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Changes 1 thru 8

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RUNWAY LENGTH REQUIREMENTS FOR AIRPORT DESIGN



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AC 150/5325-4

CHANGE 14

DATE 9/27/78

ADVISORY CIRCULAR

CHANGE



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

Washington, D.C.

Subject: Change 14 to RUNWAY LENGTH REQUIREMENTS FOR AIRPORT DESIGN--Adds New Performance Tables

1. **PURPOSE.** This Change adds aircraft performance tables for the Boeing 727-100 series with the JT8D-7 engine, the Boeing 727-200 series with the JT8D-15 engine, and the Boeing 737-200 series with the JT8D-15 engine.

The Change number and date of the new tables are indicated at the top of each page in Appendix 6. The Change number and date are also shown at the top of the Contents page which lists the aircraft (indicated by asterisks in the margins.)

PAGE CONTROL CHART

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iii	7/27/77	iii	9/27/78
iv	11/15/76	iv	11/15/76
		Appendix 6	
		61 thru 76	9/27/78
		61-M thru 76-M	9/27/78

William V. Vitale
WILLIAM V. VITALE
Acting Assistant Administrator
Office of Airports Programs

Suggest filing this transmittal at the back of the AC. It will provide a reference authority for changes, a method of determining that all Changes have been received, and a check for determining if the AC contains the proper pages.

Initiated by: AAP-560

AC NO: 150/5325-4

DATE: 4/5/65

(Page revised 3/13/78 by CHG 13)



ADVISORY CIRCULAR

DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION

SUBJECT: RUNWAY LENGTH REQUIREMENTS FOR AIRPORT DESIGN

-
- * 1. PURPOSE. This circular presents aircraft performance data and sets forth standards for the determination of runway lengths to be provided at airports. The use of these standards is required by statute for project activity under the Airport Development Aid Program when a specific critical aircraft is considered as the basis for the design. *
2. CANCELLATIONS. This circular clarifies, consolidates, and replaces the following material:
- a. Aircraft performance curves on pages 24 through 55 and paragraphs under "Runway Length for Takeoff" and "Runway Landing Distance" on pages 22 and 23 of the Federal Aviation Administration publication titled Airport Design, 1961, including Supplement No. 1 dated 1962.
 - b. AC 150/5325-1, Aircraft Performance Nomograms, August 1963.
 - c. Pages 1 through 12-2 and pages 21 through 28 of Appendix 2 of AC 150/5300-1, VFR Airports, March 1963 with Changes 1 and 2.
3. REFERENCES. Advisory Circular (AC) 00-2, Advisory Circular Checklist and Status of Federal Aviation Regulations, updated triannually, contains the listing of current issuances of advisory circulars and changes thereto. It explains the circular numbering system and gives instructions for ordering advisory circulars that are for sale as well as those distributed free of charge. AC 00-2 also gives instructions for ordering the Federal Aviation Regulations.
- a. The following free advisory circulars may be obtained from the Department of Transportation, Publications Section, M-443.1, Washington, D.C. 20590.
- * * *
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Initiated by: AAP-560

3/13/78

- (1) AC 150/5325-2, Airport Design Standards - Airports Served by Air Carriers - Surface Gradient and Line-of-Sight.
- (2) AC 150/5325-3, Background Information on the Aircraft Performance Curves for Large Airplanes.

- * b. Climatology of the United States No. 86, Decennial Census of United States Climate - Climatic Summary of the United States - Supplement for 1951 Through 1960, may be obtained from the Environmental Data Service, National Climatic Center, Federal Building, Asheville, North Carolina 28801. Price varies. Specify state when ordering. *
4. NEW MATERIAL. In addition to the aircraft performance curves replacing those mentioned in paragraph 2 above, the following curves have been included herein:
- a. Aircraft performance curves for the Boeing 727-00 Series.
 - b. Aircraft performance curves for the Convair 340/440 equipped with the Allison 501-D13H engine.



