737
Airplane Characteristics for Airport Planning

BOEING
Boeing Commercial Airplanes
# 737 Airplane Characteristics

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1.0 SCOPE AND INTRODUCTION

1.1 Scope

1.2 Introduction

1.3 A Brief Description of the 737 Family of Airplanes
1.0 SCOPE AND INTRODUCTION

1.1 Scope

This document provides, in a standardized format, airplane characteristics data for general airport planning. Since operational practices vary among airlines, specific data should be coordinated with the using airlines prior to facility design. Boeing Commercial Airplanes should be contacted for any additional information required.

Content of the document reflects the results of a coordinated effort by representatives from the following organizations:

- Aerospace Industries Association
- Airports Council International - North America
- Air Transport Association of America
- International Air Transport Association

The airport planner may also want to consider the information presented in the "Commercial Aircraft Design Characteristics – Trends and Growth Projections," available from the US AIA, 1250 Eye St., Washington DC 20005, for long-range planning needs. This document is updated periodically and represents the coordinated efforts of the following organizations regarding future aircraft growth trends:

- International Coordinating Council of Aerospace Industries Associations
- Airports Council International - North America
- Air Transport Association of America
- International Air Transport Association
1.2 Introduction

This document conforms to NAS 3601. It provides characteristics of the Boeing Model 737 airplanes for airport planners and operators, airlines, architectural and engineering consultant organizations, and other interested industry agencies. Airplane changes and available options may alter model characteristics. The data presented herein reflect typical airplanes in each model category.

For additional information contact:

Boeing Commercial Airplanes
P.O. Box 3707
Seattle, Washington 98124-2207
U.S.A.

Attention: Manager, Airport Technology
Mail Code 20-93
1.3 A Brief Description of the 737 Family of Airplanes

The 737 is a twin-engine airplane designed to operate over short to medium ranges from sea level runways of less than 6,000 ft (1,830 m) in length.

Significant features of interest to airport planners are described below:

- Underwing-mounted engines provide eye-level assessability. Nearly all system maintenance may be performed at eye level.
- Optional airstairs allow operation at airports where no passengers loading bridges or stairs are available.
- Auxiliary power unit can supply energy for engine starting, air conditioning, and electrical power while the airplane is on the ground or in flight.
- Servicing connections allow single-station pressure fueling and overwing gravity fueling.
- All servicing of the 737 is accomplished with standard ground equipment.

**737-100**

The 737-100 is the standard short body version of the 737 family. It is 94 ft (28.63 m) long from nose to the tip of the horizontal stabilizer.

**737-200**

The 737-200 is an extended body version of the 737 family and is 100 ft 2 in (30.53 m) long. Two sections were added to the 737-100 fuselage; a 36-in section forward of the wing and a 40-in section aft of the wing. All other dimensions are the same as the 737-100.

**Advanced 737-200**

The advanced 737-200 is a high gross weight airplane that has significant improvements over the 737-200, which result in improved performance, e.g. longer range, greater payload, and shorter runway requirement. The advanced 737-200 has dimensions identical to the 737-200.
737-200C, Adv 737-200C

The convertible version differs from the passenger model in that it has an 86 by 134-in (2.18 by 3.40 m) main deck cargo door, increased floor strength, and additional seat tracks. Either of two cargo handling systems, the cargo (C) or quick change (QC) can be installed to allow conversion from a passenger configuration to a cargo or a mixed passenger/cargo configuration, and vice-versa.

737-200 Executive Airplane

The 737-200 and Adv 737-200 were also delivered with an executive interior. The interior comes in a variety of configurations depending on customer requirements. Some airplanes were delivered without any interior furnishings for customer installation of special interiors.

737-300

The 737-300 is a second-generation stretched version of the 737 family of airplanes and is 109 ft 7 in long. Two sections were added to the 737-200 fuselage; a 44-in section forward of the wing and a 60-in section aft of the wing. Wing and stabilizer spans are also increased. The 737-300 incorporates new aerodynamic and engine technologies in addition to the increased payload and range. The -300 can seat as many as 149 passengers in an all-economy configuration.

737-300 With Winglets

Winglets are installed on some 737-300 airplanes as an after-market airline option. Data for this airplane is included for dimensional information only.

737-400

The 737-400 is 120 inches longer that the -300. Two sections were added to the -300 fuselage; a 72-in section forward of the wing and a 48-in section aft of the wing. The -400 can seat as many as 168 passengers in all-economy configuration.

737-500

The 737-500 is the shortened version of the 737-300. The -500 is 101 ft 9 in long and can seat up to 132 passengers in an all-economy configuration.
The 737-600, along with the 737-700, -800, and -900 is the latest derivative in the 737 family of airplanes. This airplane has the same fuselage as the 737-500 and fitted with new wing, stabilizer, and tail sections. This enables the airplane to fly over longer distances. The 737-600 is 102 ft 6 in long and can carry up to 130 passengers in an all-economy configuration.

The 737-700 has the same fuselage as the 737-300 and is fitted with the new wing, stabilizer, and tail sections. The 737-700 is 110 ft 4 in long and can carry up to 148 passengers in an all-economy configuration.

The 737-800 has a slightly longer fuselage than the 737-400 and is fitted with the new wing, stabilizer, and tail sections. The 737-800 is 129 ft 6 in long and can carry up to 184 passengers in an all-economy configuration.

The 737-900 is a derivative of the -800 and is 96 inches longer that the -800. Two sections were added to the -800 fuselage; a 54-in section forward of the wing and a 42-in section aft of the wing. The -900 can seat as many as 189 passengers in all-economy configuration.

The Boeing Business Jet is a 737-700 airplane that is delivered without any interior furnishings. The customer installs specific interior configurations. This 737-700 model airplane is equipped with a 737-800 landing gear configuration and has weight and performance capabilities as the -800. One unique feature of the 737 BBJ is the addition of winglets to provide improved cruise performance capabilities.

The Boeing Business Jet Two is a 737-800 airplane that is delivered without any interior furnishings. The customer installs specific interior configurations. Like the 737 BBJ, the BBJ2 is equipped with winglets to provide improved cruise performance capabilities.
737-600, -700, -800, -900 With Winglets

The 737-700, -800, and –900 airplanes are also delivered with winglets. Interior configurations are similar to the base airplane models. Like the BBJ airplanes, the winglets provide improved cruise performance capabilities. Winglets are installed on some 737-600 airplanes as an after-market airline option. Data for this airplane is included for dimensional information only.

737-900ER, -900ER With Winglets

The 737-900ER airplanes are long-range derivatives of the 737-900 and -900 with winglets and designed for higher capacity seating. Additional exit doors are installed aft of the wing to provide exit capability for the additional passenger capacity. The 737-900ER and -900ER with winglets are capable of carrying up to 215 passengers with the additional exit doors.

Engines

The 737-100 and -200 airplanes were equipped with JT8D-7 engines. The -9, -5, -17, and -17R engines reflect successive improvements in nose reduction, thrust, and maintenance costs. Other optional engines include the -9A, -15A, -17A, and -17AR.

The 737-300, -400, and -500 airplanes are equipped with new high bypass ratio engines (CFM56-3) that are economical to operate and maintain. These are quiet engines that meet FAR 36 Stage 3 and ICAO Annex 16 Chapter 3 noise standards. With these higher thrust engines and modified flight control surfaces, runway length requirement is reduced.

The 737-600, -700, -800, and -900 airplanes are equipped with advanced derivatives of the 737-300, -400, and -500 engines. These engines (CFM56-7) generate more thrust and exhibit noise characteristics that are below the current noise standards.

737 Gravel Runway Capability

The optional gravel runway capability allows the 737-200 to operate on remote unimproved runways. The gravel kit includes gravel deflectors for the nose and main gears, vortex dissipators for each engine nacelle, and special protective finishes. Low-pressure tires are also required for operation on low strength runways.

The special environment of the gravel runway dictates changes in operating procedures and techniques for maximum safety and economy. Boeing Commercial Airplanes and the FAA have specified procedural changes for operating the 737-200 on gravel runways. Organizations interested in operational details are referred to the using airline or to Boeing.
Passenger Cabin Interiors

Early 737s were equipped with hatrack-type overhead stowage. Later models were equipped with a “wide-body look” interior that incorporates stowage bins in the sidewall and ceiling panels to simulate a superjet interior. More recent configurations include carryall compartments and the advanced technology interior. These interiors provide more stowage above the passenger seats.

Integral Airstairs

Optional airstairs allow passenger loading and unloading at airports where there are no loading bridges or stairs. The forward airstairs are mounted under the cabin floor just below the forward entry door. The aft airstairs are mounted on a special aft entry door and are deployed when the door is opened. The aft airstairs option is available only on the 737-100 and 737-200 airplanes.

Auxiliary Fuel Tanks

Optional auxiliary fuel tanks installed in the lower cargo compartments, provide extra range capability. Although this option increases range, it decreases payload.

Document Page Applicability

Several configurations have been developed for the 737 family of airplanes to meet varied airline requirements. Configurations shown in this document are typical and individual airlines may have different combinations of options. The airlines should be consulted for specific airplane configuration.

Document Applicability

This document contains information on all 737 models.

Information on the 737-100, -200, 200C, Adv 737-200, and Adv 737-200C formerly contained in Document D6-58325, Revision D, 737 Airplane Characteristics for Airport Planning is now included in this document. Document D6-58325 is superseded and should be discarded.

Information on the 737-300, -400, and -500 model airplanes formerly contained in Document D6-58325-2 Revision A, 737-300/400/500 Airplane Characteristics for Airport Planning is now included in this document. Document D6-58325-2 is superseded and should be discarded.

Information on the 737-600, -700, -800, and -900 model airplanes formerly contained in Document D6-58325-3, 737-600/700/800/900 Airplane Characteristics for Airport Planning is now included in this document. Document D6-58325-3 is superseded and should be discarded.
Information on the 737-700, -800, and -900 model airplanes with winglets formerly contained in Document D6-58325-5, 737-700/800/900 (With Winglets) Airplane Characteristics for Airport Planning is now included in this document. Document D6-58325-5 is superseded and should be discarded.

Information on the Boeing Business Jet airplanes formerly contained in Document D6-58325-4, 737-BBJ Airplane Characteristics for Airport Planning is now included in this document. Document D6-58325-4 is superseded and should be discarded.
2.0 AIRPLANE DESCRIPTION

2.1 General Characteristics
2.2 General Dimensions
2.3 Ground Clearances
2.4 Interior Arrangements
2.5 Cabin Cross Sections
2.6 Lower Cargo Compartments
2.7 Door Clearances
2.0 AIRPLANE DESCRIPTION

2.1 General Characteristics

Maximum Design Taxi Weight (MTW). Maximum weight for ground maneuver as limited by aircraft strength and airworthiness requirements. (It includes weight of taxi and run-up fuel.)

Maximum Design Takeoff Weight (MTOW). Maximum weight for takeoff as limited by aircraft strength and airworthiness requirements. (This is the maximum weight at start of the takeoff run.)

Maximum Design Landing Weight (MLW). Maximum weight for landing as limited by aircraft strength and airworthiness requirements.

Maximum Design Zero Fuel Weight (MZFW). Maximum weight allowed before usable fuel and other specified usable agents must be loaded in defined sections of the aircraft as limited by strength and airworthiness requirements.

Operating Empty Weight (OEW). Weight of structure, powerplant, furnishing systems, unusable fuel and other unusable propulsion agents, and other items of equipment that are considered an integral part of a particular airplane configuration. Also included are certain standard items, personnel, equipment, and supplies necessary for full operations, excluding usable fuel and payload.

Maximum Payload. Maximum design zero fuel weight minus operational empty weight.

Maximum Seating Capacity. The maximum number of passengers specifically certificated or anticipated for certification.

Maximum Cargo Volume. The maximum space available for cargo.

Usable Fuel. Fuel available for aircraft propulsion.
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NOTE: (1) OPERATING EMPTY WEIGHT FOR BASELINE MIXED CLASS CONFIGURATION. CONSULT WITH AIRLINE FOR SPECIFIC WEIGHTS AND CONFIGURATIONS.

2.1.1 GENERAL CHARACTERISTICS
MODEL 737-100
### General Characteristics

#### Model 737-200

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**Note:** (1) Operating Empty Weight for Baseline Mixed Class Configuration. Consult with airline for specific weights and configurations.

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**2.1.2 General Characteristics**

**Model 737-200**

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D6-58325-6

14 December 2010
### CHARACTERISTICS

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<td>TWO-CLASS</td>
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<td>EXECUTIVE INTERIOR VARIES WITH CUSTOMER OPTION</td>
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<td>ALL-ECONOMY</td>
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<td>78.2 (3)</td>
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<td>US GALLONS</td>
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<td>3,500</td>
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<td>13,248</td>
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<td>POUNDS</td>
<td>28,140</td>
<td>23,450</td>
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<td>KILOGRAMS</td>
<td>12,764</td>
<td>10,637</td>
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**NOTES:**
1. OPERATING EMPTY WEIGHT FOR BASELINE MIXED CLASS CONFIGURATION. CONSULT WITH AIRLINE FOR SPECIFIC WEIGHTS AND CONFIGURATIONS.
2. AIRPLANE IN ALL-PASSENGER CONFIGURATION
3. AIRPLANE IN ALL-CARGO CONFIGURATION WITH THE “QC” CARGO SYSTEM 88 x 125 IN (2.24 x 3.18 M) PALLETS

### 2.1.3 GENERAL CHARACTERISTICS

**MODEL 737-200, CONVERTIBLE AND EXECUTIVE AIRPLANES**
<table>
<thead>
<tr>
<th>CHARACTERISTICS</th>
<th>UNITS</th>
<th>MODEL ADVANCED 737-200</th>
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<td>MAX DESIGN WEIGHT</td>
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<tr>
<td></td>
<td>KILOGRAMS</td>
<td>52,617 53,297 54,431 56,699 58,332</td>
</tr>
<tr>
<td>MAX DESIGN TAKEOFF WEIGHT</td>
<td>POUNDS</td>
<td>115,500 117,000 119,500 124,500 128,100</td>
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<tr>
<td></td>
<td>KILOGRAMS</td>
<td>52,390 53,070 54,204 56,472 58,105</td>
</tr>
<tr>
<td>MAX DESIGN LANDING WEIGHT</td>
<td>POUNDS</td>
<td>103,000 105,000 105,000 107,000 107,000</td>
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<td>KILOGRAMS</td>
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<tr>
<td>MAX DESIGN ZERO FUEL WEIGHT</td>
<td>POUNDS</td>
<td>95,000 95,000 95,000 95,000 95,000</td>
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<td>93 AT FIVE ABREAST, OR 130 AT SIX ABREAST; FAA EXIT LIMIT: 136</td>
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<td>CUBIC FEET</td>
<td>875 875 875 745 (2) 640 (3)</td>
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<td></td>
<td>CUBIC METERS</td>
<td>24.8 24.8 24.8 21.1 (2) 18.1 (3)</td>
</tr>
<tr>
<td>USABLE FUEL</td>
<td>US GALLONS</td>
<td>5,160 5,160 5,160 5,550 (2) 5,970 (3)</td>
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<tr>
<td></td>
<td>LITERS</td>
<td>19,531 19,531 19,531 21,007 (2) 22,596 (3)</td>
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<td>POUNDS</td>
<td>34,572 34,572 34,572 37,185 (2) 39,999 (3)</td>
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<tr>
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<td>KILOGRAMS</td>
<td>15,682 15,682 15,682 16,867 (2) 18,143 (3)</td>
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**NOTES:**
(1) OPERATING EMPTY WEIGHT FOR BASELINE MIXED CLASS CONFIGURATION.
CONSULT WITH AIRLINE FOR SPECIFIC WEIGHTS AND CONFIGURATIONS.
(2) AIRPLANE WITH 390 GAL (1,475 L) AUXILIARY FUEL TANK IN AFT CARGO COMPARTMENT
(3) AIRPLANE WITH 810 GAL (3,065 L) AUXILIARY FUEL TANK IN AFT CARGO COMPARTMENT
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<thead>
<tr>
<th>CHARACTERISTICS</th>
<th>UNITS</th>
<th>MODEL ADVANCED 737-200C, -200QC</th>
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<td>52,617 53,297 54,431 56,699 58,332</td>
</tr>
<tr>
<td>MAX DESIGN TAKEOFF WEIGHT</td>
<td>POUNDS</td>
<td>115,500 117,000 119,500 124,500 128,100</td>
</tr>
<tr>
<td></td>
<td>KILOGRAMS</td>
<td>52,390 53,070 54,204 56,472 58,105</td>
</tr>
<tr>
<td>MAX DESIGN LANDING WEIGHT</td>
<td>POUNDS</td>
<td>103,000 105,000 105,000 107,000 107,000</td>
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<tr>
<td></td>
<td>KILOGRAMS</td>
<td>46,720 47,627 47,627 48,534 48,534</td>
</tr>
<tr>
<td>MAX DESIGN ZERO FUEL WEIGHT</td>
<td>POUNDS</td>
<td>95,000 96,500 95,000 99,000 99,000</td>
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<td>TWO-CLASS 102: 14 FIRST CLASS AND 88 ECONOMY</td>
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<td>ALL-ECONOMY 93 AT FIVE ABREAST, OR 130 AT SIX ABREAST; FAA EXIT LIMIT: 136</td>
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</tr>
<tr>
<td>MAX CARGO VOLUME - MAIN DECK (3)</td>
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<td>MAX CARGO VOLUME - LOWER DECK</td>
<td>CUBIC FEET</td>
<td>875 875 875 875 875</td>
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<td>CUBIC METERS</td>
<td>24.8 24.8 24.8 24.8 24.8</td>
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<td>19,531 19,531 19,531 19,531 19,531</td>
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<td>POUNDS</td>
<td>34,572 34,572 34,572 34,572 34,572</td>
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<td>KILOGRAMS</td>
<td>15,682 15,682 15,682 15,682 15,682</td>
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NOTES:  
(1) OPERATING EMPTY WEIGHT FOR BASELINE MIXED CLASS CONFIGURATION. CONSULT WITH AIRLINE FOR SPECIFIC WEIGHTS AND CONFIGURATIONS.  
(2) AIRPLANE IN ALL-PASSENGER CONFIGURATION  
(3) AIRPLANE IN ALL-CARGO CONFIGURATION, SEVEN PALLETS 88 x 125 IN (2.24 x 3.18 M) EACH

2.1.5 GENERAL CHARACTERISTICS
MODEL ADVANCED 737-200C, -200QC

D6-58325-6
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<td>18,602 (3)</td>
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**NOTES:**
1. OPERATING EMPTY WEIGHT FOR BASELINE MIXED CLASS CONFIGURATION. CONSULT WITH AIRLINE FOR SPECIFIC WEIGHTS AND CONFIGURATIONS.
2. AIRPLANE WITH 390 GAL (1,475 L) AUXILIARY FUEL TANK IN AFT CARGO COMPARTMENT
3. AIRPLANE WITH 810 GAL (3,065 L) AUXILIARY FUEL TANK IN AFT CARGO COMPARTMENT
4. AIRPLANE WITH 500 GAL (1,893 L) AUXILIARY FUEL TANK IN AFT CARGO COMPARTMENT
5. AIRPLANE WITH 1,000 GAL (3,785 L) AUXILIARY FUEL TANK IN AFT CARGO COMPARTMENT

**2.1.6 GENERAL CHARACTERISTICS**

*MODEL 737-300*
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<tr>
<th>CHARACTERISTICS</th>
<th>UNITS</th>
<th>CFM56-3B2 ENGINES (22,000 LB SLST)</th>
<th>CFM56-3C ENGINES (23,500 LB SLST)</th>
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<td>ALL-ECONOMY</td>
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<td>32.5 (3)</td>
<td>34.6 (4)</td>
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<td>19,131 (5)</td>
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**NOTES:**
1. OPERATING EMPTY WEIGHT FOR BASELINE MIXED CLASS CONFIGURATION. CONSULT WITH AIRLINE FOR SPECIFIC WEIGHTS AND CONFIGURATIONS.
2. AIRPLANE WITH 390 GAL (1,475 L) AUXILIARY FUEL TANK IN AFT CARGO COMPARTMENT
3. AIRPLANE WITH 810 GAL (3,065 L) AUXILIARY FUEL TANK IN AFT CARGO COMPARTMENT
4. AIRPLANE WITH 500 GAL (1,893 L) AUXILIARY FUEL TANK IN AFT CARGO COMPARTMENT
5. AIRPLANE WITH 1,000 GAL (3,785 L) AUXILIARY FUEL TANK IN AFT CARGO COMPARTMENT

**2.1.7 GENERAL CHARACTERISTICS**

*MODEL 737-400*
### CHARACTERISTICS

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<thead>
<tr>
<th>CHARACTERISTICS</th>
<th>UNITS</th>
<th>MODEL 737-500 CFM56-3B1 ENGINES (18,500 LB SLST)</th>
<th>CFM56-3B1 ENGINES (20,000 LB SLST)</th>
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**SEATING CAPACITY**
- TWO-CLASS: 108: 8 FIRST CLASS AND 100 ECONOMY
- ALL-ECONOMY: 122 AT SIX ABREAST; FAA EXIT LIMIT: 149

**MAX CARGO VOLUME**
- CUBIC FEET: 822, 683 (2), 595 (3), 671 (4), 546 (5)
- LOWER DECK CUBIC METERS: 23.3, 19.3 (2), 16.8 (3), 19.0 (4), 15.5 (5)

**USABLE FUEL**
- US GALLONS: 5,311, 5,701 (2), 6,121 (3), 5,803 (4), 6,295 (5)
- LITERS: 20,102, 21,578 (2), 23,168 (3), 21,964 (4), 23,827 (5)
- POUNDS: 35,584, 38,197 (2), 41,011 (3), 38,880 (4), 42,177 (5)
- KILOGRAMS: 16,141, 17,326 (2), 18,602 (3), 17,636 (4), 19,131 (5)

**NOTES:**
1. OPERATING EMPTY WEIGHT FOR BASELINE MIXED CLASS CONFIGURATION.
   CONSULT WITH AIRLINE FOR SPECIFIC WEIGHTS AND CONFIGURATIONS.
2. AIRPLANE WITH 390 GAL (1,475 L) AUXILIARY FUEL TANK IN AFT CARGO COMPARTMENT
3. AIRPLANE WITH 810 GAL (3,065 L) AUXILIARY FUEL TANK IN AFT CARGO COMPARTMENT
4. AIRPLANE WITH 500 GAL (1,893 L) AUXILIARY FUEL TANK IN AFT CARGO COMPARTMENT
5. AIRPLANE WITH 1,000 GAL (3,785 L) AUXILIARY FUEL TANK IN AFT CARGO COMPARTMENT

### 2.1.8 GENERAL CHARACTERISTICS

**MODEL 737-500**

D6-58325-6

20 DECEMBER 2010
## CHARACTERISTICS

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<td>65,317</td>
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<td>108</td>
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<td>KILOGRAMS</td>
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**NOTE:** (1) OPERATING EMPTY WEIGHT FOR BASELINE MIXED CLASS CONFIGURATION. CONSULT WITH AIRLINE FOR SPECIFIC WEIGHTS AND CONFIGURATIONS.

### 2.1.9 GENERAL CHARACTERISTICS

**MODEL 737-600**

D6-58325-6  DECEMBER 2010  21
### General Characteristics

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<thead>
<tr>
<th>CHARACTERISTICS</th>
<th>UNITS</th>
<th>MODEL 737-700, -700 WITH WINGLETS -700C</th>
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<td>KILOGRAMS</td>
<td>20,894 20,894 20,894</td>
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</tbody>
</table>

**Note:** (1) Operating empty weight for baseline mixed class configuration. Consult with airline for specific weights and configurations.

---

**2.1.10 General Characteristics**

*Model 737-700, -700 with Winglets, -700C*

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D6-58325-6

22 December 2010
### 2.1.11 GENERAL CHARACTERISTICS

**MODEL 737-800, -800 WITH WINGLETS**

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**NOTE:** (1) OPERATING EMPTY WEIGHT FOR BASELINE MIXED CLASS CONFIGURATION. CONSULT WITH AIRLINE FOR SPECIFIC WEIGHTS AND CONFIGURATIONS.
<table>
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**NOTE:** (1) OPERATING EMPTY WEIGHT FOR BASELINE MIXED CLASS CONFIGURATION. CONSULT WITH AIRLINE FOR SPECIFIC WEIGHTS AND CONFIGURATIONS.
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<td>EMPTY WEIGHT (1)</td>
<td>KILOGRAMS</td>
<td>44,677</td>
</tr>
<tr>
<td>MAX STRUCTURAL</td>
<td>POUNDS</td>
<td>39,308</td>
</tr>
<tr>
<td>PAYLOAD</td>
<td>KILOGRAMS</td>
<td>17,830</td>
</tr>
<tr>
<td>SEATING CAPACITY (1)</td>
<td>TWO-CLASS</td>
<td>177</td>
</tr>
<tr>
<td>ALL-ECONOMY</td>
<td></td>
<td>186 WITH MID EXIT DOOR, 21S: FAA EXIT LIMIT</td>
</tr>
<tr>
<td>AUXILIARY FUEL OPTIONS</td>
<td>SEE NOTES</td>
<td>(2)</td>
</tr>
<tr>
<td>(2) WITH NO AUXILIARY FUEL TANK</td>
<td></td>
<td>(3)</td>
</tr>
<tr>
<td>(3) WITH ONE AUXILIARY FUEL TANK</td>
<td></td>
<td>(4)</td>
</tr>
<tr>
<td>MAX CARGO</td>
<td>CUBIC FEET</td>
<td>1,826</td>
</tr>
<tr>
<td>- LOWER DECK</td>
<td>CUBIC METERS</td>
<td>51.7</td>
</tr>
<tr>
<td>USABLE FUEL</td>
<td>US GALLONS</td>
<td>6,875</td>
</tr>
<tr>
<td></td>
<td>LITERS</td>
<td>26,025</td>
</tr>
<tr>
<td></td>
<td>POUNDS</td>
<td>46,063</td>
</tr>
<tr>
<td></td>
<td>KILOGRAMS</td>
<td>20,894</td>
</tr>
</tbody>
</table>

NOTES: (1) OPERATING EMPTY WEIGHT FOR BASELINE MIXED CLASS CONFIGURATION. CONSULT WITH AIRLINE FOR SPECIFIC WEIGHTS AND CONFIGURATIONS. (2) WITH NO AUXILIARY FUEL TANK (3) WITH ONE AUXILIARY FUEL TANK (4) WITH TWO AUXILIARY FUEL TANKS

2.1.13 GENERAL CHARACTERISTICS
MODEL 737-900ER, -900ER WITH WINGLETS
### CHARACTERISTICS

<table>
<thead>
<tr>
<th>CHARACTERISTICS</th>
<th>UNITS</th>
<th>MODEL 737 BBJ</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAX DESIGN</td>
<td>POUNDS</td>
<td>171,500</td>
</tr>
<tr>
<td>TAXI WEIGHT</td>
<td>KILOGRAMS</td>
<td>77,791</td>
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<tr>
<td>MAX DESIGN</td>
<td>POUNDS</td>
<td>171,000</td>
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<tr>
<td>TAKEOFF WEIGHT</td>
<td>KILOGRAMS</td>
<td>77,564</td>
</tr>
<tr>
<td>MAX DESIGN</td>
<td>POUNDS</td>
<td>134,000</td>
</tr>
<tr>
<td>LANDING WEIGHT</td>
<td>KILOGRAMS</td>
<td>60,781</td>
</tr>
<tr>
<td>MAX DESIGN</td>
<td>POUNDS</td>
<td>126,000</td>
</tr>
<tr>
<td>ZERO FUEL WEIGHT</td>
<td>KILOGRAMS</td>
<td>57,152</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>NUMBER OF AUXILIARY FUEL TANKS</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPEC OPERATING POUNDS</td>
<td>92,345</td>
<td>92,722</td>
<td>93,393</td>
<td>93,785</td>
<td>94,056</td>
<td>94,352</td>
<td>94,570</td>
</tr>
<tr>
<td>EMPTY WEIGHT (1) KILOGRAMS</td>
<td>41,887</td>
<td>42,058</td>
<td>42,362</td>
<td>43,540</td>
<td>42,663</td>
<td>42,797</td>
<td>42,896</td>
</tr>
<tr>
<td>MAX STRUCTURAL POUNDS</td>
<td>33,655</td>
<td>33,278</td>
<td>32,607</td>
<td>32,215</td>
<td>31,944</td>
<td>31,648</td>
<td>31,430</td>
</tr>
<tr>
<td>PAYLOAD KILOGRAMS</td>
<td>15,300</td>
<td>15,126</td>
<td>14,821</td>
<td>14,609</td>
<td>14,520</td>
<td>14,385</td>
<td>14,286</td>
</tr>
<tr>
<td>MAX CARGO CUBIC FEET</td>
<td>611</td>
<td>515</td>
<td>415</td>
<td>319</td>
<td>268</td>
<td>214</td>
<td>160</td>
</tr>
<tr>
<td>- LOWER DECK CUBIC METERS</td>
<td>17.3</td>
<td>14.6</td>
<td>11.7</td>
<td>9.0</td>
<td>7.6</td>
<td>6.1</td>
<td>4.6</td>
</tr>
<tr>
<td>USABLE FUEL US GALLONS</td>
<td>8,360</td>
<td>8,897</td>
<td>9,399</td>
<td>9,917</td>
<td>10,213</td>
<td>10,457</td>
<td>10,697</td>
</tr>
<tr>
<td>LITERS</td>
<td>31,646</td>
<td>33,611</td>
<td>35,579</td>
<td>37,540</td>
<td>38,660</td>
<td>39,584</td>
<td>40,485</td>
</tr>
<tr>
<td>POUNDS</td>
<td>56,012</td>
<td>59,610</td>
<td>62,973</td>
<td>66,444</td>
<td>68,427</td>
<td>70,062</td>
<td>71,670</td>
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<tr>
<td>KILOGRAMS</td>
<td>25,460</td>
<td>27,095</td>
<td>28,624</td>
<td>30,202</td>
<td>31,103</td>
<td>31,846</td>
<td>32,577</td>
</tr>
</tbody>
</table>

**NOTES:**

1. SPEC WEIGHT FOR NUMBER OF AUXILIARY FUEL TANKS SHOWN. CONSULT WITH AIRCRAFT OPERATOR FOR SPECIFIC WEIGHTS AND CONFIGURATIONS.

### 2.1.14 GENERAL CHARACTERISTICS

**MODEL 737 BBJ**
### CHARACTERISTICS

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Units</th>
<th>Model 737 BBJ2</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAX DESIGN T.W.</td>
<td>Pounds</td>
<td>174,700</td>
</tr>
<tr>
<td></td>
<td>Kilograms</td>
<td>79,245</td>
</tr>
<tr>
<td>MAX DESIGN T.W.</td>
<td>Pounds</td>
<td>174,200</td>
</tr>
<tr>
<td></td>
<td>Kilograms</td>
<td>79,015</td>
</tr>
<tr>
<td>MAX DESIGN L.W.</td>
<td>Pounds</td>
<td>146,300</td>
</tr>
<tr>
<td></td>
<td>Kilograms</td>
<td>66,360</td>
</tr>
<tr>
<td>MAX DESIGN Z.F.W.</td>
<td>Pounds</td>
<td>138,300</td>
</tr>
<tr>
<td></td>
<td>Kilograms</td>
<td>62,730</td>
</tr>
</tbody>
</table>

### NUMBER OF AUXILIARY FUEL TANKS

<table>
<thead>
<tr>
<th>Number of Tanks</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spec Operating</td>
<td>Pounds</td>
<td>96,727</td>
<td>97,372</td>
<td>97,821</td>
<td>98,344</td>
<td>98,722</td>
<td>99,393</td>
<td>99,785</td>
</tr>
<tr>
<td></td>
<td>Kilograms</td>
<td>43,875</td>
<td>44,167</td>
<td>44,371</td>
<td>44,608</td>
<td>44,780</td>
<td>45,084</td>
<td>45,262</td>
</tr>
<tr>
<td>Max Structural</td>
<td>Pounds</td>
<td>41,573</td>
<td>40,928</td>
<td>40,479</td>
<td>39,356</td>
<td>39,578</td>
<td>38,907</td>
<td>38,515</td>
</tr>
<tr>
<td></td>
<td>Kilograms</td>
<td>18,859</td>
<td>18,570</td>
<td>18,366</td>
<td>18,130</td>
<td>17,960</td>
<td>17,563</td>
<td>17,475</td>
</tr>
<tr>
<td>Max Cargo</td>
<td>Cubic Feet</td>
<td>1,546</td>
<td>1,423</td>
<td>1,331</td>
<td>1,224</td>
<td>1,116</td>
<td>1,029</td>
<td>922</td>
</tr>
<tr>
<td>- Lower Deck</td>
<td>Cubic Meters</td>
<td>43.8</td>
<td>40.3</td>
<td>37.7</td>
<td>34.7</td>
<td>31.6</td>
<td>29.2</td>
<td>26.1</td>
</tr>
<tr>
<td>Usable Fuel</td>
<td>US Gallons</td>
<td>6,875</td>
<td>7,395</td>
<td>7,837</td>
<td>8,360</td>
<td>8,879</td>
<td>9,399</td>
<td>9,917</td>
</tr>
<tr>
<td></td>
<td>Liters</td>
<td>26,025</td>
<td>27,992</td>
<td>29,665</td>
<td>31,645</td>
<td>33,609</td>
<td>35,578</td>
<td>37,538</td>
</tr>
<tr>
<td></td>
<td>Pounds</td>
<td>46,080</td>
<td>49,546</td>
<td>52,508</td>
<td>56,012</td>
<td>59,489</td>
<td>62,973</td>
<td>66,571</td>
</tr>
<tr>
<td></td>
<td>Kilograms</td>
<td>20,910</td>
<td>22,480</td>
<td>23,824</td>
<td>25,414</td>
<td>26,992</td>
<td>28,572</td>
<td>30,214</td>
</tr>
</tbody>
</table>

**Notes:** (1) Spec weight for number of auxiliary fuel tanks shown. Consult with aircraft operator for specific weights and configurations.

### 2.1.15 GENERAL CHARACTERISTICS

*Model 737 BBJ2*
2.2.1 GENERAL DIMENSIONS

MODEL 737-100
2.2.2 GENERAL DIMENSIONS
MODEL 737-200
2.2.3 GENERAL DIMENSIONS

MODEL 737-300

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2.2.4 GENERAL DIMENSIONS

MODEL 737-300 WITH WINGLETS
2.2.5 GENERAL DIMENSIONS
MODEL 737-400
2.2.6 GENERAL DIMENSIONS
MODEL 737-500
2.2.7 GENERAL DIMENSIONS

MODEL 737-600

---

67 FT 9 IN (20.65 M)
62 FT 9 IN (19.13 M) (APPROX)
102 FT 6 IN (31.24 M)
29 FT 6 IN (8.84 M)
15 FT 10 IN (4.83 M)
12 FT 4 IN (3.76 M)
97 FT 9 IN (29.79 M)
36 FT 10 IN (11.23 M)
13 FT 5 IN (4.09 M)
112 FT 7 IN (34.32 M)
47 FT 1 IN (14.35 M)
APPROX 8 FT (2.44 M)
18 FT 9 IN (5.72 M)

---

D6-58325-6
JULY 2007
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2.2.8 GENERAL DIMENSIONS
MODEL 737-600 WITH WINGLETS
2.2.9 GENERAL DIMENSIONS

MODEL 737-700, -700C
2.2.10 GENERAL DIMENSIONS

MODEL 737-700 WITH WINGLETS, 737 BBJ

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2.2.11 GENERAL DIMENSIONS
MODEL 737-800
2.2.12 GENERAL DIMENSIONS
MODEL 737-800 WITH WINGLETS, 737 BBJ2
2.2.13 GENERAL DIMENSIONS

MODEL 737-900, -900ER
2.2.14 GENERAL DIMENSIONS
MODEL 737-900, -900ER WITH WINGLETS

D6-58325-6
### 2.3.1 GROUND CLEARANCES

**MODEL 737-100, -200, -200C**

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>737-100</th>
<th>737-200, -200C</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAX (AT OEW)</td>
<td>MIN (AT MTW)</td>
<td>MAX (AT OEW)</td>
</tr>
<tr>
<td>FT - IN</td>
<td>M</td>
<td>FT - IN</td>
</tr>
<tr>
<td>A TOP OF FUSELAGE</td>
<td>16 – 9</td>
<td>16 – 5</td>
</tr>
<tr>
<td>B ENTRY DOOR NO 1</td>
<td>8 – 8</td>
<td>8 – 1</td>
</tr>
<tr>
<td>C FWD CARGO DOOR</td>
<td>4 – 3</td>
<td>3 – 10</td>
</tr>
<tr>
<td>D ENGINE</td>
<td>1 – 11</td>
<td>1 – 8</td>
</tr>
<tr>
<td>E WINGTIP</td>
<td>10 – 2</td>
<td>10 – 0</td>
</tr>
<tr>
<td>F AFT CARGO DOOR</td>
<td>5 – 1</td>
<td>5 – 0</td>
</tr>
<tr>
<td>G ENTRY DOOR NO 2</td>
<td>9 – 0</td>
<td>9 – 1</td>
</tr>
<tr>
<td>H STABILIZER</td>
<td>16 – 8</td>
<td>17 – 0</td>
</tr>
<tr>
<td>L BOTTOM OF FUSELAGE</td>
<td>3 – 7</td>
<td>3 – 1</td>
</tr>
<tr>
<td>M MAIN DECK CARGO DOOR</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**NOTES:** CLEARANCES SHOWN ARE NOMINAL. ADD PLUS OR MINUS 3 INCHES TO ACCOUNT FOR VARIATIONS IN LOADNG, OLEO AND TIRE PRESSURES, CENTER OF GRAVITY, ETC.

