



## ***European Aviation Safety Agency***

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**EASA**

**TYPE-CERTIFICATE  
DATA SHEET**

No. IM.A.120

**for  
BOEING 737**

**Type Certificate Holder:  
The Boeing Company**

P.O. Box 3707  
Seattle, WA 98124-2207  
USA

**Airworthiness Category: Large Aeroplanes**

For Models:

“Classic” Series:

737-100  
737-200  
737-200C  
737-300  
737-400  
737-500

Next Generation” Series:

737-600  
737-700  
737-800  
737-900  
737-900ER

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## **SECTION 1: 737-100, -200, -200C, -300, -400, -500 VARIANTS**

### **I. General**

1. Type / Model / Variant: Boeing 737-100, -200, -200C, -300, -400, -500
2. Performance Class: A
3. Certifying Authority: Federal Aviation Administration (FAA)  
Seattle Aircraft Certification Office  
1601 Lind Avenue S.W.  
Renton, WA 98055-4056  
United States of America
4. Manufacturer: The Boeing Company  
P.O. Box 3707  
Seattle, WA 98124-2207  
United States of America
5. EASA Validation Application Date The 737-100, -200, -200C, -300, -400 and -500 series were not subject to a validation by JAA prior to EASA, therefore they are accepted by EASA under the provisions of EU Regulation 1702/2003.
6. FAA Type Certification Date: December 15, 1967 (737-100)  
(First Type Certificate issuance)  
December 21, 1967 (737-200)  
October 29, 1968 (737-200C)  
November 14, 1984 (737-300)  
September 02, 1988 (737-400)  
February 12, 1990 (737-500)
7. EASA Type Validation Date January 23, 1968 (737-130)  
(First TC issued within EU MS by LBA Germany)  
July 12, 1968 (737-204)  
(First TC issued within EU MS by UKCAA)  
September 9, 1969 (737-248C)  
(First TC issued within EU MS by IAA Ireland)  
January 29, 1985 (737-3T5)  
(First TC issued within EU MS by UKCAA)  
September 14, 1988 (737-4Y0)  
(First TC issued within EU MS by UKCAA)  
March 7, 1990 (737-505)  
(First TC issued within EU MS by CAA Norway)

SECTION 1: 737-100, -200, -200C, -300, -400, -500 VARIANTS - continued

**II. Certification Basis**

1. FAA Type Certificate Data Sheet: No. A16WE
2. FAA Certification Basis: Refer to FAA Type Certificate Data Sheet (TCDS) No. A16WE
3. EASA Airworthiness Requirements: In accordance with Regulation (EC) 1702/2003 FAR Part 25 as defined in FAA TCDS A16WE
4. Special Conditions: for adopted special conditions refer to FAA TCDS A16WE,  
special condition CRI H-01 "Instructions for Continued Airworthiness (ICA) on Electrical Wiring Interconnecting Systems (EWIS)"
5. Adopted FAA Exemptions: Refer to FAA TCDS A16WE
6. Adopted FAA Equivalent Safety Findings: Refer to FAA TCDS A16WE
7. Environmental Protection Standards: Noise: ICAO Annex 16, Volume I  
Special Federal Aviation Regulation 27  
See also TCDSN EASA.IM.A.120

**III. Technical Characteristics and Operational Limitations**

1. Type Design Definition: Boeing Top Collector Drawing No. 65-73701
2. Description: Low wing jet transport with a conventional tail unit configuration, powered by two high bypass turbofan engines mounted on pylons beneath the wings
3. Equipment: The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification.

4. Dimensions

Series	-100	-200/200C	-300	-400	-500
Length	28.65 m	30.48 m	33.4 m	36.45 m	31.01 m
Wingspan	28.35 m	28.35 m	28.88 m		
Height	11.28 m	11.28 m	11.13 m		

5. Engines

- 737-100, 200, and 200C: 2 Pratt and Whitney Turbofan Engines JT8D-7, JT8D-7A, JT8D-7B, T8D-9, JT8D-9A, JT8D-15, JT8D-15A, JT8D-17, and JT8D-17A
- 737-300, -400, -500: 2 CFM-56-3B-1, CFM-56-3B-2 or CFM-56-3C-1 Turbofan Engines.

Refer to the Approved Airplane Flight Manual for aircraft engine and engine intermix eligibility.

For limitations see FAA TCDS no E3NE (Pratt and Whitney engines) or E2GL/E21EU (CFM engines) or approved Airplane Flight Manual.

SECTION 1: 737-100, -200, -200C, -300, -400, -500 VARIANTS - continued

- 6. Auxiliary Power Unit: Honeywell GTCP 85-129  
Honeywell GTCP 36-280  
Hamilton Sundstrand APS 2000
- 7. Propellers: N/A
- 8. Fluids (Fuel, Oil, Additives, Hydraulics) See FAA TCDS A16WE and approved Airplane Flight Manual
- 9. Fluid Capacities: See appropriate Weight and Balance Manual, Boeing Document D6-15066
- 10. Airspeed Limits: See approved Airplane Flight Manual
- 11. Maximum Operating Altitude: See approved Airplane Flight Manual
- 12. All Weather Capability: See approved Airplane Flight Manual
- 13. Maximum Certified Masses: See approved Airplane Flight Manual for actual approved weights of individual airplanes

	-100/200		-300		-400		-500	
	lbs	Kg	lbs	Kg	lbs	Kg	lbs	Kg
MTW	116000	52617	135500	61462	150500	68266	134000	60781
MTOW	115500	52390	135000	61236	150000	68039	133500	60555
MLW	103000	46720	114000	51710	124000	56246	110000	49895
MZFW	95000	43092	106500	48308	117000	53070	102500	46493

(weights at Type Certification)

- 14. Centre of Gravity Range: See approved Airplane Flight Manual
- 15. Datum: See appropriate Weights and Balance Manual  
  
The airplane reference origin of coordinates is a point located 540 inches forward of the center section wing front spar centerline, at buttock line zero, (i.e., aircraft fore/aft centerline as viewed in plane view) and at water line zero. (737-100 Series) All production body stations coincide numerically with moment arms. Horizontal distance of datum to nose gear jack point is 286 inches for the 737-100 Series, 250 inches for the 737-200 Series, and 207.7 inches for the 737-300 Series, 135.7 inches for the 737-400 Series, 261.7 inches for the 737-500 Series.
- 16. Mean Aerodynamic Chord: (MAC) See appropriate Weights and Balance Manual Boeing Document No. D6-15066
- 17. Levelling Means: See approved Airplane Flight Manual
- 18. Minimum Flight Crew: Two (2): Pilot and Co-pilot, for all types of flight

SECTION 1: 737-100, -200, -200C, -300, -400, -500 VARIANTS - continued

19. Maximum Seating Capacity: For maximum number of passengers see item 20. Exits

Note: The maximum number of passengers approved for emergency evacuation is dependant on door configuration, see 20) below. See interior layout drawing for the maximum passenger capacities approved for each aeroplane delivered.

20. Exits:

	Type (LH and RH)	Maximum Passenger
-100	I-III-I	113 (124) *
-200	I-III-I	119 (136) *
-300	I-III-I	149
-400	I-III-III-I	188
-500	I-III-I	140

\* See FAA TCDS A16WE for details

21. Baggage/Cargo Compartment: See appropriate Weights and Balance Manual Boeing Document No. D6-15066

22. Wheels and Tyres: Nose Assy (Qty 2)  
Main Assy (Qty 4)  
Speed Rating: See approved Airplane Flight Manual  
Refer to Boeing Wheel/Tire/Brake Interchangeability Drawing for further details.

**IV. Operating and Service Instructions**

1. Flight Manual: Since validation of the Boeing 737-100/-200/-200C/-300/-400/-500 model was conducted by individual NAAs and not under JAA process, there is no generic JAA AFM format. It is the responsibility of the State of Registry to establish that the AFM for an individual aircraft contains appropriate and relevant data and limitations.

2. Mandatory Maintenance Instructions: See FAA TCDS A16WE  
Life Limited Parts and required inspection intervals are listed in the EASA approved Airworthiness Limitations Section (Section 9) of the Boeing Maintenance Planning Data Document D6-38278.

3. Service Letters and Service Bulletins: As Published by Boeing and approved by the FAA

4. Required Equipment:

**V. Notes**

1. Cabin Interior and Seating Configuration must be approved.
2. Additional information is provided in FAA Type Certificate Data Sheet A16WE.

**SECTION 2: PERTINENT TO ALL NEXT GENERATION SERIES**  
**(737-600, -700, -800, -900, -900ER)**

**I. General**

1. Type / Model / Variant: Boeing 737-600, -700, -800, -900, -900ER  
"Next Generation", NG – Series
2. Performance Class: A
3. Certifying Authority: Federal Aviation Administration (FAA)  
Seattle Aircraft Certification Office  
1601 Lind Avenue S.W.  
Renton, WA 98055-4056  
United States of America
4. Manufacturer: The Boeing Company  
P.O. Box 3707  
Seattle, WA 98124-2207  
United States of America
5. FAA Certification Application Date: See individual data (Section 3 to 7)
6. EASA Validation Application Date: See individual data (Section 3 to 7)
7. FAA Type Certification Date: See individual data (Section 3 to 7)
8. EASA Type Validation Date: See individual data (Section 3 to 7)

**II. Certification Basis**

See individual data (Section 3 to 7).