WILLIAM V. VITALE

Acting Assistant Administrator
Office of Airports Program

CHANGE

AC NO: 150/5325-4 CHG 12

DATE: 7/27/77



ADVISORY CIRCULAR

DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION

SUBJECT: CHANGE 12 TO ADVISORY CIRCULAR 150/5325-4, RUNWAY
LENGTH REQUIREMENTS FOR AIRPORT DESIGN

1. PURPOSE. This change transmits revised pages to the subject advisory circular.
 2. EXPLANATION OF CHANGES.
 - a. Aircraft performance tables for the Douglas DC-9-50, with JT8D-17 engine, and the Boeing 747 series, with JT9D-7A wet engine rating, have been included in Appendix 6.
 - b. The use of asterisks denotes changed, added, or deleted portions of the table of contents.
 3. HOW TO GET THIS PUBLICATION. Additional copies of this change, as well as the basic advisory circular, may be obtained free of charge from the Department of Transportation, Publications Section, TAD-443.1, Washington, D.C. 20590.
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7/27/77

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JOSEPH A. FOSTER, Assistant Administrator
Office of Airports Programs

CHANGE



TAD-494.4
AC NO: 150/5325-4 CHG 11

DATE: 11/15/76

ADVISORY CIRCULAR

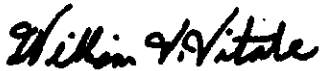
DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION

SUBJECT: CHANGE 11 TO ADVISORY CIRCULAR 150/5325-4, RUNWAY
LENGTH REQUIREMENTS FOR AIRPORT DESIGN

1. PURPOSE. This change transmits revised pages to the subject advisory circular.
2. EXPLANATION OF CHANGES.
 - a. Aircraft performance tables for the Douglas DC-9-30, JT8D-9 engine have been included in Appendix 6.
 - b. Appendix 6 has been expanded to include aircraft performance tables expressed in metric units.
 - c. The use of asterisks denotes changed, added, or deleted portions of the text.
3. HOW TO GET THIS PUBLICATION. Additional copies of this change, as well as the basic advisory circular, may be obtained free of charge from the Department of Transportation, Publications Section, TAD-443.1, Washington, D.C. 20590.

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		2-M through 42-M	11/15/76
		43-M through 48-M	11/15/76



WILLIAM V. VITALE

Acting Assistant Administrator
Office of Airports Programs

TAD-494.6

CHANGE

AC NO: 150/5325-4 CHG 10

DATE: 5/18/76



ADVISORY CIRCULAR

DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION

SUBJECT: CHANGE 10 TO ADVISORY CIRCULAR 150/5325-4, RUNWAY
LENGTH REQUIREMENTS FOR AIRPORT DESIGN

1. PURPOSE. This change transmits revised pages to the subject advisory circular.
 2. EXPLANATION OF CHANGES.
 - a. Aircraft performance tables for the Boeing 737-200, JT8D-9 engines have been included in appendix 6.
 - b. Aircraft performance curves for the Boeing 737-200 Series have been deleted.
 - c. A procedure for determining takeoff weight based on an existing runway length has been included in appendix 6.
 - d. The use of asterisks denotes changed, added, or deleted portions of the text.
 3. HOW TO GET THIS PUBLICATION. Additional copies of this change, as well as the basic advisory circular, may be obtained free of charge from the Department of Transportation, Publications Section, TAD-443.1, Washington, D.C. 20590.
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Initiated by: AAS-560

4. PAGE CONTROL CHART.

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WILLIAM V. VITALE
Director, Airports Service

CHANGE

AC NO: 150/5325-4 CHG 9

DATE: August 15, 1975



ADVISORY CIRCULAR

DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION

SUBJECT: CHANGE 9 TO ADVISORY CIRCULAR 150/5325-4, RUNWAY
LENGTH REQUIREMENTS FOR AIRPORT DESIGN

1. PURPOSE. This change transmits revised pages to the subject advisory circular.
 2. EXPLANATION OF CHANGES.
 - a. Aircraft performance tables on the following aircraft have been included in appendix 6:
 - (1) Boeing 707-300C, JT3D-3B engines.
 - (2) Boeing 727-200, JT8D-7 engines.
 - (3) Boeing 727-200, JT8D-9 engines.
 - (4) Douglas DC-8-61, JT3D-3B engines.
 - (5) Douglas DC-10-10, CF6-6D engines.
 - (6) Lockheed L-1011-385-1, RB.211-22B engines.
 - b. Aircraft performance curves for the aircraft listed in paragraphs 2a(1) through 2a(4) above have been deleted.
 - c. Miscellaneous editorial changes have been made throughout the publication.
 - d. The use of asterisks denotes changed, added, or deleted portions of the text.
 3. HOW TO GET THIS PUBLICATION. Additional copies of this change, as well as the basic advisory circular, may be obtained free of charge from the Department of Transportation, Publications Section, TAD-443.1, Washington, D.C. 20590.
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Initiated by: AAS-560

4. PAGE CONTROL CHART.

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7 and 8	(undated)	7 (and 8)	8/15/75