DURING ROUTINE SERVICING, THE AIRPLANE REMAINS RELATIVELY STABLE, PITCH AND ELEVATION CHANGES OCCURRING SLOWLY.
### 2.3.2 Ground Clearances

**Model 737-300, -400, -500**

<table>
<thead>
<tr>
<th>Description</th>
<th>MAX (AT OEW)</th>
<th>MIN (AT MTW)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FT - IN</td>
<td>M</td>
</tr>
<tr>
<td>A TOP OF FUSELAGE</td>
<td>17 – 3</td>
<td>5.26</td>
</tr>
<tr>
<td>B ENTRY DOOR NO 1</td>
<td>9 – 1</td>
<td>2.77</td>
</tr>
<tr>
<td>C FWD CARGO DOOR</td>
<td>4 – 7</td>
<td>1.40</td>
</tr>
<tr>
<td>D ENGINE</td>
<td>1 – 9</td>
<td>0.53</td>
</tr>
<tr>
<td>E WINGTIP</td>
<td>10 - 2</td>
<td>3.09</td>
</tr>
<tr>
<td>F AFT CARGO DOOR</td>
<td>4 – 6</td>
<td>1.37</td>
</tr>
<tr>
<td>G ENTRY DOOR NO 2</td>
<td>8 – 7</td>
<td>2.62</td>
</tr>
<tr>
<td>H STABILIZER</td>
<td>16 – 3</td>
<td>4.95</td>
</tr>
<tr>
<td>J VERTICAL TAIL</td>
<td>36 – 4</td>
<td>11.07</td>
</tr>
<tr>
<td>K OVERWING EXIT DOOR</td>
<td>10 – 6</td>
<td>3.20</td>
</tr>
<tr>
<td>L BOTTOM OF FUSELAGE</td>
<td>3 – 10</td>
<td>1.17</td>
</tr>
</tbody>
</table>

Notes: Clearances shown are nominal. Add plus or minus 3 inches to account for variations in loading, oleo and tire pressures, center of gravity, etc.

During routine servicing, the airplane remains relatively stable, pitch and elevation changes occurring slowly.
### 2.3.3 GROUND CLEARANCES

**MODEL 737-600, -700, -700C**

NOTES: CLEARANCES SHOWN ARE NOMINAL. ADD PLUS OR MINUS 3 INCHES TO ACCOUNT FOR VARIATIONS IN LOADING, OLEO AND TIRE PRESSURES, CENTER OF GRAVITY, ETC.

DURING ROUTINE SERVICING, THE AIRPLANE REMAINS RELATIVELY STABLE, PITCH AND ELEVATION CHANGES OCCURRING SLOWLY.

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>737-600 MAX (AT OEW)</th>
<th>737-600 MIN (AT MTW)</th>
<th>737-700, -700C MAX (AT OEW)</th>
<th>737-700, -700C MIN (AT MTW)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FT - IN</td>
<td>M</td>
<td>FT - IN</td>
<td>M</td>
</tr>
<tr>
<td>A TOP OF FUSELAGE</td>
<td>18 - 2</td>
<td>5.54</td>
<td>17 - 8</td>
<td>5.38</td>
</tr>
<tr>
<td>B ENTRY DOOR NO 1</td>
<td>9 - 0</td>
<td>2.74</td>
<td>8 - 6</td>
<td>2.59</td>
</tr>
<tr>
<td>C FWD CARGO DOOR</td>
<td>4 - 9</td>
<td>1.45</td>
<td>4 - 3</td>
<td>1.30</td>
</tr>
<tr>
<td>D ENGINE</td>
<td>2 - 0</td>
<td>0.61</td>
<td>1 - 6</td>
<td>0.46</td>
</tr>
<tr>
<td>E WINGTIP</td>
<td>12 - 9</td>
<td>3.89</td>
<td>11 - 11</td>
<td>3.63</td>
</tr>
<tr>
<td>F AFT CARGO DOOR</td>
<td>5 - 10</td>
<td>1.78</td>
<td>5 - 4</td>
<td>1.63</td>
</tr>
<tr>
<td>G ENTRY DOOR NO 2</td>
<td>10 - 2</td>
<td>3.10</td>
<td>9 - 8</td>
<td>2.95</td>
</tr>
<tr>
<td>H STABILIZER</td>
<td>18 - 5</td>
<td>5.61</td>
<td>17 - 11</td>
<td>5.46</td>
</tr>
<tr>
<td>J VERTICAL TAIL</td>
<td>41 - 8</td>
<td>12.70</td>
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<td>12.45</td>
</tr>
<tr>
<td>DESCRIPTION</td>
<td>737-800 MAX (AT OEW)</td>
<td>737-800 MIN (AT MTW)</td>
<td>737-900 MAX (AT OEW)</td>
<td>737-900 MIN (AT MTW)</td>
</tr>
<tr>
<td>----------------------</td>
<td>----------------------</td>
<td>----------------------</td>
<td>----------------------</td>
<td>----------------------</td>
</tr>
<tr>
<td></td>
<td>FT - IN M</td>
<td>FT - IN M</td>
<td>FT - IN M</td>
<td>FT - IN M</td>
</tr>
<tr>
<td>TOP OF FUSELAGE</td>
<td>18 - 3 5.56</td>
<td>17 - 9 5.41</td>
<td>18 - 4 5.59</td>
<td>17 - 10 5.44</td>
</tr>
<tr>
<td>ENTRY DOOR NO 1</td>
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<td>8 - 6 2.59</td>
<td>9 - 0 2.74</td>
<td>8 - 6 2.59</td>
</tr>
<tr>
<td>FWD CARGO DOOR</td>
<td>4 - 9 1.45</td>
<td>4 - 3 1.30</td>
<td>4 - 9 1.45</td>
<td>4 - 3 1.30</td>
</tr>
<tr>
<td>ENGINE</td>
<td>2 - 1 0.64</td>
<td>1 - 7 0.48</td>
<td>2 - 1 0.64</td>
<td>1 - 7 0.48</td>
</tr>
<tr>
<td>WINGTIP</td>
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<td>12 - 0 3.66</td>
<td>12 - 10 3.91</td>
<td>12 - 0 3.66</td>
</tr>
<tr>
<td>AFT CARGO DOOR</td>
<td>5 - 11 1.80</td>
<td>5 - 5 1.65</td>
<td>5 - 11 1.80</td>
<td>5 - 5 1.65</td>
</tr>
<tr>
<td>ENTRY DOOR NO 2</td>
<td>10 - 3 3.12</td>
<td>9 - 9 2.97</td>
<td>10 - 3 3.12</td>
<td>9 - 9 2.97</td>
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<tr>
<td>STABILIZER</td>
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<td>18 - 0 5.49</td>
<td>18 - 7 5.66</td>
<td>18 - 1 5.51</td>
</tr>
<tr>
<td>VERTICAL TAIL</td>
<td>41 - 5 12.62</td>
<td>40 - 7 12.37</td>
<td>41 - 5 12.62</td>
<td>40 - 7 12.37</td>
</tr>
</tbody>
</table>

**NOTES:** CLEARANCES SHOWN ARE NOMINAL. ADD PLUS OR MINUS 3 INCHES TO ACCOUNT FOR VARIATIONS IN LOADING, OLEO AND TIRE PRESSURES, CENTER OF GRAVITY, ETC.

DURING ROUTINE SERVICING, THE AIRPLANE REMAINS RELATIVELY STABLE, PITCH AND ELEVATION CHANGES OCCURRING SLOWLY.

### 2.3.4 GROUND CLEARANCES
*MODEL 737-800, -900, -900ER*
<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>737-700 WITH WINGLETS, BBJ</th>
<th>737-800 WITH WINGLETS, BBJ2</th>
<th>737-900 WITH WINGLETS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MAX (OEW)</td>
<td>MIN (MTW)</td>
<td>MAX (OEW)</td>
</tr>
<tr>
<td>A TOP OF FUSELAGE</td>
<td>18 - 3 5.56</td>
<td>17 - 9 5.41</td>
<td>18 - 3 5.56</td>
</tr>
<tr>
<td>B ENTRY DOOR NO 1</td>
<td>9 - 0 2.74</td>
<td>8 - 6 2.59</td>
<td>9 - 0 2.74</td>
</tr>
<tr>
<td>C FWD CARGO DOOR</td>
<td>4 - 9 1.45</td>
<td>4 - 3 1.30</td>
<td>4 - 9 1.45</td>
</tr>
<tr>
<td>D ENGINE</td>
<td>2 - 0 0.61</td>
<td>1 - 6 0.46</td>
<td>2 - 1 0.64</td>
</tr>
<tr>
<td>E WINGTIP</td>
<td>21 - 9 6.63</td>
<td>21 - 3 6.48</td>
<td>22 - 2 6.76</td>
</tr>
<tr>
<td>F AFT CARGO DOOR</td>
<td>5 - 10 1.78</td>
<td>5 - 4 1.63</td>
<td>5 - 11 1.80</td>
</tr>
<tr>
<td>G ENTRY DOOR NO 2</td>
<td>10 - 2 3.10</td>
<td>9 - 8 2.95</td>
<td>10 - 3 3.12</td>
</tr>
<tr>
<td>H STABILIZER</td>
<td>18 - 5 5.61</td>
<td>17 - 11 5.46</td>
<td>18 - 6 5.64</td>
</tr>
</tbody>
</table>

NOTES: CLEARANCES SHOWN ARE NOMINAL. ADD PLUS OR MINUS 3 INCHES TO ACCOUNT FOR VARIATIONS IN LOADING, OLEO AND TIRE PRESSURES, CENTER OF GRAVITY, ETC.

DURING ROUTINE SERVICING, THE AIRPLANE REMAINS RELATIVELY STABLE, PITCH AND ELEVATION CHANGES OCCURRING SLOWLY.

2.3.5 GROUND CLEARANCES

MODEL 737-700, -800, -900, -900ER WITH WINGLETS, BBJ, BBJ2
2.4.1 INTERIOR ARRANGEMENTS

MODEL 737-100

NOTES:
* SIX-ABREAST SEATING
* 103 PASSENGERS AT 34-IN (0.86 M) PITCH AS SHOWN OR 118 PASSENGERS AT 30-IN (0.76 M) PITCH
* GALLEY AFT
2.4.2 INTERIOR ARRANGEMENTS
MODEL 737-200

NOTES:
* SIX-ABREAST SEATING
* 115 PASSENGERS AT 34-IN (0.86 M) PITCH OR
* 120 PASSENGERS AT 32-IN (0.81 M) PITCH OR
* 130 PASSENGERS AT 30-IN (0.76 M) PITCH AS SHOWN
* GALLEY FORWARD AND AFT
2.4.3 INTERIOR ARRANGEMENTS – MIXED CLASS

MODEL 737-200

NOTES:

* 14 FIRST CLASS PASSENGERS, 4-ABREAST SEATING AT 38-IN (0.97-M) PITCH
* 88 ECONOMY CLASS PASSENGERS, 6-ABREAST AT 34-IN (0.86 M) PITCH OR
2.4.5 INTERIOR ARRANGEMENTS - PASSENGER/CARGO CONFIGURATION

MODEL 737-200C

NOTES:
* 56 PASSENGERS AS SHOWN
* SIX-ABREAST SEATING AT 34-IN (0.86-M) PITCH
* THREE CARGO PALLET(S)
2.4.6 INTERIOR ARRANGEMENTS – ALL-CARGO CONFIGURATION

MODEL 737-200C

CARGO DOOR
86 x 134 IN (2.18 x 3.40 M)
CLEAR OPENING
84.5 x 134 IN (2.15 x 3.40 M)

TYPE 1 FORWARD SERVICE DOOR
30 x 65 IN (0.75 x 1.65 M)

TYPE 1 AFT SERVICE DOOR
50 x 65 IN (0.75 x 1.65 M)

TYPE II EMERGENCY EXIT
20 x 38 IN (0.50 x 0.97 M)
LH AND RH

CARGO PALLET
88 x 125 IN (2.24 x 3.18 M)

CARGO PALLET
88 x 108 IN (2.24 x 2.75 M)

TYPICAL MAIN DECK CARGO VOLUMES

<table>
<thead>
<tr>
<th>PALLET SIZE</th>
<th>&quot;G&quot; SYSTEM VOLUME - EACH PALLET</th>
<th>&quot;OC&quot; SYSTEM VOLUME - EACH PALLET</th>
<th>&quot;G&quot; SYSTEM VOLUME - 7 PALLETS</th>
<th>&quot;OC&quot; SYSTEM VOLUME - 7 PALLETS</th>
</tr>
</thead>
<tbody>
<tr>
<td>88 x 108 IN (2.24 x 2.75 M)</td>
<td>352.5 CU FT (10.0 CU M)</td>
<td>356.4 CU FT (10.1 CU M)</td>
<td>2,468 CU FT (69.9 CU M)</td>
<td>2,495 CU FT (70.0 CU M)</td>
</tr>
<tr>
<td>88 x 125 IN (2.24 x 3.18 M)</td>
<td>390 CU FT (11.1 CU M)</td>
<td>394.3 CU FT (11.2 CU M)</td>
<td>2,730 CU FT (77.4 CU M)</td>
<td>2,762 CU FT (78.3 CU M)</td>
</tr>
</tbody>
</table>
2.4.7 INTERIOR ARRANGEMENTS

MODEL 737-300

- **MIXED CLASS**
  - 8 FIRST CLASS SEATS AT 36-IN PITCH
  - 120 ECONOMY CLASS SEATS AT 32-IN PITCH

- **SINGLE CLASS**
  - 140 ECONOMY CLASS SEATS AT 32-IN PITCH
2.4.8 INTERIOR ARRANGEMENTS
MODEL 737-400

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2.4.9 INTERIOR ARRANGEMENTS

MODEL 737-500
2.4.10 INTERIOR ARRANGEMENTS

MIXED CLASS
8 FIRST CLASS SEATS AT 36-IN PITCH
100 ECONOMY CLASS SEATS AT 32-IN PITCH

MIXED CLASS
70 BUSINESS CLASS SEATS AT 34-IN PITCH
39 ECONOMY CLASS SEATS AT 32-IN PITCH

SINGLE CLASS
123 ECONOMY CLASS SEATS AT 32-IN PITCH (SHOWN)
OR 130 ECONOMY CLASS SEATS AT 30-IN PITCH

ATTENDANT  CLOSET  GALLEY  LAVATORY  STOWAGE

MODEL 737-600
2.4.11 INTERIOR ARRANGEMENTS
MODEL 737-700, -700 WITH WINGLETS

MIXED CLASS
8 FIRST CLASS SEATS AT 36-IN PITCH
120 ECONOMY CLASS SEATS AT 32-IN PITCH

MIXED CLASS
90 BUSINESS CLASS SEATS AT 34-IN PITCH
36 ECONOMY CLASS SEATS AT 32-IN PITCH

SINGLE CLASS
140 ECONOMY CLASS SEATS AT 32-IN PITCH (SHOWN)
OR 148 ECONOMY CLASS SEATS AT 30-IN PITCH

- ATTENDANT
- CLOSET
- GALLEY
- LAVATORY
- STOWAGE

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2.4.12 INTERIOR ARRANGEMENTS

MODEL 737-700C

PASSENGER CONFIGURATION — MIXED CLASS
8 FIRST CLASS SEATS AT 36-IN PITCH
118 ECONOMY CLASS SEATS AT 32-IN PITCH

CARGO CONFIGURATION
EIGHT 88 X 125 IN (2.24 X 3.18 M) PALLETS AS SHOWN
OR EIGHT 88 X 108 IN (2.24 X 2.64 M)

ATTENDANT  CLOSET  GALLEY  LAVATORY  STOWAGE
2.4.13 INTERIOR ARRANGEMENTS

MODEL 737-800, -800 WITH WINGLETS
2.4.14 INTERIOR ARRANGEMENTS
MODEL 737 BBJ, 737 BBJ2
2.4.15 INTERIOR ARRANGEMENTS

MODEL 737-900, -900 WITH WINGLETS

**MIXED CLASS**
- 12 FIRST CLASS SEATS AT 36-IN PITCH
- 165 ECONOMY CLASS SEATS AT 32-IN PITCH

**SINGLE CLASS**
- 177 ECONOMY CLASS SEATS AT 32-IN PITCH (SHOWN)
- OR 189 ECONOMY CLASS SEATS AT 31-IN PITCH

A ATTENDANT  C CLOSET  G GALLEY  L LAVATORY
2.4.16 INTERIOR ARRANGEMENTS
MODEL 737-900ER, 900ER WITH WINGLETS

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2.5.1 CABIN CROSS-SECTIONS - SIX-ABREAST SEATING
WITH HATRACK-TYPE STOWAGE SYSTEM
MODEL 737-100
2.5.2 CABIN CROSS-SECTIONS - FOUR-ABREAST SEATING WITH "WIDE-BODY LOOK" INTERIOR
MODEL 737-200
2.5.3 CABIN CROSS-SECTIONS - FIVE-ABREAST SEATING WITH CARRYALL COMPARTMENTS
MODEL 737-200
NOTE: CABIN INTERIOR FOR BBJ1 AND BBJ2 AIRPLANES ARE DEPENDENT ON CUSTOMER OPTION.

2.5.4 CABIN CROSS-SECTIONS - FOUR-ABREAST SEATING

MODEL 737-200 WITH ADVANCED TECHNOLOGY INTERIOR
MODEL 737-300, -400, -500, -600, -700, -800, -900, BBJ1, BBJ2
2.5.5 CABIN CROSS-SECTIONS - SIX-ABREAST SEATING
MODEL 737-200 WITH ADVANCED TECHNOLOGY INTERIOR
MODEL 737-300, -400, -500, -600, -700, -800, -900
2.6.1 LOWER CARGO COMPARTMENTS - DIMENSIONS
MODEL 737, ALL MODELS
### Lower Cargo Compartments - Capacities

**Model 737-100, -200**

<table>
<thead>
<tr>
<th>Airplane Model</th>
<th>Aft Cargo Compartment</th>
<th>Forward Compartment Bulk Cargo</th>
<th>Total Bulk Cargo</th>
</tr>
</thead>
<tbody>
<tr>
<td>737-100</td>
<td>370 CU FT (10.48 CU M)</td>
<td>0</td>
<td>280 CU FT (7.93 CU M)</td>
</tr>
<tr>
<td>737-200 AND ADVANCED 737-200</td>
<td>505 CU FT (14.31 CU M)</td>
<td>0</td>
<td>370 CU FT (10.48 CU M)</td>
</tr>
<tr>
<td></td>
<td>370 CU FT (10.48 CU M)</td>
<td>390 GAL (1.475 L)</td>
<td>135 CU FT (3.83 CU M)</td>
</tr>
<tr>
<td></td>
<td>270 CU FT (7.65 CU M)</td>
<td>810 GAL (3.065 L)</td>
<td>235 CU FT (6.66 CU M)</td>
</tr>
</tbody>
</table>
2.6.3 LOWER CARGO COMPARTMENTS - CAPACITIES

MODEL 737-300, -400, -500
### 2.6.4 LOWER CARGO COMPARTMENTS - CAPACITIES

**MODEL 737-600, -700, -800, -900, -900ER WITH AND WITHOUT WINGLETS**

<table>
<thead>
<tr>
<th>AIRPLANE MODEL</th>
<th>AFT CARGO COMPARTMENT</th>
<th>FORWARD COMPARTMENT</th>
<th>TOTAL BULK CARGO</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>737-600</td>
<td>488 CU FT (13.8 CU M)</td>
<td>0</td>
<td>268 CU FT (7.6 CU M)</td>
<td>756 CU FT (21.4 CU M)</td>
</tr>
<tr>
<td>737-700</td>
<td>596 CU FT (16.9 CU M)</td>
<td>0</td>
<td>406 CU FT (11.5 CU M)</td>
<td>1,002 CU FT (28.4 CU M)</td>
</tr>
<tr>
<td>737-800</td>
<td>899 CU FT (25.5 CU M)</td>
<td>0</td>
<td>692 CU FT (19.6 CU M)</td>
<td>1,591 CU FT (45.1 CU M)</td>
</tr>
<tr>
<td>737-900</td>
<td>1,012 CU FT (28.7 CU M)</td>
<td>0</td>
<td>840 CU FT (23.8 CU M)</td>
<td>1,852 CU FT (52.5 CU M)</td>
</tr>
<tr>
<td>737-900ER</td>
<td>996 CU FT (28.2 CU M)</td>
<td>0</td>
<td>830 CU FT (23.5 CU M)</td>
<td>1,826 CU FT (51.7 CU M)</td>
</tr>
<tr>
<td>737-900ER</td>
<td>843 CU FT (23.9 CU M)</td>
<td>520 GAL (1,968 L)</td>
<td>153 CU FT (4.3 CU M)</td>
<td>1,673 CU FT (47.7 CU M)</td>
</tr>
<tr>
<td>737-900ER</td>
<td>755 CU FT (21.4 CU M)</td>
<td>962 GAL (3,641 L)</td>
<td>241 CU FT (6.8 CU M)</td>
<td>1,585 CU FT (44.9 CU M)</td>
</tr>
</tbody>
</table>

**NOTES:**

1. NO AUXILIARY FUEL TANK
2. USEABLE CAPACITY, NO AUXILIARY FUEL TANK – PRELIMINARY ESTIMATES
3. USEABLE CAPACITY, WITH ONE AUXILIARY FUEL TANK – PRELIMINARY ESTIMATES
4. USEABLE CAPACITY, WITH TWO AUXILIARY FUEL TANKS – PRELIMINARY ESTIMATES
<table>
<thead>
<tr>
<th>AIRPLANE MODEL</th>
<th>FWD CARGO COMPARTMENT</th>
<th>AFT CARGO COMPARTMENT</th>
<th>TOTAL CARGO</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NO OF FUEL TANKS</td>
<td>CAPACITY AVAILABLE</td>
<td>NO OF FUEL TANKS</td>
</tr>
<tr>
<td></td>
<td>CU FT</td>
<td>CU M</td>
<td>CU FT</td>
</tr>
<tr>
<td>737 BBJ</td>
<td>0</td>
<td>377</td>
<td>10.7</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>377</td>
<td>10.7</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>181</td>
<td>5.1</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>181</td>
<td>5.1</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>181</td>
<td>5.1</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>127</td>
<td>3.6</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>73</td>
<td>2.1</td>
</tr>
<tr>
<td>737 BBJ2</td>
<td>0</td>
<td>985</td>
<td>27.9</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>985</td>
<td>27.9</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>985</td>
<td>27.9</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>662</td>
<td>18.8</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>662</td>
<td>18.8</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>468</td>
<td>13.3</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>468</td>
<td>13.3</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>468</td>
<td>13.3</td>
</tr>
</tbody>
</table>

2.6.5 LOWER CARGO COMPARTMENTS - CAPACITIES
MODEL 737 BBJ, 737 BBJ2
2.7.1 DOOR CLEARANCES - FORWARD MAIN ENTRY DOOR NO. 1
MODEL 737, ALL MODELS
2.7.2 DOOR CLEARANCES – OPTIONAL FORWARD AIRSTAIRS, MAIN ENTRY DOOR NO 1
MODEL 737 ALL MODELS
2.7.3 DOOR CLEARANCES - LOCATIONS OF SENSORS AND PROBES - FORWARD OF MAIN ENTRY DOOR NO 1
MODELS 737-100, -200, -300, -400, -500

<table>
<thead>
<tr>
<th>NAME OF SENSOR</th>
<th>DISTANCE AFT OF NOSE</th>
<th>DISTANCE ABOVE (+) OR BELOW (-) DOOR SILL REFERENCE LINE</th>
<th>PROTRUSION FROM AIRPLANE SKIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRIMARY PITOT-STATIC (LR)</td>
<td>5 FT 3 IN (1.60 M)</td>
<td>+1 FT 3 IN (0.38 M)</td>
<td>6 IN (0.15 M)</td>
</tr>
<tr>
<td>ALTERNATE PITOT-STATIC (R)</td>
<td>5 FT 3 IN (1.60 M)</td>
<td>+3 IN (0.08 M)</td>
<td>6 IN (0.15 M)</td>
</tr>
<tr>
<td>ANGLE OF ATTACK (LR)</td>
<td>5 FT 2 IN (1.57 M)</td>
<td>-5 IN (-0.13 M)</td>
<td>4 IN (0.10 M)</td>
</tr>
<tr>
<td>TOTAL AIR TEMPERATURE (L)</td>
<td>11 FT 6 IN (3.51 M)</td>
<td>+1 FT 6 IN (0.46 M)</td>
<td>4 IN (0.10 M)</td>
</tr>
</tbody>
</table>
2.7.4 DOOR CLEARANCES - LOCATIONS OF SENSORS AND PROBES - FORWARD OF MAIN ENTRY DOOR NO 1
MODEL 737-600, -700, -800, -900ER, -BBJ, -BBJ2

<table>
<thead>
<tr>
<th>NAME OF SENSOR</th>
<th>DISTANCE AFT OF NOSE</th>
<th>DISTANCE ABOVE (+) OR BELOW (-) DOOR SILL REFERENCE LINE</th>
<th>PROTRUSION FROM AIRPLANE SKIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRIMARY PITOT-STATIC (L/R)</td>
<td>5 FT 2 IN (1.57 M)</td>
<td>+1 FT 3 IN (0.38 M)</td>
<td>6 IN (0.15 M)</td>
</tr>
<tr>
<td>ALTERNATE PITOT-STATIC (R)</td>
<td>5 FT 2 IN (1.57 M)</td>
<td>+ 3 IN (0.08 M)</td>
<td>6 IN (0.15 M)</td>
</tr>
<tr>
<td>ANGLE OF ATTACK (L/R)</td>
<td>5 FT 2 IN (1.57 M)</td>
<td>-6 IN (-0.15 M)</td>
<td>4 IN (0.10 M)</td>
</tr>
<tr>
<td>TOTAL AIR TEMPERATURE (L)</td>
<td>11 FT 6 IN (3.50 M)</td>
<td>+ 1 FT 6 IN (0.46 M)</td>
<td>4 IN (0.10 M)</td>
</tr>
</tbody>
</table>
2.7.5 DOOR CLEARANCES - FORWARD SERVICE DOOR
MODEL 737, ALL MODELS
2.7.6 DOOR CLEARANCES - AFT ENTRY DOOR AND AFT SERVICE DOOR
MODEL 737, ALL MODELS
2.7.7 DOOR CLEARANCES - AFT ENTRY DOOR WITH OPTIONAL AIRSTAIR
MODEL 737-100, 200
### Door Clearances - Lower Deck Cargo Compartments

**Model 737-100, -200, -300, -400, -500, -600, -700, -800, -900, BBJ1, BBJ2**

<table>
<thead>
<tr>
<th>Airplane Model</th>
<th>Forward Cargo Door</th>
<th>Aft Cargo Door</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Door Size (C x B)</td>
<td>Clear Opening (A x B)</td>
</tr>
<tr>
<td>737-100</td>
<td>51 x 48 IN (1.30 x 1.22 M)</td>
<td>35 x 48 IN (0.89 x 1.22 M)</td>
</tr>
<tr>
<td>737-200</td>
<td>51 x 48 IN (1.30 x 1.22 M)</td>
<td>35 x 48 IN (0.89 x 1.22 M)</td>
</tr>
<tr>
<td>737-300</td>
<td>51 x 48 IN (1.30 x 1.22 M)</td>
<td>35 x 48 IN (0.89 x 1.22 M)</td>
</tr>
<tr>
<td>737-400</td>
<td>51 x 48 IN (1.30 x 1.22 M)</td>
<td>35 x 48 IN (0.89 x 1.22 M)</td>
</tr>
<tr>
<td>737-500</td>
<td>51 x 48 IN (1.30 x 1.22 M)</td>
<td>35 x 48 IN (0.89 x 1.22 M)</td>
</tr>
<tr>
<td>737-600</td>
<td>51 x 48 IN (1.30 x 1.22 M)</td>
<td>35 x 48 IN (0.89 x 1.22 M)</td>
</tr>
<tr>
<td>737-700 / 737 BBJ1</td>
<td>51 x 48 IN (1.30 x 1.22 M)</td>
<td>35 x 48 IN (0.89 x 1.22 M)</td>
</tr>
<tr>
<td>737-800 / 737 BBJ2</td>
<td>51 x 48 IN (1.30 x 1.22 M)</td>
<td>35 x 48 IN (0.89 x 1.22 M)</td>
</tr>
<tr>
<td>737-900</td>
<td>51 x 48 IN (1.30 x 1.22 M)</td>
<td>35 x 48 IN (0.89 x 1.22 M)</td>
</tr>
</tbody>
</table>
2.7.9 DOOR CLEARANCES – MAIN DECK CARGO DOOR
MODEL 737-200C

NOTE:
1. EXPOSED FLOOR WIDTH FOR CRANE LOADING IN FULL OPEN POSITION.
2.7.10 DOOR CLEARANCES – MAIN DECK CARGO DOOR
MODEL 737-700C
3.0 AIRPLANE PERFORMANCE

3.1 General Information

3.2 Payload/Range for Long Range Cruise

3.3 F.A.R. and J.A.R. Takeoff Runway Length Requirements

3.4 F.A.R. Landing Runway Length Requirements
3.0 AIRPLANE PERFORMANCE

3.1 General Information

The graphs in Section 3.2 provide information on operational empty weight (OEW) and payload, trip range, brake release gross weight, and fuel limits for airplane models with the different engine options. To use these graphs, if the trip range and zero fuel weight (OEW + payload) are known, the approximate brake release weight can be found, limited by fuel quantity.

The graphs in Section 3.3 provide information on F.A.R. takeoff runway length requirements with the different engines at different pressure altitudes. Maximum takeoff weights shown on the graphs are the heaviest for the particular airplane models with the corresponding engines. Standard day temperatures for pressure altitudes shown on the F.A.R. takeoff graphs are given below:

<table>
<thead>
<tr>
<th>PRESSURE ALTITUDE</th>
<th>STANDARD DAY TEMP</th>
</tr>
</thead>
<tbody>
<tr>
<td>FEET</td>
<td>METERS</td>
</tr>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2,000</td>
<td>610</td>
</tr>
<tr>
<td>4,000</td>
<td>1,219</td>
</tr>
<tr>
<td>6,000</td>
<td>1,829</td>
</tr>
<tr>
<td>8,000</td>
<td>2,438</td>
</tr>
</tbody>
</table>

For airplanes which are governed by the European Joint Airworthiness Authorities (JAA), the wet runway performance is shown in accordance with JAR-OPS 1 Subpart F, with wet runways defined in Paragraph 1.480(a)(10). Skid-resistant runways (grooved or PFC treated) per FAA or ICAO specifications exhibit runway length requirements that remove some or all of the length penalties associated with smooth (non-grooved) runways. Under predominantly wet conditions, the wet runway performance characteristics may be used to determine runway length requirements, if it is longer than the dry runway performance requirements.

The graphs in Section 3.4 provide information on landing runway length requirements for different airplane weights and airport altitudes. The maximum landing weights shown are the heaviest for the particular airplane model.
3.2.1 PAYLOAD/RANGE FOR LONG-RANGE CRUISE

MODEL 737-100 (JT8D-7 ENGINES)

D6-58325-6

OCTOBER 2005     85
NOTES:
* DOMESTIC RESERVES
* JT8D-9/9A ENGINES
* STANDARD DAY, ZERO WIND
* LRC AT 30,000 FEET (9,150 METERS)
* CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN

* FOR TAKEOFF WEIGHT, SUBTRACT 500 LB (227 KG) FROM TAXI WEIGHT

3.2.2 PAYLOAD/RANGE FOR LONG-RANGE CRUISE
MODEL 737-200 (JT8D-9/9A ENGINES)
3.2.3 PAYLOAD/RANGE FOR LONG-RANGE CRUISE
MODEL ADVANCED 737-200 (JT8D-15/15A ENGINES)

NOTES:
* DOMESTIC RESERVES
* JT8D-15/15A ENGINES
* STANDARD DAY, ZERO WIND
* LRC AT 30,000 FEET (9,150 METERS)
* CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN

* FOR TAKEOFF WEIGHT, SUBTRACT 500 LB (227 KG) FROM TAXI WEIGHT

OEW PLUS PAYLOAD
1,000 KILOGRAMS

105
100
95
90
85
80
75
70
65
60
55
50
45
40
35
30
25
20
15
10
5
0

RANGE - 100 NAUTICAL MILES

10
20
30
40
50
60
70
80
90
100

5,140 U.S. GAL (19,000 L)
120 PASSENGERS AND BAGS
OEW: 61,300 LB (27,800 KG)
NOTES:
* DOMESTIC RESERVES
* JT8D-17/17A ENGINES
* STANDARD DAY, ZERO WIND
* LUG AT 30,000 FEET (9,150 METERS)
* CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN

* FOR TAKEOFF WEIGHT, SUBTRACT 500 LB (227 KG) FROM TAXI WEIGHT

3.2.4 PAYLOAD/RANGE FOR LONG-RANGE CRUISE
MODEL ADVANCED 737-200 (JT8D-17/17A ENGINES)
3.2.5 PAYLOAD/RANGE FOR LONG-RANGE CRUISE
MODEL ADVANCED 737-200 (JT8D-17R/17AR ENGINES)

* FOR TAKEOFF WEIGHT, SUBTRACT 500 LB (227 KG) FROM TAXI WEIGHT

NOTES:
* DOMESTIC RESERVES
* JT8D-17R/17AR ENGINES
* STANDARD DAY, ZERO WIND
* LWC AT 30,000 FEET (9,150 METERS)
* CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
3.2.6 PAYLOAD/RANGE FOR LONG-RANGE CRUISE

MODEL 737-300

NOTES:
* DOMESTIC RESERVES
* CFM56-3B-1 OR CFM56-3B-2 ENGINES
* STANDARD DAY, ZERO WIND
* LRC AT 31,000/35,000 FEET
* CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
3.2.7 PAYLOAD/RANGE FOR LONG-RANGE CRUISE
MODEL 737-400

NOTES:
* DOMESTIC RESERVES
* CFM56-3C-2 OR CFM56-3C-1 ENGINES
* STANDARD DAY, ZERO WIND
* LRC AT 31,000/35,000 FEET
* CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
3.2.8 PAYLOAD/RANGE FOR LONG-RANGE CRUISE

MODEL 737-500
- STANDARD DAY, ZERO WIND
- CRUISE MACH = LRC
- NORMAL POWER EXTRACTION AND AIR CONDITIONING BLEED
- TYPICAL MISSION RULES
- CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE AND OEW PRIOR TO FACILITY DESIGN.

DO NOT USE FOR DISPATCH

Payload/Range
737-600 (CFM56-7B Series)

MAX ZERO FUEL WEIGHT = 114,000 LB (51,710 KG)

3.2.9 PAYLOAD/RANGE FOR LONG-RANGE CRUISE
MODEL 737-600
- STANDARD DAY, ZERO WIND
- CRUISE MACH = LRC
- NORMAL POWER EXTRACTION AND AIR CONDITIONING BLEEDS
- TYPICAL MISSION RULES
- NON-WINGLET PERFORMANCE SHOWN. WINGLET AIRCRAFT WILL HAVE SLIGHTLY GREATER RANGE.
- CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE AND OEW PRIOR TO FACILITY DESIGN.

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**3.2.10 PAYLOAD/RANGE FOR LONG-RANGE CRUISE**

**MODEL: 737-700**

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D6-58325-6

94 JULY 2010
- STANDARD DAY, ZERO WIND
- CRUISE MACH = LRC
- NORMAL POWER EXTRACTION AND AIR CONDITIONING BLEEDS
- TYPICAL MISSION RULES
- NON-WINGLET PERFORMANCE SHOWN, WINGLET AIRCRAFT WILL HAVE SLIGHTLY GREATER RANGE.
- CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE AND OEW PRIOR TO FACILITY DESIGN.
3.2.12 PAYLOAD/RANGE FOR LONG-RANGE CRUISE

MODEL 737-800
- STANDARD DAY, ZERO WIND
- CRUISE MACH = LRC
- NORMAL POWER EXTRACTION AND AIR CONDITIONING BLEEDS
- TYPICAL MISSION RULES
- NON-WINGLET PERFORMANCE SHOWN. WINGLET AIRCRAFT WILL HAVE SLIGHTLY GREATER RANGE.
- CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE AND OEW PRIOR TO FACILITY DESIGN.