Special condition CRI H-01 "Instructions for Continued Airworthiness (ICA) on Electrical Wiring Interconnecting Systems (EWIS)"

**III. Technical Characteristics and Operational Limitations**

1. Production Basis: Manufactured under Production Certificate 700
2. Type Design Definition: See individual data (Section 3 to 7)
3. Description: Low wing jet transport with a conventional tail unit configuration, powered by two high bypass turbofan engines mounted on pylons beneath the wings.
4. Dimensions:

Series	-700	-800	-600	-900	-900ER
Length	32.18 m (105 ft 7 in)	39.5 m (129 ft 6 in)	31.2 m (102 ft 6 in)	42.1 m (138 ft 2 in)	42.1 m (138 ft 2 in)
Wingspan	34.32 m (112 ft 7 in)				
Span with Winglets	35.79 m (117 ft 5 in)				
Height	12.57 m (41 ft 3 in)				



SECTION 2: PERTINENT TO ALL NEXT GENERATION SERIES  
(737-600, -700, -800, -900, -900ER) - continued

5. Engines: 2 CFM 56-7B or -7B/2 or -7B/3 or -7BE Series Turbofan Engines. Refer to the Approved Airplane Flight Manual for engine limitations. The CFM56-7B/2 series have double annular combustors and provide the same thrust as the CFM56-7B series engines at the respective engine ratings and are approved for all models except the CFM56-7B-18/2 engine rating.
- The CFM56-7B/3 series are the so-called "Tech Insertion" engines, they have single annular combustors and provide the same thrust as the CFM56-7B series at the respective engine ratings.
- The CFM56-7BE series have single annular combustors and provide the same thrust as the CFM56-7B series at the respective engine ratings.
- Engine ratings and all approved models are referred to in: EASA TCDS E.004 "CFM International CFM56-7B Engines"
6. Auxiliary Power Unit: Auxiliary Power Unit (APU): Allied Signal AS 131-9 [B]  
Limitations: Refer to the APU TCDS / TSO
7. Propellers: N/A
8. Fluids (Fuel, Oil, Additives, Hydraulics): Eligible Fuels:  
ASTM Specification D-1655 Jet A, JAR A1  
MIL-T-5624G; JP-5  
MIL-T-83133; JP-8  
Refer to Airplane Flight Manual for other approved fuels.
- Eligible Oils: See CFM 56-7B ServiceBulletin 79-001 as revised.
9. Fluid Capacities: Fuel Capacity:  
26024 litres (6875 US Gall), consisting of two wing tanks, each of 4875 litres (1288 US Gall) capacity, and one centre tank, capacity 16274 litres (4299 US Gall).
- Oil Capacity: 10.3 litres useable
10. Air Speeds: See Airplane Flight Manual
11. Maximum Operating Altitude: 12,497 m (41,000 ft) pressure altitude
12. All Weather Capability: Cat 3
13. Maximum Certified Masses: See individual data (Section 3 to 7)
14. Centre of Gravity Range: See Airplane Flight Manual

SECTION 2: PERTINENT TO ALL NEXT GENERATION SERIES  
(737-600, -700, -800, -900, -900ER) - continued

15. Datum: See Weights and Balance Manual
16. Mean Aerodynamic Chord: 3.96m (155.81 in)  
(MAC)
17. Levelling Means: See approved Airplane Flight Manual
18. Minimum Flight Crew: Two (Pilot and Co-pilot) for all types of flight
19. Maximum Seating Capacity: See individual data (Section 3 to 7)
20. Exits: See individual data (Section 3 to 7)
21. Baggage/Cargo Compartment: See individual data (Section 3 to 7)
22. Wheels and Tyres: Speed Rating: 225 MPH, (-900ER: 235 MPH)  
Nose Assy (Qty 2) Tyre: 27 x 7.75 - 15 or 27 x 7.75 - R15  
Wheel: 27 x 7.75 - 15  
Main Assy (Qty 4) Tyre: H43.5 x 16.0 - 21 or  
H44.5 x 16.5 - 21  
Wheel: HR44.5 x 16.5 - 21
- Refer to Boeing Wheel/Tire/Brake Interchangeability  
Drawing for further details
23. ETOPS: 737-600 / -700 / -800 / -900 / -900ER  
The type design reliability and performance of this  
airplane has been evaluated in accordance with AMC 20-  
6 and found suitable for extended range operations when  
configured in accordance with Boeing Document  
D044A007 "737-600/-700/-800/-900/-900ER ETOPS  
Configuration, Maintenance and Procedures". This  
finding does not constitute approval to conduct extended  
range operations. ETOPS approval for the -600, -700, -  
800, -900, and -900ER is determined by NAA operating  
policies

**IV. Operating and Servicing Instructions**

1. Flight Manual: Since validation of the 737-700 model was conducted  
under JAA process, there is a generic JAA/EASA AFM  
format.
2. Mandatory Maintenance  
Instructions: CMRs  
Model 737 MRB Report  
Life Limited Parts and required inspection intervals are  
listed in the EASA approved Airworthiness Limitations  
Section (Section 9) of the Boeing Maintenance Planning  
Data Document D626A001.

SECTION 2: PERTINENT TO ALL NEXT GENERATION SERIES  
(737-600, -700, -800, -900, -900ER) – continued

- |   |  |
|---|--|
| 3. Service Letters and Service Bulletins: | As published by Boeing and approved by FAA.  |
| 4. Required Equipment:                    | All equipment as prescribed in Section II (Certification Basis) above must be installed in the aircraft. |

**V. Notes:**

1. Cabin Interior and Seating Configuration must be approved.
2. Additional information is provided in FAA Type Certificate Data Sheet A16WE.

## **SECTION 3: 737-700 Series**

### **I. General**

1. Type / Model / Variant: Boeing 737-700
2. FAA Certification Application Date: February 04, 1993
3. JAA Validation Application Date:  
(Reference date for JAA validation) August 04, 1993
4. FAA Type Certification Date: November 07, 1997
5. EASA/JAA Type Validation Date: February 18, 1998

### **II. Certification Basis**

1. FAA Type Certificate Data Sheet: No. A16WE
2. FAA Certification Basis: FAR Part 25 Amendment 25-77 except where modified by the FAA Issue Paper G-1
3. JAA Airworthiness Requirements: JAR 25 Change 13, effective 5 October 1989  
Orange Paper 90/1, effective 11 May 1990  
Orange Paper 91/1, effective 12 April 1991  
JAR AWO Chg. 1, effective 29 November 1985  
Orange Paper AWO/91/1, effective 28  
November 1991 (Note also see AWO Change 2)  
JAA IL-23 RVSM, effective April 1994 - (Boeing  
letter B-T111-96-1357 dated Dec 12, 1996)

The following NPAs have been applied:

NPA 25 B, D, G-244	Accelerate Stop Distances and Related Performances
NPA 25C-213	Discrete source damage due to rotor burst
NPA 25B215	Stall and Stall Warning Speeds and Manoeuvre Capability
NPA 25B-217	Reduced Thrust
NPA AWO 2	All Weather Operations
NPA AWO 5	All Weather Operations
NPA 25B, C, D-236	Flutter, Deformation and Fail Safe Criteria
NPA 25J-246	APU Instruments
NPA 25C-260	Design Dive Speed (JAR 25.335(b)(2) plus ACJ at Ch.14)
NPA 25C-260	Nose Wheel Steering (JAR 25.499(e))
NPA 25B-261	Harmonisation of JAR/FAR 25 Flight Requirements

In addition, the following requirements have been applied:

JAR AWO Change 2: All Weather Operations  
Special Condition JAA/737-700/SC/C-07 (JAR 25.427(b)(3) FAA/JAA Harmonised version)  
in place of JAR 25.427(b)(3)  
Static Ground Load Conditions (Jacking): JAR 25.X519(b) in accordance with JAR 25  
Amendment 25/96/1  
Stalling Speeds for Structural Design (defined in CRI C-12)  
Type III Emergency Exit Operating Handle Illumination JAR 25.811(e) at JAR 25 Chg. 14

SECTION 3: 737-700 SERIES - continued

3.1. Reversions:

The following reversions from the defined certification basis have been applied:

CRI A. 11-02 JAR 25.365	Pressurised Cabin Loads Reversion to FAR 25.365 Amendment 0
CRI A. 11-04 JAR 25.562	Emergency Landing Dynamic Loads Reversion to JAR 25 Change 12 which excludes para .562
CRI A. 11-05 JAR 25.571	Fatigue and Damage Tolerance Partial Reversion to FAR 25.571 Amendment 0
CRI A. 11-06 JAR 25.607(a)	Fasteners Reversion to FAR 25.607(a) Amendment 0
CRI A. 11-08 JAR 25.699(a)	Lift and Drag Device Indicator Reversion to FAR 25.699 Amendment 0
CRI A. 11-11 JAR 25.783(f)	Doors Reversion to FAR 25.783 Amendement 15
CRI A. 11-12 JAR 25.785(a)	Seat, Berths, Safety Belts and Harness Reversion to JAR 25.785(a) Change 12
CRI A. 11-16 JAR 25.1309	Equipment Systems and Installations Reversion to FAR 25.1309 Amendment 0
CRI A.11-23 JAR 25.775(d)	Windshields and Windows Reversion to FAR 25.775(d) Amendment 0
CRI J-04 JAR 25A1141(f)(2)	APU Fuel Shut Off Valve Indication Reversion to FAR 25.1141 Amendment 11

4. Special Conditions:

The following JAA Special Conditions have been applied defined in their respective CRI:

CRI B-10 JAA/737-700/SC/B-10	Stall Warning Thrust Bias Affected JAR 25.207(c) as amended by NPA 25B-215
CRI C-01 JAA/737-700/SC/C-01	Pressurised Cabin Loads INT/POL/25/7 Affected requirement JAR 25.365
CRI C-11 JAA/737-700/SC/C-11	Interaction of Systems and Structure Affected requirement JAR 25.302 & 25.310(b)
CRI D-01 JAA/737-700/SC/D-01	Brakes Requirements Qualification and Testing INT/POL/25/6: Affected requirement JAR 25.735
CRI D-04 JAA/737-700/SC/D-04	Landing Gear Warning INT/POL/25/1: Affected requirement JAR 25.729(e)(2) to (4)
CRI D-14 JAA/737-700/SC/D-14	Exit Configuration Affected requirement JAR 25.807, JAR 25.562

SECTION 3: 737-700 SERIES - continued

CRI F-01 JAA/737-700/SC/F-01	High Intensity Radiated Field (HIRF) INT/POL/25/2: Affected requirement JAR 25.1431(a)
CRI F-02 JAA/737-700/SC/F-02	Protection from Effects of Lightning Strike; Direct Effects INT/POL/25/3: Affected requirement JAR 25X899 and ACJ 25X899
CRI F-03 JAA/737-700/SC/F-03	Protection from Effects of Lightning Strike; Indirect Effects INT/POL/25/4: Affected requirement JAR 25.581, 25.899 25.954, 25.1309
CRI PTC/E-10	Flammability Reduction Systems (FRS) INT/POL/25/12: Affected requirement FAR 25.981 (c), JAR 25.1309, NPA 10-2004, JAR 21.16(a)(1)

5. Exemptions/Deviations:

The following Partial JAA Exemption has been applied:

CRI D-02 JAA/737-700/PE/D-02	Hydraulic System Proof Pressure Testing Partial Exemption Against JAR 25 1435(b)(1)
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The following EASA Deviation has been applied:

CRI D-29	CFM 56-7B Technology Insertion Engines and new Thrust Reverser Cascades
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6. Equivalent Safety Findings:

The following JAA Equivalent Safety Findings have been applied:

CRI D-06 JAA/737-700/ES/D-06	Towbarless Towing Equivalent Safety with JAR 25X745(d)
CRI D-08 JAA/737-700/ES/D-08	Forward and Aft Door Escape Slide Low Sill Height Equivalent Safety with JAR 25.809(f)(1)(ii)
CRI D-10 JAA/737-700/ES/D-10	Overwing Hatch Emergency Exit Signs Equivalent Safety with JAR 25.812(b)(1)(i)
CRI D-16 JAA/737-700/ES/D-16	Automatic Overwing Exit Equivalent Safety with JAR 27.783(f)
CRI D-17 JAA/737-700/ES/D-17	Oversized Type I Exits, Maximum Number of Passengers Equivalent Safety with JAR 25.807
CRI D-18 JAA/737-700/ES/D-18	Slide/Raft Inflation Gas Cylinders Equivalent Safety with JAR 25X1436
CRI PTC/ D-19 JAA/757-300/ES/D-19	Door Sill Reflectance Equivalent Safety with JAR 25.811(f)

SECTION 3: 737-700 SERIES - continued

CRI E-09 Automatic Fuel Shut Off  
JAA/737-700/ES/E-09 Equivalent Safety with JAR 25.979(b)(1)

CRI F-15 Wing Position Lights  
JAA/737-700/ES/F-15 Equivalent Safety with JAR 25.1389(b)(3)

CRI PTC/ D-23 Passenger Information Signs  
JAA/737-700/ES/D-23 Equivalent Safety with JAR 853(d)

CRI PTC/ D-21 Door Sill Reflectance  
JAA/737-700/ES/D-21 Equivalent Safety with JAR 25.811(f)

7. Environmental Protection Standards: Noise: ICAO Annex 16, Volume I (Third Edition)  
Fuel: ICAO Annex 16, Volume II (Second Edition)  
See also TCDSN EASA.IM.A.120

**III. Technical Characteristics and Operational Limitations**

1. Production Basis: Manufactured under Production Certificate 700
2. Type Design Definition: Defined by Boeing Top Drawing No. 001A0001-700 Rev. AG, dated January 12, 1998, and later approved changes and Production Revision Record (PRR) No. 38280.  
  
(737-700 IGW) Boeing Top Drawing No. 001A0001-2703 Rev. CA, dated October 13, 1998, and later approved changes and Production Revision Record (PRR) No. 38280
3. Description: Refer to Section 2 (data pertinent to all NG Series)
4. Dimensions: Refer to Section 2 (data pertinent to all NG Series)

5. Engines:

CFM56-	7B20 7B20/2 7B20/3 7B20E	7B22 7B22/3 7B22E	7B24 7B24/2 7B24/3 7B24E	7B26 7B26/B1 7B26/3F 7B26E 7B26E/B1 7B26E/B2 7B26E/B2F 7B26E/F	7B27/B3 7B27/3B3 7B27E/B3
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6. Auxiliary Power Unit: Refer to Section 2 (data pertinent to all NG Series)
7. Propellers: N/A
8. Fluids (Fuel, Oil, Additives, Hydraulics): Refer to Section 2 (data pertinent to all NG Series)
9. Fluid Capacities: Refer to Section 2 (data pertinent to all NG Series)
10. Airspeed Limits: See Airplane Flight Manual

SECTION 3: 737-700 SERIES – continued

- 11. Maximum Operating Altitude: 12,497 m (41,000 ft) pressure altitude
- 12. All Weather Capability: Cat III B (with 50 ft. decision height)
- 13. Maximum Certified Masses:

	737-700*		737-700 IGW**	
Taxi and Ramp	155,000 lbs.	70,307 kg,	171,500 lbs.	77,791 kg.
Take-off	154,500 lbs.	70,080 kg.	171,000 lbs.	77,564 kg.
Landing	129,200 lbs.	58,604 kg.	134,000 lbs.	60,781 kg.
Zero Fuel	121,700 lbs.	55,202 kg.	126,000 lbs.	57,153 kg.

\* Specified weights for -700 are Increased Design Weights approved post-initial Type Validation

\*\* Reference Boeing PLOD B-T111-98-2097 (737-700 IGW Revision F)

- 14. Centre of Gravity Range: Refer to Airplane Flight Manual
- 15. Datum: See Weights and Balance Manual
- 16. Mean Aerodynamic Chord: 3.96 m (155.81 in)  
(MAC)
- 17. Levelling Means: See Weight and Balance Manual
- 18. Minimum Flight Crew: Two (Pilot and Co-pilot) for all types of flight
- 19. Maximum Seating Capacity: (-) Passengers

Note: The maximum number of passengers approved for emergency evacuation is 149 with JAA / 737-700/SC/D-14 applicable, otherwise 145.

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

- 20. Exits:

B737-700	Number	Type	Size mm (inches)
1 Main Fwd LH	1	Type I	864W x 1829H (34 x 72),
2 Main Aft LH	1	Type I	762W x 1829H (30 x 72),
3 Service (Fwd, RH, Aft, RH)	1+1	Type I	762W x 1651H (30 x 65 - both)
4 Overwing/Emergency left	1	Type III	508W x 914H (20 x 36)
5 Overwing/Emergency right	1	Type III	508W x 914H (20 x 36)
6 Flight Crew Emergency Exits	1 + 1	Sliding	483W x 508H (19 x 20 - both)

- 21. Baggage/Cargo Compartment:

Location	Class	Volume m <sup>3</sup> (ft <sup>3</sup> )
Front Fwd	D	11.37 (406)
Middle	N/A	N/A
Rear Aft	D	16.7 (596)
Underfloor	N/A	N/A



SECTION 3: 737-700 SERIES – continued

22. Wheels and Tyres: Refer to Section 2 (data pertinent to all NG Series)

23. ETOPS Operation: Refer to Section 2 (data pertinent to all NG Series)

24. Fuel Tank Flammability Reduction System (FRS): Aircraft which have made their first flight after 1 January 2012 must be equipped with a fuel tank Flammability Reduction System (EASA SIB 2010-10)

Flammability Reduction Systems have been installed on aircraft line numbers 1820 and 1831 in December 2005, and then since mid 2008 on aircraft line number 2517, 2620 and on.