William V. Vitale
 WILLIAM V. VITALE
 Director, Airports Service



ADVISORY CIRCULAR

DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION

SUBJECT: RUNWAY LENGTH REQUIREMENTS FOR AIRPORT DESIGN

-
1. **PURPOSE.** This circular presents aircraft performance curves and sets forth standards for the determination of runway lengths to be provided at airports. The use of these standards is required for project activity under the Federal-aid Airport Program when a specific critical aircraft is considered as the basis for the design of a runway.
 2. **CANCELLATIONS.** This circular clarifies, consolidates, and replaces the following material:
 - a. Aircraft performance curves on Pages 24 through 55 and paragraphs under "Runway Length for Takeoff" and "Runway Landing Distance" on Pages 22 and 23 of the Federal Aviation Administration publication titled Airport Design, 1961, including Supplement No. 1 dated 1962.
 - b. AC 150/5325-1, Aircraft Performance Nomograms, August 1963.
 - c. Pages 1 through 12-2 and Pages 21 through 28 of Appendix 2 of AC 150/5300-1, VFR Airports, March 1963 with Changes 1 and 2.
 3. **REFERENCES.**
 - a. Obtain copies of the following circulars and additional copies of this circular from the Department of Transportation, Distribution Unit, TAD 484.3, Washington, D. C. 20590. Identify the circulars by title and advisory circular number and indicate number of copies needed.
 - (1) AC 150/5325-2A, Airport Surface Areas Gradient Standards.
 - (2) AC 150/5325-3, Background Information on the Aircraft Performance Curves for Large Airplanes.
-

- b. Weather Bureau Technical Paper No. 31 - This publication may be obtained from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Enclose with your request a check or money order in the amount of 25¢ per copy.

NEW MATERIAL. In addition to the aircraft performance curves replacing those mentioned in Paragraph 2 above, the following curves have been included herein:

- a. Aircraft performance curves for the Boeing 727-00 Series.
- b. Aircraft performance curves for the Convair 340/440 equipped with the Allison 501-D13H engine.


Cole Morrow, Director
Airports Service



AC NO: 150/5325-4

DATE: 4/5/65

(Page revised 8/15/75 by CHG 9)

ADVISORY CIRCULAR

DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION

SUBJECT: RUNWAY LENGTH REQUIREMENTS FOR AIRPORT DESIGN

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2. CANCELLATIONS. This circular clarifies, consolidates, and replaces the following material:
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 - b. AC 150/5325-1, Aircraft Performance Nomograms, August 1963.
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- a. The following free advisory circulars may be obtained from the Department of Transportation, Publications Section, TAD-443.1, Washington, D.C. 20590:
-

Initiated by: AAS-560

8/15/75

(1) AC 150/5325-2, Airport Design Standards - Airports Served by Air Carriers - Surface Gradient and Line-of-Sight. *

(2) AC 150/5325-3, Background Information on the Aircraft Performance Curves for Large Airplanes.

b. National Oceanic and Atmospheric Administration (NOAA) Technical Paper No. 81, Monthly Normals 1941-1970, may be obtained from the Environmental Data Service, National Climatic Center, Federal Building, Asheville, North Carolina 28801, for 25¢ (prepaid). *

NEW MATERIAL. In addition to the aircraft performance curves replacing those mentioned in paragraph 2 above, the following curves have been included herein:

a. Aircraft performance curves for the Boeing 727-00 Series.

b. Aircraft performance curves for the Convair 340/440 equipped with the Allison 501-D13H engine.



WILLIAM V. VITALE

Director, Airports Service

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UNIVERSAL

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VICKERS

Viscount 745D; Appendix 2, Pages 16-2 and 17
Viscount 810 ; Appendix 2, Pages 18 and 19