### Payload/Range

**Model 737-900**

**737-900/-900W (CFM56-7B Series)**

**3.2.13 Payload/Range for Long-Range Cruise**
3.2.14 PAYLOAD/RANGE FOR LONG-RANGE CRUISE
MODEL 737-900ER
INTENTIONALLY LEFT BLANK AND DELETED PAGES 100 – 103
3.3.1 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY
MODEL 737-100 (JT8D-7 ENGINES)
3.3.2 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY +27°F (STD + 15°C)
MODEL 737-100 (JT8D-7 ENGINES)
3.3.2 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY
MODEL 737-200 (JT8D-9/9A ENGINES)
3.3.4 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY +27°F (STD + 15°C)
MODEL 737-200 (JT8D-9/9A ENGINES)

NOTES:
* NO ENGINE AIRBLEED FOR AIR CONDITIONING
* ZERO WIND, ZERO RUNWAY GRADIENT
* CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
* JT8D-9/9A ENGINES
3.3.5 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY
MODEL ADVANCED 737-200 (JT8D-15/15A ENGINES)

NOTES:
* NO ENGINE AIRBLEED FOR AIR CONDITIONING
* ZERO WIND, ZERO RUNWAY GRADIENT
* CONSULT USING AIRLINE FOR SPECIFIC
  OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
* JT8D-15/15A ENGINES
3.3.6 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +27°F (STD + 15°C)
MODEL ADVANCED 737-200 (JT8D-15/15A ENGINES)
3.3.7 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY
MODEL ADVANCED 737-200 (JT8D-17/17A ENGINES)
3.3.8 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +27°F (STD + 15°C)

MODEL ADVANCED 737-200 (JT8D-17/17A ENGINES)
3.3.9 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY
MODEL ADVANCED 737-200 (JT8D-17R/17AR ENGINES)
3.3.10 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +27°F (STD + 15°C)

MODEL ADVANCED 737-200 (JT8D-17R/17AR ENGINES)

NOTES:
* NO ENGINE ARRIVED FOR AIR CONDITIONING
* ZERO WIND, ZERO RUNWAY GRADIENT
* CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
* STD-17R/17AR ENGINES
3.3.11 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY
MODEL 737-300 (CFM56-3B1 ENGINES AT 20,000 LB SLST)

NOTES:
* NO ENGINE AIRBLEED FOR AIR CONDITIONING
* ZERO WIND, ZERO RUNWAY GRADIENT
* CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
* CFM 56-3B1 ENGINES RATED AT 20,000 LB SLST
3.3.12 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +27°F (STD + 15°C),
MODEL 737-300 (CFM56-3B1 ENGINES AT 20,000 LB SLST)

NOTES:
* NO ENGINE AIRBLEED FOR AIR CONDITIONING
* ZERO WIND, ZERO RUNWAY GRADIENT
* CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
* CFM 56-3B1 ENGINES RATED AT 20,000 LB SLST
3.3.13 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY
MODEL 737-300 (CFM56-3B-2 ENGINES AT 22,000 LB SLST)

NOTES:
* NO ENGINE AIRBLEED FOR AIR CONDITIONING
* ZERO WIND, ZERO RUNWAY GRADIENT
* CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
* CFM56-3B2 ENGINES RATED AT 22,000 LB SLST

116  OCTOBER 2005
3.3.14 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +27°F (STD + 15°C)

MODEL 737-300 (CFM56-3B-2 ENGINES AT 22,000 LB SLST)

NOTES:
* NO ENGINE AIRBLEED FOR AIR CONDITIONING
* ZERO WIND, ZERO RUNWAY GRADIENT
* CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
* CFM 56–3B2 ENGINES RATED AT 22,000 LB SLST
NOTES:
* NO ENGINE AIRBLEED FOR AIR CONDITIONING
* ZERO WIND, ZERO RUNWAY GRADIENT
* CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
* CFM 56-3B2 ENGINES NATED AT 22,000 LB SLST

3.3.15 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY
MODEL 737-400 (CFM56-3B2 ENGINES AT 22,000 LB SLST)

D6-58325-6
118 OCTOBER 2005
3.3.16  F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +27°F (STD + 15°C)

MODEL 737-400 (CFM56-3B-2 ENGINES AT 22,000 LB SLST)

NOTES:
* NO ENGINE AIRBLEED FOR AIR CONDITIONING
* ZERO WIND, ZERO RUNWAY GRADE
* CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURES PRIOR TO FACILITY DESIGN
* CFM 56-3B2 ENGINES RATED AT 22,000 LB SLST
3.3.17 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY
MODEL 737-400 (CFM56-3C1 ENGINES AT 23,500 LB SLST)
3.3.18 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +27°F (STD + 15°C)

MODEL 737-400 (CFM56-3C1 ENGINES AT 23,500 LB SLST)

NOTES:
* NO ENGINE AIRBLEED FOR AIR CONDITIONING
* ZERO WIND, ZERO RUNWAY GRADIENT
* CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
* CFM 56-3C1 ENGINES RATED AT 23,500 LB SLST
3.3.19  F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY
MODEL 737-500 (CFM56-3B-1 ENGINES AT 20,000 LB SLST)

NOTES:
* NO ENGINE AIRBLEED FOR AIR CONDITIONING
* ZERO WIND, ZERO RUNWAY GRADIENT
* CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
* CFM 56-3B1 ENGINES RATED AT 20,000 LB SLST

1,000 POUNDS

1,000 METERS

F.A.R. TAKEOFF RUNWAY LENGTH

 длительножельмётнют

1,000 KILOGRAMS

OPERATIONAL TAKEOFF WEIGHT

90 95 100 105 110 115 120 125 130 135 140

42 44 46 48 50 52 54 56 58 60 62
3.3.20  F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY +27°F (STD + 15°C)
MODEL 737-500 (CFM56-3B-1 ENGINES AT 20,000 LB SLST)

NOTES:
* NO ENGINE AIRBLEED FOR AIR CONDITIONING
* ZERO WIND, ZERO RUNWAY GRADIENT
* CONSULT USING AIRLINE FOR SPECIFIC
  OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
* CFM 56-3B1 ENGINES RATED AT 20,000 LB SLST
3.3.21 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY
MODEL 737-500 (CFM56-3B1 ENGINES AT 18,500 LB SLST)

NOTES:
* NO ENGINE AIRBLEED FOR AIR CONDITIONING
* ZERO WIND, ZERO RUNWAY GRADIENT
* CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
* CFM 56-3B1 ENGINES RATED AT 18,500 LB SLST
3.3.22  F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +27°F (STD + 15°C)

MODEL 737-500 (CFM56-3B-1 ENGINES AT 18,500 LB SLST)
3.3.23  
F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS  
STANDARD DAY, DRY RUNWAY  
MODEL 737-600 (CFM56-7B18/-7B20 ENGINES AT 20,000 LB SLST)
3.3.24 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +27°F (STD + 15°C), DRY RUNWAY

MODEL 737-600 (CFM56-7B18/-7B20 ENGINES AT 20,000 LB SLST)

DO NOT USE FOR DISPATCH

Takeoff Runway Length Requirements
737-600 (CFM56-7B18/-7B20)

- CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN.
3.3.25 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY + 40°F (STD + 22.2°C), DRY RUNWAY
MODEL 737-600 (CFM56-7B18/-7B20 ENGINES AT 20,000 LBS S/LST)

DO NOT USE FOR DISPATCH

Takeoff Runway Length Requirements
737-600 (CFM56-7B18/-7B20)

- CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN.

- PRESSURE ALTITUDE
  - 10,000 (3,048)
  - 6,000 (1,829)
  - 4,000 (1,219)
  - 2,000 (610)
  - SEA LEVEL (0)

- TEMPERATURE
  - 21.4°C
  - 25.3°C

- TIRE SPEED LIMIT
  - 225 MPH (362 KMPH)

- STANDARD DAY + 40.0°F (STD + 22.2°C)

- MAX TAKEOFF WT
  - 145,500 LBS (66,986 KG)

- OPERATIONAL TAKEOFF WEIGHT
  - 45,000 LBS (20,412 KG)
  - 55,000 LBS (24,948 KG)
  - 65,000 LBS (29,477 KG)
3.3.26 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY +63°F (STD + 35°C), DRY RUNWAY
MODEL 737-600 (CFM56-7B18/-7B20 ENGINES AT 20,000 LB SLST)

DO NOT USE FOR DISPATCH
Takeoff Runway Length Requirements
737-600 (CFM56-7B18/-7B20)

- CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN.

---

TAKEOFF LENGTH
1,000 METERS

TAKEOFF FIELD LENGTH
1,000 FEET

PRESSURE ALTITUDE (METERS)
(0 ft (0 m))

PRESSURE ALT. TEMP.
4,000 (1,219) [42.1]
2,000 (610) [46.0]
SEA LEVEL [50.0]

STANDARD DAY +63.0°F
(STD + 35.0°C)

---

OPERATIONAL TAKEOFF WEIGHT
1,000 POUNDS
1,000 KILOGRAMS

---

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3.3.27 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY, DRY RUNWAY

MODEL 737-600 (CFM56-7B22 ENGINES AT 2200 LBS)

DO NOT USE FOR DISPATCH

Takeoff Runway Length Requirements
737-600 (CFM56-7B22)

- CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN.

<table>
<thead>
<tr>
<th>PRESSURE ALTITUDE</th>
<th>TEMPERATURE</th>
<th>MAX. TAKEOFF WT</th>
</tr>
</thead>
<tbody>
<tr>
<td>FEET (METERS)</td>
<td>CELSIUS</td>
<td>145,500 LBS (65,930 KG)</td>
</tr>
<tr>
<td>10,000 (3,048)</td>
<td>4.8</td>
<td></td>
</tr>
<tr>
<td>8,000 (2,438)</td>
<td>6.6</td>
<td></td>
</tr>
<tr>
<td>6,000 (1,829)</td>
<td>8.8</td>
<td></td>
</tr>
<tr>
<td>4,000 (1,219)</td>
<td>10.0</td>
<td></td>
</tr>
<tr>
<td>2,000 (610)</td>
<td>11.0</td>
<td></td>
</tr>
<tr>
<td>SEA LEVEL</td>
<td>11.0</td>
<td></td>
</tr>
</tbody>
</table>

TAKING FIELD LENGTH

1,000 METERS

1,000 FEET

1,000 POUNDS

1,000 KILOGRAMS

OPERATIONAL TAKEOFF WEIGHT
3.3.28 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY +27°F (STD + 15°C), DRY RUNWAY
MODEL 737-600 (CFM56-7B22 ENGINES AT 22,000 LB SLST)

DO NOT USE FOR DISPATCH
Takeoff Runway Length Requirements
737-600 (CFM56-7B22)

- CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN.

STANDARD DAY + 27.0 °F (STD + 15.0 °C)

TEMPERATURE CELSIUS
10.2
14.3
18.1
22.1
26.0
30.0

PRESSURE ALTITUDE FEET (METERS)
10,000 (3,048)
8,000 (2,438)
6,000 (1,829)
4,000 (1,219)
2,000 (610)
SEA LEVEL

MAX TAKEOFF WT 145,900 LBS (66,598 KG)

10,000 METERS

TAKEOFF FIELD LENGTH
1,000 METERS

1,000 FEET

1,000 POUNDS

1,000 KILOGRAMS

OPERATIONAL TAKEOFF WEIGHT
3.3.29 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY +45°F (STD + 25°C), DRY RUNWAY
MODEL 737-600 (CFM56-7B22 ENGINES AT 22,000 LB SLST)

DO NOT USE FOR DISPATCH

Takeoff Runway Length Requirements
737-600 (CFM56-7B22)

- CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN.

D4 TAKEOFF WT
145,000 (65,892 KG)

STANDARD DAY + 45.0°F
(STD + 25.0°C)

225 MPH (362 KMPH)
TIRE SPEED LIMIT

TAKEOFF FLD. LENGTH
1,000 METERS

10,000 (9,048)
8,000 (2,438)
6,000 (1,829)
4,000 (1,219)
2,000 (610)

SEA LEVEL

PRESSURE ALTITUDE
FEET (METERS)

202
281
321
360
400

TEMPERATURE CELSUIS

3.3.29 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY +45°F (STD + 25°C), DRY RUNWAY
MODEL 737-600 (CFM56-7B22 ENGINES AT 22,000 LB SLST)
3.3.30

F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY +63°F (STD +35°C), DRY RUNWAY
MODEL 737-600 (CFM56-7B22 ENGINES AT 22,000 LB SLST)

DO NOT USE FOR DISPATCH
Takeoff Runway Length Requirements
737-600 (CFM56-7B22)
-
CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN.

- PRESSURE ALTITUDE
- TEMPERATURE
- T.O. WEIGHT
- OPERATIONAL TAKEOFF WEIGHT

STANDARD DAY +63°F
(STD +35°C)

1,000 POUNDS
1,000 KILOGRAMS
1,000 METERS
1,000 FEET

MAX TAKEOFF WEIGHT
145,500 LBS (66,508 KG)

T.O. WEIGHT
90,000 LBS (40,823 KG)
80,000 LBS (36,300 KG)
70,000 LBS (31,750 KG)
60,000 LBS (27,215 KG)
50,000 LBS (22,679 KG)
40,000 LBS (18,144 KG)
30,000 LBS (13,608 KG)
20,000 LBS (9,072 KG)
10,000 LBS (4,536 KG)
0,000 LBS (0 KG)

TEMPERATURE
43°F (6°C)
38°F (3°C)
32°F (0°C)
22°F (-5°C)
12°F (-10°C)
0°F (-18°C)
-2°F (-19°C)
-5°F (-21°C)
-10°F (-23°C)
-20°F (-29°C)
-30°F (-34°C)

P.S. LEVEL

AIR CONDITIONING OFF
OPTIMUM FLAP SETTING
ZERO RUNWAY GRADIENT
ZERO WIND
DRY RUNWAY
3.3.31 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY, DRY RUNWAY

MODEL 737-700 (CFM56-7B20/-7B22/-7B24 ENGINES AT 20,000 LB S/L)

- NON-WINGLET PERFORMANCE SHOWN. WINGLET AIRCRAFT WILL HAVE SLIGHTLY IMPROVED PERFORMANCE.
- CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN.
3.3.32 FAR TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY +27°F (STD + 15°C), DRY RUNWAY
MODEL 737-700 (CFM56-7B20/-7B22/-7B24 ENGINES AT 20,000 LB SLST)

DO NOT USE FOR DISPATCH

Takeoff Runway Length Requirements
737-700/-700W (CFM56-7B20/-7B22/-7B24)

- NON-WINGLET PERFORMANCE SHOWN. WINGLET AIRCRAFT WILL HAVE SLIGHTLY IMPROVED PERFORMANCE.
- CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN.
3.3.33 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +40°F (STD + 22.2°C), DRY RUNWAY

MODEL 737-700 (CFM56-7B20/-7B22/-7B24 ENGINES AT 20,000 LB SLST)

DO NOT USE FOR DISPATCH

Takeoff Runway Length Requirements
737-700/-700W (CFM56-7B20/-7B22/-7B24)

- NON-WINGLET PERFORMANCE SHOWN. WINGLET AIRCRAFT WILL HAVE SLIGHTLY IMPROVED PERFORMANCE.
- CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN.

Diagram showing takeoff field length in meters against operational takeoff weight in kilograms.
3.3.34 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY +63°F (STD + 35°C), DRY RUNWAY

Model 737-700 (CFM56-7B20/-7B22/-7B24 ENGINES AT 20,000 LB SLST)

Takeoff Runway Length Requirements
737-700/-700W (CFM56-7B20/-7B22/-7B24)

- Non-Winglet performance shown. Winglet aircraft will have slightly improved performance.
- Consult using airline for specific operating procedure prior to facility design.

![Diagram showing takeoff runway length requirements for 737-700 aircraft at various conditions.](Image)

- TAKOFF FIELD LENGTH
1,000 METERS
1,000 FEET

- PRESSURE ALTITUDE
10,000 (0,948)
6,000 (1,829)
3,000 (919)
- PRESSURE ALT. TEMP.
2,000 (610) [46.0]
SEA LEVEL [50.0]
- STANDARD DAY + 63.0°F (STD + 35.0°C)

- Operational Takeoff Weight

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3.3.35 FAR TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY, DRY RUNWAY

MODEL: 737-700/-700W (CFM56-7B26)

- NON-WINGLET PERFORMANCE SHOWN. WINGLET AIRCRAFT WILL HAVE SLIGHTLY IMPROVED PERFORMANCE.
- CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN.

DO NOT USE FOR DISPATCH

Takeoff Runway Length Requirements
737-700/-700W (CFM56-7B26)
3.3.36 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +27°F (STD + 15°C), DRY RUNWAY

MODEL 737-700/-700W (CFM56-7B26 ENGINES AT 26,000 LB SLST)

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Takeoff Runway Length Requirements

737-700/-700W (CFM56-7B26)

- Non-winglet performance shown. Winglet aircraft will have slightly improved performance.
- Consult using airline for specific operating procedure prior to facility design.

STANDARD DAY +45°F (STD + 25°C), DRY RUNWAY

Model 737-700/-700W (CFM56-7B26 ENGINES AT 26,000 LB SLST)
3.3.38

F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +63°F (STD + 35°C), DRY RUNWAY

MODEL 737-700/-700W (CFM56-7B26 ENGINES AT 26,000 LB SLST)

DO NOT USE FOR DISPATCH

Takeoff Runway Length Requirements

737-700/-700W (CFM56-7B26)

- NON-WINGLET PERFORMANCE SHOWN. WINGLET AIRCRAFT WILL HAVE SLIGHTLY IMPROVED PERFORMANCE.

CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN.

STANDARD DAY +63.0 °F
(STD + 35.0 °C)

225 MPH (362 KMPH)
TIRE SPEED LIMIT

PRESSURE ALTITUDE
FEET (METERS)
10,000 (3,048)
8,000 (2,438)
6,000 (1,829)
4,000 (1,219)
2,000 (610)
SEA LEVEL

TEMPERATURE
CELSIUS
36.2
38.3
42.1
46.0
50.0

Pounds
1,000 METERS
1,000 FEET

1,000 POUNDS
OPERATIONAL TAKEOFF WEIGHT

1,000 KILOGRAMS
3.3.40 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +27°F (STD + 15°C), DRY RUNWAY

MODEL 737-700ER/-700ERW/-700C/-700CW (CFM56-7B20/-7B22/-7B24 ENGINES AT 20,000 LB SLST)

- NON-WINGLET PERFORMANCE SHOWN. WINGLET AIRCRAFT WILL HAVE SLIGHTLY IMPROVED PERFORMANCE.
- CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN.

DO NOT USE FOR DISPATCH

Takeoff Runway Length Requirements
737-700ER/-700ERW/-700C/-700CW (CFM56-7B20/-7B22/-7B24)

Diagram showing takeoff field length against takeoff weight for different operational conditions.
Takeoff Runway Length Requirements
737-700ER/-700ERW/-700C/-700CW (CFM56-7B20/-7B22/-7B24 ENGINES AT 20,000 LB SLST)

- NON-WINGLET PERFORMANCE SHOWN. WINGLET AIRCRAFT WILL HAVE SLIGHTLY IMPROVED PERFORMANCE.
- CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN.
3.3.42 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +63°F (STD + 35°C), DRY RUNWAY

MODEL 737-700ER/-700ERW/-700C/-700CW (CFM56-7B20/-7B22/-7B24 ENGINES AT 20,000 LB SLST)

DO NOT USE FOR DISPATCH

Takeoff Runway Length Requirements

737-700ER/-700ERW/-700C/-700CW (CFM56-7B20/-7B22/-7B24)

- NON-WINGLET PERFORMANCE SHOWN. WINGLET AIRCRAFT WILL HAVE SLIGHTLY IMPROVED PERFORMANCE.
- CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN.
3.3.43 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY, DRY RUNWAY
MODEL 737-700ER/-700ERW/-700C/-700CW/BBJ1 (CFM56-7B26/-7B27 ENGINES AT 26,000 LB SLST)

- NON-WINGLET PERFORMANCE SHOWN. WINGLET AIRCRAFT WILL HAVE SLIGHTLY IMPROVED PERFORMANCE.
- CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN.

DO NOT USE FOR DISPATCH

Takeoff Runway Length Requirements

737-700ER/-700ERW/-700C/-700CW/BBJ1 (CFM56-7B26/-7B27)

- PRESSURE ALTITUDE
  - 10,000 (3,048)
  - 8,000 (2,438)
  - 6,000 (1,829)
  - 4,000 (1,219)
  - 2,000 (610)
  - SEA LEVEL

- TEMPERATURE
  - 41°
  - 0°
  - -3°

- WEIGHT
  - 17,000 (7,690 KGS)
  - 16,000 (7,257 KGS)
  - 15,000 (6,804 KGS)
  - 14,000 (6,365 KGS)
  - 13,000 (5,926 KGS)
  - 12,000 (5,487 KGS)
  - 11,000 (5,048 KGS)
  - 10,000 (4,609 KGS)
  - 9,000 (4,170 KGS)

1,000 FEET
1,000 METERS
1,000 POUNDS
1,000 KILOGRAMS

OPERATIONAL TAKEOFF WEIGHT
3.3.44 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY +27°F (STD + 15°C), DRY RUNWAY
MODEL 737-700ER/-700ERW/-700C/-700CW/BBJ1 (CFM56-7B26/-7B27 ENGINES AT 26,000 LB SLST)

DO NOT USE FOR DISPATCH
Takeoff Runway Length Requirements
737-700ER/-700ERW/-700C/-700CW/BBJ1 (CFM56-7B26/-7B27)

- NON-WINGLET PERFORMANCE SHOWN. WINGLET AIRCRAFT WILL HAVE SLIGHTLY IMPROVED PERFORMANCE.
- CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN.
DO NOT USE FOR DISPATCH

Takeoff Runway Length Requirements

737-700ER/-700ER/W/-700C/-700CW/BBJ1 (CFM56-7B26/-7B27)

- NON-WINGLET PERFORMANCE SHOWN. WINGLET AIRCRAFT WILL HAVE SLIGHTLY IMPROVED PERFORMANCE.
- CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN.

STANDARD DAY +45 F (STD + 25°C), DRY RUNWAY

MODEL 737-700ER/-700ER/W/-700C/-700CW/BBJ1 (CFM56-7B26/-7B27 ENGINES AT 26,000 LB SLST)
3.3.46 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +63\degree F (STD + 35\degree C), DRY RUNWAY

MODEL 737-700ER/-700ERW/-700C/-700CW/BBJ1 (CFM56-7B26/-7B27 ENGINES AT 26,000 LB SLST)

- NON-WINGLET PERFORMANCE SHOWN. WINGLET AIRCRAFT WILL HAVE SLIGHTLY IMPROVED PERFORMANCE.
- CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN.

DO NOT USE FOR DISPATCH

Takeoff Runway Length Requirements

737-700ER/-700ERW/-700C/-700CW/BBJ1 (CFM56-7B26/-7B27)

![Diagram of Takeoff Runway Length Requirements](image-url)
3.3.47 FAR TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY, DRY RUNWAY
MODEL 737-800/-800W/BBJ2 (CFM56-7B24/-7B26/-7B27 ENGINES AT 26,000 LB SLST)

DO NOT USE FOR DISPATCH
Takeoff Runway Length Requirements
737-800/-800W/BBJ2 (CFM56-7B24/-7B26/-7B27)

- NON-WINGLET PERFORMANCE SHOWN. WINGLET AIRCRAFT WILL HAVE SLIGHTLY IMPROVED PERFORMANCE.
- CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN.
3.3.48

F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +27°F (STD + 15°C), DRY RUNWAY

**Model 737-800/-800W/BBJ2** (CFM56-7B24/-7B26/-7B27 ENGINES AT 26,000 LB SLST)

---

**DO NOT USE FOR DISPATCH**

Takeoff Runway Length Requirements

737-800/-800W/BBJ2 (CFM56-7B24/-7B26/-7B27)

- NON-WINGLET PERFORMANCE IS OWN. WINGLET AIRCRAFT WILL HAVE SLIGHTLY IMPROVED PERFORMANCE.
- CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN.

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**Chart Details**

- **Temperature Celsius**
  - 10°C
  - 18°C
  - 22°C
  - 26°C
  - 30°C

- **Pressure Altitude (Feet/Meters)**
  - 10,000 (3,048)
  - 8,500 (2,591)
  - 7,000 (2,134)
  - 6,000 (1,829)
  - 4,000 (1,219)
  - 2,000 (610)
  - Sea Level

- **Tire Speed Limit**

- **Maximum Takeoff Weight**
  - 174,300 lb (78,961 kg)

---

- **Takeoff Field Length (1,000 Meters)**
- **Operational Takeoff Weight (1,000 Pounds)**
- **Operational Takeoff Weight (1,000 Kilograms)**
3.3.49 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +45°F (STD + 25°C), DRY RUNWAY

Model: 737-800/-800W/BJ2 (CFM56-7B24/-7B26/-7B27 Engines at 26,000 LB SLST)

DO NOT USE FOR DISPATCH

Takeoff Runway Length Requirements

737-800/-800W/BJ2 (CFM56-7B24/-7B26/-7B27)

- Non-Winglet Performance Shown. Winglet Aircraft Will Have Slightly Improved Performance.
- Consult Using Airline for Specific Operating Procedure Prior to Facility Design.

Diagram showing takeoff runway length requirements for different flight conditions and weights.
3.3.50 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY +63°F (STD + 35°C), DRY RUNWAY
MODEL 737-800/-800W/BBJ2 (CFM56-7B24/-7B26/-7B27 ENGINES AT 26,000 LB SLST)

DO NOT USE FOR DISPATCH
Takeoff Runway Length Requirements
737-800/800W/BBJ2 (CFM56-7B24/-7B26/-7B27)

- Non-winglet performance shown. Winglet aircraft will have slightly improved performance.
- Consult using airline for specific operating procedure prior to facility design.

Graph showing takeoff field length requirements with various factors such as temperature, pressure altitude, and tire speed limit.
3.3.51 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY, DRY RUNWAY

MODE L 737-900/-900W (CFM56-7B24/-7B26 ENGINES AT 24,000 LB SLST)

DO NOT USE FOR DISPATCH

Takeoff Runway Length Requirements
737-900/-900W (CFM56-7B24/-7B26)

- NON-WINGLET PERFORMANCE SHOWN. WINGLET AIRCRAFT WILL HAVE SLIGHTLY IMPROVED PERFORMANCE.
- CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN.
3.3.52 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY +27° F (STD + 15°C), DRY RUNWAY

MODEL 737-900/-900W (CFM56-7B24/-7B26 ENGINES AT 24,000 LB SLST)

DO NOT USE FOR DISPATCH

Takeoff Runway Length Requirements
737-900/-900W (CFM56-7B24/-7B26)

- NON-WINGLET PERFORMANCE SHOWN, WINGLET AIRCRAFT WILL HAVE SLIGHTLY IMPROVED PERFORMANCE.
- CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN.

- PRESSURE ALTITUDE
- TEMPERATURE CELSIUS
- TIRE SPEED LIMIT
- MAX TAKEOFF WT 174,000 LBS (79,016 KG)

1,000 FEET

1,000 METERS

1,000 POUNDS

1,000 KILOGRAMS

OPERATIONAL TAKEOFF WEIGHT
Takeoff Runway Length Requirements
737-900/-900W (CFM56-7B24/-7B26)

- Non-winglet performance shown. Winglet aircraft will have slightly improved performance.
- Consult using airline for specific operating procedure prior to facility design.

**STANDARD DAY +45° F (STD + 25°C), DRY RUNWAY**

**MODEL:** 737-900/-900W (CFM56-7B24/-7B26 ENGINES AT 24,000 LB SLST)

**DO NOT USE FOR DISPATCH**

**TIRE SPEED LIMIT**

**STANDARD DAY +45.0° F**
**Celsius +25.0°C**

---

**PRESSURE ALTITUDE**

- 10,000 (3,048)
- 8,000 (2,439)
- 6,000 (1,829)
- 4,000 (1,219)
- 2,000 (610)
- SEA LEVEL

---

**OPERATIONAL TAKEOFF WEIGHT**

---

**1,000 METERS**

---

**1,000 FEET**

---

**1,000 POUNDS**

---

**1,000 KILOGRAMS**

---

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3.3.54

F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +63°F (STD + 35°C), DRY RUNWAY

MODEL 737-900/-900W (CFM56-7B24/-7B26 ENGINES AT 24,000 LB SLST)

DO NOT USE FOR DISPATCH

Takeoff Runway Length Requirements
737-900/-900W (CFM56-7B24/-7B26)

- NON-WINGLET PERFORMANCE SHOWN. WINGLET AIRCRAFT WILL HAVE SLIGHTLY IMPROVED PERFORMANCE.
- CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN.
3.3.55 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY, DRY RUNWAY
MODEL 737-900ER/-900ERW/BBJ3 (CFM56-7B26/-7B27 ENGINES AT 26,000 LB SLST)

DO NOT USE FOR DISPATCH

Takeoff Runway Length Requirements
737-900ER/-900ERW/BBJ3 (CFM56-7B26/-7B27)

- NON-WINGLET PERFORMANCE SHOWN. WINGLET AIRCRAFT WILL HAVE SLIGHTLY IMPROVED PERFORMANCE.
- CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN.
Takeoff Runway Length Requirements
737-900ER/-900ER/W/BBJ3 (CFM56-7B26/-7B27)

- NON-WINGLET PERFORMANCE SHOWN. WINGLET AIRCRAFT WILL HAVE SLIGHTLY IMPROVED PERFORMANCE.
- CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN.
3.3.57 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS
STANDARD DAY +45°F (STD + 25°C), DRY RUNWAY

MODEL: 737-900ER/-900ERW/BBJ3 (CFM56-7B26/-7B27 ENGINES AT 26,000 LB SLST)

DO NOT USE FOR DISPATCH
Takeoff Runway Length Requirements
737-900ER/-900ERW/BBJ3 (CFM56-7B26/-7B27)
- NON-WINGLET PERFORMANCE SHOWN. WINGLET AIRCRAFT WILL HAVE SLIGHTLY IMPROVED PERFORMANCE.
- CONSULT USING AIRLINER FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN.

STANDARD DAY + 45.0 °F
(STD + 25.0 °C)

225 MPH (362 KMPH)
TIRE SPEED LIMIT

OPERATIONAL TAKEOFF WEIGHT

1,000 POUNDS

1,000 KILOGRAMS

1,000 FEET

1,000 METERS

PRESSURE ALTITUDE
FEET (METERS)
10,000 (3,048)
8,000 (2,439)
6,000 (1,829)
4,000 (1,219)
2,000 (610)
SEA LEVEL

TEMPERATURE
CELSIUS
24.2
28.1
32.1
36.0
40.0

STANDARD DAY +45°F
(STD + 25°C)
3.3.58 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +63°F (STD + 35°C), DRY RUNWAY

MODEL 737-900ER/-900ERW/BBJ3 (CFM56-7B26/-7B27)

- NON-WINGLET PERFORMANCE SHOWN. WINGLET AIRCRAFT WILL HAVE SLIGHTLY IMPROVED PERFORMANCE.
- CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN.

**Graph:**
- **Axes:**
  - Y-axis: Standard Day + 63°F (STD + 35°C)
  - X-axis: Operational Takeoff Weight (1,000 Pounds)
- **Lines:**
  - Tire Speed Limit: 225 MPH (362 KM/H)
  - Temperature in Celsius: 30°C
- **Legend:**
  - Standard Day + 63°F (STD + 35°C)
  - Temperature in Celsius: 30°C
  - Pressure Altitude in Feet (Meters):
    - 10,000 (3,048)
    - 8,000 (2,439)
    - 6,000 (1,829)
    - 4,000 (1,219)
    - 2,000 (610)
    - Sea Level

**Note:**
- The graph illustrates the takeoff runway length requirements for the specified aircraft model under standard day conditions with a +63°F (STD + 35°C) temperature.
3.4.1 F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 40

MODEL 737-100
3.4.2 F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 30

MODEL 737-100

NOTES:
* Vapp = 1.3Vs
* ZERO WIND
* FLAP POSITION 30
* AUTOMATIC SPEED BRAKES
* CONSULT WITH USING AIRLINE FOR SPECIFIC PROCEDURE PRIOR TO FACILITY DESIGN
3.4.3   F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 25

MODEL 737-100

NOTES:
* $V_{APP} = 1.3V_{S}$
* ZERO WIND
* FLAP POSITION 25
* AUTOMATIC SPEED BRAKES
* CONSULT WITH USING AIRLINE FOR SPECIFIC PROCEDURE PRIOR TO FACILITY DESIGN

![Graph showing F.A.R. Landing Runway Length Requirements - Flaps 25 for Model 737-100](image-url)
3.4.4 F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 40
MODEL 737-200, -200C

NOTES:
* $V_{APP} = 1.3V_s$
* ZERO WIND
* FLAP POSITION 40
* AUTOMATIC SPEED BRAKES
* CONSULT WITH USING AIRLINE FOR SPECIFIC PROCEDURE PRIOR TO FACILITY DESIGN
3.4.5 F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 30
MODEL 737-200, -200C

NOTES:
* VREF = 1.3VS
* ZERO WIND
* FLAP POSITION 30
* AUTOMATIC SPEED BRAKES
* CONSULT WITH USING AIRLINE FOR SPECIFIC
  PROCEDURE PRIOR TO FACILITY DESIGN

MAX DESIGN LANDING WEIGHT
103,000 LB (46,710 KG)
3.4.6 F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 25
MODEL 737-200, -200C
3.4.7  F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 40
MODEL ADVANCED 737-200, -200C
3.4.8  F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 30

MODEL 737-ADVANCED 737-200, -200C

NOTES:
* VAPP = 1.3VS
* ZERO WIND
* FLAP POSITION 30
* AUTOMATIC SPEED BRAKES
* CONSULT WITH USING AIRLINE FOR SPECIFIC
  PROCEDURE PRIOR TO FACILITY DESIGN

---

GRAPHIC CONTENTS:

- FLAPS 30
- MAX DESIGN LANDING WEIGHT
  107,000 LB (48,530 KG)
- AIRPORT ELEVATION
  FEET / METERS
- WET RUNWAY
- DRY RUNWAY
- SEA LEVEL
- OPERATIONAL LANDING WEIGHT
  1,000 POUNDS
  1,000 KILOGRAMS
3.4.9 F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 15
MODEL ADVANCED 737-200, -200C
3.4.10 F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 40
MODEL 737-300

NOTES:
* $V_{app} = 1.3V_{S}$
* ZERO WIND, ZERO RUNWAY GRADIENT
* FLAP POSITION 40
* AUTOMATIC SPEED BRAKES
* CONSULT WITH USING AIRLINE FOR SPECIFIC PROCEDURE PRIOR TO FACILITY DESIGN

---

**FLAPS 40**

MAX DESIGN LANDING WEIGHT
114,000 LB (51,700 KG)

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3.4.11 F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 30
MODEL 737-600

NOTES:
* VAPP = 1.3VS
* ZERO WIND, ZERO RUNWAY GRADIENT
* FLAP POSITION 30
* AUTOMATIC SPEED BRAKES
* CONSULT WITH USING AIRLINE FOR SPECIFIC PROCEDURE PRIOR TO FACILITY DESIGN

FLAPS 30 MAX DESIGN LANDING WEIGHT 114,000 LBS (51,700 KG)

AIRPORT ELEVATION FEET METERS
6,000 1,830
5,000 1,520
4,000 1,210
SEA LEVEL

WET RUNWAY
DRY RUNWAY

1,000 FEET
1,000 MетERS

1,000 KILOGRAMS OPERATIONAL LANDING WEIGHT

1,000 POUNDS

75 80 85 90 95 100 105 110 115 120 125
3.4.12 F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 15
MODEL 737-300

NOTES:
* \( V_{APP} = 1.5 V_{S} \)
* ZERO WIND, ZERO RUNWAY GRADIENT
* FLAP POSITION 15
* AUTOMATIC SPEED BRAKES
* CONSULT WITH USING AIRLINE FOR SPECIFIC PROCEDURE PRIOR TO FACILITY DESIGN

FLAPS 15
MAX DESIGN LANDING WEIGHT
114,000 LB (51,700 KG)

F.A.R. LANDING RUNWAY LENGTH
1,000 METERS

1,000 FEET

AIRPORT ELEVATION
3,000 2,000

SEA LEVEL
4,000 1,319

8,000 2,438

10,000 3,048

12,000 3,657

WET RUNWAY

DRY RUNWAY

1,000 POUNDS

1,000 KILOGRAMS

OPEFRATIONAL LANDING WEIGHT

75 80 85 90 95 100 105 110 115 120 125

D6-58325-6

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3.4.13 F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 40
MODEL 737-400

NOTES:
* VAPP = 1.3Vs
* ZERO WIND, ZERO RUNWAY GRADIENT
* FLAP POSITION 40
* AUTOMATIC SPEED BRAKES
* CONSULT WITH USING AIRLINE FOR SPECIFIC
PROCEDURE PRIOR TO FACILITY DESIGN
3.4.14  F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 30
MODEL 737-400
3.4.15 F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 15
MODEL 737-400

NOTES:
* \( V_{APP} = 1.3 V_{S} \)
* ZERO WIND, ZERO RUNWAY GRADIENT
* FLAP POSITION 15
* AUTOMATIC SPEED BRAKES
* CONSULT WITH USING AIRLINE FOR SPECIFIC PROCEDURE PRIOR TO FACILITY DESIGN

![Graph showing F.A.R. landing runway length requirements for Model 737-400 with flaps 15.](image-url)
3.4.16  F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 40

MODEL 737-500

NOTES:
* V_{\text{APP}} = 1.3V_{\text{S}}
* ZERO WIND, ZERO RUNWAY GRADIENT
* FLAP POSITION 40
* AUTOMATIC SPEED BRAKES
* CONSULT WITH USING AIRLINE FOR SPECIFIC PROCEDURE PRIOR TO FACILITY DESIGN
3.4.17  F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 30

MODEL 737-500
3.4.18  F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 15
MODEL 737-500

NOTES:
* $V_{APP} = 1.3V_{S}$
* ZERO WIND, ZERO RUNWAY GRADIENT
* FLAP POSITION 15
* AUTOMATIC SPEED BRAKES
* CONSULT WITH USING AIRLINE FOR SPECIFIC
  PROCEDURE PRIOR TO FACILITY DESIGN.
3.4.19 F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 30
MODEL 737-600
3.4.20  F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 30
MODEL 737-700ER
3.4.21 F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 30

MODEL 737-800
3.4.22 F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 30

MODEL 737-900
3.4.23 F.A.R. LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 30

MODEL 737-900ER
4.0 GROUND MANEUVERING

4.1 General Information
4.2 Turning Radii
4.3 Clearance Radii
4.4 Visibility from Cockpit in Static Position
4.5 Runway and Taxiway Turn Paths
4.6 Runway Holding Bay
4.0 GROUND MANEUVERING

4.1 General Information

The 737 landing gear system is a conventional tricycle-type. The main gear consists of two dual wheel assemblies, one on each side of the fuselage. The nose gear is a dual-wheel assembly.