This system shall remain installed and operative and can only be dispatched inoperative in accordance with the provisions of the MMEL

**IV. Operating and Servicing Instructions**

1. Flight Manual: Airplane Flight Manual, Document No. D631A001.J01

2. Service Information: Maintenance Manual, Document No. D633A101

Maintenance Review Board Report Revision 1; 19 November 1997 or subsequent JAA approved revision

Airworthiness Limitations and Certification Maintenance Requirements: 737-600/700/800 Maintenance Planning Document (MPD) Document Section 9 Ref.: D626A001, Revision dated September 1997, and later revisions thereof

Service Letters and Service Bulletins

3. Required Equipment: The approved equipment is listed in: (737-700) CRI A-10

**V. Notes**

None

## **SECTION 4: 737-800 Series**

### **I. General**

- |  |                   |
|--|-------------------|
| 1. Type / Model / Variant:   | Boeing 737-800    |
| 2. FAA Certification Application Date:                                     | February 04, 1993 |
| 3. JAA Validation Application Date:<br>(Reference date for JAA validation) | August 04, 1993   |
| 4. FAA Type Certification Date:  | March 13, 1998    |
| 5. EASA/JAA Type Validation Date:  | April 09, 1998    |

### **II. Certification Basis**

- |  |                                      |
|--|--------------------------------------|
| 1. FAA Type Certificate Data Sheet:    | No. A16WE                            |
| 2. FAA Certification Basis:            | As for Boeing 737-700, see Section 3 |
| 3. JAA Airworthiness Requirements:     | As for Boeing 737-700, see Section 3 |
| 4. Special Conditions:                 | As for Boeing 737-700, see Section 3 |
| 5. Exemptions/Deviations:              | As for Boeing 737-700, see Section 3 |
| 6. Equivalent Safety Findings:         | As for Boeing 737-700, see Section 3 |
| 7. Environmental Protection Standards: | As for Boeing 737-700, see Section 3 |

### **III. Technical Characteristics and Operational Limitations**

- |                            |   |
|----------------------------|---|
| 1. Production Basis:       | Manufactured under Production Certificate 700   |
| 2. Type Design Definition: | Defined by Boeing Top Drawing No. 001A0001-800 Rev. AK, dated February 27, 1998, and later approved changes and Production Revision Record (PRR) No. 38280. |
| 3. Description:            | Refer to Section 2 (data pertinent to all NG Series)  |
| 4. Dimensions:             | Refer to Section 2 (data pertinent to all NG Series)  |
| 5. Engines:                |   |

CFM56-	7B24 7B24/3 7B24/3B1 7B24E 7B24E/B1	7B26 7B26/2 7B26/3 7B26/3F 7B26E 7B26E/F	7B27 7B27/2 7B27/3 7B27/3F 7B27E 7B27E/F	7B27/B1 7B27/3B1 7B27/3B1F 7B27/3B3 7B27E/B1 7B27E/B1F 7B27E/B3
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SECTION 4: 737-800 Series - continued

- 6. Auxiliary Power Unit: Refer to Section 2 (data pertinent to all NG Series)
- 7. Propellers: N/A
- 8. Fluids (Fuel, Oil, Additives, Hydraulics): Refer to Section 2 (data pertinent to all NG Series)
- 9. Fluid Capacities: Refer to Section 2 (data pertinent to all NG Series)
- 10. Airspeed Limits: See Airplane Flight Manual
- 11. Maximum Operating Altitude: 12,497 m (41,000 ft) pressure altitude
- 12. All Weather Capability: Cat III B (with 50 ft. decision height)
- 13. Maximum Certified Masses:

Taxi and Ramp	174,700 lbs.	79,243 kg.
Take-off	174,200 lbs.	79,016 kg.
Landing	146,300 lbs.	66,361 kg.
Zero Fuel	138,300 lbs.	62,732 kg.

\* Specified weight approved post-initial Type Validation

- 14. Centre of Gravity Range: Refer to Airplane Flight Manual
- 15. Datum: See Weights and Balance Manual
- 16. Mean Aerodynamic Chord (MAC): 3.96 m (155.81 in)
- 17. Levelling Means: See Weight and Balance Manual
- 18. Minimum Flight Crew: Two (Pilot and Co-pilot) for all types of flight
- 19. Maximum Seating Capacity: (-) Passengers

Note: The maximum number of passengers approved for emergency evacuation is 189 (with JAA/737-700/SC/D-14 applicable - or otherwise: 180).  
See interior layout drawing for the maximum passenger capacities approved for each aeroplane delivered.

- 20. Exits:

B737-800	Number	Type	Size mm (inches)
1 Main Fwd LH	1	Type I	864W x 1829H (34 x 72),
2 Main Aft LH	1	Type I	762W x 1829H (30 x 72),
3 Service (Fwd, RH, Aft, RH)	1+1	Type I	762W x 1651H (30 x 65-both)
4 Overwing/Emergency left	2	Type III	508W x 914H (20 x 36)
5 Overwing/Emergency right	2	Type III	508W x 914H (20 x 36)
6 Cockpit side window (2)	Flight Crew Emerg. Exits		483W x 508H (19 x 20)

For crew emergency evacuation purposes, the side windows are available on both sides.

SECTION 4: 737-800 Series - continued

21. Baggage/Cargo Compartment:

Location	Class	Volume m <sup>3</sup> (ft <sup>3</sup> )
Front Fwd	D	19.6 (692)
Middle	N/A	N/A
Rear Aft	D	25.46 (899)
Underfloor	N/A	N/A

22. Wheels and Tyres: Refer to Section 2 (data pertinent to all NG Series)

23. ETOPS Operation: Refer to Section 2 (data pertinent to all NG Series)

24. Fuel Tank Flammability Reduction System (FRS): Aircraft which have made their first flight after 1 January 2012 must be equipped with a fuel tank Flammability Reduction System (EASA SIB 2010-10)

Flammability Reduction Systems have been installed on aircraft line numbers 1820 and 1831 in December 2005, and then since mid 2008 on aircraft line number 2517, 2620 and on.

This system shall remain installed and operative and can only be dispatched inoperative in accordance with the provisions of the MMEL

**IV. Operating and Servicing Instructions**

1. Flight Manual: Airplane Flight Manual, Document No. D631A001.J02

2. Service Information: Maintenance Manual, Document No. D633A101

Maintenance Review Board Report Revision 1; 19 November 1997 or subsequent JAA/EASA approved revision

Airworthiness Limitations and Certification Maintenance Requirements: 737-600/700/800 Maintenance Planning Document (MPD) Document Section 9 Ref.: D626A001, Revision Dated September 1997, and later revisions thereof

Service Letters and Service Bulletins

3. Required Equipment: The approved equipment is listed in: (737-700) CRI A-10

**V. Notes**

None

## **SECTION 5: 737-600 Series**

### **I. General**

1. Type / Model / Variant: Boeing 737-600
2. FAA Certification Application Date: February 04, 1993
3. JAA Validation Application Date:  
(Reference date for JAA validation) August 04, 1993
4. FAA Type Certification Date: August 12, 1998
5. EASA/JAA Type Validation Date: September 09, 1998

### **II. Certification Basis**

1. FAA Type Certificate Data Sheet: No. A16WE
2. FAA Certification Basis: As for Boeing 737-700, see Section 3
3. JAA Airworthiness Requirements: As for Boeing 737-700, see Section 3
4. Special Conditions: As for Boeing 737-700, see Section 3
5. Exemptions/Deviations: As for Boeing 737-700, see Section 3
6. Equivalent Safety Findings: As for Boeing 737-700, see Section 3
7. Environmental Protection Standards: As for Boeing 737-700, see Section 3

### **III. Technical Characteristics and Operational Limitations**

1. Production Basis: Manufactured under Production Certificate 700
2. Type Design Definition: Defined by Boeing Top Drawing No. 001A0001-600 Rev. AW, dated June 08, 1998, and later approved changes and Production Revision Record (PRR) No. 38280.
3. Description: Refer to Section 2 (data pertinent to all NG Series)
4. Dimensions: Refer to Section 2 (data pertinent to all NG Series)
5. Engines:

CFM56-		7B18/3	7B20 7B20/2 7B20/3 7B20E	7B22 7B22/2 7B22/3 7B22E
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6. Auxiliary Power Unit: Refer to Section 2 (data pertinent to all NG Series)
7. Propellers: N/A

SECTION 5: 737-600 Series - continued

8. Fluids (Fuel, Oil, Additives, Hydraulics): Refer to Section 2 (data pertinent to all NG Series)
9. Fluid Capacities: Refer to Section 2 (data pertinent to all NG Series)
10. Airspeed Limits: See Airplane Flight Manual
11. Maximum Operating Altitude: 12,497 m (41,000 ft) pressure altitude
12. All Weather Capability: Cat III B (with 50 ft. decision height)
13. Maximum Certified Masses:

Taxi and Ramp	144,000 lbs.	65,317 kg.
Take-off	143,500 lbs.	65,091 kg.
Landing	120,500 lbs.	54,658 kg.
Zero Fuel	113,500 lbs.	51,483 kg.