1. INTRODUCTION. The determination of the length of a runway is related to the airplane expected to use that runway. The takeoff and landing requirements of that airplane must be known to derive the length necessary for the runway. This circular presents design data for landing and takeoff requirements of airplanes in common use in the civil fleet. Also presented are instructions on the use of these design data and a discussion of the factors considered in their development.
2. BACKGROUND. Aircraft performance curves for design have gained wide recognition by airport engineers and planners as effective means of determining how long to build runways. With the issuance of the Agency publication entitled Airport Design in 1961, it was recognized that the disparity of present day transport aircraft types and their certification and operational requirements precluded the application of a runway length design concept based on a type of air carrier service. For airports designed to serve general aviation, it was found possible to group aircraft generally by their functional utilization which permits determining a runway length where a specific aircraft for a location is not known. However, much more precise runway length determinations can be made if a particular aircraft is used as a basis. Aircraft performance curves and tables for individual airplanes were therefore developed as design and planning tools.
- * 3. GROUPING OF AIRCRAFT PERFORMANCE DATA. In this circular, the aircraft performance data are presented in groups according to aircraft size and aircraft power plant type.
 - a. Appendix 1 - Piston Powered Large Airplanes.
 - b. Appendix 2 - Turboprop Powered Large Airplanes.
 - c. Appendix 3 - Turbojet Powered Large Airplanes.
 - d. Appendix 4 - Turbofan and Aftfan Powered Large Airplanes.
 - e. Appendix 5 - Piston Powered Small Airplanes. (Airplanes certificated with a maximum takeoff weight of 12,500 pounds or less).
 - * f. Appendix 6 - Aircraft Performance Tables
 - g. Appendix 7 - Preliminary Aircraft Performance Curves.
4. GRADIENT. The runway length determined from the takeoff aircraft performance data is based on an effective runway gradient of zero percent. The effective runway gradient is defined as a maximum difference in runway centerline elevations divided by the runway length. For effective runway gradients other than zero percent, the runway length should be increased at the following rates for each one percent of effective runway gradient:
 - a. Twenty percent for piston and turboprop powered airplanes.
 - b. Ten percent for turbojet powered airplanes.

8/15/75

1. RUNWAY LENGTH FOR LANDING UNDER WET OR SLIPPERY CONDITIONS.

- a. Development of Runway Length Standards. Runway design length criteria for airports are developed in the form of aircraft performance curves and tables. These standards recognize the need for a high measure of usability with nationwide uniformity, considering local factors affecting runway length. Performance criteria for particular aircraft are prepared from information contained in the * flight manual of that airplane recognizing operational requirements set forth in the Federal Aviation Regulations plus factors of development to assure longevity, economic practicality, stability, and a normal growth potential. The design standards provide a facility which will assure a high degree of usability based on a reasonably expectable set of operating conditions. While allowances are made for each significant design factor, full allowance is not made for all factors affecting runway design. As an example, a high average temperature is considered in design but not the highest recorded temperature. Also, it is recognized that the most critical conditions for all design factors will not occur simultaneously.
- b. Change in Operating Regulations. New operating regulations for turbojet powered airplanes, established in January 1966 by FAR Part 121.195, increased the effective runway length requirements for landing on wet or slippery runways. In consideration with other design allowances and to retain a design condition for landing with wet or slippery runways equivalent to that allowed for in the aircraft performance data for runway design, an * additional amount of runway may be needed for turbojet airplanes to satisfy FAR Part 121.195. A survey has been made to determine the amount of design runway length which should be added for the wet or slippery runway conditions and has taken into account other design allowances already built into the performance data. *
- c. Piston and Turboprop Powered Airplanes. FAR Part 121.195 does not require an increase in runway length under wet or slippery conditions for the operations of these airplanes. Therefore, no change from the results obtained by using the landing performance curves contained in Appendices 1, 2 and 5 is required.
- d. Turbojet Powered Airplanes. To determine the design landing length for wet or slippery runway conditions, increase the results obtained from using the landing performance curves contained in appendices 3 and 4 by the percentages shown for the specific airplane in Table 1. These percentages apply to all weights and elevations for each airplane, but are rounded off to the nearest one-half of one percent. The landing performance tables contained in Appendix 6 are based on wet and slippery runway conditions. Therefore, no further adjustment is necessary. *

TABLE 1. PERCENTAGE INCREASE OF DESIGN RUNWAY LANDING LENGTH
UNDER WET OR SLIPPERY CONDITIONS

<u>AIRPLANES IN APPENDIX 3</u>	<u>PERCENT INCREASE</u>	<u>AIRPLANES IN APPENDIX 4</u>	<u>PERCENT INCREASE</u>
BOEING		BOEING	
707-100 Series	7.5	707-100B Series	7.5
707-200	7.5	707-300B	7.5
* 707-300	7.5	DELETED--CHG 9	*
707-400	7.5	720-000B	6.5
720-000	7.5	727-00	7.0
B.A.C.			
B.A.C. 1-11	5.0		
CARAVELLE			
SE 210-1	6.5		
SE 210-6R	6.5		
CONVAIR		CONVAIR	
880	9.5	990A	4.5
880M	8.0		
DOUGLAS		DOUGLAS	
DC-8-10 Series	7.5	DC-8-50 Series	7.0
DC-8-20	7.0	DC-8-55	7.0
DC-8-30	7.0	DC-8F-55	7.0
DC-8-40	7.0	DC-9-10	8.0

3/13/78

DEVELOPMENT PARAMETERS FOR LARGE AIRPLANE PERFORMANCE CURVES. The aircraft performance curves for large airplanes presented in this circular permit the determination of runway length requirements for airport design and planning guidance only and are not to be used for airplane operational purposes. Except for the preliminary aircraft performance curves (Appendix 7), the relationship of elevation, temperature, aircraft weight, and distance shown on the aircraft performance curves for large airplanes is based on flight test and operational data.