Sections 4.2 and 4.3 show turning radii for various nose gear steering angles. Radii for the main and nose gears are measured from the outside edge of the tire, rather than from the center of the wheel strut.

Section 4.4 shows the range of pilot’s visibility from the cockpit within the limits of ambinocular vision through the windows. Ambinocular vision is defined as the total field of vision seen by both eyes at the same time.

The runway-taxiway turns in Section 4.5 show models 737-100 and 737-900 on a 100-ft (30-m) runway and 50-ft (15-m) taxiway system. Main gear tire tracks for the other airplane models will be between the tracks of the -100 and -900 models. Boeing 737 Series aircraft are able to operate on 100-foot wide runways worldwide. However, the FAA recommends the runway width criteria for the 737-700/-800/-900 is 150 ft (45 m) due to its maximum certificated takeoff weight.

Section 4.6 shows minimum holding apron requirements for the 737 airplane models. Holding aprons for larger aircraft should be adequate for the 737.
NOTES:
* ACTUAL OPERATING TURNING RADIi MAY BE GREATER THAN SHOWN
* CONSULT WITH AIRLINE FOR SPECIFIC OPERATING PROCEDURE

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4.2.1 TURNING RADIi - NO SLIP ANGLE
MODEL 737-100
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* ACTUAL OPERATING TURNING RADII MAY BE GREATER THAN SHOWN
* CONSULT WITH AIRLINE FOR SPECIFIC OPERATING PROCEDURE

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**4.2.2 TURNING RADII - NO SLIP ANGLE**

*MODEL 737-200*
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* ACTUAL OPERATING TURNING RADIi MAY BE GREATER THAN SHOWN
* CONSULT WITH AIRLINE FOR SPECIFIC OPERATING PROCEDURE

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4.2.3 TURNING RADIi - NO SLIP ANGLE
MODEL 737-300
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* ACTUAL OPERATING TURNING RADIUS MAY BE GREATER THAN SHOWN
* CONSULT WITH AIRLINE FOR SPECIFIC OPERATING PROCEDURE

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4.2.3 TURNING RADII - NO SLIP ANGLE
MODEL 737-300 WITH WINGLETS
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* ACTUAL OPERATING TURNING RADII MAY BE GREATER THAN SHOWN
* CONSULT WITH AIRLINE FOR SPECIFIC OPERATING PROCEDURE

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4.2.4 TURNING RADII - NO SLIP ANGLE
MODEL 737-400

D6-58325-6
SEPTEMBER 2013
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* ACTUAL OPERATING TURNING RADII MAY BE GREATER THAN SHOWN
* CONSULT WITH AIRLINE FOR SPECIFIC OPERATING PROCEDURE

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4.2.5 TURNING RADII - NO SLIP ANGLE

MODEL 737-500
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* CONSULT WITH AIRLINE FOR SPECIFIC OPERATING PROCEDURE

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**4.2.6 TURNING RADIi - NO SLIP ANGLE**

*MODEL 737-600*
NOTES:
* ACTUAL OPERATING TURNING RADII MAY BE GREATER THAN SHOWN
* CONSULT WITH AIRLINE FOR SPECIFIC OPERATING PROCEDURE

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4.2.6 TURNING RADII - NO SLIP ANGLE
MODEL 737-600 WITH WINGLETS
### NOTES:

* ACTUAL OPERATING TURNING RADII MAY BE GREATER THAN SHOWN
* CONSULT WITH AIRLINE FOR SPECIFIC OPERATING PROCEDURE

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## 4.2.7 TURNING RADIUS - NO SLIP ANGLE

*MODEL 737-700*
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* ACTUAL OPERATING TURNING RADIi MAY BE GREATER THAN SHOWN
* CONSULT WITH AIRLINE FOR SPECIFIC OPERATING PROCEDURE

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4.2.8 TURNING RADIi - NO SLIP ANGLE
 MODEL 737-700 WITH WINGLETS, 737 BBJ
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* CONSULT WITH AIRLINE FOR SPECIFIC OPERATING PROCEDURE

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4.2.9 TURNING RADII - NO SLIP ANGLE
MODEL 737-800
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* ACTUAL OPERATING TURNING RADII MAY BE GREATER THAN SHOWN
* CONSULT WITH AIRLINE FOR SPECIFIC OPERATING PROCEDURE

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4.2.10 TURNING RADIUS - NO SLIP ANGLE
MODEL 737-800 WITH WINGLETS, 737 BBJ2
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* CONSULT WITH AIRLINE FOR SPECIFIC OPERATING PROCEDURE

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4.2.11 TURNING RADIi - NO SLIP ANGLE
MODEL 737-900, -900ER
### 4.2.12 TURNING RADI - NO SLIP ANGLE

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<td>44.7</td>
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<td>67.8</td>
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<td>80.6</td>
<td>24.6</td>
</tr>
<tr>
<td>50</td>
<td>35.7</td>
<td>10.9</td>
<td>58.8</td>
<td>17.9</td>
<td>74.4</td>
<td>22.7</td>
</tr>
<tr>
<td>55</td>
<td>27.9</td>
<td>8.9</td>
<td>51.0</td>
<td>15.5</td>
<td>69.7</td>
<td>21.2</td>
</tr>
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<td>60</td>
<td>21.0</td>
<td>6.4</td>
<td>44.1</td>
<td>13.4</td>
<td>66.0</td>
<td>20.1</td>
</tr>
<tr>
<td>65</td>
<td>14.7</td>
<td>4.5</td>
<td>37.8</td>
<td>11.5</td>
<td>63.1</td>
<td>19.2</td>
</tr>
<tr>
<td>70</td>
<td>8.9</td>
<td>2.7</td>
<td>32.0</td>
<td>9.8</td>
<td>60.9</td>
<td>18.6</td>
</tr>
<tr>
<td>78 (MAX)</td>
<td>0.4</td>
<td>0.1</td>
<td>23.5</td>
<td>7.2</td>
<td>58.5</td>
<td>17.8</td>
</tr>
</tbody>
</table>

NOTES:

* ACTUAL OPERATING TURNING RADII MAY BE GREATER THAN SHOWN
* CONSULT WITH AIRLINE FOR SPECIFIC OPERATING PROCEDURE
### Model 737-100, -200

**Effective Turning Angle (Deg)**

<table>
<thead>
<tr>
<th>Airplane Model</th>
<th>X</th>
<th>Y</th>
<th>A</th>
<th>R3</th>
<th>R4</th>
<th>R5</th>
<th>R6</th>
</tr>
</thead>
<tbody>
<tr>
<td>737-100</td>
<td>75</td>
<td>34.3</td>
<td>10.5</td>
<td>9.2</td>
<td>2.8</td>
<td>56.1</td>
<td>17.1</td>
</tr>
<tr>
<td>737-200</td>
<td>75</td>
<td>41.3</td>
<td>11.4</td>
<td>10.0</td>
<td>3.0</td>
<td>60.0</td>
<td>18.3</td>
</tr>
</tbody>
</table>

#### 4.3.1 Minimum Turning Radii - 3° Slip Angle

*Model 737-100, -200*

---

**NOTES:**

- 3° Tire Slip angle approximate
- Only for 78° steering angle
- Consult with airline for actual operating data
- Dimensions rounded to nearest 0.1 ft and 0.1 meter

---

**Diagram Notes:**

- Minimum pavement width for 180° turn
- (Outside to outside of tire)
- Theoretical center of turn for minimum turning radius.
- Slow continuous turning at minimum thrust on all engines.
- No differential braking.
4.3.2 MINIMUM TURNING RADIUS - 3° SLIP ANGLE

MODEL 737-300, -300 WITH WINGLETS, -400, -500
4.3.3 MINIMUM TURNING RADII - 3° SLIP ANGLE

MODEL 737-600, -700, -800, -900, -900ER
### 4.3.4 MINIMUM TURNING RADIUS - 3° SLIP ANGLE

*Model 737-600, -700, -800, -900, -900ER with winglets, 737 BBJ, 737 BBJ2*

<table>
<thead>
<tr>
<th>AIRPLANE</th>
<th>EFFECTIVE TURNING ANGLE (DEG)</th>
<th>X</th>
<th>Y</th>
<th>A</th>
<th>R3</th>
<th>R4</th>
<th>R5</th>
<th>R6</th>
</tr>
</thead>
<tbody>
<tr>
<td>737-600</td>
<td>75</td>
<td>36.8</td>
<td>11.2</td>
<td>9.9</td>
<td>3.0</td>
<td>60.8</td>
<td>18.5</td>
<td>39.6</td>
</tr>
<tr>
<td>737-700 737BBJ</td>
<td>75</td>
<td>41.3</td>
<td>12.6</td>
<td>11.1</td>
<td>3.4</td>
<td>66.9</td>
<td>20.4</td>
<td>44.3</td>
</tr>
<tr>
<td>737-800 737BBJ2</td>
<td>75</td>
<td>51.2</td>
<td>15.6</td>
<td>13.7</td>
<td>4.2</td>
<td>79.7</td>
<td>24.3</td>
<td>54.5</td>
</tr>
<tr>
<td>737-900, -900ER</td>
<td>75</td>
<td>56.3</td>
<td>17.2</td>
<td>15.1</td>
<td>4.6</td>
<td>86.4</td>
<td>26.3</td>
<td>59.8</td>
</tr>
</tbody>
</table>

*Notes:
- 3° TIRE SLIP ANGLE APPROXIMATE ONLY FOR 78° STEERING ANGLE
- CONSULT WITH AIRLINE FOR ACTUAL OPERATING DATA
- DIMENSIONS ROUNDED TO NEAREST 0.1 FT AND 0.1 METER
4.4 VISIBILITY FROM COCKPIT IN STATIC POSITION
MODEL 737, ALL MODELS
NOTE:
BEFORE DETERMINING THE SIZE OF THE INTERSECTION FILLET, CHECK WITH THE AIRLINES REGARDING THE OPERATING PROCEDURES THAT THEY USE AND THE TYPES OF AIRCRAFT THAT ARE EXPECTED TO SERVE THE AIRPORT.

(1) MAIN GEAR TIRE TRACKS FOR THE OTHER AIRPLANE MODELS WILL BE BETWEEN THE 737-100 AND 737-900 TRACKS.

NOSE GEAR TRACKS
CENTERLINE OF TURNS

4.5.1 RUNWAY AND TAXIWAY TURN PATHS - RUNWAY-TO-TAXIWAY, MORE THAN 90 DEGREES, NOSE GEAR TRACKS CENTERLINE
MODEL 737, ALL MODELS
NOTE:

BEFORE DETERMINING THE SIZE OF THE INTERSECTION FILLET, CHECK WITH THE AIRLINES REGARDING THE OPERATING PROCEDURES THAT THEY USE AND THE TYPES OF AIRCRAFT THAT ARE EXPECTED TO SERVE THE AIRPORT.

4.5.2 RUNWAY AND TAXIWAY TURN PATHS - RUNWAY-TO-TAXIWAY, 90 DEGREES, NOSE GEAR TRACKS CENTERLINE

MODEL 737, ALL MODELS

(1) MAIN GEAR TIRE TRACKS FOR THE OTHER AIRPLANE MODELS WILL BE BETWEEN THE 737-100 AND 737-900 TRACKS.

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NOTE:
BEFORE DETERMINING THE SIZE OF THE INTERSECTION FILLET, CHECK WITH THE AIRLINES REGARDING THE OPERATING PROCEDURES THAT THEY USE AND THE TYPES OF AIRCRAFT THAT ARE EXPECTED TO SERVE THE AIRPORT.

4.5.3 RUNWAY AND TAXIWAY TURN PATHS - TAXIWAY-TO-TAXIWAY, 90 DEGREES, NOSE GEAR TRACKS CENTERLINE
MODEL 737, ALL MODELS
4.5.4 RUNWAY AND TAXIWAY TURN PATHS - TAXIWAY-TO-TAXIWAY, 90 DEGREES, COCKPIT TRACKS CENTERLINE

MODEL 737, ALL MODELS

NOTE:

BEFORE DETERMINING THE SIZE OF THE INTERSECTION FILLET, CHECK WITH THE AIRLINES REGARDING THE OPERATING PROCEDURES THAT THEY USE AND THE TYPES OF AIRCRAFT THAT ARE EXPECTED TO SERVE THE AIRPORT.

(1) MAIN GEAR TIRE TRACKS FOR THE OTHER AIRPLANE MODELS WILL BE BETWEEN THE 737-100 AND 737-900 TRACKS.

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NOTE:

BEFORE DETERMINING THE SIZE OF THE PAVEMENT AND SHOULDER, CHECK WITH THE AIRLINES REGARDING THE OPERATING PROCEDURES THAT THEY USE AND THE AIRCRAFT TYPES THAT ARE EXPECTED TO SERVE THE AIRPORT.

4.6. RUNWAY HOLDING BAY

MODEL 737, ALL MODELS
5.0 TERMINAL SERVICING

5.1 Airplane Servicing Arrangement - Typical Turnaround
5.2 Terminal Operations - Turnaround Station
5.3 Terminal Operations - En Route Station
5.4 Ground Servicing Connections
5.5 Engine Starting Pneumatic Requirements
5.6 Ground Pneumatic Power Requirements
5.7 Conditioned Air Requirements
5.8 Ground Towing Requirements
5.0 TERMINAL SERVICING

During turnaround at the terminal, certain services must be performed on the aircraft, usually within a given time, to meet flight schedules. This section shows service vehicle arrangements, schedules, locations of service points, and typical service requirements. The data presented in this section reflect ideal conditions for a single airplane. Service requirements may vary according to airplane condition and airline procedure.

Section 5.1 shows typical arrangements of ground support equipment during turnaround. As noted, if the auxiliary power unit (APU) is used, the electrical, air start, and air-conditioning service vehicles would not be required. Passenger loading bridges or portable passenger stairs could be used to load or unload passengers.

Sections 5.2 and 5.3 show typical service times at the terminal. These charts give typical schedules for performing service on the airplane within a given time. Service times could be rearranged to suit availability of personnel, airplane configuration, and degree of service required.

Section 5.4 shows the locations of ground service connections in graphic and in tabular forms. Typical capacities and service requirements are shown in the tables. Services with requirements that vary with conditions are described in subsequent sections.

Section 5.5 shows typical sea level air pressure and flow requirements for starting different engines. The curves are based on an engine start time of 90 seconds.

Section 5.6 shows pneumatic requirements for heating and cooling (air conditioning) using high pressure air to run the air cycle machine. The curves show airflow requirements to heat or cool the airplane within a given time and ambient conditions. Maximum allowable pressure and temperature for air cycle machine operation are 60 psia and 450°F, respectively.

Section 5.7 shows pneumatic requirements for heating and cooling the airplane, using low pressure conditioned air. This conditioned air is supplied through an 8-in ground air connection (GAC) directly to the passenger cabin, bypassing the air cycle machines.

Section 5.8 shows ground towing requirements for various ground surface conditions.
5.1.1 AIRPLANE SERVICING ARRANGEMENT - TYPICAL TURNAROUND

MODEL 737-100
5.1.2 AIRPLANE SERVICING ARRANGEMENT - TYPICAL TURNAROUND
MODEL 737-200
5.1.3 AIRPLANE SERVICING ARRANGEMENT - TYPICAL TURNAROUND
MODEL 737-300
5.1.4 AIRPLANE SERVICING ARRANGEMENT - TYPICAL TURNAROUND

MODEL 737-400
5.1.5 AIRPLANE SERVICING ARRANGEMENT - TYPICAL TURNAROUND
MODEL 737-500
5.1.6 AIRPLANE SERVICING ARRANGEMENT - TYPICAL TURNAROUND

MODEL 737-600
5.1.7 AIRPLANE SERVICING ARRANGEMENT - TYPICAL TURNDOWN

MODEL 737-700
5.1.8 AIRPLANE SERVICING ARRANGEMENT - TYPICAL TURNAROUND

MODEL 737-700 WITH WINGLETS, 737 BBJ
5.1.9. AIRPLANE SERVICING ARRANGEMENT - TYPICAL TURNAROUND

MODEL 737-800
5.1.10 AIRPLANE SERVICING ARRANGEMENT - TYPICAL TURNAROUND
MODEL 737-800 WITH WINGLETS, 737 BBJ2
5.1.11. AIRPLANE SERVICING ARRANGEMENT - TYPICAL TURNAROUND
MODEL 737-900, -900ER
5.1.12 AIRPLANE SERVICING ARRANGEMENT - TYPICAL TURNDOWN
MODEL 737-900, -900ER WITH WINGLETS
### 5.2.1 TERMINAL OPERATIONS - TURNAROUND STATION

**MODEL 737—100, -200**

<table>
<thead>
<tr>
<th>Step</th>
<th>Estimated Time (Minutes after parked)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Lower Stairs</td>
<td></td>
</tr>
<tr>
<td>2. Provide Ground Support Equipment</td>
<td></td>
</tr>
<tr>
<td>3. Deplane Passengers</td>
<td></td>
</tr>
<tr>
<td>4. Unload Baggage</td>
<td>10-15</td>
</tr>
<tr>
<td>5. Unload Cargo</td>
<td>10-15</td>
</tr>
<tr>
<td>6. Fuel Airplane</td>
<td>15-20</td>
</tr>
<tr>
<td>7. Service Waste Tanks</td>
<td>15-20</td>
</tr>
<tr>
<td>8. Service Potable Water</td>
<td>5-10</td>
</tr>
<tr>
<td>9. Service Galley</td>
<td>10-15</td>
</tr>
<tr>
<td>10. Service Cabin</td>
<td>10-15</td>
</tr>
<tr>
<td>11. Perform Maintenance Checks</td>
<td>10-15</td>
</tr>
<tr>
<td>12. Load Cargo</td>
<td>10-15</td>
</tr>
<tr>
<td>13. Load Baggage</td>
<td>10-15</td>
</tr>
<tr>
<td>14. Enplane Passengers</td>
<td>5-10</td>
</tr>
<tr>
<td>15. Start Engines</td>
<td>5-10</td>
</tr>
<tr>
<td>16. Clear Airplane for Departure</td>
<td>5-10</td>
</tr>
</tbody>
</table>

**NOTES:**

1. Estimates based on mixed-class configuration, 45% load factor.
2. It is assumed that all equipment functions properly and that no abnormal weather conditions exist.
3. Total time on the ramp is 30 minutes.
4. Both forward and aft doors are used.
5. 100% passenger exchange.
6. This data is provided to illustrate the general scope and types of tasks involved in terminal operations. Varying airline practices and operating circumstances throughout the world will result in different sequences and time intervals to accomplish the tasks shown.
7. Ground operations requirements should be coordinated with using airlines prior to ramp planning.

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5.2.2 TERMINAL OPERATIONS - TURNAROUND STATION, PASSENGER/CARGO

NOTE:
1. ESTIMATES BASED ON 76-PASSENGER/TWO MAIN DECK PALLETS CONFIGURATION
2. IT IS ASSUMED THAT ALL EQUIPMENT FUNCTION PROPERLY AND THAT NO ABNORMAL WEATHER CONDITIONS EXIST.
3. TOTAL TIME ON THE RAMP IS 25 MINUTES
4. THIS DATA IS PROVIDED TO ILLUSTRATE THE GENERAL SCOPE AND TYPES OF TASKS INVOLVED IN TERMINAL OPERATIONS. VARYING AIRLINE PRACTICES AND OPERATING CIRCUMSTANCES THROUGHOUT THE WORLD WILL RESULT IN DIFFERENT SEQUENCES AND TIME INTERVALS TO ACCOMPLISH THE TASKS SHOWN.
5. GROUND OPERATIONS REQUIREMENTS SHOULD BE COORDINATED WITH USING AIRLINES PRIOR TO RAMP PLANNING.
### 5.2.3 TERMINAL OPERATIONS - TURNAROUND STATION, ALL CARGO

#### MODEL 737-200C

<table>
<thead>
<tr>
<th>Step</th>
<th>Time (Minutes After Parked)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. POSITION MOBILE STAIRS</td>
<td>1</td>
</tr>
<tr>
<td>2. POSITION CARGO LOADER</td>
<td>5</td>
</tr>
<tr>
<td>3. UNLOAD LOWER LOBE COMPARTMENTS</td>
<td>10</td>
</tr>
<tr>
<td>4. FUEL AIRPLANE</td>
<td>15</td>
</tr>
<tr>
<td>5. OPEN CARGO DOOR</td>
<td>20</td>
</tr>
<tr>
<td>6. UNLOAD PALLETS</td>
<td>25</td>
</tr>
<tr>
<td>7. LOAD LOWER LOBE COMPARTMENTS</td>
<td>30</td>
</tr>
<tr>
<td>8. LOAD PALLETS</td>
<td>35</td>
</tr>
<tr>
<td>9. REMOVE CARGO LOADER</td>
<td>40</td>
</tr>
<tr>
<td>10. CLOSE CARGO DOOR</td>
<td>35</td>
</tr>
<tr>
<td>11. REMOVE MOBILE STAIRS</td>
<td>30</td>
</tr>
<tr>
<td>12. START ENGINES</td>
<td>25</td>
</tr>
</tbody>
</table>

#### NOTES:

1. It is assumed that all equipment functions properly and that no abnormal weather conditions exist.
2. This data is provided to illustrate the general scope and types of tasks involved in terminal operations. Varying airline practices and operating circumstances throughout the world will result in different sequences and time intervals to accomplish the tasks shown.
3. Ground operations requirements should be coordinated with using airlines prior to ramp planning.
5.2.4 TERMINAL OPERATIONS - TURNAROUND STATION, 
MODEL 737-300, -400, -500

NOTES:
1. IT IS ASSUMED THAT ALL EQUIPMENT FUNCTION PROPERLY AND THAT NO ABNORMAL WEATHER CONDITIONS EXIST.
2. THIS DATA IS PROVIDED TO ILLUSTRATE THE GENERAL SCOPE AND TYPES OF TASKS INVOLVED IN TERMINAL OPERATIONS. VARYING AIRLINE PRACTICES AND OPERATING CIRCUMSTANCES THROUGHOUT THE WORLD WILL RESULT IN DIFFERENT SEQUENCES AND TIME INTERVALS TO ACCOMPLISH THE TASKS SHOWN.
3. GROUND OPERATIONS REQUIREMENTS SHOULD BE COORDINATED WITH USING AIRLINES PRIOR TO RAMP PLANNING
### 5.2.5 TERMINAL OPERATIONS - TURNAROUND STATION

#### MODEL 737-600

<table>
<thead>
<tr>
<th>Task</th>
<th>Time (Minutes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Position Passenger Bridge or Stairs</td>
<td>1.0</td>
</tr>
<tr>
<td>Deplane Passengers</td>
<td>6.0</td>
</tr>
<tr>
<td>Service Galleys</td>
<td>14.0</td>
</tr>
<tr>
<td>Service Cabin</td>
<td>10.0</td>
</tr>
<tr>
<td>Board Passengers</td>
<td>9.0</td>
</tr>
<tr>
<td>Remove Passenger Bridge or Stairs</td>
<td>1.0</td>
</tr>
<tr>
<td>Unload Fwd Compartment</td>
<td>3.0</td>
</tr>
<tr>
<td>Load Fwd Compartment</td>
<td>4.0</td>
</tr>
<tr>
<td>Unload Aft Compartment</td>
<td>5.0</td>
</tr>
<tr>
<td>Load Aft Compartment</td>
<td>7.0</td>
</tr>
<tr>
<td>Fuel Airplane</td>
<td>9.0</td>
</tr>
<tr>
<td>Service Vacuum Toilets</td>
<td>10.0</td>
</tr>
<tr>
<td>Service Potable Water</td>
<td>2.0</td>
</tr>
<tr>
<td>Start Engines/Push Back</td>
<td>---</td>
</tr>
</tbody>
</table>

**Notes:**
- Position/Remove Equipment
- 100% Exchange of Passengers and Cargo
- 108 Passengers Board and Deplane via FWD LH Entry Door
- Fuel - 2,700 Gallons at 300 GPM
- 1 Nozzle at 50 PSIG
- 1,000 Gallons Fuel Reserve

**Passenger Loading Rates:**
- Unloading - 18 PAX per Minute
- Loading - 12 PAX per Minute

**Baggage Loading Rates:**
- Unloading - 15.0 Bags per Minute
- Loading - 10.0 Bags per Minute

- 1.0 Bags per PAX (3.0 cu ft)
- 38 Bags FWD/70 Bags AFT
- 85% Stacking Efficiency
- 1 Galley Truck Used
- 100% Load Factor

This data is provided to illustrate the general scope and types of tasks involved in terminal operations. Varying airline practices and operating circumstances throughout the world will result in different sequences and time intervals to accomplish the tasks shown.
### 5.2.6 TERMINAL OPERATIONS - TURNAROUND STATION

**MODEL 737-700, -700 WITH WINGLETS**

<table>
<thead>
<tr>
<th>Passenger Services</th>
<th>Time (Minutes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Position Passenger Bridge or Stairs</td>
<td>1.0</td>
</tr>
<tr>
<td>Deplane Passengers</td>
<td>8.0</td>
</tr>
<tr>
<td>Service Galley</td>
<td>15.0</td>
</tr>
<tr>
<td>Service Cabin</td>
<td>10.0</td>
</tr>
<tr>
<td>Board Passengers</td>
<td>12.0</td>
</tr>
<tr>
<td>Remove Passenger Bridge or Stairs</td>
<td>1.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cargo/Baggage Handling</th>
<th>Time (Minutes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unload FWD Compartment</td>
<td>4.0</td>
</tr>
<tr>
<td>Load FWD Compartment</td>
<td>6.0</td>
</tr>
<tr>
<td>Unload AFT Compartment</td>
<td>6.0</td>
</tr>
<tr>
<td>Load AFT Compartment</td>
<td>8.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Airplane Servicing</th>
<th>Time (Minutes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuel Airplane</td>
<td>9.0</td>
</tr>
<tr>
<td>Service Vacuum Toilets</td>
<td>10.0</td>
</tr>
<tr>
<td>Service Potable Water</td>
<td>2.0</td>
</tr>
</tbody>
</table>

**Start Engines/Push Back**

---

**NOTES:**
- Position/Remove Equipment
- 100% Exchange of Passengers and Cargo
- 140 Passengers Board and Deplane via FWD LH Entry Door
- Fuel = 2,700 Gallons at 300 GPM
- 1 Nozzle at 50 PSIG
- 1,000 Gallons Fuel Reserve

**Passenger Loading Rates:**
- Unloading = 18 Pax per Minute
- Loading = 12 Pax per Minute

**Baggage Loading Rates:**
- Unloading = 15.0 Bags per Minute
- Loading = 10.0 Bags per Minute

- 1.0 Bags per Pax (3.0 CF FT)
- 57 Bags FWD/83 Bags AFT
- 83% Stacking Efficiency
- 1 Galley Truck Used
- 100% Load Factor

*This data is provided to illustrate the general scope and types of tasks involved in terminal operations. Varying airline practices and operating circumstances throughout the world will result in different sequences and time intervals to accomplish the tasks shown.*
### 5.2.7 TERMINAL OPERATIONS - TURNAROUND STATION

**MODEL 737-800, -800 WITH WINGLETS**

<table>
<thead>
<tr>
<th><strong>Passenger Services</strong></th>
<th><strong>Time - Minutes</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Position Passenger Bridge or Stairs</td>
<td>1.0</td>
</tr>
<tr>
<td>Deplane Passengers</td>
<td>9.0</td>
</tr>
<tr>
<td>Service Galley</td>
<td>15.0</td>
</tr>
<tr>
<td>Service Cabin</td>
<td>11.0</td>
</tr>
<tr>
<td>Board Passengers</td>
<td>14.0</td>
</tr>
<tr>
<td>Remove Passenger Bridge or Stairs</td>
<td>1.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Cargo/Baggage Handling</strong></th>
<th><strong>Time - Minutes</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Unload FWD Compartment</td>
<td>5.0</td>
</tr>
<tr>
<td>Load FWD Compartment</td>
<td>7.0</td>
</tr>
<tr>
<td>Unload AFT Compartment</td>
<td>6.0</td>
</tr>
<tr>
<td>Load AFT Compartment</td>
<td>9.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Airplane Servicing</strong></th>
<th><strong>Time - Minutes</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuel Airplane</td>
<td>9.0</td>
</tr>
<tr>
<td>Service Vacuum Toilets</td>
<td>10.0</td>
</tr>
<tr>
<td>Service Potable Water</td>
<td>2.0</td>
</tr>
</tbody>
</table>

**Notes:**
- Position/Remove Equipment
- 100% Exchange of Passengers and Cargo
- 16D Passengers Board and Deplane Via FWD LH Entry Door
- Fuel - 2,700 Gallons at 300 GPM
- 1 Nozzle at 50 PSI
- 1,000 Gallons Fuel Reserve

**Passenger Loading Rates:**
- Unloading - 18 Pax per minute
- Loading - 12 Pax per minute

**Baggage Loading Rates:**
- Unloading - 15.0 Bags per minute
- Loading - 10.0 Bags per minute

- 1.0 Bags per Pax (3.0 cu ft)
- 69 Bags FWD/91 Bags AFT
- 83% Stacking Efficiency
- 1 Galley Truck Used
- 100% Load Factor

This data is provided to illustrate the general scope and types of tasks involved in terminal operations. Varying airline practices and operating circumstances throughout the world will result in different sequences and time intervals to accomplish the tasks shown.
### 5.2.8 TERMINAL OPERATIONS - TURNAROUND STATION

**MODEL 737-900, -900ER, WITH AND WITHOUT WINGLETS**

<table>
<thead>
<tr>
<th><strong>Passenger Services</strong></th>
<th><strong>Time - Minutes</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Position Passenger Bridge or Stairs</td>
<td>1.0</td>
</tr>
<tr>
<td>Deplane Passengers</td>
<td>10.0</td>
</tr>
<tr>
<td>Service Galley</td>
<td>15.0</td>
</tr>
<tr>
<td>Service Cabin</td>
<td>11.0</td>
</tr>
<tr>
<td>Board Passengers</td>
<td>15.0</td>
</tr>
<tr>
<td>Remove Passenger Bridge or Stairs</td>
<td>1.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Cargo/Baggage Handling</strong></th>
<th><strong>Time - Minutes</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Unload FWD Compartment</td>
<td>5.0</td>
</tr>
<tr>
<td>Load FWD Compartment</td>
<td>8.0</td>
</tr>
<tr>
<td>Unload AFT Compartment</td>
<td>6.0</td>
</tr>
<tr>
<td>Load AFT Compartment</td>
<td>10.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Airplane Servicing</strong></th>
<th><strong>Time - Minutes</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuel Airplane</td>
<td>9.0</td>
</tr>
<tr>
<td>Service Vacuum Toilets</td>
<td>10.0</td>
</tr>
<tr>
<td>Service Potable Water</td>
<td>2.0</td>
</tr>
<tr>
<td>Start Engines/Push Back</td>
<td></td>
</tr>
</tbody>
</table>
NOTE

TURNAROUND TERMINAL OPERATIONS TIME CHARTS ARE NOT INCLUDED IN THIS DOCUMENT BECAUSE THE DIFFERENT CONFIGURATIONS OF BOEING BUSINESS JET AIRPLANES HAVE INDIVIDUAL REQUIREMENTS. CONSULT AIRCRAFT USER/OPERATOR FOR CURRENT REQUIREMENTS.