14. Centre of Gravity Range: Refer to Airplane Flight Manual
15. Datum: See Weights and Balance Manual
16. Mean Aerodynamic Chord (MAC): 3.96 m (155.81 in)
17. Levelling Means: See Weight and Balance Manual
18. Minimum Flight Crew: Two (Pilot and Co-pilot) for all types of flight
19. Maximum Seating Capacity: (-) Passengers

Note: The maximum number of passengers approved for emergency evacuation is 149 (with JAA/737-700/SC/D-14 applicable - or otherwise: 145).  
See interior layout drawing for the maximum passenger capacities approved for each aeroplane delivered.

20. Exits:

B737-600	Number	Type	Size mm (inches)
1 Main Fwd LH	1	Type I	864W x 1829H (34 x 72),
2 Main Aft LH	1	Type I	762W x 1829H (30 x 72),
3 Service (Fwd, RH, Aft, RH)	1+1	Type I	762W x 1651H (30 x 65-both)
4 Overwing/Emergency left	1	Type III	508W x 914H (20 x 36)
5 Overwing/Emergency right	1	Type III	508W x 914H (20 x 36)
6 Cockpit side window (2)	Flight Crew Emerg. Exits		483W x 508H (19 x 20)

For crew emergency evacuation purposes, the side windows are available on both sides.

SECTION 5: 737-600 Series - continued

21. Baggage/Cargo Compartment:

Location	Class	Volume m <sup>3</sup> (ft <sup>3</sup> )
Front Fwd	D	7.59 (268)
Middle	N/A	N/A
Rear Aft	D	13.8 (488)
Underfloor	N/A	N/A

22. Wheels and Tyres: Refer to Section 2 (data pertinent to all NG Series)

23. ETOPS Operation: Refer to Section 2 (data pertinent to all NG Series)

24. Fuel Tank Flammability Reduction System (FRS): Aircraft which have made their first flight after 1 January 2012 must be equipped with a fuel tank Flammability Reduction System (EASA SIB 2010-10)

Flammability Reduction Systems have been installed on aircraft line numbers 1820 and 1831 in December 2005, and then since mid 2008 on aircraft line number 2517, 2620 and on.

This system shall remain installed and operative and can only be dispatched inoperative in accordance with the provisions of the MMEL

**IV. Operating and Servicing Instructions**

1. Flight Manual: Airplane Flight Manual, Document No. D631A001.J03

2. Service Information: Maintenance Manual, Document No. D633A101

Maintenance Review Board Report Revision 1;  
19 November 1997 or subsequent JAA/EASA approved revision

Airworthiness Limitations and Certification Maintenance Requirements: 737-600/700/800 Maintenance Planning Document (MPD) Document Section 9 Ref.: D626A001, Revision dated September 1997, and later revisions thereof

Service Letters and Service Bulletins

3. Required Equipment: The approved equipment is listed in: (737-700) CRI A-10

**V. Notes**

None

## **SECTION 6: 737-900 Series**

### **I. General**

1. Type / Model / Variant: Boeing 737-900
2. FAA Certification Application Date: October 14, 1997
3. JAA Validation Application Date:  
(Reference date for JAA validation) October 14, 1997
4. FAA Type Certification Date: April 17, 2001
5. EASA/JAA Type Validation Date: April 19, 2001

### **II. Certification Basis**

1. FAA Type Certificate Data Sheet: No. A16WE
2. FAA Certification Basis: FAR Part 25 Amendment 25-91 except where modified by the FAA Issue Paper G-1
3. JAA/EASA Airworthiness Requirements: Applicable JAR Requirements  
(Reference CRI 9/A-01)  
JAR 25 Change 14, effective 27 May 1994  
Orange Paper 96/1, effective 19 April 1996  
JAR AWO Change 2, effective 01 August 1996  
JAA IL-23 RVSM, effective April 1994

The following NPAs have been applied:

NPA 25 B, D, G-244	Accelerate Stop Distances and Related Performances
NPA 25C-213	Discrete source damage due to rotor burst
NPA 25B215	Stall and Stall Warning Speeds and Manoeuvre Capability
NPA 25B-217	Reduced Thrust
NPA AWO 2	All Weather Operations
NPA AWO 5	All Weather Operations
NPA 25B, C, D-236	Flutter, Deformation and Fail Safe Criteria
NPA 25J-246	APU Instruments
NPA 25C-260	Design Dive Speed (JAR 25.335(b)(2) plus ACJ at Ch.14)
NPA 25C-260	Nose Wheel Steering (JAR 25.499(e))
NPA 25C-260	Reference JAR 25.415 and JAR 25.519
NPA 25B-261	Harmonisation of JAR/FAR 25 Flight Requirements
NPA 25C-282	Harmonisation of Structures Requirements (see CRI C-05)

In addition, the following requirements have been applied:

JAR AWO Change 2: All Weather Operations  
Special Condition JAA/737-700/SC/C-07: (JAR 25.427(b)(3)FAA/JAA Harmonised version)  
in place of JAR 25.427(b)(3)  
Static Ground Load Conditions (Jacking): JAR 25.X519(b) in accordance with JAR 25  
Amendment 25/96/1  
Stalling Speeds for Structural Design (defined in CRI C-12)  
Type III Emergency Exit Operating Handle Illumination JAR 25.811(e) at JAR 25 Chg. 14  
ETOPS Approval (180 Minutes): JAA Information Leaflet Number 20 (1<sup>st</sup> July 1995  
Revised)



SECTION 6: 737-900 Series - continued

3.1. Reversions:

The following Reversions from the defined certification basis have been applied:

CRI A.11-04 JAR 25.562	Emergency Landing Dynamic Loads Reversion to JAR 25 Change 12 excluding paragraph .562
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*Note: Special Condition JAA/737-700/SC/D-14 which is applicable to the model -900 requires compliance to 25.562 at change 13 (same as change 14) except for 25.562(c)(5) and (c)(6).*

CRI A.11-06 JAR 25.607(a)	Fasteners Reversion to FAR 25.607(a) Amendment 0
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CRI A.11-08 JAR 25.699(a)	Lift and Drag Device Indicator Reversion to FAR 25.699 Amendment 0
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CRI A.11-11 JAR 25.783(f)	Doors Reversion to FAR 25.783 Amendment 15
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CRI A.11-12 JAR 25.785(a)	Seat, Berths, Safety Belts and Harness Reversion to JAR 25.785(a) Change 12
------------------------------	--

CRI A.11-16 JAR 25.1309	Equipment, Systems and Installations Reversion to FAR 25.1309 Amendment 0
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CRI A.11-23 JAR 25.775(d)	Windshields and Windows Reversion to FAR 25.775(d) Amendment 0
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CRI J-04 JAR 25A1141(f)(2)	APU Fuel Shut Off Valve Indication Reversion to FAR 25.1141 Amendment 11
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CRI 9/A.11-01 JAR 25.365	Pressurised Cabin Loads Reversion to FAR 25.365 Amendment 0
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CRI 9/A.11-02 JAR 25.963(g)(1)	Fuel Tank Access Covers Reversion to FAR 25 963 (e)(1) Amendment 69
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CRI 9/A11-03 JAR 25.1329	Automatic Pilot System Reversion to JAR 25.1329 Change 13 and associated ACJ
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CRI 9/A11-04 AMJ 25-11	Electronic Display Systems Reversion to JAR 25 Change 13 and associated ACJ
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4. Special Conditions:

The following JAA Special Conditions have been applied defined in their respective CRI:

JAA/737-700/SC/B-10 CRI B-10	Stall Warning Thrust Bias Affected Requirement JAR 25.207(c) as amended by NPA 25B-215
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JAA/737-700/SC/C-01 CRI C-01	Pressurized Cabin Loads INT/POL/25/7 Affected requirement JAR 25.365
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SECTION 6: 737-900 Series - continued