- a. Airport Elevation. The elevation of the airport above mean sea level is to be used for runway length determination and for this purpose is considered equivalent to the airport pressure altitude.
- b. Temperature. The temperature recommended for airport runway length design is the mean daily maximum temperature at the airport for the hottest month. Values for mean daily maximum temperature may be obtained from the National Oceanic and Atmospheric Administration's publication, Climatology of the United States No. 86. *
- c. Takeoff Weight. The takeoff weight corresponding to the distance (length of haul) shown on the takeoff aircraft performance curves for large airplanes is the lesser of (1) or (2) described below.
 - (1) The aircraft's zero fuel weight plus the weight of fuel required to fly to the airport of destination plus the weight of fuel reserve required for 1 hour and 15 minutes of flying time.
 - (2) The aircraft's maximum landing weight plus the weight of fuel required to fly to the airport of destination.
- d. Distance. The distance indicated on the aircraft takeoff performance curves for large airplanes is the distance that the airplane can fly from one airport to the next with a maximum payload and the minimum fuel load required for the distance. For airport design, use the longest nonstop distance expected to be flown from the airport at least 250 times a year by the specific critical aircraft. This value may be adjusted to account for the effect of seasonal traffic variation and of isolated or remote areas. *
- e. Runway Length Required for Takeoff. The runway length determined from the takeoff aircraft performance curves for large airplanes is equal to the airplane's accelerate-stop distance or the airplane's takeoff distance, whichever is greater. Condition of no wind is assumed.

- f. Runway Length Required for Landing. The runway length determined from the landing aircraft performance curves for large airplanes is the airplane's landing distance divided by 0.6. Conditions of dry runway and a five-knot tailwind are assumed.
6. EXPLANATORY INSTRUCTIONS FOR LARGE AIRPLANE PERFORMANCE CURVES. To determine the length of the runway required, it is necessary to investigate both the aircraft's takeoff and landing length requirements. To do so, the following basic information is necessary:
- a. Selected airplane which the runway is to accommodate.
 - * b. The longest nonstop distance expected to be flown from the airport at least 250 times a year by the selected airplane. *
 - c. Airport elevation above mean sea level.
 - * d. Mean daily maximum temperature (F°) for the hottest month. *
 - e. Aircraft maximum landing weight.
 - f. Effective runway gradient.
7. EXAMPLE (NO. 1) FOR LARGE AIRPLANES.
- a. Statement. Assume it is desired to determine the length of runway required to accommodate the following design conditions:
 - (1) Example large airplane (Figures 1 and 2, Pages 8 and 9).
 - * (2) Mean daily maximum temperature 85°F. *
 - (3) Airport elevation 1,800 feet.
 - (4) Distance 1,400 miles.
 - (5) Aircraft maximum landing weight 175,000 pounds.
 - (6) Effective runway gradient 0.5 percent.
 - b. Runway Length Required for Landing. The example trace (1) on the landing aircraft performance curve (Figure 1, Page 8) corresponds to the procedure steps listed below.
 - (1) Enter the landing aircraft performance curve on the abscissa axis at the aircraft's maximum landing weight (175,000 pounds).
 - (2) Project this point vertically to the intersection with the slanted line corresponding to the airport elevation, interpolating where necessary.
 - (3) Extend this point of intersection horizontally to the right to the intersection of the runway length scale and read the runway length required for landing--in this case, 6,700 feet for a maximum landing weight of 175,000 pounds.
 - c. Runway Length Required for Takeoff. The example trace (1) on the takeoff aircraft performance curve (Figure 2, Page 9) corresponds to the procedure steps listed below.

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- (1) Enter the temperature scale on the abscissa axis at the temperature (85°F).
 - (2) Project this point vertically to the intersection with the slanted line corresponding to the airport elevation (1,800 feet), interpolating between elevation lines where necessary.
 - (3) Extend this point of intersection horizontally to the right until coincident with the reference line (RL).
 - (4) Then, proceed up and to the right or down and to the left, interpolating between the slanted lines as necessary, until reaching a point directly above the aircraft's takeoff weight or distance (1,400 miles).
 - (5) Project this point horizontally to the right to the intersection with the runway length scale and read the runway length (8,940 feet).
- * (6) Increase this runway length for effective runway gradient (0.5 percent):
- (a) If the airplane is piston or turboprop powered:
 $8,940 + (8,940 \times 0.20 \times 0.5) = 9,830$ feet.
 - (b) If the airplane is turbojet powered:
 $8,940 + (8,940 \times 0.10 \times 0.5) = 9,390$ feet.
- d. Example Answer. The runway length required for takeoff is greater than the runway length required for landing. Therefore, the runway length required for takeoff should be selected to meet the design conditions specified. *