5.2.9 TERMINAL OPERATIONS - TURNAROUND STATION
MODEL 737 BBJ, BBJ2
1. LOWER AIRSTAIRS
2. PROVIDE GROUND SUPPORT EQUIPMENT
3. DEPLANE PASSENGERS
4. UNLOAD BAGGAGE
5. UNLOAD CARGO
6. FUEL AIRPLANE
7. SERVICE WASTE TANKS
8. SERVICE POTABLE WATER
9. SERVICE GALLEY
10. SERVICE CABIN
11. PERFORM MAINTENANCE CHECKS
12. LOAD CARGO
13. LOAD BAGGAGE
14. ENPLANE PASSENGERS
15. START ENGINES
16. CLEAR AIRPLANE FOR DEPARTURE

NOTES:
1. ESTIMATES BASED ON MIXED-CLASS CONFIGURATION, 65% LOAD FACTOR
2. IT IS ASSUMED THAT ALL EQUIPMENT FUNCTION PROPERLY AND THAT NO ABNORMAL WEATHER CONDITIONS EXIST.
3. TOTAL TIME ON THE RAMP IS 25 MINUTES
4. BOTH FORWARD AND AFT DOORS ARE USED
5. 75% PASSENGER EXCHANGE
6. THIS DATA IS PROVIDED TO ILLUSTRATE THE GENERAL SCOPE AND TYPES OF TASKS INVOLVED IN TERMINAL OPERATIONS. VARYING AIRLINE PRACTICES AND OPERATING CIRCUMSTANCES THROUGHOUT THE WORLD WILL RESULT IN DIFFERENT SEQUENCES AND TIME INTERVALS TO ACCOMPLISH THE TASKS SHOWN.
7. GROUND OPERATIONS REQUIREMENTS SHOULD BE CoORDINATED WITH USING AIRLINES PRIOR TO RAMP PLANNING

5.3.1 TERMINAL OPERATIONS - EN ROUTE STATION
MODEL 737-100, -200, -300, -400, -500
### 5.3.2 TERMINAL OPERATIONS - EN ROUTE STATION

#### MODEL 737-600

<table>
<thead>
<tr>
<th>Time (Minutes)</th>
<th>Task Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>Position Passenger Bridge or Stairs</td>
</tr>
<tr>
<td>4.0</td>
<td>Deplane Passengers</td>
</tr>
<tr>
<td>---</td>
<td>Service Galleys</td>
</tr>
<tr>
<td>---</td>
<td>Service Cabin</td>
</tr>
<tr>
<td>5.0</td>
<td>Board Passengers</td>
</tr>
<tr>
<td>1.0</td>
<td>Remove Passenger Bridge or Stairs</td>
</tr>
<tr>
<td>2.0</td>
<td>Unload FWD Compartment</td>
</tr>
<tr>
<td>2.0</td>
<td>Load FWD Compartment</td>
</tr>
<tr>
<td>3.0</td>
<td>Unload AFT Compartment</td>
</tr>
<tr>
<td>4.0</td>
<td>Load AFT Compartment</td>
</tr>
<tr>
<td>---</td>
<td>Fuel Airplane</td>
</tr>
<tr>
<td>---</td>
<td>Service Toilets</td>
</tr>
<tr>
<td>---</td>
<td>Service Potable Water</td>
</tr>
<tr>
<td>---</td>
<td>Start Engines/Push Back</td>
</tr>
</tbody>
</table>

**NOTES:**

- Position/Remove Equipment
- 100% Load Factor (108 Passengers)
- 65 Passengers Deplane and Board Via FWD LH Entry Door
- 60% Exchange of Passengers and Cargo
- Passenger Loading Rates:
  - Unloading: 18 Pax PER Minute
  - Loading: 12 Pax PER Minute
- Baggage Loading Rates:
  - Unloading: 15.0 Bags PER Minute
  - Loading: 10.0 Bags PER Minute
- 1.0 Bags PER Pax (4.5 CU FT)
- 23 Bags FWD/42 Bags AFT
- 83% Stacking Efficiency

*This data is provided to illustrate the general scope and types of tasks involved in terminal operations. Varying airline practices and operating circumstances throughout the world will result in different sequences and time intervals to accomplish the tasks shown.*
### 5.3.3 TERMINAL OPERATIONS - EN ROUTE STATION

#### MODEL 737-700, -700 WITH WINGLETS

<table>
<thead>
<tr>
<th>Passenger Services</th>
<th>Time (Minutes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Position Passenger Bridge or Stairs</td>
<td>1.0</td>
</tr>
<tr>
<td>Deplane Passengers</td>
<td>5.0</td>
</tr>
<tr>
<td>Service Galleys</td>
<td>---</td>
</tr>
<tr>
<td>Service Cabin</td>
<td>---</td>
</tr>
<tr>
<td>Board Passengers</td>
<td>7.0</td>
</tr>
<tr>
<td>Remove Passenger Bridge or Stairs</td>
<td>1.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cargo/Baggage Handling</th>
<th>Time (Minutes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unload FWD Compartment</td>
<td>3.0</td>
</tr>
<tr>
<td>Load FWD Compartment</td>
<td>4.0</td>
</tr>
<tr>
<td>Unload AFT Compartment</td>
<td>4.0</td>
</tr>
<tr>
<td>Load AFT Compartment</td>
<td>5.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Airplane Servicing</th>
<th>Time (Minutes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuel Airplane</td>
<td>---</td>
</tr>
<tr>
<td>Service Toilets</td>
<td>---</td>
</tr>
<tr>
<td>Service Potable Water</td>
<td>---</td>
</tr>
</tbody>
</table>

| Start Engines/Push Back | --- |

### Notes:
- **Position/Remove Equipment**
- **100% Load Factor (140 Passengers)**
- **84 Passengers Deplane and Board via FWD LH Entry Door**
- **60% Exchange of Passengers and Cargo**

**Passenger Loading Rates:**
- Unloading: 18 PAX per minute
- Loading: 12 PAX per minute

**Baggage Loading Rates:**
- Unloading: 15.0 bags per minute
- Loading: 10.0 bags per minute

**1.0 Bags per PAX (4.5 cu ft)**

83% Stacking Efficiency

### This data is provided to illustrate the general scope and types of tasks involved in terminal operations. Varying airline practices and operating circumstances throughout the world will result in different sequences and time intervals to accomplish the tasks shown.
### 5.3.4 TERMINAL OPERATIONS - EN ROUTE STATION

#### MODEL 737-800, -800 WITH WINGLETS

<table>
<thead>
<tr>
<th>Passenger Services</th>
<th>Time - Minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Position Passenger Bridge or Stairs</td>
<td>1.0</td>
</tr>
<tr>
<td>Deplane Passengers</td>
<td>5.0</td>
</tr>
<tr>
<td>Service Galley</td>
<td>---</td>
</tr>
<tr>
<td>Service Cabin</td>
<td>---</td>
</tr>
<tr>
<td>Board Passengers</td>
<td>8.0</td>
</tr>
<tr>
<td>Remove Passenger Bridge or Stairs</td>
<td>1.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cargo/Baggage Handling</th>
<th>Time - Minutes</th>
</tr>
</thead>
<tbody>
<tr>
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<td>3.0</td>
</tr>
<tr>
<td>Load Fwd Compartment</td>
<td>4.0</td>
</tr>
<tr>
<td>Unload Aft Compartment</td>
<td>4.0</td>
</tr>
<tr>
<td>Load Aft Compartment</td>
<td>5.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Airplane Servicing</th>
<th>Time - Minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuel Airplane</td>
<td>---</td>
</tr>
<tr>
<td>Service Toilets</td>
<td>---</td>
</tr>
<tr>
<td>Service Potable Water</td>
<td>---</td>
</tr>
<tr>
<td>Start Engines/Push Back</td>
<td>---</td>
</tr>
</tbody>
</table>

**Notes:**
- Position/Remove Equipment
- 100% Load Factor (160 Passengers)
- 96 Passengers Deplane and Board via FWD LH Entry Door
- 60% Exchange of Passengers and Cargo
- Passenger Loading Rates:
  - Loading - 12 Pax Per Minute
  - Unloading - 18 Pax Per Minute
- Baggage Loading Rates:
  - Unloading - 15.0 Bags Per Minute
  - Loading - 10.0 Bags Per Minute
- 1.0 Bags Per Pax (4.5 Cu Ft)
- 41 Bags FWD/54 Bags Aft
- 83% Stacking Efficiency

This data is provided to illustrate the general scope and types of tasks involved in terminal operations. Varying airline practices and operating circumstances throughout the world will result in different sequences and time intervals to accomplish the tasks shown.
### 5.3.5 TERMINAL OPERATIONS - EN ROUTE STATION

**MODEL 737-900, -900ER, WITH AND WITHOUT WINGLETS**

<table>
<thead>
<tr>
<th>Passenger Services</th>
<th>Time - Minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Position Passenger Bridge or Stairs</td>
<td>1.0</td>
</tr>
<tr>
<td>Deplane Passengers</td>
<td>6.0</td>
</tr>
<tr>
<td>Service Galleyis</td>
<td>---</td>
</tr>
<tr>
<td>Service Cabin</td>
<td>---</td>
</tr>
<tr>
<td>Board Passengers</td>
<td>9.0</td>
</tr>
<tr>
<td>Remove Passenger Bridge or Stairs</td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cargo/Baggage Handling</th>
<th>Time - Minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unload Fwd Compartment</td>
<td>3.0</td>
</tr>
<tr>
<td>Load Fwd Compartment</td>
<td>5.0</td>
</tr>
<tr>
<td>Unload Aft Compartment</td>
<td>4.0</td>
</tr>
<tr>
<td>Load Aft Compartment</td>
<td>6.0</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Airplane Servicing</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuel Airplane</td>
<td>---</td>
</tr>
<tr>
<td>Service Toilets</td>
<td>---</td>
</tr>
<tr>
<td>Service Potable Water</td>
<td>---</td>
</tr>
</tbody>
</table>

**Start Engines/Push Back**

**Notes:**
- Position/Remove Equipment
- 100% Load Factor (177 Passengers)
- 106 Passengers Deplane and Board Via Fwd Lh Entry Door
- 60% Exchange of Passengers and Cargo

- Passenger Loading Rates:
  - Unloading - 18 Pax Per Minute
  - Loading - 12 Pax Per Minute

- Baggage Loading Rates:
  - Unloading - 15.0 Bags Per Minute
  - Loading - 10.0 Bags Per Minute

- 1.0 bags per Pax (4.5 cu ft)
- 45 bags fwd/58 bags aft
  83% stacking efficiency

**This data is provided to illustrate the general scope and types of tasks involved in terminal operations. Varying airline practices and operating circumstances throughout the world will result in different sequences and time intervals to accomplish the tasks shown.**
NOTE

ENROUTE TERMINAL OPERATIONS TIME CHARTS
ARE NOT INCLUDED IN THIS DOCUMENT
BECAUSE THE DIFFERENT CONFIGURATIONS
OF BOEING BUSINESS JET AIRPLANES
HAVE INDIVIDUAL REQUIREMENTS.
CONSULT AIRCRAFT USER/OPERATOR FOR CURRENT
REQUIREMENTS

5.3.6 TERMINAL OPERATIONS - ENROUTE STATION
MODEL 737 BBJ, BBJ2
5.4.1 GROUND SERVICING CONNECTIONS

MODEL 737-100
5.4.2 GROUND SERVICING CONNECTIONS

MODEL 737-200
5.4.3 GROUND SERVICING CONNECTIONS
MODEL 737-300
5.4.4 GROUND SERVICING CONNECTIONS

MODEL 737-400

D6-58325-6
5.4.5 GROUND SERVICING CONNECTIONS
MODEL 737-500
5.4.6 GROUND SERVICING CONNECTIONS
MODEL 737-600
5.4.7 GROUND SERVICING CONNECTIONS
MODEL 737-700

D6-58325-6

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5.4.8  GROUND SERVICING CONNECTIONS
MODEL 737-700 WITH WINGLETS, 737 BBJ
5.4.9 GROUND SERVICING CONNECTIONS

MODEL 737-800
5.4.10 GROUND SERVICING CONNECTIONS
MODEL 737-800 WITH WINGLETS, 737 BBJ2

D6-58325-6

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5.4.11 GROUND SERVICING CONNECTIONS
MODEL 737-900, -900ER
5.4.12 GROUND SERVICING CONNECTIONS
MODEL 737-900, -900ER WITH WINGLETS
<table>
<thead>
<tr>
<th>SYSTEM</th>
<th>MODEL</th>
<th>DISTANCE AFT OF NOSE</th>
<th>DISTANCE FROM AIRPLANE CENTERLINE</th>
<th>MAX HEIGHT ABOVE GROUND</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>FT-IN</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>M</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>LH SIDE</td>
<td>RH SIDE</td>
<td>LH SIDE</td>
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<td>FT-IN</td>
<td>M</td>
<td>FT-IN</td>
</tr>
<tr>
<td>CONDITIONED AIR</td>
<td>737-100</td>
<td>33 - 2</td>
<td>10.1</td>
<td>0</td>
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<tr>
<td>ONE 8-IN (20.3 CM) PORT</td>
<td>737-200</td>
<td>36 - 2</td>
<td>11.0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>737-300</td>
<td>39 - 10</td>
<td>12.1</td>
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</tr>
<tr>
<td></td>
<td>737-400</td>
<td>45 - 10</td>
<td>14.0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>737-500</td>
<td>36 - 2</td>
<td>11.0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>737-600</td>
<td>35 - 3</td>
<td>10.7</td>
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</tr>
<tr>
<td></td>
<td>737-700</td>
<td>39 - 9</td>
<td>12.1</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>737-800</td>
<td>49 - 7</td>
<td>15.1</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>737-900</td>
<td>54 - 1</td>
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<td>737-100 THRU 737-500</td>
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<td>2.6</td>
<td>-</td>
</tr>
<tr>
<td>ONE CONNECTION</td>
<td>737-600 THRU 737-900</td>
<td>8 - 6</td>
<td>2.6</td>
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<tr>
<td>60 KVA, 200/115 V AC, 400 HZ, 3-PHASE EACH</td>
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<td>44 - 1</td>
<td>13.4</td>
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<tr>
<td>ONE UNDERWING PRESSURE CONNECTOR ON RIGHT WING (SEE SEC 2.1 FOR CAPACITY)</td>
<td>737-200</td>
<td>47 - 1</td>
<td>14.4</td>
<td>-</td>
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<tr>
<td></td>
<td>737-300</td>
<td>50 –9</td>
<td>15.5</td>
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</tr>
<tr>
<td></td>
<td>737-400</td>
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<td>17.3</td>
<td>-</td>
</tr>
<tr>
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<tr>
<td>FUEL</td>
<td>737-100</td>
<td>52 - 1</td>
<td>15.8</td>
<td>34 – 3</td>
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<td>TWO OVERWING FUEL PORTS</td>
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<td>55 – 1</td>
<td>16.8</td>
<td>34 – 3</td>
</tr>
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<td></td>
<td>737-300</td>
<td>58 – 9</td>
<td>17.9</td>
<td>34 – 3</td>
</tr>
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<td></td>
<td>737-400</td>
<td>64 – 9</td>
<td>19.7</td>
<td>34 – 3</td>
</tr>
<tr>
<td></td>
<td>737-500</td>
<td>55 – 1</td>
<td>16.8</td>
<td>34 – 3</td>
</tr>
<tr>
<td>FUEL</td>
<td>737-600</td>
<td>61 - 0</td>
<td>18.6</td>
<td>48 – 3</td>
</tr>
<tr>
<td>FUEL VENT ON Underside OF BOTH WINGTIPS</td>
<td>737-700</td>
<td>65 - 6</td>
<td>20.0</td>
<td>48 – 3</td>
</tr>
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<td></td>
<td>737-800</td>
<td>75 - 4</td>
<td>22.0</td>
<td>48 – 3</td>
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<td>737-900</td>
<td>80 - 6</td>
<td>24.5</td>
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5.4.13 GROUND SERVICING CONNECTIONS AND CAPACITIES

MODEL 737, ALL MODELS
<table>
<thead>
<tr>
<th>SYSTEM</th>
<th>MODEL</th>
<th>DISTANCE AFT OF NOSE</th>
<th>DISTANCE FROM AIRPLANE CENTERLINE</th>
<th>MAX HEIGHT ABOVE GROUND</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td>FT-IN M</td>
<td>FT-IN M</td>
<td>FT-IN M</td>
</tr>
<tr>
<td>LAVATORY</td>
<td>737-100</td>
<td>11 – 8 3.6</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>ONE PRESSURE CONNECTION FOR DRAINING, FLUSHING, AND CHEMICAL FILLING – 17 GAL (64.3 L) CAPACITY</td>
<td>737-200</td>
<td>11 – 8 3.6</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>10-GPM (37.9 LPM) 20-PSIG (1.4 KG/SQ CM) SERVICE REQUIRED</td>
<td>737-300</td>
<td>11 – 8 3.6</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>LAVATORY</td>
<td>737-400</td>
<td>11 – 8 3.6</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>ONE CONNECTION FOR VACUUM LAVATORY</td>
<td>737-500</td>
<td>11 – 8 3.6</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>OXYGEN</td>
<td>737-600</td>
<td>67 - 9 20.7</td>
<td>2 - 7</td>
<td>0.8</td>
</tr>
<tr>
<td>ONE SERVICE CONNECTION FOR OXYGEN FILL – 153 CU FT (4.3 CU M) AT 3,000 PSIG (211 KG/SQ CM) OR 190 CU FT (5.4 CU M) WITH SECOND OBSERVER SEAT.</td>
<td>737-700</td>
<td>75 - 7 23.1</td>
<td>2 - 7</td>
<td>0.8</td>
</tr>
<tr>
<td>OXYGEN</td>
<td>737-800</td>
<td>94 - 9 28.9</td>
<td>2 - 7</td>
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<td>INDIVIDUAL CANISTERS IN EACH PASSENGER SERVICE UNIT</td>
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<td>102 - 9 31.3</td>
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<td>PNEUMATIC</td>
<td>737-100</td>
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<td>ONE 3-IN (7.6 CM) PORT FOR ENGINE START AND AIRCONDITIONING PACKS</td>
<td>737-200</td>
<td>37 - 3 11.3</td>
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<tr>
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<td>40 - 10 12.5</td>
<td>-</td>
<td>-</td>
<td>3 - 0 0.9</td>
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<tr>
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<td>46 - 10 14.3</td>
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<td>-</td>
<td>3 - 0 0.9</td>
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<tr>
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<td>-</td>
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<td>3 - 0 0.9</td>
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<tr>
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<td>-</td>
<td>3 - 0 0.9</td>
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<tr>
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<td>3 - 0 0.9</td>
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<tr>
<td>737-900</td>
<td>55 - 11 17.1</td>
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<td>3 - 0 0.9</td>
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5.4.14 GROUND SERVICING CONNECTIONS AND CAPACITIES
MODEL 737, ALL MODELS
<table>
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<tr>
<th>SYSTEM</th>
<th>MODEL</th>
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<td>LH SIDE</td>
<td>RH SIDE</td>
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<td>68 – 11</td>
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<td>1 – 0</td>
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<td>TWO SERVICE CONNECTIONS</td>
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<td>737-300</td>
<td>84 – 9</td>
<td>25.8</td>
<td>1 – 0</td>
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<tr>
<td>ONE SERVICE CONNECTION</td>
<td>737-400</td>
<td>94 – 9</td>
<td>28.9</td>
<td>1 – 0</td>
</tr>
<tr>
<td>0.75-IN (1.9 CM)</td>
<td>737-500</td>
<td>75 – 3</td>
<td>22.9</td>
<td>1 – 0</td>
</tr>
<tr>
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<tr>
<td></td>
<td>737-600</td>
<td>73 – 1</td>
<td>22.3</td>
<td>-</td>
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<tr>
<td></td>
<td>737-700</td>
<td>80 – 11</td>
<td>24.7</td>
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<tr>
<td></td>
<td>737-800</td>
<td>100 – 1</td>
<td>30.5</td>
<td>-</td>
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<tr>
<td></td>
<td>737-900</td>
<td>108 – 1</td>
<td>33.9</td>
<td>-</td>
</tr>
</tbody>
</table>

NOTES:
- DISTANCES ROUNDED TO THE NEAREST INCH AND 0.1 METER.
- AIRPLANE MODEL DESIGNATIONS ALSO INCLUDE ALL DERIVATIVES.

5.4.15 GROUND SERVICING CONNECTIONS AND CAPACITIES
MODEL 737, ALL MODELS
5.5.1 ENGINE START PNEUMATIC REQUIREMENTS - SEA LEVEL

MODEL 737-100, -200
5.5.2 ENGINE START PNEUMATIC REQUIREMENTS - SEA LEVEL
MODEL 737-300, -400, -500

NOTES:
* CFM56-3 ENGINES
* MINIMUM STARTING REQUIREMENTS
* SEA LEVEL
* COORDINATE WITH USING AIRLINE FOR SPECIFIC PLANNED OPERATING PROCEDURES

EXAMPLE:
AMBENT TEMPERATURE = 59°F (15°C)
GROUND CONNECTION TEMPERATURE = 200°F (93°C)
REQUIRED PRESSURE AT GROUND CONNECTION
REQUIRED AIRFLOW AT GROUND CONNECTION
= 52.5 PSIA (3.69 KG/SQ CM ABS)
= 120 LB/Min 54.4 KG/Min)
5.5.3 ENGINE START PNEUMATIC REQUIREMENTS - SEA LEVEL

MODEL 737-600, -700, -800, -900, 737 BBJ, 737 BBJ2
5.6.1 GROUND PNEUMATIC POWER REQUIREMENTS - HEATING/COOLING

MODEL 737-100, -200

D6-58325-6
5.6.2 GROUND PNEUMATIC POWER REQUIREMENTS - HEATING/COOLING

MODEL 737-300, -500
5.6.3 GROUND PNEUMATIC POWER REQUIREMENTS - HEATING/COOLING
MODEL 737-400
5.6.4 GROUND PNEUMATIC POWER REQUIREMENTS - HEATING/COOLING
MODEL 737-600, -700
HEATING (PULL-UP)
- INITIAL CABIN TEMPERATURE - 0°F (-18°C)
- OUTSIDE AIR TEMPERATURE - 0°F (-18°C)
- NO GALLEY LOAD, NO ELECTRICAL LOAD
- \( W_{\text{gain}} = 1.14 \times W \)
- \( P = \) PRESSURE AT GROUND CONNECTION
- TEMP AT GROUND CONNECTION - 200°F (65°C) TO 450°F (232°C)

COOLING (PULL-DOWN)
- INITIAL CABIN TEMPERATURE - 103°F (39°C)
- OUTSIDE AIR TEMPERATURE - 103°F (39°C)
- SOLAR LOAD - 7,741 BTU/HR (1,951 KCAL/HR)
- NO GALLEY LOAD, NO ELECTRICAL LOAD
- \( W_{\text{gain}} = 11.7 \times W \)
- \( P = \) PRESSURE AT GROUND CONNECTION, PSIG
- TEMP AT GROUND CONNECTION - LESS THAN 450°F (232°C)

5.6.5 GROUND PNEUMATIC POWER REQUIREMENTS - HEATING/COOLING
MODEL 737-800, -900
5.7.1 CONDITIONED AIR FLOW REQUIREMENTS

MODEL 737—100, -200

COOLING:
1. CABIN AT 78°F (26°C); 90 PASSENGERS AND CREW;
   NO GALLEY LOAD; SOLAR LOAD 5,570 BTU/HR;
   ELECTRICAL LOAD 6,340 BTU/HR.
2. CABIN AT 80°F (27°C); OTHERWISE SAME AS IN 1.
3. CABIN AT 70°F (21°C); 3 CREW MEMBERS; GALLEY
   LOAD 6,200 BTU/HR; SOLAR LOAD 5,570 BTU/HR;
   ELECTRICAL LOAD 6,340 BTU/HR.
4. CABIN AT 80°F (27°C); 65 PASSENGERS AND CREW;
   NO GALLEY LOAD; SOLAR LOAD 5,570 BTU/HR;
   ELECTRICAL LOAD 6,340 BTU/HR.
   PRECONDITIONED AIRPLANE.

HEATING:
5. CABIN AT 78°F (26°C); NO CREW OR
   PASSENGERS; NO OTHER HEAT LOADS.
6. CABIN AT 75°F (24°C); NO CREW OR
   PASSENGERS; NO OTHER HEAT LOADS.
7. CABIN AT 78°F (26°C); NO CREW OR
   PASSENGERS; NO OTHER HEAT LOADS.
8. CABIN AT 78°F (26°C); 65 PASSENGERS
   AND CREW; NO GALLEY LOAD; NO SOLAR
   LOAD; ELECTRICAL LOAD 6,430 BTU/HR;
   PRECONDITIONED AIRPLANE.

ΔP = GAGE STATIC PRESSURE IN INCHES
   OF WATER AT GROUND CONNECTION.
1 BTU/HR = 0.252 KG-CAL/HR

---

NOTES:
* AIRFLOW REQUIREMENTS ARE SHOWN FOR THE 737-200 AIRPLANE AND ARE
   APPROXIMATELY 5 TO 10 LB/MIN GREATER THAN FOR THE 737-100,
   DEPENDING ON CONDITIONS AND LOADING
* MAXIMUM RECOMMENDED AIRFLOW = 160 LB/MIN (72 KG/MIN) TO AVOID
   OPENING OF THE DISTRIBUTION RELIEF VALVE

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5.7.1 CONDITIONED AIR FLOW REQUIREMENTS

MODEL 737—100, -200

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5.7.2 CONDITIONED AIR FLOW REQUIREMENTS

MODEL 737-300, -500

HEATING:
1. CABIN AT 75°F (24°C); NO CREW OR PASSENGERS; NO OTHER HEAT LOADS.
2. CABIN AT 75°F (24°C); NO CREW OR PASSENGERS; NO OTHER HEAT LOADS.
3. CABIN AT 75°F (24°C); NO CREW OR PASSENGERS, NO OTHER HEAT LOADS.
4. CABIN AT 75°F (24°C); 98 PASSENGERS AND CREW; NO GALLEY LOAD; NO SOLAR LOAD; ELECTRICAL LOAD 6,984 BTU/HR; PRECONDITIONED AIRPLANE.

GAGE STATIC PRESSURE IN INCHES OF WATER AT GROUND CONNECTION.
1 BTU/HR = 0.252 KG-CAL/HR
5.7.3 CONDITIONED AIR FLOW REQUIREMENTS
MODEL 737-400
5.7.4 CONDITIONED AIR FLOW REQUIREMENTS

MODEL 737-600, -700

5. CABIN AT 75° F (24° C); NO CREW OR PASSENGERS; NO OTHER HEAT LOADS.
6. CABIN AT 75° F (24° C); NO CREW OR PASSENGERS; NO OTHER HEAT LOADS.
7. CABIN AT 75° F (24° C); NO CREW OR PASSENGERS; NO OTHER HEAT LOADS.
8. CABIN AT 75° F (24° C); 98 PASSENGERS AND CREW; NO GALLEY LOAD; NO SOLAR LOAD; ELECTRICAL LOAD 6,984 BTU/HR; PRECONDITIONED AIRPLANE.

ΔP<sub>S</sub> = GAGE STATIC PRESSURE IN INCHES OF WATER AT GROUND CONNECTION.

ΔP<sub>S</sub> = 17 IN MAX (NO RECIRC)
ΔP<sub>S</sub> = 12 IN (NO RECIRC)
ΔP<sub>S</sub> = 15 IN MAX (WITH RECIRC)
ΔP<sub>S</sub> = 11 IN (WITH RECIRC)
ΔP<sub>S</sub> = 8 IN (WITH RECIRC)
ΔP<sub>S</sub> = 4 IN (NO RECIRC)
ΔP<sub>S</sub> = 3 IN (NO RECIRC)

ΔP<sub>S</sub> = 17 IN MAX (NO RECIRC)
ΔP<sub>S</sub> = 12 IN (NO RECIRC)
ΔP<sub>S</sub> = 15 IN MAX (WITH RECIRC)
ΔP<sub>S</sub> = 11 IN (WITH RECIRC)
ΔP<sub>S</sub> = 8 IN (WITH RECIRC)
ΔP<sub>S</sub> = 4 IN (NO RECIRC)
ΔP<sub>S</sub> = 3 IN (NO RECIRC)
COOLING:

1. CABIN AT 75° F (24° C); 185 PASSENGERS AND CREW; NO GALLEY LOAD; SOLAR LOAD 7,741 BTU/HR; ELECTRICAL LOAD 10,955 BTU/HR.

2. CABIN AT 80° F (27° C); OTHERWISE SAME AS IN 1.

3. CABIN AT 70° F (21° C); 2 CREW MEMBERS; GALLEY LOAD 8,200 BTU/HR; SOLAR LOAD 7,741 BTU/HR; ELECTRICAL LOAD 10,955 BTU/HR.

4. CABIN AT 80° F (27° C); 117 PASSENGERS AND CREW; NO GALLEY LOAD; SOLAR LOAD 7,741 BTU/HR; ELECTRICAL LOAD 10,955 BTU/HR; PRECONDITIONED AIRPLANE.

HEATING:

5. CABIN AT 75° F (24° C); NO CREW OR PASSENGERS; NO OTHER HEAT LOADS.

6. CABIN AT 75° F (24° C); NO CREW OR PASSENGERS; NO OTHER HEAT LOADS.

7. CABIN AT 75° F (24° C); NO CREW OR PASSENGERS; NO OTHER HEAT LOADS.

8. CABIN AT 75° F (24° C); 117 PASSENGERS AND CREW; NO GALLEY LOAD; NO SOLAR LOAD; ELECTRICAL LOAD 10,955 BTU/HR; PRECONDITIONED AIRPLANE.

\[ \Delta P_s = \text{GAGE STATIC PRESSURE IN INCHES OF WATER AT GROUND CONNECTION.} \]
NOTES:

- UNUSUAL BREAKAWAY CONDITIONS NOT REFLECTED
- ESTIMATED FOR RUBBER-TIRED TOW VEHICLES
- COEFFICIENT OF FRICTION (\(\mu\)) APPROXIMATE

5.8.1 GROUND TOWING REQUIREMENTS - ENGLISH UNITS
MODEL 737, ALL MODELS
5.8.2 GROUND TOWING REQUIREMENTS - METRIC UNITS
MODEL 737, ALL MODELS

NOTES:
- UNUSUAL BREAKAWAY CONDITIONS NOT REFLECTED
- ESTIMATED FOR RUBBER-TIRED TOW VEHICLES
- COEFFICIENT OF FRICTION (μ) APPROXIMATE
6.0 JET ENGINE WAKE AND NOISE DATA

6.1 Jet Engine Exhaust Velocities and Temperatures

6.2 Airport and Community Noise
6.0 JET ENGINE WAKE AND NOISE DATA

6.1 Jet Engine Exhaust Velocities and Temperatures

This section shows exhaust velocity and temperature contours aft of the 737 airplanes. The contours were calculated from a standard computer analysis using three-dimensional viscous flow equations with mixing of primary, fan, and free-stream flow. The presence of the ground plane is included in the calculations as well as engine tilt and toe-in. Mixing of flows from the engines is also calculated. The analysis does not include thermal buoyancy effects which tend to elevate the jet wake above the ground plane. The buoyancy effects are considered to be small relative to the exhaust velocity and therefore are not included.

The graphs show jet wake velocity and temperature contours are valid for sea level, static, standard day conditions. The effect of wind on jet wakes was not included. There is evidence to show that a downwind or an upwind component does not simply add or subtract from the jet wake velocity, but rather carries the whole envelope in the direction of the wind. Crosswinds may carry the jet wake contour far to the side at large distances behind the airplane.
6.1.1 PREDICTED JET ENGINE EXHAUST VELOCITY CONTOURS
- IDLE THRUST

MODEL 737-100, -200
6.1.2 PREDICTED JET ENGINE EXHAUST VELOCITY CONTOURS

- IDLE THRUST

MODEL 737-300, -400, -500

NOTES:
- STANDARD DAY
- ZERO WIND
- SEA LEVEL
- STATIC AIRPLANE

HEIGHT ABOVE GROUND

FEET  METERS

40  12
30  10
20  6
10  4
0  2

AFT END OF AIRPLANE

4 FT 0 IN (1.22 M)

7 FT 4 IN (2.24 M)

GROUND PLANE

AXIAL DISTANCE BEHIND AIRPLANE

FEET  METERS

0  0
20  6
40  12
60  18
80  24
100  30
120  36
140  42
160  48
180  54
200  60
220  66

DISTANCE FROM AIRPLANE CENTRILINE

FEET  METERS

40  12
30  10
20  6
10  4
0  2

35 MPH

AIRPLANE
6.1.3 PREDICTED JET ENGINE EXHAUST VELOCITY CONTOURS
- IDLE THRUST

MODEL 737-600, -700, -800, -900, ALL MODELS
6.1.4 PREDICTED JET ENGINE EXHAUST VELOCITY CONTOURS - BREAKAWAY THRUST

MODEL 737-100, -200

NOTES:
- STANDARD DAY
- ZERO WIND
- JT8D ENGINES
- SEA LEVEL
- STATIC AIRPLANE

GROUND PLANE

HEIGHT ABOVE GROUND

FEET 0 20 40 60 80 100 120 140 160 180 200 220
METERS 0 10 20 30 40

AXIAL DISTANCE BEHIND AIRPLANE

FEET 0 20 40 60 80 100 120
METERS 0 10 20 30 40

DISTANCE FROM AIRPLANE CENTERLINE

FEET 0 20 40
METERS 0 20 40

AFT END OF AIRPLANE

3.3 FT (1.0 M)

737-200

737-100

100 MPH (160 KMPH)

70 MPH (110 KMPH)

35 MPH (56 KMPH)
6.1.6 PREDICTED JET ENGINE EXHAUST VELOCITY CONTOURS - BREAKAWAYTHRUST
MODEL 737-600, -700, -800, -900 ALL MODELS
6.1.7 PREDICTED JET ENGINE EXHAUST VELOCITY CONTOURS - TAKEOFF THRUST MODEL 737-100, -200

**NOTES:**
- STANDARD DAY
- ZERO WIND
- SEA LEVEL
- STATIC AIRPLANE
- JT8D-17 ENGINES, OTHER JT8D ENGINES EXHIBIT SMALLER VELOCITY CONTOURS

![Diagram showing predicted jet engine exhaust velocity contours for takeoff thrust.](attachment:image.png)

- 737-200
- 737-100
- 300 MPH (480 KM/H)
- 200 MPH (320 KM/H)
- 150 MPH (240 KM/H)
- 100 MPH (160 KM/H)
- 70 MPH (110 KM/H)
- 50 MPH TO 370 FT (80 KM/H TO 113 M)

Axial distance behind airplane:

- 300 MPH
- 200 MPH
- 150 MPH
- 100 MPH
- 70 MPH

Distance from airplane centerline:

- 50 MPH
- 70 MPH

Height above ground:

- 3.3 FT (1.0 M)
6.1.8 PREDICTED JET ENGINE EXHAUST VELOCITY CONTOURS

- TAKEOFF THRUST

MODEL 737-300, -400, -500

NOTES:
- STANDARD DAY
- ZERO WIND
- SEA LEVEL
- STATIC AIRPLANE

- 200 MPH (320 KMPH)
- 150 MPH (240 KMPH)
- 100 MPH (160 KMPH)
- 75 MPH (120 KMPH)
- 35 MPH (56 KMPH)

TO 1,900 FT (580 M)

HEIGHT ABOVE GROUND

FEET

METERS

0 20 40 60 80 100 120 140 160 180 200 220

METERS

FEET

DISTANCE FROM AIRPLANE CENTERLINE

0 10 20 30 40 50 60 70 80 90 100 110 120

AFT END OF AIRPLANE

4 FT 0 IN (1.22 M)

7 FT 4 IN (2.24 M)

GROUND PLANE

AXIAL DISTANCE BEHIND AIRPLANE
6.1.9  PREDICTED JET ENGINE EXHAUST VELOCITY CONTOURS
- TAKEOFF THRUST

MODEL 737-600, -700, -800, -900 ALL MODELS
6.1.10 PREDICTED JET ENGINE EXHAUST TEMPERATURE CONTOURS

MODEL 737-100, -200

NOTES:
- STANDARD DAY
- ZERO WIND
- SEA LEVEL
- STATIC AIRPLANE

737-200
737-100

150°F (66°C)
100°F (38°C)

3.3 FT (1.0 M)

GROUND PLANE

FEET 0 20 40 60 80 100 120 140 160 180 200 220
METERS 0 10 20 30 40 50 60 70

AXIAL DISTANCE BEHIND AIRPLANE

DISTANCE FROM AIRPLANE CENTERLINE
0 2 4 6 8 10 12 20 30 40
0 2 4 6 8 10 12

150°F
100°F

© AIRPLANE
6.1.11 PREDICTED JET ENGINE EXHAUST TEMPERATURE CONTOURS - IDLE THRUST

MODEL 737-300, -400, -500

EXHAUST TEMPERATURES AFT OF AIRPLANE ARE LESS THAN 100° F (38° C) AT IDLE THRUST

NOTES:
- STANDARD DAY
- ZERO WIND
- SEA LEVEL
- STATIC AIRPLANE

HEIGHT ABOVE GROUND

AFT END OF AIRPLANE

GROUND PLANE

FEET

METERS

AXIAL DISTANCE BEHIND AIRPLANE

DISTANCE FROM AIRPLANE CENTERLINE

© AIRPLANE

FEET

METERS

0 10 20 30 40 50 60 70

0 10 20 30 40 50 60 70
6.1.12 PREDICTED JET ENGINE EXHAUST TEMPERATURE CONTOURS

- IDLE THRUST
MODEL 737-600, -700, -800, -900 ALL MODELS

EXHAUST TEMPERATURES AFT OF AIRPLANE ARE LESS THAN 100° F (38° C) AT BREAKAWAY THRUST

NOTES:
- STANDARD DAY
- ZERO WIND
- SEA LEVEL
- STATIC AIRPLANE
6.1.13 PREDICTED JET ENGINE EXHAUST TEMPERATURE CONTOURS - BREAKAWAY THRUST

MODEL 737-100, -200

NOTES:
- STANDARD DAY
- ZERO WIND
- SEA LEVEL
- STATIC AIRPLANE

JT8D-17 ENGINES

HEIGHT ABOVE GROUND

FEET 0 20 40 60 80 100 120 140 160 180 200 220
METERS 0 10 20 30 40 50 60 70

AXIAL DISTANCE BEHIND AIRPLANE

DISTANCE FROM AIRPLANE CENTERLINE

150°F (66°C)  100°F

3.3 FT (1.0 M)
EXHAUST TEMPERATURES AFT OF AIRPLANE ARE LESS THAN 100°F (38°C) AT IDLE THRUST

NOTES:
- STANDARD DAY
- ZERO WIND
- SEA LEVEL
- STATIC AIRPLANE

100°F
6.1.15 PREDICTED JET ENGINE EXHAUST TEMPERATURE CONTOURS - BREAKAWAY THRUST
MODEL 737-600, -700, -800, -900 ALL MODELS
6.1.16 PREDICTED JET ENGINE EXHAUST TEMPERATURE CONTOURS
- TAKEOFF THRUST
MODEL 737-100, -200
6.1.17 PREDICTED JET ENGINE EXHAUST TEMPERATURE CONTOURS - TAKEOFF THRUST

MODEL 737-300, -400, -500

NOTES:
- STANDARD DAY
- ZERO WIND
- SEA LEVEL
- STATIC AIRPLANE

100°F (38°C)

HEIGHT ABOVE GROUND FEET

METERS

0 4 8 12 16 20 24 28 32

GROUND PLANE

AFT END OF AIRPLANE

4 FT 0 IN (1.22 M)

7 FT 4 IN (2.24 M)

FEET 0 20 40 60 80 100 120 140 160 180 200 220

METERS 0 10 20 30 40 50 60 70

AXIAL DISTANCE BEHIND AIRPLANE

DISTANCE FROM AIRPLANE CENTERLINE

0 2 4 6 8 10 12

0 2 4 6 8 10 12

© AIRPLANE
6.1.18 Predicted Jet Engine Exhaust Temperature Contours - Takeoff Thrust

Model 737-600, -700, -800, -900 All Models

Notes:
- Standard Day
- Zero Wind
- Sea Level
- Static Airplane

- 100°F (38°C)
- 3 ft 7 in (1.10 m)
- 12 ft 8 in (3.87 m)
- 15 ft 9 in (4.82 m)

Distance from Airplane Centerline

Height Above Ground
6.2 Airport and Community Noise

Airport noise is of major concern to the airport and community planner. The airport is a major element in the community's transportation system and, as such, is vital to its growth. However, the airport must also be a good neighbor, and this can be accomplished only with proper planning. Since aircraft noise extends beyond the boundaries of the airport, it is vital to consider the impact on surrounding communities. Many means have been devised to provide the planner with a tool to estimate the impact of airport operations. Too often they oversimplify noise to the point where the results become erroneous. Noise is not a simple subject; therefore, there are no simple answers.

The cumulative noise contour is an effective tool. However, care must be exercised to ensure that the contours, used correctly, estimate the noise resulting from aircraft operations conducted at an airport.

The size and shape of the single-event contours, which are inputs into the cumulative noise contours, are dependent upon numerous factors. They include the following:

1. Operational Factors

   (a) **Aircraft Weight**-Aircraft weight is dependent on distance to be traveled, en route winds, payload, and anticipated aircraft delay upon reaching the destination.

   (b) **Engine Power Settings**-The rates of ascent and descent and the noise levels emitted at the source are influenced by the power setting used.

   (c) **Airport Altitude**-Higher airport altitude will affect engine performance and thus can influence noise.
2. Atmospheric Conditions-Sound Propagation

   (a) **Wind**-With stronger headwinds, the aircraft can take off and climb more rapidly relative to the ground. Also, winds can influence the distribution of noise in surrounding communities.

   (b) **Temperature and Relative Humidity**-The absorption of noise in the atmosphere along the transmission path between the aircraft and the ground observer varies with both temperature and relative humidity.

3. Surface Condition-Shielding, Extra Ground Attenuation (EGA)

   (a) **Terrain**-If the ground slopes down after takeoff or before landing, noise will be reduced since the aircraft will be at a higher altitude above ground. Additionally, hills, shrubs, trees, and large buildings can act as sound buffers.
All these factors can alter the shape and size of the contours appreciably. To demonstrate the effect of some of these factors, estimated noise level contours for two different operating conditions are shown below. These contours reflect a given noise level upon a ground level plane at runway elevation.