JAA/737-700/SC/C-11 CRI C-11	Interaction of Systems and Structure Affected requirement JAR 25.302
JAA/737-700/SC/D-01 CRI D-01	Brakes Requirements Qualification and Testing INT/POL/25/6 Affected requirement JAR 25.735
JAA/737-700/SC/D-04 CRI D-04	Landing Gear Warning INT/POL/25/1: Affected requirement JAR 25.729(e)(2) to (4)
JAA/737-700/SC/D-14 CRI D-14	Exit Configuration Affected Requirement: JAR 25.807, JAR 25.562
JAA/737-700/SC/F-01 CRI F-01	High Intensity Radiated Field (HIRF) INT/POL/25/2: Affected requirement JAR 25.1431(a)
JAA/737-700/SC/F-02 CRI F-02	Protection from Effects of Lightning Strike; Direct Effects INT/POL/25/3: Affected requirement JAR 25X899 and ACJ 25X899
JAA/737-700/SC/F-03 CRI F-03	Protection from Effects of Lightning Strike; Indirect Effects INT/POL/25/4: Affected requirement JAR 25.581, 25.899, 25.954, 25.1309
CRI PTC/E-10	Flammability Reduction Systems (FRS) INT/POL/25/12: Affected requirement FAR 25.981 (c), JAR 25.1309, NPA 10-2004, JAR 21.16(a)(1)

5. Exemptions/Deviations:

The following partial JAA Exemption has been applied:

JAA/737-700/PE/D-02 CRI D-02	Hydraulic System Pressure Testing Partial Exemption Against JAR 25 1435(b)(1)
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The following EASA Deviation has been applied:

CRI D-29	CFM 56-7B Technology Insertion Engines and new Thrust Reverser Cascades
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6. Equivalent Safety Findings:

JAA/737-700/ES/D-08 CRI D-08	Forward and Aft Door Escape Slide Low Sill Height Equivalent Safety with JAR 25.809(f)(1)(ii)
JAA/737-700/ES/D-16 CRI D-16	Automatic Overwing Exit Equivalent Safety with JAR 25.783(f)
JAA/737-700/ES/D-17 CRI D-17	Oversized Type I Exits, Maximum Number of Passengers

SECTION 6: 737-900 Series - continued

JAA/737-700/ES/D-18 CRI D-18	Slide/Raft Inflation Gas Cylinders Equivalent Safety with JAR 25X1436
JAA/737-700/ES/E-09 CRI E-09	Automatic Fuel Shut Off Equivalent Safety with JAR 25.979(b)(1)
JAA/737-700/ES/F-15 CRI F-15	Wing Tip Position Lights Equivalent Safety with JAR 25.1389(b)(3)
JAA/737-900/ES/9/C-01 CRI 9/C-01	Material Strength Properties and Design Values Equivalent Safety with JAR 25.613
JAA/737-900/ES/9/C-04 CRI 9/C-04	Control Systems Equivalent Safety with JAR 25.395(a)
JAA/737-900/ES/9/D-02 CRI 9/D-02	Environmental Control Systems (Packs Off Take-Off) Equivalent Safety with JAR 25.831 (a)
JAA/737-700/ES/D-23 CRI PTC/D-23	Passenger Information Signs Equivalent Safety with JAR 25.853(d)
JAA/737-700/ES/D-21 CRI PTC/D-21	Door Sill Reflectance Equivalent Safety with JAR 25.811(f)

7. Environmental Protection Standards: As for Boeing 737-700, see Section 3

**III. Technical Characteristics and Operational Limitations**

1. Production Basis: Manufactured under Production Certificate 700
2. Type Design Definition: Defined by Boeing Top Drawing No. 001A0001-900 Rev. HK, dated March 06, 2001, and later approved changes and Production Revision Record (PRR) No. 38906.
3. Description: Refer to Section 2 (data pertinent to all NG Series)
4. Dimensions: Refer to Section 2 (data pertinent to all NG Series)
5. Engines:

CFM56-	7B24 7B24/3 7B24/3B1 7B24E 7B24E/B1	7B26 7B26/3 7B26/3F 7B26E 7B26E/F	7B27 7B27/3 7B27/3F 7B27E 7B27E/F	7B27/B1 7B27/3B1 7B27/3B3 7B27E/B1 7B27E/B3
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6. Auxiliary Power Unit: Refer to Section 2 (data pertinent to all NG Series)
7. Propellers: N/A

SECTION 6: 737-900 Series - continued

- 8. Fluids (Fuel, Oil, Additives, Hydraulics): Refer to Section 2 (data pertinent to all NG Series)
- 9. Fluid Capacities: Refer to Section 2 (data pertinent to all NG Series)
- 10. Airspeed Limits: See Airplane Flight Manual
- 11. Maximum Operating Altitude: 12,497 m (41,000 ft) pressure altitude
- 12. All Weather Capability: Cat III B (with 50 ft. decision height)
- 13. Maximum Certified Masses:

Taxi and Ramp	174,700 lbs.	79,243 kg.
Take-off	174,200 lbs.	79,016 kg.
Landing	146,300 lbs.	66,361 kg.
Zero Fuel	140,300 lbs.	63,639 kg.

- 14. Centre of Gravity Range: Refer to Airplane Flight Manual
- 15. Datum: See Weights and Balance Manual
- 16. Mean Aerodynamic Chord (MAC): 3.96 m (155.81 in)
- 17. Levelling Means: See Weight and Balance Manual
- 18. Minimum Flight Crew: Two (Pilot and Co-pilot) for all types of flight
- 19. Maximum Seating Capacity: (-) Passengers

Note: The maximum number of passengers approved for emergency evacuation is 189 (with JAA/737-700/SC/D-14 applicable) or otherwise: 180  
See interior layout drawing for the maximum passenger capacities approved for each aeroplane delivered.

- 20. Exits:

B737-900	Number	Type	Size mm (inches)
1 Main Fwd LH	1	Type I	864W x 1829H (34 x 72),
2 Main Aft LH	1	Type I	762W x 1829H (30 x 72),
3 Service (Fwd, RH, Aft, RH)	1+1	Type I	762W x 1651H (30 x 65-both)
4 Overwing/Emergency left	2	Type III	508W x 914H (20 x 36)
5 Overwing/Emergency right	2	Type III	508W x 914H (20 x 36)
6 Cockpit side window (2)	Flight Crew Emerg. Exits		483W x 508H (19 x 20)

For crew emergency evacuation purposes, the side windows are available on both sides.

SECTION 6: 737-900 Series - continued

21. Baggage/Cargo Compartment:

Location	Class	Volume m <sup>3</sup> (ft <sup>3</sup> )
Front Fwd	C	23.5 (830)
Middle	N/A	N/A
Rear Aft	C	28.2 (996)
Underfloor	N/A	N/A

22. Wheels and Tyres: Refer to Section 2 (data pertinent to all NG Series)

23. ETOPS Operation: Refer to Section 2 (data pertinent to all NG Series)

24. Fuel Tank Flammability Reduction System (FRS): Aircraft which have made their first flight after 1 January 2012 must be equipped with a fuel tank Flammability Reduction System (EASA SIB 2010-10)

Flammability Reduction Systems have been installed on aircraft line numbers 1820 and 1831 in December 2005, and then since mid 2008 on aircraft line number 2517, 2620 and on.

This system shall remain installed and operative and can only be dispatched inoperative in accordance with the provisions of the MMEL

**IV. Operating and Servicing Instructions**

1. Flight Manual: Airplane Flight Manual, Document No. D631A001.J04

2. Service Information: Maintenance Manual, Document No. D633A101

Maintenance Review Board Report Revision 3 together with MRBR Supplement for 737-900 as JAA Approved 12 January 2000; subsequent JAA approved revision

Airworthiness Limitations and Certification Maintenance Requirements: 737-600/700/800 Maintenance Planning Document (MPD) Document Section 9 Ref.: D626A001, Revision dated March 2001, and later revisions thereof

Service Letters and Service Bulletins.

3. Required Equipment: The approved equipment is listed in: (737-900) CRI 9/A-10

**V. Notes**

None

## **SECTION 7: 737-900ER**

### **I. General**

1. Type / Model / Variant: Boeing 737-900ER
2. FAA Certification Application Date: June 05, 2002
3. JAA Validation Application Date: January 10, 2002  
(Reference date for JAA validation) June 05, 2002
4. FAA Type Certification Date: April 20, 2007
5. EASA/JAA Type Validation Date: April 22, 2008

### **II. Certification Basis**

1. FAA Type Certificate Data Sheet: No. A16WE
2. FAA Certification Basis: FAR Part 25 Amendment 25-108 except where modified by the FAA Issue Paper G-1
3. JAA/EASA Airworthiness Requirements: Applicable JAR Requirements  
(Reference CRI 9ER/A-01)\*  
JAR 25 Change 15, effective 01 October 2000  
JAR AWO Change 2, effective 01 August 1996  
JAA IL-23 RVSM, effective April 1994

In addition to the -900 model the following NPAs have been applied in various CRIs:

NPA 25B, C, D-236	Flutter, Deformation and Fail Safe Criteria
NPA 25C, D, F-314	Better Plan for Harmonization – Cabin Safety
NPA 25F-274	Introduction of MLS and Upgrade of Equipment Software Standards
NPA 25D-301 Issue 1	Doors
NPA 25D-336	Reinforced Cockpit Doors to Enhance Aeroplane Security
NPA 25D-320	Revised Standards for Cargo or Baggage Compartments in Transport Category Aeroplanes