EXAMPLE (NO. 2) FOR LARGE AIRPLANES. The procedure outlined in Paragraph 7 is normal except for aircraft operating at heavier weight, higher elevations, and/or higher temperatures, in which case restrictions may limit the takeoff weight and runway length. These restrictions are shown as dashed elevation lines in the upper righthand portion of the takeoff aircraft performance curve. The limit line corresponding to the elevation at the airport must not be crossed when using the curve, interpolating where necessary. The procedure outlined below and the example trace (2) shown on the takeoff aircraft performance curve (Figure 2, Page 9) illustrate the use of limit lines.

- a. Statement. Assume it is desired to determine the length of runway required to accommodate the following design conditions:

- * (1) Example large airplane (Figures 1 and 2, Pages 8 and 9).
(2) Mean daily maximum temperature 70°F.
(3) Airport elevation 3,000 feet.
(4) Distance 2,200 miles.
(5) Aircraft maximum landing weight 175,000 pounds.
(6) Effective runway gradient 0.5 percent.

- b. Runway Length Required for Landing. From trace (2) on the landing aircraft performance curve (Figure 1, Page 8), read runway length of 6,900 feet.

- c. Runway Length Required for Takeoff. The example trace (2) on the takeoff performance curve (Figure 2, Page 9) corresponds to the procedure steps listed below.

- (1) Enter the temperature scale on the abscissa axis at the temperature (70°F).
- (2) Project this point vertically to the intersection with the slanted line corresponding to the airport elevation (3,000 feet), interpolating between elevation lines where necessary.
- (3) Extend this point of intersection horizontally to the right until coincident with the reference line (RL).
- (4) Then, proceed up and to the right or down and to the left, interpolating between the slanted lines as necessary, to the intersection of the 3,000-foot elevation limit line or until reaching a point directly above the aircraft's takeoff weight or distance (2,200 miles), whichever occurs first, in this case the 3,000-foot elevation limit line.
- (5) Project this point horizontally to the right to the intersection with the runway length scale and read the runway length (11,250 feet).
- (6) Increase this runway length for effective runway gradient (0.5 percent).
 - (a) If the airplane is piston or turboprop powered:
 $11,250 + (11,250 \times 0.20 \times 0.5) = 12,370$ feet.
 - (b) If the airplane is turbojet powered:
 $11,250 + (11,250 \times 0.10 \times 0.5) = 11,810$ feet.

- d. Example Answer. The runway length required for takeoff is greater than the runway length required for landing. Therefore, the runway length required for takeoff should be selected to meet the design conditions specified.

3. DEVELOPMENT PARAMETERS FOR SMALL AIRPLANE PERFORMANCE CURVES. The aircraft performance curves for small airplanes presented in this circular were developed from actual values obtained from aircraft manufacturers' data based on flight tests utilizing paved runway surfaces. Therefore, the curves establish the length required for a paved runway and are furnished for use in the planning and design of airports and are not to be used for airplane operational purposes.

- a. Airport Elevation. The airport elevation shown on the aircraft performance curves is considered to equal the airport pressure altitude.
- b. Temperature. The temperature recommended for airport runway length design is the mean daily maximum temperature at the airport for the hottest month. Values for mean daily maximum temperature may be obtained from the National Oceanic and Atmospheric Administration's publication, Climatology of the United States No. 86. *
- c. Wind. The runway lengths obtained from the aircraft performance curves for small airplanes are based on zero wind.
- d. Weight. The runway lengths obtained from the aircraft performance curves for small airplanes are for aircraft at maximum gross weight.
- e. Runway Length Required for Takeoff. The runway length determined from the takeoff performance curves for small airplanes is equal to the takeoff distance.
- f. Runway Length Required for Landing. The runway length determined from the landing performance curves for small airplanes is equal to the landing distance. For small airplanes, for which the takeoff aircraft performance curves are presented without the landing aircraft performance curves, the runway length required for landing is shorter than the runway length required for takeoff.