**Condition 1**

<table>
<thead>
<tr>
<th>Landing</th>
<th>Takeoff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Structural Landing Weight</td>
<td>Maximum Gross Takeoff Weight</td>
</tr>
<tr>
<td>10-knot Headwind</td>
<td>Zero Wind</td>
</tr>
<tr>
<td>3° Approach</td>
<td>84 °F</td>
</tr>
<tr>
<td>84 °F</td>
<td>Humidity 15%</td>
</tr>
<tr>
<td>Humidity 15%</td>
<td></td>
</tr>
</tbody>
</table>

**Condition 2**

<table>
<thead>
<tr>
<th>Landing:</th>
<th>Takeoff:</th>
</tr>
</thead>
<tbody>
<tr>
<td>85% of Maximum Structural Landing Weight</td>
<td>80% of Maximum Gross Takeoff Weight</td>
</tr>
<tr>
<td>10-knot Headwind</td>
<td>10-knot Headwind</td>
</tr>
<tr>
<td>3° Approach</td>
<td>59 °F</td>
</tr>
<tr>
<td>59 °F</td>
<td>Humidity 70%</td>
</tr>
<tr>
<td>Humidity 70%</td>
<td></td>
</tr>
</tbody>
</table>
As indicated from these data, the contour size varies substantially with operating and atmospheric conditions. Most aircraft operations are, of course, conducted at less than maximum gross weights because average flight distances are much shorter than maximum aircraft range capability and average load factors are less than 100%. Therefore, in developing cumulative contours for planning purposes, it is recommended that the airlines serving a particular city be contacted to provide operational information.

In addition, there are no universally accepted methods for developing aircraft noise contours or for relating the acceptability of specific zones to specific land uses. It is therefore expected that noise contour data for particular aircraft and the impact assessment methodology will be changing. To ensure that the best currently available information of this type is used in any planning study, it is recommended that it be obtained directly from the Office of Environmental Quality in the Federal Aviation Administration in Washington, D.C.

It should be noted that the contours shown herein are only for illustrating the impact of operating and atmospheric conditions and do not represent the single-event contour of the family of aircraft described in this document. It is expected that the cumulative contours will be developed as required by planners using the data and methodology applicable to their specific study.
7.0 PAVEMENT DATA

7.1 General Information

7.2 Landing Gear Footprint

7.3 Maximum Pavement Loads

7.4 Landing Gear Loading on Pavement

7.5 Flexible Pavement Requirements - U.S. Army Corps of Engineers Method S-77-1 and FAA Design Method

7.6 Flexible Pavement Requirements - LCN Conversion

7.7 Rigid Pavement Requirements - Portland Cement Association Design Method

7.8 Rigid Pavement Requirements - LCN Conversion

7.9 Rigid Pavement Requirements - FAA Design Method

7.10 ACN/PCN Reporting System - Flexible and Rigid Pavements

7.11 Tire Inflation Chart (737-100 thru -500 only)
7.0 PAVEMENT DATA

7.1 General Information

A brief description of the pavement charts that follow will help in their use for airport planning. Each airplane configuration is depicted with a minimum range of five loads imposed on the main landing gear to aid in interpolation between the discrete values shown. All curves for any single chart represent data based on rated loads and tire pressures considered normal and acceptable by current aircraft tire manufacturer's standards. Tire pressures, where specifically designated on tables and charts, are at values obtained under loaded conditions as certificated for commercial use.

Section 7.2 presents basic data on the landing gear footprint configuration, maximum design taxi loads, and tire sizes and pressures.

Maximum pavement loads for certain critical conditions at the tire-to-ground interface are shown in Section 7.3, with the tires having equal loads on the struts.

Pavement requirements for commercial airplanes are customarily derived from the static analysis of loads imposed on the main landing gear struts. The charts in Section 7.4 are provided in order to determine these loads throughout the stability limits of the airplane at rest on the pavement. These main landing gear loads are used as the point of entry to the pavement design charts, interpolating load values where necessary.

The flexible pavement design curves (Section 7.5) are based on procedures set forth in Instruction Report No. S-77-1, "Procedures for Development of CBR Design Curves," dated June 1977, and as modified according to the methods described in FAA Advisory Circular 150/5320-6D, "Airport Pavement Design and Evaluation," dated July 7, 1995. Instruction Report No. S-77-1 was prepared by the U.S. Army Corps of Engineers Waterways Experiment Station, Soils and Pavements Laboratory, Vicksburg, Mississippi. The line showing 10,000 coverages is used to calculate Aircraft Classification Number (ACN).
The following procedure is used to develop the curves, such as shown in Section 7.5:

1. Having established the scale for pavement depth at the bottom and the scale for CBR at the top, an arbitrary line is drawn representing 5,000 annual departures.

2. Values of the aircraft gross weight are then plotted.

3. Additional annual departure lines are drawn based on the load lines of the aircraft gross weights already established.

4. An additional line representing 10,000 coverages (used to calculate the flexible pavement Aircraft Classification Number) is also placed.

All Load Classification Number (LCN) curves (Sections 7.6 and 7.8) have been developed from a computer program based on data provided in International Civil Aviation Organization (ICAO) document 9157-AN/901, Aerodrome Design Manual, Part 3, “Pavements”, Second Edition, 1983. LCN values are shown directly for parameters of weight on main landing gear, tire pressure, and radius of relative stiffness (l) for rigid pavement or pavement thickness or depth factor (h) for flexible pavement.

Rigid pavement design curves (Section 7.7) have been prepared with the Westergaard equation in general accordance with the procedures outlined in the Design of Concrete Airport Pavement (1955 edition) by Robert G. Packard, published by the Portland Cement Association, 5420 Old Orchard Road, Skokie, Illinois 60077-1083. These curves are modified to the format described in the Portland Cement Association publication XP6705-2, Computer Program for Airport Pavement Design (Program PDILB), 1968, by Robert G. Packard.
The following procedure is used to develop the rigid pavement design curves shown in Section 7.7:

1. Having established the scale for pavement thickness to the left and the scale for allowable working stress to the right, an arbitrary load line is drawn representing the main landing gear maximum weight to be shown.

2. Values of the subgrade modulus (k) are then plotted.

3. Additional load lines for the incremental values of weight on the main landing gear are drawn on the basis of the curve for k = 300, already established.

The rigid pavement design curves (Section 7.9) have been developed based on methods used in the FAA Advisory Circular AC 150/5320-6D, July 7, 1995. The following procedure is used to develop the curves, such as shown in Section 7.9:

1. Having established the scale for pavement flexure strength on the left and temporary scale for pavement thickness on the right, an arbitrary load line is drawn representing the main landing gear maximum weight to be shown at 5,000 coverages.

2. Values of the subgrade modulus (k) are then plotted.

3. Additional load lines for the incremental values of weight are then drawn on the basis of the subgrade modulus curves already established.

4. The permanent scale for the rigid-pavement thickness is then placed. Lines for other than 5,000 coverages are established based on the aircraft pass-to-coverage ratio.
The ACN/PCN system (Section 7.10) as referenced in ICAO Annex 14, "Aerodromes," 3rd Edition, July 1999, provides a standardized international airplane/pavement rating system replacing the various S, T, TT, LCN, AUW, ISWL, etc., rating systems used throughout the world. ACN is the Aircraft Classification Number and PCN is the Pavement Classification Number. An aircraft having an ACN equal to or less than the PCN can operate on the pavement subject to any limitation on the tire pressure. Numerically, the ACN is two times the derived single-wheel load expressed in thousands of kilograms, where the derived single wheel load is defined as the load on a single tire inflated to 181 psi (1.25 MPa) that would have the same pavement requirements as the aircraft.

Computationally, the ACN/PCN system uses the PCA program PDILB for rigid pavements and S-77-1 for flexible pavements to calculate ACN values. The method of pavement evaluation is left up to the airport with the results of their evaluation presented as follows:

<table>
<thead>
<tr>
<th>PCN TYPE</th>
<th>PAVEMENT TYPE</th>
<th>SUBGRADE CATEGORY</th>
<th>TIRE PRESSURE CATEGORY</th>
<th>EVALUATION METHOD</th>
</tr>
</thead>
<tbody>
<tr>
<td>R = Rigid</td>
<td>A = High</td>
<td>W = No Limit</td>
<td>T = Technical</td>
<td></td>
</tr>
<tr>
<td>F = Flexible</td>
<td>B = Medium</td>
<td>X = To 254 psi (1.75 MPa)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>C = Low</td>
<td>Y = To 181 psi (1.25 MPa)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>D = Ultra Low</td>
<td>Z = To 73 psi (0.5 MPa)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ACN values for flexible pavements are calculated for the following four subgrade categories:

- Code A - High Strength - CBR 15
- Code B - Medium Strength - CBR 10
- Code C - Low Strength - CBR 6
- Code D - Ultra Low Strength - CBR 3

ACN values for rigid pavements are calculated for the following four subgrade categories:

- Code A - High Strength, k = 550 pci (150 MN/m³)
- Code B - Medium Strength, k = 300 pci (80 MN/m³)
- Code C - Low Strength, k = 150 pci (40 MN/m³)
- Code D - Ultra Low Strength, k = 75 pci (20 MN/m³)
### Maximum Design Taxi Weight

<table>
<thead>
<tr>
<th></th>
<th>MODEL 737-100</th>
</tr>
</thead>
<tbody>
<tr>
<td>LB</td>
<td>97,800</td>
</tr>
<tr>
<td>KG</td>
<td>44,361</td>
</tr>
<tr>
<td>104,000</td>
<td></td>
</tr>
<tr>
<td>47,174</td>
<td></td>
</tr>
<tr>
<td>111,000</td>
<td></td>
</tr>
<tr>
<td>50,349</td>
<td></td>
</tr>
</tbody>
</table>

### Percent of Weight on Main Gear

See Section 7.4

<table>
<thead>
<tr>
<th></th>
<th>24 x 7.7 – 10</th>
<th>24 x 7.7 – 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>IN</td>
<td>14 PR</td>
<td>16 PR</td>
</tr>
<tr>
<td>PSI</td>
<td>135</td>
<td>135</td>
</tr>
<tr>
<td>KG/CM²</td>
<td>9.49</td>
<td>9.49</td>
</tr>
<tr>
<td>145</td>
<td>10.19</td>
<td></td>
</tr>
</tbody>
</table>

### Nose Gear Tire Size

<table>
<thead>
<tr>
<th></th>
<th>24 x 7.7 – 10</th>
<th>24 x 7.7 – 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>IN</td>
<td>14 PR</td>
<td>16 PR</td>
</tr>
<tr>
<td>PSI</td>
<td>135</td>
<td>135</td>
</tr>
<tr>
<td>KG/CM²</td>
<td>9.49</td>
<td>9.49</td>
</tr>
<tr>
<td>145</td>
<td>10.19</td>
<td></td>
</tr>
</tbody>
</table>

### Main Gear Tire Size

<table>
<thead>
<tr>
<th></th>
<th>40 x 14 – 16</th>
<th>40 x 14 – 16</th>
<th>40 x 14 – 16</th>
</tr>
</thead>
<tbody>
<tr>
<td>IN</td>
<td>22 PR</td>
<td>22 PR</td>
<td>24 PR</td>
</tr>
<tr>
<td>PSI</td>
<td>138</td>
<td>146</td>
<td>157</td>
</tr>
<tr>
<td>KG/CM²</td>
<td>9.70</td>
<td>10.27</td>
<td>11.04</td>
</tr>
</tbody>
</table>

#### 7.2.1 Landing Gear Footprint

**MODEL 737-100**
### Maximum Design Taxi Weight

<table>
<thead>
<tr>
<th></th>
<th>Model 737-200</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LB</strong></td>
<td>100,800</td>
</tr>
<tr>
<td><strong>KG</strong></td>
<td>45,722</td>
</tr>
<tr>
<td><strong>LB</strong></td>
<td>104,000</td>
</tr>
<tr>
<td><strong>KG</strong></td>
<td>47,174</td>
</tr>
<tr>
<td><strong>LB</strong></td>
<td>110,000</td>
</tr>
<tr>
<td><strong>KG</strong></td>
<td>49,895</td>
</tr>
<tr>
<td><strong>LB</strong></td>
<td>111,000</td>
</tr>
<tr>
<td><strong>KG</strong></td>
<td>50,349</td>
</tr>
<tr>
<td><strong>LB</strong></td>
<td>116,000</td>
</tr>
<tr>
<td><strong>KG</strong></td>
<td>52,617</td>
</tr>
</tbody>
</table>

### Percent of Weight on Main Gear

See Section 7.4

### Standard Tires and Brakes

<table>
<thead>
<tr>
<th>NoSE Gear Tire Size</th>
<th>IN</th>
<th>24 x 7.7 – 10 14 PR</th>
<th>24 x 7.7 – 10 16 PR</th>
</tr>
</thead>
<tbody>
<tr>
<td>NoSE Gear Tire Pressure</td>
<td>PSI</td>
<td>135</td>
<td>135</td>
</tr>
<tr>
<td></td>
<td>KG/cm²</td>
<td>9.49</td>
<td>9.49</td>
</tr>
<tr>
<td>Main gear Tire Size</td>
<td>IN</td>
<td>40 x 14 – 16 22 PR</td>
<td>40 x 14 – 16 24 PR</td>
</tr>
<tr>
<td>Main gear Tire Pressure</td>
<td>PSI</td>
<td>141</td>
<td>146</td>
</tr>
<tr>
<td></td>
<td>KG/cm²</td>
<td>9.91</td>
<td>10.27</td>
</tr>
</tbody>
</table>

### Heavy-Duty Tires and Brakes

<table>
<thead>
<tr>
<th>NoSE Gear Tire Size</th>
<th>IN</th>
<th>24 x 7.7 – 10 16 PR</th>
</tr>
</thead>
<tbody>
<tr>
<td>NoSE Gear Tire Pressure</td>
<td>PSI</td>
<td>145</td>
</tr>
<tr>
<td></td>
<td>KG/cm²</td>
<td>10.19</td>
</tr>
<tr>
<td>Main gear Tire Size</td>
<td>IN</td>
<td>C40 x 14 – 21 22 PR</td>
</tr>
<tr>
<td>Main gear Tire Pressure</td>
<td>PSI</td>
<td>141</td>
</tr>
<tr>
<td></td>
<td>KG/cm²</td>
<td>9.91</td>
</tr>
</tbody>
</table>

#### 7.2.2 Landing Gear Footprint

*Model 737-200*
### Maximum Design Taxi Weight

<table>
<thead>
<tr>
<th>Maximum Design Taxi Weight</th>
<th>Model Advanced 737-200</th>
</tr>
</thead>
<tbody>
<tr>
<td>LB</td>
<td>116,000</td>
</tr>
<tr>
<td>KG</td>
<td>52,617</td>
</tr>
</tbody>
</table>

### Percent of Weight on Main Gear

<table>
<thead>
<tr>
<th>Percent of Weight on Main Gear</th>
<th>See Section 7.4</th>
</tr>
</thead>
</table>

### Standard Tires and Brakes

<table>
<thead>
<tr>
<th>Nose Gear Tire Size</th>
<th>PSI</th>
<th>24 x 7.7 – 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pressure</td>
<td></td>
<td>16 PR</td>
</tr>
</tbody>
</table>

| Nose Gear Tire Size   | PSI | 140 |
| Pressure              |     |     |
| KG/CM²                |     | 9.84 |

| Main Gear Tire Size   | IN  | 40 x 14 – 16 |
| Pressure              | PSI | 166 | 168 | 172 |
| KG/CM²                |     | 11.67 | 11.81 | 12.09 |

### Heavy-Duty Tires and Brakes

| Nose Gear Tire Size   | IN  | 24 x 7.7 – 10 |
| Pressure              | PSI | 140 |
| KG/CM²                |     | 9.84 |

| Main Gear Tire Size   | IN  | C40 x 14 – 21 |
| Pressure              | PSI | 164 | 166 | 170 |
| KG/CM²                |     | 11.53 | 11.67 | 11.95 |

### Low Pressure Tires

| Nose Gear Tire Size   | IN  | C24.5 x 18.5 – 12 | C24.5 x 18.5 – 12 |
| Pressure              | PSI | 104 | 104 |
| KG/CM²                |     | 7.31 | 7.31 |

| Main Gear Tire Size   | IN  | C40 x 18 - 17 |
| Pressure              | PSI | 95 | 96 |
| KG/CM²                |     | 6.68 | 6.75 |

### 7.2.3 Landing Gear Footprint

**Model Advanced 737-200**
### Maximum Design Taxi Weight

<table>
<thead>
<tr>
<th></th>
<th>737-300</th>
<th>737-400</th>
<th>737-500</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MAXIMUM DESIGN</strong></td>
<td><strong>LB</strong></td>
<td><strong>LB</strong></td>
<td><strong>LB</strong></td>
</tr>
<tr>
<td><strong>TAXI WEIGHT</strong></td>
<td>125,000 TO 140,000</td>
<td>139,000</td>
<td>150,500</td>
</tr>
<tr>
<td><strong>KG</strong></td>
<td>56,699 TO 63,503</td>
<td>63,049</td>
<td>68,266</td>
</tr>
<tr>
<td><strong>PERCENT OF WEIGHT</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>ON MAIN GEAR</strong></td>
<td>SEE SECTION 7.4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Standard Tires and Brakes

#### Nose Gear Tire Size

<table>
<thead>
<tr>
<th></th>
<th>IN</th>
<th>27 x 7.75 – 15</th>
<th>27 x 7.75 – 15</th>
<th>27 x 7.75 – 15</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NOSE GEAR TIRE</strong></td>
<td>PSI</td>
<td>166</td>
<td>171</td>
<td>177</td>
</tr>
<tr>
<td><strong>PRESSURE</strong></td>
<td></td>
<td>120.2</td>
<td>12.09</td>
<td>12.44</td>
</tr>
<tr>
<td><strong>KG/CM²</strong></td>
<td></td>
<td>11.67</td>
<td>12.02</td>
<td>12.44</td>
</tr>
<tr>
<td><strong>MAIN GEAR TIRE</strong></td>
<td>IN</td>
<td>H40 x 14.5 – 19</td>
<td>H40 x 14.5 – 19</td>
<td>H40 x 14.5 – 19</td>
</tr>
<tr>
<td><strong>SIZE</strong></td>
<td></td>
<td>24 PR</td>
<td>26 PR</td>
<td>24 PR</td>
</tr>
<tr>
<td><strong>PRESSURE (1)</strong></td>
<td>PSI</td>
<td>180 TO 201</td>
<td>209</td>
<td>185</td>
</tr>
<tr>
<td></td>
<td>KG/CM²</td>
<td>12.65 TO 14.13</td>
<td>14.27</td>
<td>14.83</td>
</tr>
</tbody>
</table>

### Low Pressure Tires

#### Nose Gear Tire Size

<table>
<thead>
<tr>
<th></th>
<th>IN</th>
<th>24 x 7.75 – 15</th>
<th>24 x 7.75 – 15</th>
<th>24 x 7.75 – 15</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NOSE GEAR TIRE</strong></td>
<td>PSI</td>
<td>166</td>
<td>171</td>
<td>(NA)</td>
</tr>
<tr>
<td><strong>PRESSURE</strong></td>
<td></td>
<td>120.2</td>
<td>12.09</td>
<td>(NA)</td>
</tr>
<tr>
<td><strong>KG/CM²</strong></td>
<td></td>
<td>11.67</td>
<td>12.02</td>
<td>(NA)</td>
</tr>
<tr>
<td><strong>MAIN GEAR TIRE</strong></td>
<td>IN</td>
<td>H42 X 16 – 19</td>
<td>H42 X 16 – 19</td>
<td>(NA)</td>
</tr>
<tr>
<td><strong>SIZE</strong></td>
<td></td>
<td>24 PR</td>
<td>24 PR</td>
<td>(NA)</td>
</tr>
<tr>
<td><strong>PRESSURE (1)</strong></td>
<td>PSI</td>
<td>152 TO 170</td>
<td>171</td>
<td>(NA)</td>
</tr>
<tr>
<td></td>
<td>KG/CM²</td>
<td>10.69 TO 11.95</td>
<td>12.02</td>
<td>(NA)</td>
</tr>
</tbody>
</table>

#### Note:

(1) SEE SEC 7.11 - TIRE INFLATION CHART, FOR TIRE PRESSURES AT INTERMEDIATE WEIGHTS.

### Landing Gear Footprint

**MODEL 737-300, -400, -500**

D6-58325-6
### Maximum Design

<table>
<thead>
<tr>
<th></th>
<th>Units 737-600</th>
<th>Units 737-700</th>
<th>Units 737-800</th>
<th>Units 737-900</th>
<th>Units 737-900ER</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LB</strong></td>
<td>124,500 thru 145,000</td>
<td>133,500 thru 155,000</td>
<td>156,000 thru 174,700</td>
<td>164,500 thru 174,700</td>
<td>164,500 thru 188,200</td>
</tr>
<tr>
<td><strong>KG</strong></td>
<td>56,472 thru 65,771</td>
<td>60,554 thru 70,307</td>
<td>70,760 thru 79,242</td>
<td>74,616 thru 79,242</td>
<td>74,616 thru 85,366</td>
</tr>
</tbody>
</table>

### Taxi Weight

<table>
<thead>
<tr>
<th></th>
<th>kg/CM²</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>IN.</strong></td>
<td></td>
</tr>
<tr>
<td><strong>PSI</strong></td>
<td>206</td>
</tr>
<tr>
<td><strong>27 x 7.7 - 15 12 PR</strong></td>
<td>27 x 7.75 - 15 12 PR</td>
</tr>
</tbody>
</table>

### Nose Gear Tire Size

<table>
<thead>
<tr>
<th></th>
<th>IN.</th>
<th>PSI</th>
<th>KG/CM²</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>H43.5 x 16.0 - 21 24PR OR 26 PR</strong></td>
<td>182</td>
<td>14.41</td>
<td></td>
</tr>
<tr>
<td><strong>H43.5 x 16.0 - 21 26 PR</strong></td>
<td>197</td>
<td>14.41</td>
<td></td>
</tr>
<tr>
<td><strong>H44.5 x 16.5 - 21 28 PR</strong></td>
<td>204</td>
<td>14.41</td>
<td></td>
</tr>
<tr>
<td><strong>H44.5 x 16.5 - 21 30 PR</strong></td>
<td>205</td>
<td>14.41</td>
<td></td>
</tr>
</tbody>
</table>

### Optional Tires

<table>
<thead>
<tr>
<th></th>
<th>IN.</th>
<th>PSI</th>
<th>KG/CM²</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>H44.5 x 16.5 - 21 28PR</strong></td>
<td>168</td>
<td>11.81</td>
<td>14.41</td>
</tr>
</tbody>
</table>

**Note:** (1) H44.5 x 16.5 – 21 28PR TIRE CERTIFICATED ON 737-600 UP TO 144,000 LB (65,317 KG)

### 7.2.5 Landing Gear Footprint

**Model 737-600, -700, -800, -900, -900ER with and without winglets**
7.2.6 LANDING GEAR FOOTPRINT

MODEL 737 BBJ, 737 BBJ2

<table>
<thead>
<tr>
<th>MAXIMUM DESIGN TAXI WEIGHT</th>
<th>UNITS</th>
<th>737 BBJ</th>
<th>737 BBJ2</th>
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<td>174,700</td>
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<td>79,250</td>
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<td>PERCENT OF WEIGHT ON MAIN GEAR</td>
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<td></td>
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<tr>
<td>NOSE GEAR TIRE SIZE</td>
<td>IN.</td>
<td>27 x 7.7 - 15 12 PR</td>
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<tr>
<td>NOSE GEAR TIRE PRESSURE</td>
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<td>185</td>
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<td>KG/CM²</td>
<td>13.03</td>
<td>13.03</td>
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<tr>
<td>MAIN GEAR TIRE SIZE</td>
<td>IN.</td>
<td>H44.5 x 16.5 - 21 28 PR</td>
<td>H44.5 x 16.5 - 21 28 PR</td>
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<tr>
<td>MAIN GEAR TIRE PRESSURE</td>
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<tr>
<td></td>
<td>KG/CM²</td>
<td>14.34</td>
<td>14.34</td>
</tr>
</tbody>
</table>
\( V_{NG} \) = MAXIMUM VERTICAL NOSE GEAR GROUND LOAD AT MOST FORWARD CENTER OF GRAVITY

\( V_{MG} \) = MAXIMUM VERTICAL MAIN GEAR GROUND LOAD AT MOST AFT CENTER OF GRAVITY

\( H \) = MAXIMUM HORIZONTAL GROUND LOAD FROM BRAKING

NOTE: ALL LOADS CALCULATED USING AIRPLANE MAXIMUM DESIGN TAXI WEIGHT

### Maximum Pavement Loads

**Model 737-100, -200**

<table>
<thead>
<tr>
<th>MODEL</th>
<th>UNITS</th>
<th>MAXIMUM DESIGN TAXI WEIGHT</th>
<th>( V_{NG} ) AT MOST FWD C.G.</th>
<th>( V_{NG} ) + BRAKING 10 FT/SEC² DECEL</th>
<th>( V_{MG} ) PER STRUT AT MAX LOAD AT STATIC AFT C.G.</th>
<th>( H ) PER STRUT AT INSTANTANEOUS BRAKING (( \mu = 0.8 ))</th>
</tr>
</thead>
<tbody>
<tr>
<td>737-100</td>
<td>LB</td>
<td>97,800</td>
<td>14,000</td>
<td>21,500</td>
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<td>6,350</td>
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<td>6,849</td>
</tr>
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<td>LB</td>
<td>104,000</td>
<td>18,200</td>
<td>24,000</td>
<td>48,000</td>
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</tr>
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<td>8,255</td>
<td>10,886</td>
<td>21,773</td>
<td>7,303</td>
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<tr>
<td>737-200,200</td>
<td>LB</td>
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<td>17,700</td>
<td>25,600</td>
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</tr>
<tr>
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<td>8,029</td>
<td>11,612</td>
<td>23,133</td>
<td>7,847</td>
</tr>
<tr>
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<td>LB</td>
<td>116,000</td>
<td>16,500</td>
<td>25,200</td>
<td>52,800</td>
<td>18,000</td>
</tr>
<tr>
<td></td>
<td>KG</td>
<td>52,617</td>
<td>7,484</td>
<td>11,431</td>
<td>23,950</td>
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</tr>
<tr>
<td>737-200,200C</td>
<td>LB</td>
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<td>15,800</td>
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<tr>
<td></td>
<td>KG</td>
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<td>7,167</td>
<td>10,660</td>
<td>24,721</td>
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<td>LB</td>
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<tr>
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<td>9,707</td>
<td>21,228</td>
<td>6,260</td>
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<td>51,000</td>
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<td>23,133</td>
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<td>55,600</td>
<td>16,800</td>
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<td>737-200C</td>
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<tr>
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<td>57,900</td>
<td>19,400</td>
</tr>
<tr>
<td>737-200C</td>
<td>KG</td>
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<td>7,439</td>
<td>11,204</td>
<td>26,263</td>
<td>8,800</td>
</tr>
<tr>
<td>737-200C</td>
<td>LB</td>
<td>128,600</td>
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<td>22,800</td>
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</tr>
<tr>
<td></td>
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<td>6,441</td>
<td>10,342</td>
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7.3.1 MAXIMUM PAVEMENT LOADS
**7.3.2 Maximum Pavement Loads**

*Model 737-300, -400, -500*

<table>
<thead>
<tr>
<th>MODEL</th>
<th>UNITS</th>
<th>MAXIMUM DESIGN TAXI WEIGHT</th>
<th>V&lt;sub&gt;NG&lt;/sub&gt;</th>
<th>V&lt;sub&gt;MG&lt;/sub&gt; PER STRUT AT MAX LOAD AT STATIC AFT C.G.</th>
<th>H PER STRUT AT INSTANTANEOUS BRAKING (µ = 0.8)</th>
</tr>
</thead>
<tbody>
<tr>
<td>737-300</td>
<td>LB</td>
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<td>154,000</td>
<td>22,700</td>
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</tr>
<tr>
<td></td>
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<td>10,297</td>
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<tr>
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<td>6,940</td>
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<td>15,200</td>
<td>23,400</td>
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<td></td>
<td>KG</td>
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<td>6,895</td>
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<td>63,600</td>
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<td>11,022</td>
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<td>24,400</td>
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</tr>
<tr>
<td></td>
<td>KG</td>
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<td>7,212</td>
<td>10,433</td>
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<td>KG</td>
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<tr>
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<td>KG</td>
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<td>7,212</td>
<td>10,433</td>
<td>29,438</td>
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<td>5,534</td>
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<td>25,800</td>
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<td>KG</td>
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<td>17,300</td>
<td>26,400</td>
<td>61,800</td>
</tr>
<tr>
<td></td>
<td>KG</td>
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<td>7,827</td>
<td>11,975</td>
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</tr>
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</table>
\[ V_{NG} = \text{MAXIMUM VERTICAL NOSE GEAR GROUND LOAD AT MOST FORWARD CENTER OF GRAVITY} \]
\[ V_{MG} = \text{MAXIMUM VERTICAL MAIN GEAR GROUND LOAD AT MOST AFT CENTER OF GRAVITY} \]
\[ H = \text{MAXIMUM HORIZONTAL GROUND LOAD FROM BRAKING} \]

NOTE: ALL LOADS CALCULATED USING AIRPLANE MAXIMUM DESIGN TAXI WEIGHT

<table>
<thead>
<tr>
<th>MODEL</th>
<th>UNITS</th>
<th>MAXIMUM DESIGN TAXI WEIGHT</th>
<th>V (_{NG})</th>
<th>V (_{MG})</th>
<th>H PER STRUT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>STATIC AT MOST FWD C.G.</td>
<td>STATIC + BRAKING 10 FT/SEC(^2) DECEL</td>
<td>AT MAX LOAD AT STATIC AFT C.G.</td>
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<td>12,015</td>
<td>26,459</td>
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<tr>
<td>737-600</td>
<td>LB</td>
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<td>19,020</td>
<td>30,180</td>
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<td>13,689</td>
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<td>19,000</td>
<td>30,236</td>
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<tr>
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<td>8,618</td>
<td>13,715</td>
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<td>737-700</td>
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<td>15,100</td>
<td>24,886</td>
<td>81,730</td>
</tr>
<tr>
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<td>6,849</td>
<td>11,279</td>
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</tr>
<tr>
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<td>LB</td>
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<td>14,998</td>
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</tr>
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<td>KG</td>
<td>74,616</td>
<td>6,803</td>
<td>10,600</td>
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</tr>
<tr>
<td>737-900ER</td>
<td>LB</td>
<td>174,700</td>
<td>14,155</td>
<td>23,045</td>
<td>81,743</td>
</tr>
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<td></td>
<td>KG</td>
<td>79,242</td>
<td>6,421</td>
<td>10,453</td>
<td>37,078</td>
</tr>
<tr>
<td>737-900ER</td>
<td>LB</td>
<td>188,200</td>
<td>15,206</td>
<td>24,810</td>
<td>88,993</td>
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<tr>
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<td>KG</td>
<td>85,366</td>
<td>6,897</td>
<td>11,254</td>
<td>40,367</td>
</tr>
</tbody>
</table>

### 7.3.3 Maximum Pavement Loads

MODEL 737-600, -700, -800, -900, -900ER WITH AND WITHOUT WINGLETS
\( V_{NG} \) = MAXIMUM VERTICAL NOSE GEAR GROUND LOAD AT MOST FORWARD CENTER OF GRAVITY

\( V_{MG} \) = MAXIMUM VERTICAL MAIN GEAR GROUND LOAD AT MOST AFT CENTER OF GRAVITY

\( H \) = MAXIMUM HORIZONTAL GROUND LOAD FROM BRAKING

NOTE: ALL LOADS CALCULATED USING AIRPLANE MAXIMUM DESIGN TAXI WEIGHT

### Table: Maximum Pavement Loads

<table>
<thead>
<tr>
<th>MODEL</th>
<th>UNITS</th>
<th>MAXIMUM DESIGN TAXI WEIGHT</th>
<th>( V_{NG} ) PER STRUT AT MAX LOAD AT STATIC AFT C.G.</th>
<th>( V_{MG} ) PER STRUT AT MAX LOAD AT STATIC AFT C.G.</th>
<th>( H ) PER STRUT</th>
</tr>
</thead>
<tbody>
<tr>
<td>737 BBJ</td>
<td>LB</td>
<td>171,500</td>
<td>17,400</td>
<td>29,400</td>
<td>78,700</td>
</tr>
<tr>
<td></td>
<td>KG</td>
<td>77,800</td>
<td>7,900</td>
<td>13,340</td>
<td>35,700</td>
</tr>
<tr>
<td>737 BBJ2</td>
<td>LB</td>
<td>174,700</td>
<td>15,100</td>
<td>24,900</td>
<td>81,700</td>
</tr>
<tr>
<td></td>
<td>KG</td>
<td>79,250</td>
<td>6,850</td>
<td>11,300</td>
<td>37,050</td>
</tr>
</tbody>
</table>

\[ \mu = 0.8 \]

7.3.4 MAXIMUM PAVEMENT LOADS

MODEL 737 BBJ, 737 BBJ2
7.4.1 LANDING GEAR LOADING ON PAVEMENT

MODEL 737-100
7.4.2 LANDING GEAR LOADING ON PAVEMENT
MODEL 737-200
7.4.3 LANDING GEAR LOADING ON PAVEMENT
MODEL 737-200 ADVANCED
7.4.4 LANDING GEAR LOADING ON PAVEMENT
MODEL 737-300
7.4.5 LANDING GEAR LOADING ON PAVEMENT

MODEL 737-400
7.4.6 LANDING GEAR LOADING ON PAVEMENT
MODEL 737-500
7.4.7 LANDING GEAR LOADING ON PAVEMENT
MODEL 737-600
7.4.8 LANDING GEAR LOADING ON PAVEMENT
MODEL 737-700, -700 WITH WINGLETS
7.4.9 LANDING GEAR LOADING ON PAVEMENT
MODEL 737 BBJ
7.4.10 LANDING GEAR LOADING ON PAVEMENT
MODEL 737-800, -800 WITH WINGLETS

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7.4.11 LANDING GEAR LOADING ON PAVEMENT

MODEL 737 BBJ2
7.4.12 LANDING GEAR LOADING ON PAVEMENT
MODEL 737-900, -900 WITH WINGLETS
7.4.13 LANDING GEAR LOADING ON PAVEMENT
MODEL 737-900ER, -900ER WITH WINGLETS
7.5 Flexible Pavement Requirements - U.S. Army Corps of Engineers Method (S-77-1) and FAA Design Method

The following flexible-pavement design chart presents the data of five incremental main-gear loads at the minimum tire pressure required at the maximum design taxi weight.

In the example shown in the next page, for a CBR of 25 and an annual departure level of 10,000, the required flexible pavement thickness for an airplane with a main gear loading of 85,000 pounds is 8.2 inches. Similar examples are shown in succeeding charts.

The line showing 10,000 coverages is used for ACN calculations (see Section 7.10).

The FAA design method uses a similar procedure using total airplane weight instead of weight on the main landing gears. The equivalent main gear loads for a given airplane weight could be calculated from Section 7.4.
7.5.1 FLEXIBLE PAVEMENT REQUIREMENTS - U.S. ARMY CORPS OF ENGINEERS DESIGN METHOD (S-77-1) AND FAA DESIGN METHOD

MODEL 737-100, -200 TO 104,000 LB (47,170 KG) MTW
7.5.2 FLEXIBLE PAVEMENT REQUIREMENTS - U.S. ARMY CORPS OF ENGINEERS DESIGN METHOD (S-77-1) AND FAA DESIGN METHOD

MODEL 737-100, -200, -200 ADV AT 110,000 TO 117,500 LB (49,895 TO 53,297 KG) MTW
7.5.3 FLEXIBLE PAVEMENT REQUIREMENTS - U.S. ARMY CORPS OF ENGINEERS DESIGN METHOD (S-77-1) AND FAA DESIGN METHOD (S-77-1)

MODEL (S-77-1) AND FAA DESIGN METHOD

WEIGHT ON MAIN WEIGH TANK (LB) (27,200 ADJ.
AT 160,000 TO 170,000 LBS (72,673 TO 72,873 KG) W/HW, LOW PRESSURE TIRES

WEIGHT ON MAIN WEIGH TANK (LB) (S-77-1) (110,000 LB MW)
7.5.4 FLEXIBLE PAVEMENT REQUIREMENTS - U.S. ARMY CORPS OF ENGINEERS DESIGN METHOD (S-77-1) AND FAA DESIGN METHOD
MODEL 737-200 ADV AT 120,000 TO 128,600 LB (54,431 TO 58,332 KG) MTW
NOTE:
* TIRES = H40 x 14.5 - 19 24 PR. 26 PR. H42 x 16-19 24 PR. 26 PR

7.5.5 FLEXIBLE PAVEMENT REQUIREMENTS - U.S. ARMY CORPS OF ENGINEERS DESIGN METHOD (S-77-1) AND FAA DESIGN METHOD
MODEL 737-300, -400, -500
7.5.6 FLEXIBLE PAVEMENT REQUIREMENTS - U.S. ARMY CORPS OF ENGINEERS DESIGN METHOD (S-77-1) AND FAA DESIGN METHOD
MODEL 737-600, -700, -800, -900, -900ER WITH AND WITHOUT WINGLETS, 737 BBJ, 737 BBJ2
7.6 Flexible Pavement Requirements - LCN Method

To determine the airplane weight that can be accommodated on a particular flexible pavement, both the Load Classification Number (LCN) of the pavement and the thickness must be known.