\* *NOTE: CRIs initially raised for the model -700 as cross-referenced in CRI 9ER/A-01 as applicable do not have a prefix. CRIs initially raised for the model -900 as cross-referenced therein as applicable are identified by the prefix "9". CRIs which are specific to the Boeing 737 submodel -900ER are identified by the prefix "9ER".*

#### 3.1. Reversions:

The following Reversions as defined by the respective (-700 or -900) CRI's, were identified and accepted as part of the JAA Validation of the Boeing 737-700 and -900 models and are requested by Boeing and agreed by EASA for the certification basis for the validation of the Boeing 737-900ER design change:

CRI A.11-06	Fasteners
JAR 25.607(a)	Reversion to FAR 25.607(a) Amendment 0
CRI A. 11-08	Lift and Drag Device Indicator
JAR 25.699(a)	Reversion to FAR 25.699 Amendment 0

SECTION 7: 737-900ER - continued

CRI A. 11-16 JAR 25.1309	Equipment, Systems and Installations Reversion to FAR 25.1309 Amendment 0
CRI A. 11-23 JAR 25.775(d)	Windshields and Windows Reversion to FAR 25.775(d) Amendment 0
CRI J-04 JAR 25A1141(f)(2)	APU Fuel Shut Off Valve Indication Reversion to FAR 25.1141 Amendment 11
CRI 9/A. 11-03 JAR 25.1329	Automatic Pilot System Reversion to JAR 25.1329 Change 13 and associated ACJ
CRI 9/A. 11-04 AMJ 25-11	Electronic Display Systems Reversion to JAR 25 Change and associated ACJ

The following reversions as defined by the respective CRI's have been identified to be not applicable for the EASA Validation of the Boeing 737-900ER model:

JAR 25.2571 ch. 15 (CRI A.11-5)	Fatigue and Damage Tolerance Boeing requested re-reversion to Chg 15.
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The following reversions as defined by the respective CRI's have been identified and accepted as part of the EASA Validation of the Boeing 737-900ER model:

JAR 25.571(c) CRI 9ER/C-14	Fatigue Safe-Life Scatter Factors – Harmonized Scatter Factor – JAR 25 Chg 15
JAR 25.493 CRI 9ER/C-21	Braked Roll Conditions Reversion to Chg 14 based on unchanged area.
JAR 25.365 CRI 9/A. 11-01 CRI 9ER/C-19	Pressurized Cabin Loads (partly) Reversion to FAR 25.365 Amendment 0 (with exception to the aft pressure bulkhead area, which is a significant change) JAR 25 Chr 15, CRI 9ER/C-19 applies
JAR 25.562 CRI 9ER/A.11-04	Emergency Landing Dynamic Loads Partly reversion to JAR 25 Change 12 excluding Paragraph 25.562. Partly NPA 25C,D, F-314 except for (c)(5) and (c)(6)
JAR 25.729(f) and 25.1309	Protection of Equipment on the Landing Gear and in Wheel Wells. Reversion to Change 14 including OP 96/1

3.2. Elect to Comply:

Boeing elected to comply with the following requirements as part of the Models 737-700 and 737-900 JAA Validation. These updated CRIs are for the model (-900ER):

CRI 9ER/B-07	All Weather Operations JAR NPAs AWO 2 dtd. Nov 1991 and AWO 5 dtd. Jul 1994
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SECTION 7: 737-900ER - continued

CRI 9ER/C-05	Flutter, Deformation and Fail Safe Criteria JAR 25.629 in accordance with NPA-25B, C, D – 236 dated Dec 1996, SSG(98/8)
JAR 25.427(b)(3) No CRI issued	Round the Clock Gust JAR 25 Chg 15 applied – CRI C-07 not applicable
CRI 9ER/C-12 JAR 25.333, 335(c)(d)(e), 479(a), 481(a), 729(a)	Stalling Speeds for Structural Design TGM/25/6 is to be used for B737-900ER while Boeing proposed to use CRI C-12. JAR 25 Chg 15 applies
CRI PTC G-01 (Rev. Sep/1999)	ETOPS Approval (180 minutes) AMC 20-6
CRI PTC G-03	ETOPS Approval (Performance Charts)
CRI 9ER/D-02	Towbarless Towing JAR 25X745(d) Introduce Special Condition CRI be reopened. INT/POL/25/13 instead of RNPA 25D-275
CRI 9ER/F-04	Software Policy JAR 25.1309 Chg 15 applies
JAR 25.335(b)(2)	Design Dive Speed JAR 25 Chg 15 applies
JAR 25.499(e)	Nose Wheel Steering JAR 25 Chg 15 applies
JAR 25.519(b)	Jacking JAR 25 Chg 15 applies
JAR 25.415	Ground Gust JAR 25 Chg 15 applies

4. Special Conditions:

The following JAA Special Conditions as defined by the respective (-700) CRI's, were identified as part of the JAA Validation of the Boeing 737-700 model and are applicable to, and form part of, the EASA Certification Basis for the Validation Boeing 737-900ER model:

JAA/737-700/SC/B-10 CRI B-10	Stall Warning Thrust Bias Affected Requirement JAR 25-207(c)
JAA/737-700/SC/D-14 CRI D-14	Exit Configuration Affected requirements JAR 25.807 and 25.813(c)(1)
JAA/737-700/SC/F-01 CRI F-01	High Intensity Radiated Field (HIRF) INT/POL/25/2: Affected requirement JAR 25.1431(a)
JAA/737-700/SC/F-02 CRI F-02	Protection from Effects of Lightning Strike; Direct Effects INT/POL/25/3: Affected requirements: JAR 25X899 and ACJ 25X899



SECTION 7: 737-900ER - continued

JAA/737-700/SC/F-03      Protection from Effects of Lightning Strike; Indirect Effect  
CRI F-03                    INT/POL/25/4 Affected requirements: JAR 25.581, 25.899,  
J5.954, 25.1309

The following EASA Special Conditions have been applied defined in their respective CRI:

CRI PTC/E-10                Flammability Reduction Systems (FRS)  
INT/POL/25/12: Affected requirement FAR 25.981 (c),  
JAR 25.1309, NPA 10-2004, JAR 21.16(a)(1)

CRI PTC/D-GEN02            Application of Heat Release and Smoke Density  
Requirements for Seat Materials  
Affected Requirements: CS 25.853(d);  
Appendix F part IV and V; Part 21 §21A.16B

The following Special Conditions have been identified which are specific to the model 737-900ER:

CRI 9ER/C-11                Interaction of Systems and Structure  
Affected requirement JAR 25.302

5. Exemptions/Deviations:

The following Partial Deviation/Exemption has been applied:

JAA/737-700/PE/D-02        Hydraulic System Proof Pressure Testing  
CRI D-02                    Partial Deviation against JAR 25 1435(b)(1)

6. Equivalent Safety Findings:

The following Equivalent Safety Findings were identified as part of the JAA Validation of the models -700/-900 or 757-300 and have been requested by Boeing and agreed by EASA to be applicable for model -900ER:

JAA/737-700/ES/D-17        Oversized Type I Exits, Maximum Number of Passengers  
CRI D-17                    up to 145/145/180 Equivalent Safety with JAR 25.807

JAA/737-700/ES/D-18        Slide/Raft Inflation Gas Cylinders  
CRI D-18                    Equivaent Safety with JAR 25X1436

JAA/737-700/ES/E-09        Automatic Fuel Shut Off  
CRI E-09                    Equivalent Safety with JAR 25.979(b)(1)

JAA/737-700/ES/F-15        Wing Tip Position Lights  
CRI F-15                    Equivalent Safety with JAR 25.1389(b)(3)

JAA/737-900/ES/9/C-01        Material Strength Properties and Design Values  
CRI 9/C-01                    Equivalent Safety with JAR 25.613

JAA/737/900/ES/9/C-04        Control Systems  
CRI 9/C-04                    Equivalent Safety with JAR 25.395(a)

SECTION 7: 737-900ER - continued

JAA/737-900/ES/9/D-02      Environmental Control Systems (Packs Off Take-Off)  
CRI 9/D-02                      Equivalent Safety with JAR 25.831(a)

JAA/757-300/ES/D-19      Emergency Exit Markings  
CRI D-19                         JAR 25.811(f)

The following Equivalent Safety Findings have been agreed between Boeing and EASA specific to the model 737-900ER:

JAR25.810(a)(1)(ii)ch 15      Forward and Aft Door Escape Slide Low Sill Height  
For JAR 25.809(f)(1)(ii)      Equivalent Safety with JAR 25.810(a)(1)(ii)  
CRI 9ER/D-08

JAA/737-700/ES/D-16      Automatic Overwing Exit  
CRI 9ER/D-16                      Equivalent Safety with JAR 25.783(f)

JAR 25.791(a)                 Passenger Information Signs and Placards Use of  
CRI 9ER/D-23                      Electrically Illuminated Signs in lieu of Placards

JAR 25.795(a)(2)             Reinforced Cockpit Doors  
CRI 9ER/D-22                      Acceptance of FAA Memorandum  
PS-ANM100-2001-115-11