10. EXPLANATORY INSTRUCTIONS FOR SMALL AIRPLANE PERFORMANCE CURVES. To determine the length of runway required, it is necessary to consider both the landing and takeoff length requirements of each airplane. As noted in paragraph 9f, actual determinations of both requirements need not always be made but for those that are, the following basic information is necessary:
- a. Selected airplane which the runway is to accommodate.
 - b. Airport elevation above mean sea level.
 - * c. Mean daily maximum temperature (°F) for the hottest month.
 - d. Effective runway gradient.
11. - 13. RESERVED.
14. DEVELOPMENT PARAMETERS FOR PRELIMINARY AIRCRAFT PERFORMANCE CURVES. The preliminary aircraft performance curves presented in Appendix 7 of this circular permit the determination of runway length requirements for airport design and planning guidance only and are not to be used for airplane operational purposes. The relationship of elevation, temperature, aircraft weight, and distance shown on the preliminary aircraft performance curves is based on estimated operational data.



EXAMPLE LARGE AIRPLANE

ENGINE TYPE

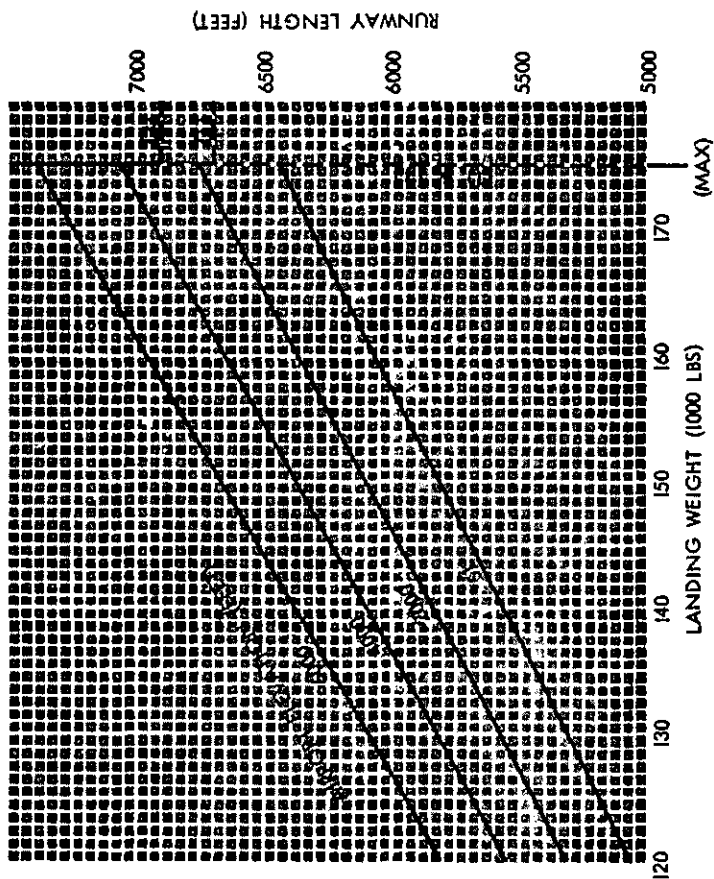
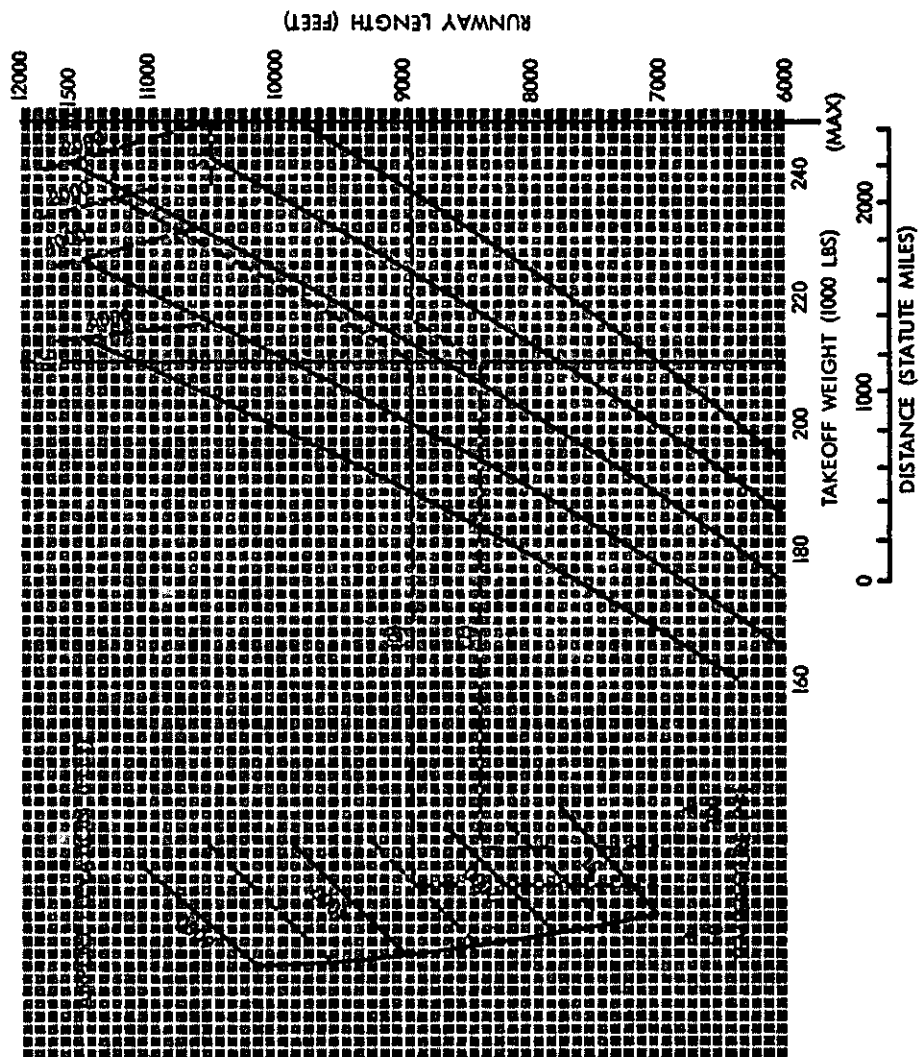
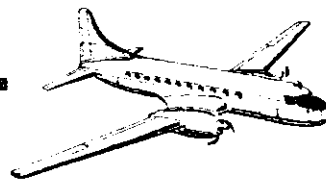