In the example shown on the next page, flexible pavement thickness is shown at 23.75 in. with an LCN of 42. For these conditions, the apparent maximum allowable weight permissible on the main landing gear is 85,000 lb for an airplane with 138 to 146-psi main gear tires. Similar examples are shown in succeeding charts.

Note: If the resultant aircraft LCN is not more that 10% above the published pavement LCN, the bearing strength of the pavement can be considered sufficient for unlimited use by the airplane. The figure 10% has been chosen as representing the lowest degree of variation in LCN that is significant (reference: ICAO Aerodrome Manual, Part 2, "Aerodrome Physical Characteristics," Chapter 4, Paragraph 4.1.5.7v, 2nd Edition dated 1965).
7.6.1 FLEXIBLE PAVEMENT REQUIREMENTS - LCN METHOD
MODEL 737-100, 200 AT 104,000 LB (47,174 KG) MTW

NOTES:
* TIMES = H40 x 14 - 16 22 FR, C40 x 14 - 21 22 FR
* THE PRESSURE RANGE FROM 150 TO 146 PSI (9.70 TO 10.27 KG/SQ CM)

[Graph showing equivalent single-wheel load vs. inches and load classification number (LCN)]

FLEXIBLE PAVEMENT THICKNESS, h

WEIGHT ON MAIN
LANDING GEAR
(SEC 7.4)
LB (KG)
98,800 (44,815)
80,000 (36,555)
70,000 (31,755)
55,000 (24,948)

MAXIMUM POSSIBLE MAIN GEAR
LOAD AT MAXIMUM DESIGN TAXI
WEIGHT AND AFT CG (104,000 LB)
7.6.2 FLEXIBLE PAVEMENT REQUIREMENTS - LCN METHOD

MODEL 737-100, -200, -200 ADV AT 110,000 TO 117,500 LB (49,895 TO 53,297 KG) MTW

NOTES:

* TIRES = H40 x 14 - 16 24PR, 040 x 14 - 21 24PR
* TIRE PRESSURE RANGE FROM 156 TO 168 PSI (10.97 TO 11.81 KG/SQ CM)

WEIGHT ON MAIN LANDING GEAR
(SEE SEC 7.4)

109,000 (49,441)
90,000 (40,823)
70,000 (31,751)
50,000 (22,680)

WEIGHT AND AFT CG (117,500 LB)

MAXIMUM POSSIBLE MAIN GEAR LOAD AT MAXIMUM DESIGN TAXI WEIGHT AND AFT CG (117,500 LB)

EQUIVALENT SINGLE-WHEEL LOAD (IN LBS OR KG)

INCHES

FLEXIBLE PAVEMENT THICKNESS, h

LOAD CLASSIFICATION NUMBER (LCN)

CENTIMETERS

25 30 40 50 60 70 80 90 100 160
7.6.3 FLEXIBLE PAVEMENT REQUIREMENTS - LCN METHOD

MODEL 737-200 ADV AT 116,000 TO 117,500 LB (52,617 TO 53,297 KG) MTW, LOW PRESSURE TIRES

NOTES:
* TIRES - C40 x 18 - 17.20 FR
* TIRE PRESSURE AT 95 OR 96 PSI (6.68 OR 6.75 KG/SQ CM)

Equivalent Single-Wheel Load (1,000 pounds)

Weight on Main Landing Gear (See Sec 7.4)

- 100,000 (45,360 kg)
- 90,000 (40,823 kg)
- 80,000 (35,715 kg)
- 70,000 (31,751 kg)
- 50,000 (22,680 kg)

Maximum Possible Main Gear Load at Maximum Design Taxi Weight and Left CG (117,500 LB)

Equivalent Single-Wheel Load (1,000 pounds)

Load Classification Number (LCN)

Flexible Pavement Thickness, \( h \)

Centimeters (inches)
7.6.4 FLEXIBLE PAVEMENT REQUIREMENTS - LCN METHOD

MODEL 737-200 ADV AT 120,000 TO 128,600 LB (54,431 TO 58,332 KG) MTW

NOTES:
* TIRES - H40 x 14 = 16 24 PR, C40 x 14 = 21 24 PR OR 26 PR; H40 x 14.5 = 19 24 PR
* THE PRESSURE RANGE FROM 170 TO 182 PSI (11.95 TO 12.80 KG/SQ CM)

WEIGHT ON MAIN LANDING GEAR
(SEE SEC 7.4)
LD 116,200 (52,635)
100,000 (45,359)
80,000 (36,257)
60,000 (27,215)

MAXIMUM POSSIBLE MAIN GEAR LOAD AT MAXIMUM DESIGN TAXI WEIGHT AND AFT CG (128,600 LB)

LOAD CLASSIFICATION NUMBER (LCN)

FLEXIBLE PAVEMENT THICKNESS, t

INCHES

(CENTIMETERS)
7.6.5 FLEXIBLE PAVEMENT REQUIREMENTS - LCN METHOD

MODEL 737-300, 400, 500
7.7 Rigid Pavement Requirements - Portland Cement Association Design Method

The Portland Cement Association method of calculating rigid pavement requirements is based on the computerized version of "Design of Concrete Airport Pavement" (Portland Cement Association, 1965) as described in XP6705-2, "Computer Program for Airport Pavement Design" by Robert G. Packard, Portland Cement Association, 1968.

The following rigid pavement design chart presents the data for five incremental main gear loads at the minimum tire pressure required at the maximum design taxi weight.

In the example shown on the next page, for an allowable working stress of 400 psi, a main gear load of 70,000 lb, and a subgrade strength (k) of 300, the required rigid pavement thickness is 7.7 in. Similar examples are shown in succeeding charts.
7.7.1 RIGID PAVEMENT REQUIREMENTS - PORTLAND CEMENT ASSOCIATION DESIGN METHOD
MODEL 737-100, -200 TO 104,000 LB (47,170 KG) MTW

NOTES:
* THES = H40 x 14 - 16 22 PR: C40 x 14 - 21 22PR
* PRESSURE RANGE FROM 150 TO 146 PSI (9,70 TO 10.27 KG/SQ CM)

MAXIMUM POSSIBLE MAIN GEAR LOAD AT MAXIMUM DESIGN TAXI WEIGHT AND AFT C.G. (104,000 LB MTW)

WEIGHT ON MAIN LANDING GEAR (SEE SEC 7.4)
LW (KG)
98,800 (44,815)
85,000 (38,655)
70,000 (31,775)
55,000 (24,948)

NOTE: THE VALUES OBTAINED BY USING THE MAXIMUM LOAD REFERENCE LINE AND ANY VALUE OF K ARE EXACT. FOR LOADS LESS THAN MAXIMUM, THE CURVES ARE EXACT FOR K = 300 BUT DEVIATE SUFFICIENTLY FOR OTHER VALUES OF K.

REFERENCES: "DESIGN OF CONCRETE AIRPORT PAVEMENT" AND "COMPUTER PROGRAM FOR AIRPORT PAVEMENT DESIGN - PROGRAM POLK" PORTLAND CEMENT ASSOCIATION.
7.7.2 RIGID PAVEMENT REQUIREMENTS - PORTLAND CEMENT ASSOCIATION DESIGN METHOD
MODEL 737-100, -200, ADVANCED 737-200 AT 110,000 TO 117,500 LB (49,900 TO 53,290 KG) MTW

NOTES:
* TIRES - H40 x 14 - 16.24 PR; C40 x 14 - 21.24 PR
* PRESSURE RANGE FROM 156 TO 168 PSI (10.97 TO 11.81 KG/SQ CM)

REFERENCES:
- DESIGN OF CONCRETE AIRPORT PAVEMENT AND "COMPUTER PROGRAM FOR AIRPORT PAVEMENT DESIGN - PROGRAM HDM" PORTLAND CEMENT ASSOCIATION.
7.7.3 RIGID PAVEMENT REQUIREMENTS - PORTLAND CEMENT ASSOCIATION DESIGN METHOD

MODEL ADV 737-200 AT 116,000 TO 117,500 LB (52,610 TO 53,290 KG) MTW (LOW PRESSURE TIRES)
7.7.4 RIGID PAVEMENT REQUIREMENTS - PORTLAND CEMENT ASSOCIATION DESIGN METHOD

MODEL ADV 737-200 AT 120,000 TO 128,000 LB (54,430 TO 58,330 KG) MTW

D6-58325-6

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NOTES:
* TIRES - H40 x 14.5-19 24PR, 26PR; H42 x 16-19 26PR

7.7.5 RIGID PAVEMENT REQUIREMENTS - PORTLAND CEMENT ASSOCIATION DESIGN METHOD
MODEL 737-300, -400, -500
7.7.5 RIGID PAVEMENT REQUIREMENTS - PORTLAND CEMENT ASSOCIATION DESIGN METHOD
MODEL 737-300, -400, -500 (LOW/PRESSURE TIRES)
7.7.6 RIGID PAVEMENT REQUIREMENTS - PORTLAND CEMENT ASSOCIATION DESIGN METHOD
MODEL 737-600, -700, -800, -900, -900ER WITH AND WITHOUT WINGLETS, 737 BBJ, 737 BBJ2
7.7.7 RIGID PAVEMENT REQUIREMENTS - PORTLAND CEMENT ASSOCIATION DESIGN METHOD

MODEL 737-600, -700 (OPTIONAL TIRES)
7.8 Rigid Pavement Requirements - LCN Conversion

To determine the airplane weight that can be accommodated on a particular rigid pavement, both the LCN of the pavement and the radius of relative stiffness (t) of the pavement must be known.

In the example shown in Section 7.8.2, for a rigid pavement with a radius of relative stiffness of 40 with an LCN of 42.5, the maximum allowable weight permissible on the main landing gear is 85,000 lb. Similar examples are shown in succeeding charts.

Note: If the resultant aircraft LCN is not more that 10% above the published pavement LCN, the bearing strength of the pavement can be considered sufficient for unlimited use by the airplane. The figure 10% has been chosen as representing the lowest degree of variation in LCN that is significant (reference: ICAO Aerodrome Manual, Part 2, "Aerodrome Physical Characteristics," Chapter 4, Paragraph 4.1.5.7v, 2nd Edition dated 1965).
RADIUS OF RELATIVE STIFFNESS (R)
VALUES IN INCHES

\[ R = 4 \sqrt[3]{\frac{E d^3}{12(1-\mu^2)k}} = 24.1652 \sqrt[3]{\frac{d^3}{k}} \]

WHERE:
- \( E \) = YOUNG’S MODULUS OF ELASTICITY = 4 x 10^6 psi
- \( k \) = SUBGRADE MODULUS, LB PER CU IN
- \( d \) = RIGID PAVEMENT THICKNESS, IN
- \( \mu \) = POISSON’S RATIO = 0.15

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7.8.1 RADIUS OF RELATIVE STIFFNESS
(REFERENCE: PORTLAND CEMENT ASSOCIATION)
7.8.2 RIGID PAVEMENT REQUIREMENTS - LCN CONVERSION

MODEL 737-100, -200 TO 747-100 (47,070 KG MTW)

NOTES:
* TIMES = 40x14-16 22FR; 040x14-21 22FR
* PRESSURE RANGE FROM 138 TO 146 PSI (9.70 TO 10.27 KG/SQ CM)
* EQUIVALENT SINGLE-WHEEL LOADS ARE DERIVED FROM ICAO AERODROME MANUAL, PART 2 PAR 4.1.5, DATED 1985.

WEIGHT ON MAIN LANDING GEAR (SEE SEC. 7.4)
Lb (Kg)
98,800 (44,815)
85,000 (38,555)
70,000 (31,751)
55,000 (24,948)

LOAD CLASSIFICATION NUMBER (LCN)
20 25 30 35 40 45 50 55 60 65 70

INCHES
20 30 40 50 60 70 80 90

CENTIMETERS
60 70 80 90 100 120 140 160 180 200

RADIUS OF RELATIVE STIFFNESS, \( r \)
RIGID PAVEMENT REQUIREMENTS - LCN CONVERSION

MODE 737-100, 200 AT 110,000 TO 117,500 LB (49,900 TO 53,290 KG) MTW

7.8.3

NOTES:
* TIRES - 40x14-16 24FR; 040x14-21 24FR
* PRESSURE RANGE FROM 156 TO 168 PSI (10.97 TO 11.81 KG/SQ CM)
* EQUIVALENT SINGLE-WHEEL LOADS ARE DERIVED FROM
  ICAO AERODROME MANUAL, PART 2 PAR 41.5, DATED 1985.

Equivalent Single-Wheel Load vs. Radius of Relative Stiffness (i)

Weight on Main Landing Gear (see sec. 7.4) (LB (KG))
109,000 (49,441)
90,000 (40,823)
70,000 (31,751)
50,000 (22,680)

Equivalent Single-Wheel Load vs. Load Classification Number (LCN)

Maximum Possible Main Gear Load at Maximum Design Taxi Weight and Lift CG (117,500 LB) (MTW)

Load Classification Number (LCN)
20 25 30 40 50 60 70
7.8.4 RIGID PAVEMENT REQUIREMENTS - LCN CONVERSION

MODEL ADV 737-200 AT 116,000 TO 117,500 LB (52,610 TO 53,290 KG)
MTW (LOW PRESSURE TIRES)

NOTES:
* TIRES = C40x18-17 20PR
* PRESSURE AT 95 OR 96 PSI (6.68 OR 6.75 KG/SQ CM)
* EQUIVALENT SINGLE-WHEEL LOADS ARE DERIVED FROM
ICAO AERODROME MANUAL, PART 2 PAR 4.1.3, DATED 1965.
7.8.5 RIGID PAVEMENT REQUIREMENTS - LCN CONVERSION

MODELS D/75-200 AT 120,000 TO 128,600 LB (54,430 TO 58,330 KG) MTW

NOTES:
* TIRES - 40x14-16 24PR; C40x14-21 24PR OR 26PR; H40x14.5-19 24PR
* PRESSURE RANGE FROM 170 TO 182 PSI (11.95 TO 12.80 KG/SQ CM)
* EQUIVALENT SINGLE-WHEEL LOADS ARE DERIVED FROM LOAD AERODROME MANUAL, PART 2 PAR 4.1.3, DATED 1965.
NOTES:

* TIRES - H40 x 14.5-19 24PR, 28PR; H42 x 16-29 24PR, 28PR

* EQUIVALENT SINGLE-WHEEL LOADS ARE DERIVED FROM LOAD AERODROME MANUAL, PART 2 PAR 4.13, DATED 1965.
RIGID PAVEMENT REQUIREMENTS - LCN CONVERSION

NOTES:
- TIRES - H44.5 x 16.5 - 21 SPHR
- EQUIVALENT SINGLE-WHEEL LOADING ARE DERIVED FROM ICAO AERODROME MANUAL, PART 2 PAR 4.1.3, DATED 1965.

MAXIMUM POSSIBLE MAIN GEAR LOAD AT MAXIMUM DESIGN TAXI WEIGHT AND 4FT CG
(188,200 LB RTW)

WEIGHT ON MAIN LANDING GEAR
(SEE SEC 7.4)

LW
(KG)
178,037 (80,356)
160,000 (72,375)
140,000 (63,505)
120,000 (54,431)
100,000 (45,359)
80,000 (36,287)

1,000 POUNDS
(1,000 KILOGRAMS)

INCHES

CENTIMETERS

RADIUS OF RELATIVE STIFFNESS, \( \lambda \)
7.9 Rigid Pavement Requirements - FAA Design Method

The following rigid pavement design charts present data on five incremental main gear loads at the minimum tire pressure required at the maximum design taxi weight.

In the example shown in the next page, the pavement flexural stress is shown at 700 psi, the subgrade strength is shown at $k = 550$, and the annual departure level is 6,000. For these conditions, the required rigid pavement thickness for an airplane with main gear load of 100,000 pounds is 10.4 inches. Similar examples are shown in succeeding charts.
7.9.1 Rigid Pavement Requirements - FAA Design Method

Model 737-100, -200

[Graph showing load vs. thickness relationship for different load scenarios and annual repetitions.]

Maximum Load at Maximum Design Taxi Weight and Alt 0.0 (126,600 lb, 57.5 Tons)

- Actual Load vs. Maximum Load
- Weight on Main Landing Gear (see next page)
- Lever (L)

Note: 20-Year Pavement Life

Annual Repetitions:
- 1,200
- 3,000
- 6,000
- 15,000
- 25,000

Flexible Thickness:
- 1.200 in. (3.05 cm)
- 3.000 in. (7.62 cm)
- 6.000 in. (15.24 cm)
- 15,000 in. (38.10 cm)
- 25,000 in. (63.50 cm)

Lift Cycles: 1,200, 3,000, 6,000, 15,000, 25,000
7.9.2 RIGID PAVEMENT REQUIREMENTS - FAA DESIGN METHOD

MODEL AD/73-20 (LOW PRESSURE TIRES)
7.9.3 RIGID PAVEMENT REQUIREMENTS - FAA DESIGN METHOD

MODEL 737-300, -400, -500

![Diagram showing rigid pavement requirements for Model 737-300, -400, -500 with various load scenarios and annual departures.]
7.9.5 RIGID PAVEMENT REQUIREMENTS - FAA DESIGN METHOD

MODEL 737-600, -700, -800, -900, -900ER WITH AND WITHOUT WINGLETS, 737 BBJ, 737 BBJ2
7.9.6 RIGID PAVEMENT REQUIREMENTS - FAA DESIGN METHOD

MODEL 737-600, -700 (OPTIONAL TIRES)

NOTE: TIME PRESSURE CONSTANT AT 185 PSI (12.91 KG/SQ CM)

MAXIMUM POSSIBLE MAIN GEAR LOAD AT MAXIMUM DESIGN TAXI WEIGHT AND LFT CG (155,000 LB MW)

<table>
<thead>
<tr>
<th>Load</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>115,900</td>
<td>52,871</td>
</tr>
<tr>
<td>96,550</td>
<td>43,794</td>
</tr>
<tr>
<td>77,250</td>
<td>35,040</td>
</tr>
</tbody>
</table>

WEIGHT ON MAIN LANDING GEAR (SEE Sec 7.4)

<table>
<thead>
<tr>
<th>Load</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>142,135</td>
<td>64,471</td>
</tr>
<tr>
<td>133,210</td>
<td>61,325</td>
</tr>
</tbody>
</table>

ANNUAL DEPARTURES
1,200
3,000
6,000
15,000
25,000

NOTE: 20-YEAR PAVEMENT LIFE

PAVEMENT THICKNESS (CENTIMETERS)

PAVEMENT THICKNESS (INCHES)
### 7.10 ACN/PCN Reporting System: Flexible and Rigid Pavements

To determine the ACN of an aircraft on flexible or rigid pavement, both the aircraft gross weight and the subgrade strength category must be known. In the chart in Section 7.10.1, for an aircraft with gross weight of 80,000 lb and low subgrade strength, the flexible pavement ACN is 19.5. In Section 7.10.20, for the same gross weight and subgrade strength, the rigid pavement ACN is 20.6.

Note: An aircraft with an ACN equal to or less that the reported PCN can operate on that pavement subject to any limitations on the tire pressure.

The following table provides ACN data in tabular format similar to the one used by ICAO in the “Aerodrome Design Manual Part 3, Pavements”. If the ACN for an intermediate weight between maximum taxi weight and the empty weight of the aircraft is required, Figures 7.10.1 through 7.10.38 should be consulted.

<table>
<thead>
<tr>
<th>AIRCRAFT MODEL</th>
<th>ALL-UP MASS/OPERATING MASS EMPTY LB (KG)</th>
<th>LOAD ON ONE MAIN GEAR LEG (%)</th>
<th>TIRE PRESSURE PSI (MPa)</th>
<th>HIGH 150</th>
<th>MEDIUM 80</th>
<th>LOW 40</th>
<th>ULTRA LOW 20</th>
<th>ACN FOR FLEXIBLE PAVEMENT SUBGRADES – CBR</th>
<th>ACN FOR RIGID PAVEMENT SUBGRADES – MN/m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>737-100</td>
<td>111,000 (50,349) 62,000 (28,123)</td>
<td>45.95</td>
<td>157 (1.08)</td>
<td>27</td>
<td>14</td>
<td>15</td>
<td>31</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>737-200</td>
<td>128,600 (58,332) 65,300 (29,620)</td>
<td>45.96</td>
<td>182 (1.25)</td>
<td>34</td>
<td>15</td>
<td>16</td>
<td>38</td>
<td>17</td>
<td>16</td>
</tr>
<tr>
<td>737-300</td>
<td>140,000 (63,503) 72,540 (32,904)</td>
<td>45.43</td>
<td>201 (1.38)</td>
<td>38</td>
<td>17</td>
<td>18</td>
<td>42</td>
<td>19</td>
<td>18</td>
</tr>
<tr>
<td>737-400</td>
<td>150,500 (68,266) 74,170 (33,643)</td>
<td>46.91</td>
<td>185 (1.27)</td>
<td>42</td>
<td>18</td>
<td>19</td>
<td>47</td>
<td>20</td>
<td>19</td>
</tr>
<tr>
<td>737-500</td>
<td>134,000 (60,781) 69,030 (31,311)</td>
<td>46.12</td>
<td>194 (1.33)</td>
<td>37</td>
<td>17</td>
<td>18</td>
<td>40</td>
<td>19</td>
<td>18</td>
</tr>
<tr>
<td>737-600</td>
<td>145,000 (65,771) 80,200 (36,378)</td>
<td>45.83</td>
<td>182 (1.25)</td>
<td>37</td>
<td>19</td>
<td>19</td>
<td>41</td>
<td>21</td>
<td>19</td>
</tr>
<tr>
<td>737-700</td>
<td>144,000 (65,317) 80,200 (36,378)</td>
<td>45.83</td>
<td>168 (1.15)</td>
<td>36</td>
<td>18</td>
<td>19</td>
<td>40</td>
<td>20</td>
<td>18</td>
</tr>
<tr>
<td>737-800</td>
<td>155,000 (70,307) 83,000 (37,648)</td>
<td>45.85</td>
<td>197 (1.36)</td>
<td>41</td>
<td>19</td>
<td>20</td>
<td>46</td>
<td>22</td>
<td>22</td>
</tr>
<tr>
<td>737-900</td>
<td>155,000 (70,307) 83,000 (37,648)</td>
<td>45.85</td>
<td>179 (1.23)</td>
<td>40</td>
<td>19</td>
<td>20</td>
<td>45</td>
<td>22</td>
<td>22</td>
</tr>
<tr>
<td>737 BBJ</td>
<td>171,500 (77,790) 91,000 (45,360)</td>
<td>45.85</td>
<td>204 (1.41)</td>
<td>47</td>
<td>25</td>
<td>26</td>
<td>52</td>
<td>28</td>
<td>28</td>
</tr>
<tr>
<td>737-800</td>
<td>174,700 (79,242) 91,300 (41,413)</td>
<td>46.79</td>
<td>204 (1.41)</td>
<td>49</td>
<td>23</td>
<td>24</td>
<td>54</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>737 BBJ2</td>
<td>174,700 (79,260) 100,000 (45,360)</td>
<td>46.79</td>
<td>204 (1.41)</td>
<td>49</td>
<td>24</td>
<td>26</td>
<td>54</td>
<td>28</td>
<td>28</td>
</tr>
<tr>
<td>737-900</td>
<td>174,700 (79,242) 94,590 (42,901)</td>
<td>46.79</td>
<td>204 (1.41)</td>
<td>49</td>
<td>24</td>
<td>26</td>
<td>54</td>
<td>28</td>
<td>28</td>
</tr>
<tr>
<td>737-900ER</td>
<td>188,200 (85,366) 98,495 (44,676)</td>
<td>47.29</td>
<td>220 (1.52)</td>
<td>56</td>
<td>26</td>
<td>27</td>
<td>61</td>
<td>29</td>
<td>29</td>
</tr>
</tbody>
</table>

Note: Values for 737-700, -800, -900, -900ER are valid for models with and without winglets.
7.10.1 AIRCRAFT CLASSIFICATION NUMBER - FLEXIBLE PAVEMENT

MODEL 737-100, -200 TO 104,000 LB (47,170 KG) MTW

NOTES:

* Tires - H40 x 14-6, 22PR, C40 x 14-21 22PR
* Pressure range from 138 to 145 PSI (9.70 to 10.27 KG/SQ CM)

CODE D = CBR 3 (ULTRA LOW)
CODE C = CBR 6 (LOW)
CODE B = CBR 10 (MEDIUM)
CODE A = CBR 15 (HIGH)

NOTES:

2. To determine main landing gear loading, see Section 7.4.
3. Percent weight on main landing gear: 92.6
NOTES:
- TIRES - H40 x 14-16, 24PR, C40 x 14-21 24PR
- PRESSURE RANGE FROM 156 TO 166 PSI (10.79 TO 11.81 KG/SQ CM)

CODE D = CBR 3 (ULTRA LOW)
CODE C = CBR 6 (LOW)
CODE B = CBR 10 (MEDIUM)
CODE A = CBR 15 (HIGH)

NOTES:
1. ACN WAS DETERMINED AS REFERENCED IN AMENDMENT 35 TO ICAO ANNEX 14, "AERODROMES", 7TH EDITION, JUNE 1976.
2. TO DETERMINE MAIN LANDING GEAR LOADING, SEE SECTION 7.4.
3. PERCENT WEIGHT ON MAIN LANDING GEAR: 91.9
7.10.3 AIRCRAFT CLASSIFICATION NUMBER - FLEXIBLE PAVEMENT

NOTES:
* TIMES = C40 x 18-17 20PR
* PRESSURE AT 95 OR 96 PSI (16.68 OR 6.75 KG/SQ CM)

MODEL 737-100, -200, ADV 737-200 AT 110,000 TO 117,500 LB (49,900 TO 53,290 KG) MTW

LOW PRESSURE TIRES

- CODE 0 = CRR 3 (ULTRA LOW)
- CODE 1 = CRR 6 (LOW)
- CODE 2 = CRR 10 (MEDIUM)
- CODE 4 = CRR 15 (HIGH)

NOTES:
1. ACN WAS DETERMINED AS REFERENCED IN AMENDMENT 35 TO ICAO ANNEX 14, "AERODROMES", 7TH EDITION, JUNE 1976.
2. TO DETERMINE MAIN LANDING GEAR LOADING, SEE SECTION 7.4.
3. PERCENT WEIGHT ON MAIN LANDING GEAR: 91.9

AIRCRAFT CLASSIFICATION NUMBER (ACN) vs. AIRCRAFT GROSS WEIGHT

AIRCRAFT GROSS WEIGHT (1,000 LB) vs. (1,000 KG)
7.10.4 AIRCRAFT CLASSIFICATION NUMBER - FLEXIBLE PAVEMENT
MODEL ADV 737-200 AT 120,000 TO 128,600 LB (54,3000 TO 58,330 KG) MTW

NOTES:
* TIRE SIZES - 40 x 14-16 24PR; C40 x 14-21 24PR OR 26PR; H40 x 14.5-19 24PR
* PRESSURE RANGE FROM 170 TO 181 PSI (11.95 TO 12.80 KG/SQ CM)

CODE 0 = CBR 3 (ULTRA LOW)
CODE 1 = CBR 6 (LOW)
CODE 2 = CBR 10 (MEDIUM)
CODE 3 = CBR 15 (HIGH)

1. ACN WAS DETERMINED AS REFERENCED IN AMENDMENT 35 TO ICAO ANNEX 14.
2. TO DETERMINE MAIN LANDING GEAR LOADING, SEE SECTION 7.4.
3. PERCENT WEIGHT ON MAIN LANDING GEAR: 91.9
7.10.5 AIRCRAFT CLASSIFICATION NUMBER - FLEXIBLE PAVEMENT

MODEL 737-300

NOTES:

1. ACN WAS DETERMINED AS REFERENCED IN AMENDMENT 58 TO ICAO ANNEX 14, "AERODROMES", 5TH EDITION, MARCH 1983.
2. TO DETERMINE MAIN LANDING GEAR LOADING, SEE SECTION 7.4.
3. PERCENT WEIGHT ON MAIN LANDING GEAR: 90.85

CODE D = CER 3 (ULTRA LOW)
CODE C = CER 6 (LOW)
CODE B = CER 10 (MEDIUM)
CODE A = CER 15 (HIGH)

TRES = H40 x 14.5-19 24PR
7.10.6 AIRCRAFT CLASSIFICATION NUMBER - FLEXIBLE PAVEMENT

MODEL 737-300 (LOW PRESSURE TIRES)

NOTES:
* TIRES = H42 x 16-19 24PR

1. ACN WAS DETERMINED AS REFERENCED IN AMENDMENT 58 TO ICAO ANNEX 14, "AERODROMES", 8TH EDITION, MARCH 1983
2. TO DETERMINE MAIN LANDING GEAR LOADING, SEE SECTION 7.4.
3. PERCENT WEIGHT ON MAIN LANDING GEAR: 90.85
NOTES:
2. To determine main landing gear loading, see Section 7.4.
3. Percent weight on main landing gear: 93.8

* TIMES = H42 x 16.19 28IPR
7.10.8 AIRCRAFT CLASSIFICATION NUMBER - FLEXIBLE PAVEMENT
MODEL 737-400 (LOW PRESSURE TIRES)
7.10.9 AIRCRAFT CLASSIFICATION NUMBER - FLEXIBLE PAVEMENT

MODEL 737-500

NOTES:

1. ACN WAS DETERMINED AS REFERENCED IN AMENDMENT 38 TO ICAO ANNEX 14, "AERODROMES", 6TH EDITION, MARCH 1983.
2. TO DETERMINE MAIN LANDING GEAR LOADING, SEE SECTION 7.4.
3. PERCENT WEIGHT ON MAIN LANDING GEAR: 92.2
NOTES:
* Tires = H42 x 16-19 24PR

2. To determine main landing gear loading, see Section 7.4.
3. Percent weight on main landing gear: 92.2.
NOTES:
* TIMES - H44.5 x 16.0 - 21, 24PR OR 26PR
* PRESSURE - 182 PSI (12.80 KG/SQ CH)

2. TO DETERMINE MAIN LANDING GEAR LOADING, SEE SECTION 5.4.
3. PERCENT WEIGHT ON MAIN LANDING GEAR: 91.66
7.10.12 AIRCRAFT CLASSIFICATION NUMBER - FLEXIBLE PAVEMENT

MODEL 737-600 (OPTIONAL TIRES)

NOTES:
* TIRES - H44.5 x 16.0 - 21, 28PR
* PRESSURE - 168 PSI (11.81 KG/SQ CM)

CODE D - GBR 3 (ULTRA LOW)
CODE C - GBR 6 (LOW)
CODE B - GBR 10 (MEDIUM)
CODE A - GBR 15 (HIGH)

1. ACN was determined as referenced in ICAO ANNEX 14, "AERODROMES", 3RD EDITION, JULY, 1999.
2. TO DETERMINE MAIN LANDING GEAR LOADING, SEE SECTION 7.4.
3. PERCENT WEIGHT ON MAIN LANDING GEAR: 91.66

AIRCRAFT CLASSIFICATION NUMBER (ACN)

1,000 LB

1,000 KG

AIRCRAFT GROSS WEIGHT

80 90 100 110 120 130 140 150 160

0 20 40 60 80

0 40 45 50 55

0
NOTES:

* TIRES - H43.5 x 16.0 - 21, 26PR
* PRESSURE - 197 PSI (13.85 KGF/SQ CM)

CODE D - CBR 3 (ULTRA LOW)
CODE C - CBR 6 (LOW)
CODE B - CBR 10 (MEDIUM)
CODE A - CBR 15 (HIGH)

1. ACN WAS DETERMINED AS REFERENCED IN ICAO ANNEX 14, "AERODROMES", 3RD EDITION, JULY 1999
2. TO DETERMINE MAIN LANDING GEAR LOADING, SEE SECTION 7.4
3. PERCENT WEIGHT ON MAIN LANDING GEAR: 91.7
NOTES:

* TIRES = H46.5 x 16.5 - 21.28PR
* PRESSURE = 204 PSI (14.54 KG/SQ CM)

CODE D - CRR 3 (ULTRA LOW)
CODE C - CRR 6 (LOW)
CODE B - CRR 10 (MEDIUM)
CODE A - CRR 15 (HIGH)

NOTES:
1. ACN WAS DETERMINED AS REFERENCED IN AMENDMENT 38 TO ICAO ANNEX 14 "AERONAUTICS", 5TH EDITION, MARCH 1985
2. TO DETERMINE MAIN LANDING GEAR LOADING, SEE SECTION 7.4
3. PERCENT WEIGHT ON MAIN LANDING GEAR: 91.72
7.10.16 AIRCRAFT CLASSIFICATION NUMBER - FLEXIBLE PAVEMENT

Model 737-800 with and without winglets

NOTES:
1. ACN was determined as referenced in ICAO ANNEX 14, "AERODROMES", 3RD EDITION, JULY 1999.
2. To determine main landing gear loading, see Section 7.4.
3. Percent weight on main landing gear: 93.58

Tires - H44.5 x 16.5 - 21, 28PR
Pressure - 204 PSI (14.34 KG/SQ CM)
7.10.18 AIRCRAFT CLASSIFICATION NUMBER - FLEXIBLE PAVEMENT
MODEL 737-900 WITH AND WITHOUT WINGLETS

NOTES:
- THRES = H=4.5 x 16.5 = 21.2 feet
- PRESSURE = 204 PSI (14.34 KPA/CM)

ACE-150 ANNEX 1,14,1999
2. DETERMINING MAIN LANDING GEAR LOADING,
3. AIRCRAFT CROSS-WEIGHT MAIN LANDING GEAR (EAF: 95.38)

D6-58325-6
OCTOBER 2005  511
7.10.19 AIRCRAFT CLASSIFICATION NUMBER - FLEXIBLE PAVEMENT

NOTE:
- TIRE SIZE = M44.5 x 16.5 = 21,300R
- PRESSURE = 220 PSI (15.47 KG/SQ CM)

CODE D = CR 5 (ULTRA LOW)
CODE C = CR 6 (LOW)
CODE B = CR 10 (MEDIUM)
CODE A = CR 15 (HIGH)

NOTE:
2. TO DETERMINE MAIN LANDING GEAR LOADING, SEE SECTION 7.4.
3. PERCENT WEIGH ON MAIN LANDING GEAR: 94.5%

1,000 LBS

110 120 130 140 150 160 170 180 190

50 55 60 65 70 75 80 85

(1,000 KG) AIRCRAFT GROSS WEIGHT
7.10.21 AIRCRAFT CLASSIFICATION NUMBER - RIGID PAVEMENT

MODEL 737-100, -200, ADV 737-200 AT 110,000 TO 117,500 LB (49,900 TO 53,290 KG) MTW

NOTES:
1. ACN WAS DETERMINED AS REFERENCED IN AMENDMENT 35 TO ICAO ANNEX 14, "AEROROMES", 7TH EDITION, JUNE 1976.
2. TO DETERMINE MAIN LANDING GEAR LOADING, SEE SECTION 7.4.
3. PERCENT WEIGHT ON MAIN LANDING GEAR: 92.6
7.10.22  
AIRCRAFT CLASSIFICATION NUMBER - RIGID PAVEMENT

(LOW PRESSURE TIRES)

NOTES:
* TIRES = C 40 x 18-17 20PR
* PRESSURE 95 OR 96 PSI (6.68 OR 6.75 KG/SQ CM)

CODE D - k = 75 (ULTRA LOW)
CODE C - k = 150 (LOW)
CODE B - k = 300 (MEDIUM)
CODE A - k = 550 (HIGH)

NOTES:
1. ACN WAS DETERMINED AS REFERENCED IN
   AMENDMENT 55 TO 1020 ANNEX 14,
   "AERMEN EN", 7TH EDITION, JUNE 1976.
2. TO DETERMINE MAIN LANDING GEAR LOADING,
   SEE SECTION 7.4.
3. PERCENT WEIGHT ON MAIN LANDING GEAR: 91.9
7.10.23 AIRCRAFT CLASSIFICATION NUMBER - RIGID PAVEMENT

MODEL ADV 737-200 AT 120,000 TO 128,600 LB (54,300 TO 58,330 KG) MTW
7.10.25 AIRCRAFT CLASSIFICATION NUMBER - RIGID PAVEMENT
MODEL 737-300 (LOW PRESSURE TIRES)
NOTES:

* TIMES = H42 x 16-19 26PR

CODE D - k = 75 (ULTRA LOW)
CODE C - k = 150 (LOW)
CODE B - k = 300 (MEDIUM)
CODE A - k = 550 (HIGH)

1. ACN WAS DETERMINED AS REFERENCED IN AMENDMENT 38 TO ICAO ANNEX 14, "AERODROMES", 8TH EDITION, MARCH 1983
2. TO DETERMINE MAIN LANDING GEAR LOADING, SEE SECTION 7.4.
3. PERCENT WEIGHT ON MAIN LANDING GEAR: 90.85
7.10.27
AIRCRAFT CLASSIFICATION NUMBER - RIGID PAVEMENT

Model 737-400 (LOW PRESSURE TIRES)

Notes:
* Tires - H42 x 16-19 24PR

- Code D - k = 75 (ULTRA LOW)
- Code C - k = 150 (LOW)
- Code B - k = 300 (MEDIUM)
- Code A - k = 550 (HIGH)

Notes:
2. To determine main landing gear loading, see Section 7.4.
3. Percent weight on main landing gear: 92.86
7.10.28
AIRCRAFT CLASSIFICATION NUMBER - RIGID PAVEMENT