JAR 25.811(f)                 Emergency Exit Markings  
CRI 9ER/D-22                      (Door Sill Reflectance)

JAR 25.813(a)                 Over Sized Type II Exit Passageway Dimension  
CRI 9ER/D-20                      Equivalent Safety with JAR 25.813(a)

JAR 25.963(g)                 Fuel Tank Access Covers  
CRI 9ER/C-20                      Equivalent Safety with JAR 25.963(g)

JAR 25.807(d)                 Maximum Passenger Seating Configuration  
CRI 9ER/D-12

7. Environmental Protection Standards:      As for Boeing 737-700, see Section 3

**III. Technical Characteristics and Operational Limitations**

1. Production Basis:                              Manufactured under Production Certificate 700
2. Type Design Definition:                      Defined by Boeing Document 737-900ER Amended Type Design Configuration, DDL 737-900ER Rev B, and later approved changes
3. Description:                                      Refer to Section 2 (data pertinent to all NG Series)
4. Dimensions:                                      Length 42.1m (138 ft 2 in)  
Span 34.32 m (112 ft 7 in)  
Height 12.57 m (41 ft 3 in)

SECTION 7: 737-900ER - continued

5. Engines:

CFM56-	7B24 7B24/3 7B24/3B1 7B24E 7B24E/B1	7B26 7B26/3 7B26/3F 7B26E 7B26E/F	7B27 7B27/3 7B27/3F 7B27E 7B27E/F	7B27/B1 7B27/3B1 7B27/3B1F 7B27E/B1 7B27E/B1F	7B27/B3 7B27/3B3 7B27E/B3
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6. Auxiliary Power Unit: Refer to Section 2 (data pertinent to all NG Series)

7. Propellers: N/A

8. Fluids (Fuel, Oil, Additives, Hydraulics): Refer to Section 2 (data pertinent to all NG Series)

9. Fluid Capacities: Refer to Section 2 (data pertinent to all NG Series)

10. Airspeed Limits: See Airplane Flight Manual

11. Maximum Operating Altitude: 12,497 m (41,000 ft) pressure altitude

12. All Weather Capability: Cat III B (with 50 ft. decision height)

13. Maximum Certified Masses:

Taxi and Ramp	188,200 lbs.	85,351 kg.
Take-off	187,700 lbs.	85,124 kg.
Landing	157,300 lbs.	71,338 kg.
Zero Fuel	149,300 lbs.	67,710 kg.

14. Centre of Gravity Range: Refer to Airplane Flight Manual

15. Datum: See Weight and Balance Manual

16. Mean Aerodynamic Chord (MAC): 3.96 m (155.81 in)

17. Levelling Means: See Weight and Balance Manual

18. Minimum Flight Crew: Two (Pilot and Co-pilot) for all types of flight

19. Maximum Seating Capacity: (-) Passengers

Note: The maximum number of passengers approved for emergency evacuation is 220 (with Passenger Passageway acc. CRI 9ER/D-20), or otherwise: 215 (with downsized Passageway acc. CRI 9ER/D-20), or otherwise with blocked MED unserviceable: 189. See interior layout drawing for the maximum passenger capacities approved for each aeroplane delivered.

SECTION 7: 737-900ER - continued

20. Exits:

B737-900ER	Number	Type	Size mm (inches)
1 Main Fwd LH	1	Type I	864W x 1829H (34 x 72),
2 Main Aft LH	1	Type I	762W x 1829H (30 x 72),
3 Service (Fwd, RH, Aft, RH)	1+1	Type I	762W x 1651H (30 x 65 – both)
4 Overwing/Emergency left	2	Type III	508W x 914H (20 x 36)
5 Overwing/Emergency right	2	Type III	508W x 914H (20 x 36)
6 Mid Emergency Door LH/RH	1+1	Type I(II)	660W x 1295H (26 x 51)
7 Cockpit side window (2)	Flight Crew Emerg. Exits		483W x 508H (19 x 20)

For crew emergency evacuation purposes, the side windows are available on both sides.

21. Baggage/Cargo Compartment:

Location	Class	Volume m <sup>3</sup> (ft <sup>3</sup> )
Front Fwd	C	23.4 (825)
Middle	N/A	N/A
Rear Aft	C	28.2 (996)
Underfloor	N/A	N/A

22. Wheels and Tyres:

Nose Assy (Qty 2) Tyre: 27 x 7.75 - 15 or 27 x 7.75 - R15  
Wheel: 27 x 7.75 – 15  
Main Assy (Qty 4) Tyre: H44.5 x 16.5 – 21  
Wheel: H44.5 x 16.5 – 21  
Speed Rating: 235 MPH refer to Section 2 (data pertinent to all NG Series)

23. ETOPS Operation:

Refer to Section 2 (data pertinent to all NG Series)

24. Fuel Tank Flammability Reduction System (FRS):

Aircraft which have made their first flight after 1 January 2012 must be equipped with a fuel tank Flammability Reduction System (EASA SIB 2010-10)

Flammability Reduction Systems have been installed on aircraft line numbers 1820 and 1831 in December 2005, and then since mid 2008 on aircraft line number 2517, 2620 and on.

This system shall remain installed and operative and can only be dispatched inoperative in accordance with the provisions of the MMEL.

**IV. Operating and Servicing Instructions**

1. Flight Manual:

Airplane Flight Manual, Document No. D631A001.J05 (04)

2. Service Information:

Maintenance Manual, Document No. D633A101

Maintenance Review Board Document D626A001-MRBR with MRBR Supplement for 737-900ER as EASA approved June 12, 2006

Airworthiness Limitations and Certification Maintenance Requirements: 737-600/700/800/900 Maintenance Planning Document (MPD) Document Section 9 Ref.: D626A001, Revision (R2) dated March 2007, and later revisions

Service Letters and Service Bulletins.

3. Required Equipment: The approved equipment is listed in: (737-700) CRI A-10

**V. Notes**

None

## **SECTION: ADMINISTRATIVE**

### **I. Acronyms and Abbreviations**

AFM	Airplane Flight Manual
APU	Auxiliary Power Unit
AWO	All Weather Operations
CAA	Civil Aviation Authority
CMR	Certification Maintenance Requirements
CRI	Certification Review Item
CS	Certification Specification
EASA	European Aviation Safety Agency
EC	European Commission
ES(F)	Equivalent Safety (Finding)
ETOPS	Extended Range Operations with Two-Engined Aeroplanes
EU	European Union
EU MS	European Union Member States
EWIS	Enhanced Wiring Interconnection System
FAA	Federal Aviation Administration
FAR	Federal Aviation Regulation
FRS	Flammability Reduction Systems
HIRF	High Intensity Radiated Field
IAA	Irish Aviation Authority
ICA	Instructions for Continued Airworthiness
ICAO	International Civil Aviation Organization
IGW	Increased Gross Weight
JAA	Joint Aviation Authorities
JAR	Joint Aviation Requirements
LBA	Luftfahrt-Bundesamt (CAA Germany)
MRB	Maintenance Review Board
NAA	National Aviation Authority
NG	Next Generation
NPA	Notice of Proposed Amendment
PTC	Post Type Certificate
SC	Special Condition
TC	Type Certificate
TCDS	Type Certificate Data Sheet
TCDSN	Type Certificate Data Sheet for Noise
TSO	Technical Standards Order

### **II. Type Certificate Holder Record**

The Boeing Company  
P.O. Box 3707  
Seattle, WA 98124-2207  
United States of America

SECTION: ADMINISTRATIVE - continued

**III. Change Record**

Starting with issue 07

<b>Issue</b>	<b>Date</b>	<b>Changes</b>	<b>TC issue</b>
Issue 07	11/10/2011	Section 2-7.III.5 (NG): Addition of engine variants Section 2.III.17: Added term "approved" wrt AFM Section 3.II.4: JAR 25.562 added to text CRI D-14 Section 3 II.4, 6.II.4, 7.II.4: CRI PTC/E-10 added Section 7.II.3: Paragraph 4.4 MOCs deleted Section 7.II.4: CRI PTC/D-GEN02 added Section "Administrative" added	Issue 02 07/07/2008
Issue 08	03/11/2011	Section 3.II.4 Removal of the duplicate sentence before CRI PTC/E-10. Section 3.III.24 Added Fuel Tank Flammability Reduction System Requirments Section 4.III.24 Added Fuel Tank Flammability Reduction System Requirments Section 5.III.23 Corrected list to sequential numbers Section 5.III.24 Added Fuel Tank Flammability Reduction System Requirments Section 6.II.4 Removal of the duplicate sentence before CRI PTC/E-10. Section 6.III.23 Corrected list to sequential numbers Section 6.III.24 Added Fuel Tank Flammability Reduction System Requirments Section 7.III.24 Added Fuel Tank Flammability Reduction System Requirments	Issue 02 07/07/2008
Issue 09	12/07/2012	Section 1.II.4.and Section 2.II: Introduction of CRI H-01 for ICA on EWIS	Issue 02 07/07/2008

-END-