-13 mandating compliance with Revision March 2006, or a later JCAB-approved revision, applicable to all Model 777-200, -300, and -300ER series airplanes with production numbers lower than 569. The Maintenance Planning Data Document, Section 9 for the 777F meets Special Federal Aviation Regulation No. 88 and compliance to 14 CFR 25.981.
- Note 10 (Reserved)
- Note 11 A production certificate number 700 was amended to include the 777F and issued. Boeing is authorized to issue airworthiness certificates under the delegation option authorization provisions of 14 CFR part 21.
- Note 12 Certification basis for 25.981 at amendment 25-125, and Equivalent Safety Finding for the Flammability Reduction System (FRS), is applied if fuel tank inerting is installed in new airplane production (starting with line # 772) or as a modification on existing aircraft per Boeing Service Bulletin 777-47-0002. Airworthiness Limitations for the FRS are contained in Section 9 of the applicable Maintenance Planning Document.
- Note 13 For aircraft delivered after July 15, 2019, information regarding the effective revision of the 777- 200/200LR/300/300ER/777F MPD Section 9 document (D622W001-9) and the 777-200/200LR/300/300ER/777F DTR Document (D622W001-DTR) at the time each aircraft line

THE FOLLOWING INFORMATION AND NOTES APPLY TO ALL MODELS UNLESS OTHERWISE NOTED:
(cont'd)

number was issued its Original Standard Airworthiness Certificate can be found in MPD Section 9 and DTR Revision Effectivity Report letter MPE-RER-777-LNXXXX.

Note J1 Dates of application for FAA and JCAB Type Certification for Model 777F are as follows.

Model 777F	FAA TC No. T00001SE	JCAB TC No. 37
	March 18,2005	February 5, 2018

Note J2 “Condition and Limitation 2. b. Provide U.S. operators with approved service instructions for retrofit of these design changes.” Read as “Condition and Limitation 2. b. Provide Japanese operators with approved service instructions for retrofit of these design changes.”

Note J3 This Type Certificate Data Sheet (TCDS) is based on FAA TCDS No. T00001SE revision 48, dated September 5, 2025.

Note J4 Import Requirements/Import Eligibility
 To be considered eligible for operation in Japan, each aircraft manufactured under this Type Certificate must be accompanied by a Certificate of Airworthiness for Export or certifying statement endorsed by the exporting foreign civil airworthiness authority which states the following (in the English language)
 “This aircraft has been examined, tested and found to conform to the type design approved under JCAB Type Certificate No. 37-8 and to be in a condition for safe operation.”

...END...