NOTES:
* TIMES - H40 x 14.5-19 24PR

- CODE D - k = 75 (ULTRA LOW)
- CODE C - k = 150 (LOW)
- CODE B - k = 300 (MEDIUM)
- CODE A - k = 550 (HIGH)

NOTES:
1. ACN WAS DETERMINED AS REFERENCED IN AMENDMENT 3B TO ICAO ANNEX 14, "AERODROMES", 8TH EDITION, MARCH 1983.
2. TO DETERMINE MAIN LANDING GEAR LOADING, SEE SECTION 7.4.
3. PERCENT WEIGHT ON MAIN LANDING GEAR: 92.2

AIRCRAFT CLASSIFICATION NUMBER (ACN)

AIRCRAFT GROSS WEIGHT

1,000 LBS
(1,000 KG)
7.10.29 AIRCRAFT CLASSIFICATION NUMBER - RIGID PAVEMENT

MODEL 737-500 (LOW PRESSURE TIRES)

NOTES:

* TIRES = H42 x 16-19 24PR

1. ACN WAS DETERMINED AS REFERENCED IN AMENDMENT 58 TO ICAO ANNEX 14, "AERODROMES", 6TH EDITION, MARCH 1983
2. TO DETERMINE MAIN LANDING GEAR LOADING, SEE SECTION 7.4
3. PERCENT WEIGHT ON MAIN LANDING GEAR: 92.2

CORE D - k = 75 (ULTRA LOW)
CORE C - k = 150 (LOW)
CORE B - k = 300 (MEDIUM)
CORE A - k = 550 (HIGH)
7.10.30 AIRCRAFT CLASSIFICATION NUMBER - RIGID PAVEMENT

CODE D = k = 75 (ULTRA LOW)
CODE B = k = 150 (LOW)  
CODE C = k = 300 (MEDIUM)  
CODE A = k = 550 (HIGH)

NOTES:
* TIMES = H43.5 x 16.0 = 21, 24PR OR 26PR
* PRESSURE = 182 PSI (12,80 KG/SQ. CN)

1. ACN WAS DETERMINED AS REFERENCED IN ICAO ANNEX 14, "AERODROMES", 3RD EDITION, JULY 1999
2. TO DETERMINE MAIN LANDING GEAR LOADING, SEE SECTION 7.4.
3. PERCENT WEIGHT ON MAIN LANDING GEAR: 91.66
7.10.31
AIRCRAFT CLASSIFICATION NUMBER - RIGID PAVEMENT
MODEL 737-600 (OPTIONAL TIRES)

NOTES:
* TIRE S = H44.5 x 16.5 = 21.28 FF
* PRESSURE = 168 PSI (11.81 KG/50 CM)

CODE A - k = 550 (HIGH)
CODE B - k = 300 (MEDIUM)
CODE C - k = 150 (LOW)
CODE D = k = 75 (ULTRA LOW)

1. ACN WAS DETERMINED AS REFERENCED IN ICAO ANNEX 14, "AERODROMES", 3RD EDITION, JULY 1999
2. TO DETERMINE MAIN LANDING GEAR LOADING, SEE SECTION 7.4.
3. PERCENT WEIGHT ON MAIN LANDING GEAR: 91.66

AIRCRAFT CLASSIFICATION NUMBER (ACN)

80  90  100  110  120  130  140  150  160
AIRCRAFT CROSS WEIGHT (1,000 KG)

0  20  40  60  80  100
AIRCRAFT CLASSIFICATION NUMBER (ACN)
NOTES:
* TIRES - H43.5 x 16.0 - 21.28PR
* PRESSURE - 197 PSI (13.85 KG/SQ CM)

7.10.32 AIRCRAFT CLASSIFICATION NUMBER - RIGID PAVEMENT

MODEL 737-700 WITH AND WITHOUT WINGLETS

CODE D - k = 75 (ULTRA LOW)
CODE C - k = 150 (LOW)
CODE B - k = 300 (MEDIUM)
CODE A - k = 550 (HIGH)

NOTES:
1. ACN WAS DETERMINED AS REFERENCED IN
   ICAO ANNEX 14, "AERODROMES", 3RD
   EDITION, JULY 1999
2. TO DETERMINE MAIN LANDING GEAR LOADING,
   SEE SECTION 7.4.
3. PERCENT WEIGHT ON MAIN LANDING GEAR: 91.7
7.10.33

AIRCRAFT CLASSIFICATION NUMBER - RIGID PAVEMENT

MODEL 737-700 (OPTIONAL TIRES) WITH AND WITHOUT WINGLETS

NOTES:
* TIRES = H44.5 x 16.5 - 21, 28PR
* PRESSURE = 179 PSI (12.59 KG/SQ CM)

CODE D = k = 75 (ULTRA LOW)
CODE C = k = 150 (LOW)
CODE B = k = 300 (MEDIUM)
CODE A = k = 550 (HIGH)

2. TO DETERMINE MAIN LANDING GEAR LOADING, SEE SECTION 7.4.
3. PERCENT WEIGHT ON MAIN LANDING GEAR: 91.7
7.10.34 AIRCRAFT CLASSIFICATION NUMBER - RIGID PAVEMENT
MODEL 737 BBJ
7.10.35 AIRCRAFT CLASSIFICATION NUMBER - RIGID PAVEMENT
MODEL 737-800 WITH AND WITHOUT WINGLETS
7.10.36 AIRCRAFT CLASSIFICATION NUMBER - RIGID PAVEMENT

MODEL 737 BBJ2

NOTES:
* TIRES = H44.5 x 16.5 = 21.28PR
* PRESSURE = 204 PSI (14.54 KG/SQ CM)

CODE D - k = 75 (ULTRA LOW)
CODE C - k = 150 (LOW)
CODE B - k = 300 (MEDIUM)
CODE A - k = 550 (HIGH)

NOTES:
1. ACN was determined as referenced in Amendment 38 to ICAO Annex 14 "AERODROMES", 8th Edition, March 1983
2. To determine main landing gear loading, see Section 7.4.
3. Percent weight on main landing gear: 93.5%
7.10.37 AIRCRAFT CLASSIFICATION NUMBER - RIGID PAVEMENT
MODEL 737-900 WITH AND WITHOUT WINGLETS

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7.10.38 AIRCRAFT CLASSIFICATION NUMBER - RIGID PAVEMENT
MODEL 737-900ER WITH AND WITHOUT WINGLETS

NOTES:
1. TIRE S - H44.5 x 16.5 - 21.30PR
2. PRESSURE - 220 PSI (15.47 KG/SQ CM)
4. TO DETERMINE MAIN LANDING GEAR LOADING, SEE SECTION 7.4.
5. PERCENT WEIGHT ON MAIN LANDING GEAR: 94.5%
7.11.2 TIRE INFLATION CHART
MODEL 737-100, -200
7.11.5 TIRE INFLATION CHART
MODEL 737-300

NOTES:
- LOADED PRESSURES
- CURVES TERMINATE AT MAXIMUM GROSS WEIGHT RECOMMENDED FOR THE TIRE
- TIRE PRESSURES MAY BE VARIED WITHIN LIMITS SHOWN

MAIN GEAR TIRE
H40 x 14.5-19 24PR

MAIN GEAR TIRE
H42 x 16 - 19 24PR
(LOW PRESSURE TIRES)

NOSE GEAR TIRE
27 x 7.75-15 10PR

TIRES INFLATION PRESSURE
KG/SQ CM

1,000 POUNDS

1,000 KILOGRAMS
AIRPLANE CROSS WEIGHT
7.11.6 TIRE INFLATION CHART
MODEL 737-400

NOTES:
* LOADED PRESSURES
* CURVES TERMINATE AT MAXIMUM GROSS WEIGHT RECOMMENDED FOR THE TIRE
* TIRE PRESSURES MAY BE VARIED WITHIN LIMITS SHOWN

MAIN GEAR TIRE
H40 x 14.5 - 19 24PR
H40 x 14.5 - 19 26PR (LOW PRESSURE TIES)

NOSE GEAR TIRE
27 x 7.75 - 15 10PR

MAX WT FOR H40 x 14.5 - 19 24PR
7.11.7 TIRE INFLATION CHART
MODEL 737-500

NOTES:
* LOADED PRESSURES
* CURVES TERMINATE AT MAXIMUM GROSS WEIGHT RECOMMENDED FOR THE TIRE
* TIRE PRESSURES MAY BE VARIED WITHIN LIMITS SHOWN

MAIN GEAR TIRE
H40 x 14.5-19 24PR

NOSE GEAR TIRE
27 x 7.75-12 24PR

MAIN GEAR TIRE
H42 x 16 - 19 24PR (LOW PRESSURE TIRES)
8.0 FUTURE 737 DERIVATIVE AIRPLANES
8.0 FUTURE 737 DERIVATIVE AIRPLANES

Development of these derivatives will depend on airline requirements. The impact of airline requirements on airport facilities will be a consideration in the configuration and design of these derivatives.
9.0 SCALED 737 DRAWINGS

9.1 - 9.5  Scaled Drawings, 737-100
9.6 - 9.10 Scaled Drawings, 737-200
9.11 – 9.15 Scaled Drawings, 737-300
9.16 – 9.20 Scaled Drawings, 737-300 With Winglets
9.21 – 9.25 Scaled Drawings, 737-400
9.26 – 9.30 Scaled Drawings, 737-500
9.31 - 9.35 Scaled Drawings, 737-600
9.36 - 9.40 Scaled Drawings, 737-600 With Winglets
9.41 – 9.45 Scaled Drawings, 737-700
9.46 - 9.50 Scaled Drawings, 737-700 With Winglets, 737 BBJ
9.51 - 9.55 Scaled Drawings, 737-800
9.56 - 9.60 Scaled Drawings, 737-800 With Winglets, 737 BBJ2
9.61 – 9.65 Scaled Drawings, 737-900, -900ER
9.66 – 9.70 Scaled Drawings, 737-900, -900ER With Winglets
9.0 SCALED DRAWINGS

The drawings in the following pages show airplane plan view drawings, drawn to approximate scale as noted. The drawings may not come out to exact scale when printed or copied from this document. Printing scale should be adjusted when attempting to reproduce these drawings. Three-view drawing files of the 737 airplane models, along with other Boeing airplane models, can be downloaded from the following website:

http://www.boeing.com/airports
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.1.1 SCALED DRAWING - 1 IN = 32 FT

MODEL 737-100

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.1.2 SCALED DRAWING - 1 IN = 32 FT

MODEL 737-100
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.2.1  SCALED DRAWING - 1 IN  = 50 FT

MODEL 737-100

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.2.2 SCALED DRAWING - 1 IN  = 50 FT

MODEL 737-100
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.3.1 SCALED DRAWING - 1 IN = 100 FT

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

NOTE:  WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.3.1 SCALED DRAWING - 1 IN = 100 FT

MODEL 737-100
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.3.2 SCALED DRAWING - 1 IN = 100 FT
MODEL 737-100
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.4.1 SCALED DRAWING – 1:500

MODEL 737-100

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3

LEGEND

A  AIR CONDITIONING
C  CARGO DOOR
E  ELECTRICAL
F  FUEL
G  SERVICE DOOR
H2O POTABLE WATER
L  LAVATORY SERVICE
MLG MAIN LANDING GEAR
NG NOSE LANDING GEAR
O  OXYGEN
P  PNEUMATIC (AIR START)
V  FUEL VENT
X  PASSENGER DOOR

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.4.2 SCALED DRAWING – 1:500

MODEL 737-100
NOTE:

SEE CORRESPONDING PAGE FOR 1 IN = 32 FT
FOR IDENTIFICATIONS OF SERVICE POINTS

LEGEND

A AIR CONDITIONING
C CARGO DOOR
E ELECTRICAL
F FUEL
G SERVICE DOOR
H2O POTABLE WATER
L LAVATORY SERVICE
MLG MAIN LANDING GEAR
NG NOSE LANDING GEAR
O OXYGEN
P PNEUMATIC (AIR START)
V FUEL VENT
X PASSENGER DOOR

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.5.1 SCALED DRAWING – 1:1000
MODEL 737-100
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.5.2 SCALED DRAWING – 1:1000
MODEL 737-100
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.6.1 SCALED DRAWING - 1 IN = 32 FT
MODEL 737-200
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.6.2 SCALED DRAWING - 1 IN = 32 FT

MODEL 737-200
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.7.1 SCALED DRAWING - 1 IN = 50 FT

MODEL 737-200
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.7.2 SCALED DRAWING - 1 IN = 50 FT
MODEL 737-200

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NOTE:
SEE CORRESPONDING PAGE FOR 1 IN = 32 FT
FOR IDENTIFICATIONS OF SERVICE POINTS

LEGEND
A  AIR CONDITIONING
C  CARGO DOOR
E  ELECTRICAL
F  FUEL
G  SERVICE DOOR
W O POTABLE WATER
L  LAVATORY SERVICE
MLG  MAIN LANDING GEAR
NG  NOSE LANDING GEAR
O  OXYGEN
P  PNEUMATIC (AIR START)
V  FUEL VENT
X  PASSENGER DOOR

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.8.2 SCALED DRAWING - 1 IN = 100 FT
MODEL 737-200
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.9.1 SCALED DRAWING – 1:500
MODEL 737-200
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.9.2 SCALED DRAWING – 1:500
MODEL 737-200
NOTE:
SEE CORRESPONDING PAGE FOR 1 IN = 32 FT
FOR IDENTIFICATIONS OF SERVICE POINTS

LEGEND
A  AIR CONDITIONING
C  CARGO DOOR
E  ELECTRICAL
F  FUEL
G  SERVICE DOOR
H  POTABLE WATER
I  LAVATORY SERVICE
MLG  MAIN LANDING GEAR
NG  NOSE LANDING GEAR
O  OXYGEN
P  PNEUMATIC (AIR START)
V  FUEL VENT
X  PASSENGER DOOR

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.10.1 SCALED DRAWING – 1:1000
MODEL 737-200
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.10.2 SCALED DRAWING – 1:1000
MODEL 737-200
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.11.1 SCALED DRAWING - 1 IN = 32 FT
MODEL 737-300
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.11.2 SCALED DRAWING - 1 IN = 32 FT

MODEL 737-300

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NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.12.1 SCALED DRAWING - 1 IN = 50 FT
MODEL 737-300

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NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.12.2 SCALED DRAWING - 1 IN = 50 FT
MODEL 737-300

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NOTE:
SEE CORRESPONDING PAGE FOR 1 IN = 32 FT
FOR IDENTIFICATIONS OF SERVICE POINTS

LEGEND
A AIR CONDITIONING
C CARGO DOOR
E ELECTRICAL
F FUEL
G SERVICE DOOR
H HYDRAULIC
H2O POTABLE WATER
L LAVATORY SERVICE
MLG MAIN LANDING GEAR
NG NOSE LANDING GEAR
P PNEUMATIC (AIR START)
V FUEL VENT
X PASSENGER DOOR

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.13.1 SCALED DRAWING - 1 IN = 100 FT
MODEL 737-300
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.13.2 SCALED DRAWING - 1 IN = 100 FT

MODEL 737-300
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.14.1 SCALED DRAWING – 1:500
MODEL 737-300

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.14.2 SCALED DRAWING – 1:500
MODEL 737-300
NOTE:
SEE CORRESPONDING PAGE FOR 1 IN = 32 FT
FOR IDENTIFICATIONS OF SERVICE POINTS

LEGEND
A AIR CONDITIONING
C CARGO DOOR
E ELECTRICAL
F FUEL
G SERVICE DOOR
H2O POTABLE WATER
L LAVATORY SERVICE
MLG MAIN LANDING GEAR
NG NOSE LANDING GEAR
O OXYGEN
P PNEUMATIC (AIR START)
V FUEL VENT
X PASSENGER DOOR

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.15.1 SCALED DRAWING – 1:1000
MODEL 737-300
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.15.2 SCALED DRAWING – 1:1000
MODEL 737-300
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.16.1 SCALED DRAWING - 1 IN = 32 FT
MODEL 737-300 WITH WINGLETS
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.16.2 SCALED DRAWING - 1 IN = 32 FT
MODEL 737-300 WITH WINGLETS
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.17.1 SCALED DRAWING - 1 IN = 50 FT
MODEL 737-300 WITH WINGLETS
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.17.2 SCALED DRAWING - 1 IN = 50 FT
MODEL 737-300 WITH WINGLETS
NOTE:

SEE CORRESPONDING PAGE FOR 1 IN = 32 FT
FOR IDENTIFICATIONS OF SERVICE POINTS

LEGEND

A  AIR CONDITIONING
C  CARGO DOOR
E  ELECTRICAL
F  FUEL
G  SERVICE DOOR
H  HYDRAULIC
H2O POTABLE WATER
L  LAVATORY SERVICE
MLG MAIN LANDING GEAR
NG NOSE LANDING GEAR
P  PNEUMATIC (AIR START)
V  FUEL VENT
X  PASSENGER DOOR

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.18.1 SCALED DRAWING - 1 IN = 100 FT
MODEL 737-300 WITH WINGLETS
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.18.2 SCALED DRAWING - 1 IN = 100 FT
MODEL 737-300 WITH WINGLETS
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.19.1 SCALED DRAWING – 1:500
MODEL 737-300 WITH WINGLETS

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.19.2 SCALED DRAWING – 1:500
MODEL 737-300 WITH WINGLETS
NOTE:

SEE CORRESPONDING PAGE FOR 1 IN = 32 FT
FOR IDENTIFICATIONS OF SERVICE POINTS

LEGEND

A  AIR CONDITIONING
C  CARGO DOOR
E  ELECTRICAL
F  FUEL
G  SERVICE DOOR
H2O POTABLE WATER
L  LAVATORY SERVICE
MLG MAIN LANDING GEAR
NG NOSE LANDING GEAR
O  OXYGEN
P  PNEUMATIC (AIR START)
V  FUEL VENT
X  PASSENGER DOOR

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.20.1 SCALED DRAWING – 1:1000
MODEL 737-300 WITH WINGLETS

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9.20.2  SCALED DRAWING – 1:1000
MODEL 737-300 WITH WINGLETS

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.21.1 SCALED DRAWING - 1 IN = 32 FT
MODEL 737-400
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.21.2 SCALED DRAWING - 1 IN  = 32 FT
MODEL 737-400
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.22.1 SCALED DRAWING - 1 IN = 50 FT
MODEL 737-400

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.22.2 SCALED DRAWING - 1 IN = 50 FT
MODEL 737-400
NOTE:

SEE CORRESPONDING PAGE FOR 1 IN = 32 FT FOR IDENTIFICATIONS OF SERVICE POINTS

LEGEND

A  AIR CONDITIONING
C  CARGO DOOR
E  ELECTRICAL
F  FUEL
G  SERVICE DOOR
H  HYDRAULIC
H2O  POTABLE WATER
L  LAVATORY SERVICE
MLG  MAIN LANDING GEAR
NG  NOSE LANDING GEAR
P  PNEUMATIC (AIR START)
V  FUEL VENT
X  PASSENGER DOOR

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.23.1 SCALED DRAWING - 1 IN = 100 FT
MODEL 737-400
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.23.2 SCALED DRAWING - 1 IN = 100 FT
MODEL 737-400
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.24.1 SCALED DRAWING – 1:500
MODEL 737-400

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.24.2 SCALED DRAWING – 1:500
MODEL 737-400

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NOTE:
SEE CORRESPONDING PAGE FOR 1 IN = 32 FT
FOR IDENTIFICATIONS OF SERVICE POINTS

LEGEND
A  AIR CONDITIONING
C  CARGO DOOR
E  ELECTRICAL
F  FUEL
G  SERVICE DOOR
H2O  POTABLE WATER
L  LAVATORY SERVICE
MLG  MAIN LANDING GEAR
NG  NOSE LANDING GEAR
O  OXYGEN
P  PNEUMATIC (AIR START)
V  FUEL VENT
X  PASSENGER DOOR

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.25.1 SCALED DRAWING – 1:1000
MODEL 737-400
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.25.2 SCALED DRAWING – 1:1000
MODEL 737-400

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NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.26.1 SCALED DRAWING - 1 IN = 32 FT
MODEL 737-500

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.26.2 SCALED DRAWING - 1 IN = 32 FT
MODEL 737-500
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.27.1 SCALED DRAWING - 1 IN = 50 FT
MODEL 737-500
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.27.2  SCALED DRAWING - 1 IN = 50 FT
MODEL 737-500
NOTE:
SEE CORRESPONDING PAGE FOR 1 IN = 32 FT
FOR IDENTIFICATIONS OF SERVICE POINTS

LEGEND
A  AIR CONDITIONING
C  CARGO DOOR
E  ELECTRICAL
F  FUEL
G  SERVICE DOOR
H  HYDRAULIC
H2O POTABLE WATER
L  LAVATORY SERVICE
MLG MAIN LANDING GEAR
NG NOSE LANDING GEAR
P  PNEUMATIC (AIR START)
V  FUEL VENT
X  PASSENGER DOOR

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER Scaling

9.28.1 SCALED DRAWING - 1 IN = 100 FT
MODEL 737-500
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.28.2 SCALED DRAWING - 1 IN = 100 FT
MODEL 737-500
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.29.1 SCALED DRAWING – 1:500
MODEL 737-500

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.29.2 SCALED DRAWING – 1:500
MODEL 737-500
NOTE:
SEE CORRESPONDING PAGE FOR 1 IN = 32 FT
FOR IDENTIFICATIONS OF SERVICE POINTS

LEGEND
A  AIR CONDITIONING
C  CARGO DOOR
E  ELECTRICAL
F  FUEL
G  SERVICE DOOR
H2O   POTABLE WATER
L  LAVATORY SERVICE
MLG  MAIN LANDING GEAR
NG  NOSE LANDING GEAR
O  OXYGEN
P  PNEUMATIC (AIR START)
V  FUEL VENT
X  PASSENGER DOOR

NOTE:  FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3

NOTE:  WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.30.1  SCALED DRAWING – 1:1000
MODEL 737-500
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.30.2 SCALED DRAWING – 1:1000
MODEL 737-500

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NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.31.1 SCALED DRAWING - 1 IN = 32 FT
MODEL 737-600
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.31.2 SCALED DRAWING - 1 IN = 32 FT
MODEL 737-600
NOTE:  WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.32.1  SCALED DRAWING - 1 IN  = 50 FT
MODEL 737-600
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.32.2 SCALED DRAWING - 1 IN = 50 FT
MODEL 737-600
NOTE:

SEE CORRESPONDING PAGE FOR 1 IN = 32 FT
FOR IDENTIFICATIONS OF SERVICE POINTS

LEGEND

A  AIR CONDITIONING
C  CARGO DOOR
E  ELECTRICAL
F  FUEL
G  SERVICE DOOR
H2O POTABLE WATER
MLG MAIN LANDING GEAR
NG NOSE LANDING GEAR
P  PNEUMATIC (AIR START)
L  VACUUM LAVATORY SERVICE
V  FUEL VENT
X  PASSENGER DOOR

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.33.1 SCALED DRAWING - 1 IN = 100 FT
MODEL 737-600
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.33.2 SCALED DRAWING - 1 IN = 100 FT
MODEL 737-600
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.34.1 SCALED DRAWING - 1:500
MODEL 737-600

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NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.34.2 SCALED DRAWING - 1:500
MODEL 737-600

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NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.35.1 SCALED DRAWING - 1:1000
MODEL 737-600
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.35.2 SCALED DRAWING - 1:1000
MODEL 737-600
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.36.1 SCALED DRAWING - 1 IN = 32 FT
MODEL 737-600 WITH WINGLETS

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.36.2 SCALED DRAWING - 1 IN = 32 FT
MODEL 737-600 WITH WINGLETS

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NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.37.1 SCALED DRAWING - 1 IN = 50 FT
MODEL 737-600 WITH WINGLETS
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.37.2 SCALED DRAWING - 1 IN = 50 FT
MODEL 737-600 WITH WINGLETS
NOTE:
SEE CORRESPONDING PAGE FOR 1 IN = 32 FT
FOR IDENTIFICATIONS OF SERVICE POINTS

LEGEND
A  AIR CONDITIONING
C  CARGO DOOR
E  ELECTRICAL
F  FUEL
G  SERVICE DOOR
H2O POTABLE WATER
MLG MAIN LANDING GEAR
NG NOSE LANDING GEAR
P  PNEUMATIC (AIR START)
L  VACUUM LAVATORY SERVICE
V  FUEL VENT
X  PASSENGER DOOR

NOTE:  FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.38.1 SCALED DRAWING - 1 IN = 100 FT
MODEL 737-600 WITH WINGLETS
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.38.2 SCALED DRAWING - 1 IN = 100 FT
MODEL 737-600 WITH WINGLETS
9.39.1 SCALED DRAWING - 1:500
MODEL 737-600 WITH WINGLETS

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.39.2 SCALED DRAWING - 1:500
MODEL 737-600 WITH WINGLETS
NOTE:
SEE CORRESPONDING PAGE FOR 1 IN = 32 FT
FOR IDENTIFICATIONS OF SERVICE POINTS

LEGEND
A AIR CONDITIONING
C CARGO DOOR
E ELECTRICAL
F FUEL
G SERVICE DOOR
H2O POTABLE WATER
MLG MAIN LANDING GEAR
NG NOSE LANDING GEAR
P PNEUMATIC (AIR START)
L VACUUM LAVATORY SERVICE
V FUEL VENT
X PASSENGER DOOR

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.40.1 SCALED DRAWING - 1:1000
MODEL 737-600 WITH WINGLETS
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.40.2 SCALED DRAWING - 1:1000
MODEL 737-600 WITH WINGLETS

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NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.41.1 SCALED DRAWING - 1 IN = 32 FT
MODEL 737-700
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.41.2 SCALED DRAWING - 1 IN = 32 FT
MODEL 737-700
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.42.1 SCALED DRAWING - 1 IN = 50 FT
MODEL 737-700
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.42.2 SCALED DRAWING - 1 IN  = 50 FT

MODEL 737-700
NOTE:
SEE CORRESPONDING PAGE FOR 1 IN = 32 FT
FOR IDENTIFICATIONS OF SERVICE POINTS

LEGEND
A AIR CONDITIONING
C CARGO DOOR
E ELECTRICAL
F FUEL
G SERVICE DOOR
H2O POTABLE WATER
MLG MAIN LANDING GEAR
NG NOSE LANDING GEAR
P PNEUMATIC (AIR START)
L VACUUM LAVATORY SERVICE
V FUEL VENT
X PASSENGER DOOR
NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.43.1 SCALED DRAWING - 1 IN = 100 FT
MODEL 737-700
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.43.2 SCALED DRAWING - 1 IN = 100 FT
MODEL 737-700
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.44.1 SCALED DRAWING - 1:500
MODEL 737-700
NOTE:

SEE CORRESPONDING PAGE FOR 1 IN = 32 FT FOR IDENTIFICATIONS OF SERVICE POINTS

LEGEND

A  AIR CONDITIONING
C  CARGO DOOR
E  ELECTRICAL
F  FUEL
G  SERVICE DOOR
H2O POTABLE WATER
MLG MAIN LANDING GEAR
NG NOSE LANDING GEAR
P  PNEUMATIC (AIR START)
L  VACUUM LAVATORY SERVICE
V  FUEL VENT
X  PASSENGER DOOR

NOTE: FOR TURNING RADIUS DATA SEE SECTIONS 4.2 AND 4.3

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.45.1 SCALED DRAWING - 1:1000
MODEL 737-700
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.45.2 SCALED DRAWING - 1:1000
MODEL 737-700

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NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.46.1 SCALED DRAWING - 1 IN = 32 FT
MODEL 737-700 WITH WINGLETS, 737 BBJ

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NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.46.2 SCALED DRAWING - 1 IN = 32 FT
MODEL 737-700 WITH WINGLETS, 737 BBJ
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.47.1  SCALED DRAWING - 1 IN  = 50 FT
MODEL 737-700 WITH WINGLETS, 737 BBJ

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.47.2 SCALED DRAWING - 1 IN = 50 FT
MODEL 737-700 WITH WINGLETS, 737 BBJ
NOTE:

SEE CORRESPONDING PAGE FOR 1 IN = 32 FT
FOR IDENTIFICATIONS OF SERVICE POINTS

LEGEND

A  AIR CONDITIONING
C  CARGO DOOR
E  ELECTRICAL
F  FUEL
G  SERVICE DOOR
H2O  POTABLE WATER
MLG  MAIN LANDING GEAR
NG  NOSE LANDING GEAR
P  PNEUMATIC (AIR START)
L  VACUUM LAVATORY SERVICE
V  FUEL VENT
X  PASSENGER DOOR

NOTE:  FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3

NOTE:  WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.48.1  SCALED DRAWING - 1 IN = 100 FT
MODEL 737-700 WITH WINGLETS, 737 BBJ
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.48.2 SCALED DRAWING - 1 IN = 100 FT
MODEL 737-700 WITH WINGLETS, 737 BBJ
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.49.1 SCALED DRAWING - 1:500
MODEL 737-700 WITH WINGLETS, 737 BBJ
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.49.2 SCALED DRAWING - 1:500
MODEL 737-700 WITH WINGLETS, 737 BBJ

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NOTE:
SEE CORRESPONDING PAGE FOR 1 IN = 52 FT
FOR IDENTIFICATIONS OF SERVICE POINTS

LEGEND
A  AIR CONDITIONING
C  CARGO DOOR
E  ELECTRICAL
F  FUEL
G  SERVICE DOOR
H2O POTABLE WATER
MLG MAIN LANDING GEAR
NG NOSE LANDING GEAR
P  PNEUMATIC (AIR START)
L  VACUUM LAVATORY SERVICE
V  FUEL VENT
X  PASSENGER DOOR
NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.50.1 SCALED DRAWING - 1:1000
MODEL 737-700 WITH WINGLETS, 737 BBJ

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NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.50.2 SCALED DRAWING - 1:1000
MODEL 737-700 WITH WINGLETS, 737 BBJ
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER_SCALING

9.51.1 SCALED DRAWING - 1 IN = 32 FT
MODEL 737-800
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.51.2 SCALED DRAWING - 1 IN = 32 FT
MODEL 737-800
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.52.1 SCALED DRAWING - 1 IN = 50 FT
MODEL 737-800

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.52.2 SCALED DRAWING - 1 IN  = 50 FT
MODEL 737-800
NOTE:
SEE CORRESPONDING PAGE FOR 1 IN = 32 FT
FOR IDENTIFICATIONS OF SERVICE POINTS

LEGEND
A AIR CONDITIONING
C CARGO DOOR
E ELECTRICAL
F FUEL
G SERVICE DOOR
H2O POTABLE WATER
MLG MAIN LANDING GEAR
NG NOSE LANDING GEAR
P PNEUMATIC (AIR START)
L VACUUM LAVATORY SERVICE
V FUEL VENT
X PASSENGER DOOR

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.53.1 SCALED DRAWING - 1 IN = 100 FT
MODEL 737-800
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.53.2 SCALED DRAWING - 1 IN = 100 FT
MODEL 737-800
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

LEGEND
A  AIR CONDITIONING
C  CARGO DOOR
E  ELECTRICAL
F  FUEL
G  SERVICE DOOR
H2O  POTABLE WATER
MLG  MAIN LANDING GEAR
NG  NOSE LANDING GEAR
P  PNEUMATIC (AIR START)
L  VACUUM LAVATORY SERVICE
V  FUEL VENT
X  PASSENGER DOOR

NOTE: FOR TURNING RADIUS DATA
      SEE SECTIONS 4.2 AND 4.3

9.54.1 SCALED DRAWING - 1:500
MODEL 737-800

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NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.54.2 SCALED DRAWING - 1:500
MODEL 737-800
NOTE:

SEE CORRESPONDING PAGE FOR 1 IN = 32 FT FOR IDENTIFICATIONS OF SERVICE POINTS

LEGEND

A  AIR CONDITIONING
C  CARGO DOOR
E  ELECTRICAL
F  FUEL
G  SERVICE DOOR
H₂O  POTABLE WATER
MLG  MAIN LANDING GEAR
NG  NOSE LANDING GEAR
P  PNEUMATIC (AIR START)
L  VACUUM LAVATORY SERVICE
V  FUEL VENT
X  PASSENGER DOOR

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.55.1 SCALED DRAWING - 1:1000
MODEL 737-800

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OCTOBER 2005   651
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.55.2 SCALED DRAWING – 1:1000
MODEL 737-800
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.56.1 SCALED DRAWING - 1 IN = 32 FT
MODEL 737-800 WITH WINGLETS, 737 BBJ2

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.56.2 SCALED DRAWING - 1 IN = 32 FT
MODEL 737-800 WITH WINGLETS, 737 BBJ2

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NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.57.1 SCALED DRAWING - 1 IN = 50 FT
MODEL 737-800 WITH WINGLETS, 737 BBJ2

LEGEND
A AIR CONDITIONING
C CARGO DOOR
E ELECTRICAL
F FUEL
G SERVICE DOOR
H2O POTABLE WATER
MLG MAIN LANDING GEAR
NG NOSE LANDING GEAR
P PNEUMATIC (AIR START)
L VACUUM LAVATORY SERVICE
V FUEL VENT
X PASSENGER DOOR

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.57.2 SCALED DRAWING - 1 IN = 50 FT
MODEL 737-800 WITH WINGLETS, 737 BBJ2
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.58.1 SCALED DRAWING - 1 IN = 100 FT
MODEL 737-800 WITH WINGLETS, 737 BBJ2
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.58.2 SCALED DRAWING - 1 IN = 100 FT
MODEL 737-800 WITH WINGLETS, 737 BBJ2
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.59.1 SCALED DRAWING - 1:500
MODEL 737-800 WITH WINGLETS, 737 BBJ2

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OCTOBER 2005   659
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.59.2 SCALED DRAWING - 1:500
MODEL 737-800 WITH WINGLETS, 737 BBJ2
NOTE:
SEE CORRESPONDING PAGE FOR 1 IN = 32 FT
FOR IDENTIFICATIONS OF SERVICE POINTS

LEGEND

A  AIR CONDITIONING
C  CARGO DOOR
E  ELECTRICAL
F  FUEL
G  SERVICE DOOR
H2O POTABLE WATER
MLG MAIN LANDING GEAR
NG NOSE LANDING GEAR
P  PNEUMATIC (AIR START)
L  VACUUM LAVATORY SERVICE
V  FUEL VENT
X  PASSENGER DOOR

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.60.1 SCALED DRAWING - 1:1000
MODEL 737-800 WITH WINGLETS, 737 BBJ2

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NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.60.2 SCALED DRAWING – 1:1000
MODEL 737-800 WITH WINGLETS, 737 BBJ2
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.61.1 SCALED DRAWING - 1 IN = 32 FT

MODEL 737-900, -900ER
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.61.2 SCALED DRAWING - 1 IN = 32 FT
MODEL 737-900, -900ER

D6-58325-6
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.62.1 SCALED DRAWING - 1 IN = 50 FT
MODEL 737-900, -900ER

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OCTOBER 2005    665
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.62.2 SCALED DRAWING - 1 IN = 50 FT
MODEL 737-900, -900ER
NOTE:
SEE CORRESPONDING PAGE FOR 1 IN = 32 FT
FOR IDENTIFICATIONS OF SERVICE POINTS

LEGEND
A AIR CONDITIONING
C CARGO DOOR
E ELECTRICAL
F FUEL
G SERVICE DOOR
H2O POTABLE WATER
MLG MAIN LANDING GEAR
NG NOSE LANDING GEAR
P PNEUMATIC (AIR START)
L VACUUM LAVATORY SERVICE
V FUEL VENT
X PASSENGER DOOR

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.64.1 SCALED DRAWING - 1:500
MODEL 737-900, -900ER

LEGEND
A AIR CONDITIONING
C CARGO DOOR
E ELECTRICAL
F FUEL
G SERVICE DOOR
H₂O POTABLE WATER
MLG MAIN LANDING GEAR
NG NOSE LANDING GEAR
P PNEUMATIC (AIR START)
L VACUUM LAVATORY SERVICE
V FUEL VENT
X PASSENGER DOOR

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.64.2 SCALED DRAWING - 1:500
MODEL 737-900, -900ER

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670 OCTOBER 2005
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.65.1 SCALED DRAWING - 1:1000
MODEL 737-900, -900ER
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.65.2 SCALED DRAWING – 1:1000
MODEL 737-900, -900ER
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.66.1 SCALED DRAWING - 1 IN = 32 FT
MODEL 737-900, -900ER WITH WINGLETS

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.67.1 SCALED DRAWING - 1 IN = 50 FT
MODEL 737-900, -900ER WITH WINGLETS
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.67.2 SCALED DRAWING - 1 IN = 50 FT
MODEL 737-900, -900ER WITH WINGLETS
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.68.1 SCALED DRAWING - 1 IN = 100 FT
MODEL 737-900, -900ER WITH WINGLETS
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.68.2 SCALED DRAWING - 1 IN = 100 FT
MODEL 737-900, -900ER WITH WINGLETS
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.69.1 SCALED DRAWING - 1:500
MODEL 737-900, -900ER WITH WINGLETS

NOTE: FOR TURNING RADIUS DATA
SEE SECTIONS 4.2 AND 4.3
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.69.2 SCALED DRAWING - 1:500
MODEL 737-900, -900ER WITH WINGLETS
NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.70.1 SCALED DRAWING - 1:1000
MODEL 737-900, -900ER WITH WINGLETS

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NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING

9.70.2 SCALED DRAWING – 1:1000
MODEL 737-900, -900ER WITH WINGLETS