FIGURE 1. Aircraft Performance Curve, Landing (Example Large Airplane)



APPENDIX 1. PISTON POWERED LARGE AIRPLANES

1. AIRCRAFT PERFORMANCE CURVES. The aircraft performance curves contained in this appendix are for airplanes with the following items in common:
 - a. Multiengine (two or more engines).
 - b. Propeller driven.
 - c. Equipped with reciprocating engines.
 - d. Certificated with a maximum takeoff weight of more than 12,500 pounds.
 - e. Transport category, with exception of the Douglas DC-3.
 - f. Type certificated in accordance with the performance requirements other than the ones of SR-422, SR-422A, or SR-422B.
2. EXPLANATORY INSTRUCTIONS. For explanatory instructions and example problems on use of the aircraft performance curves contained in this appendix, see Paragraphs 6, 7, and 8 on Pages 3 and 4 of this circular.



CONVAIR 240

PRATT & WHITNEY R2800-CA18 ENGINE
R2800-CB16

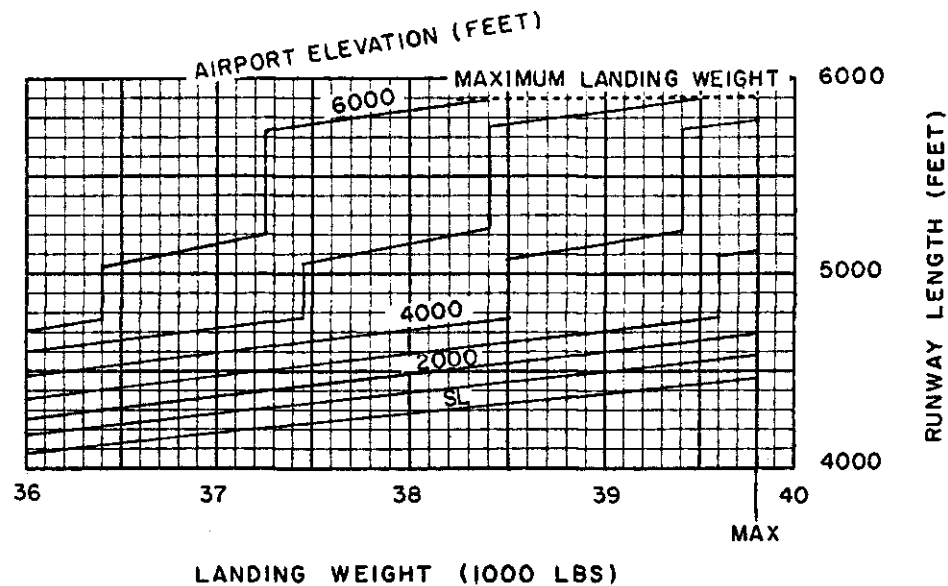


FIGURE 1. Aircraft Performance Curve, Landing (Convair 240)

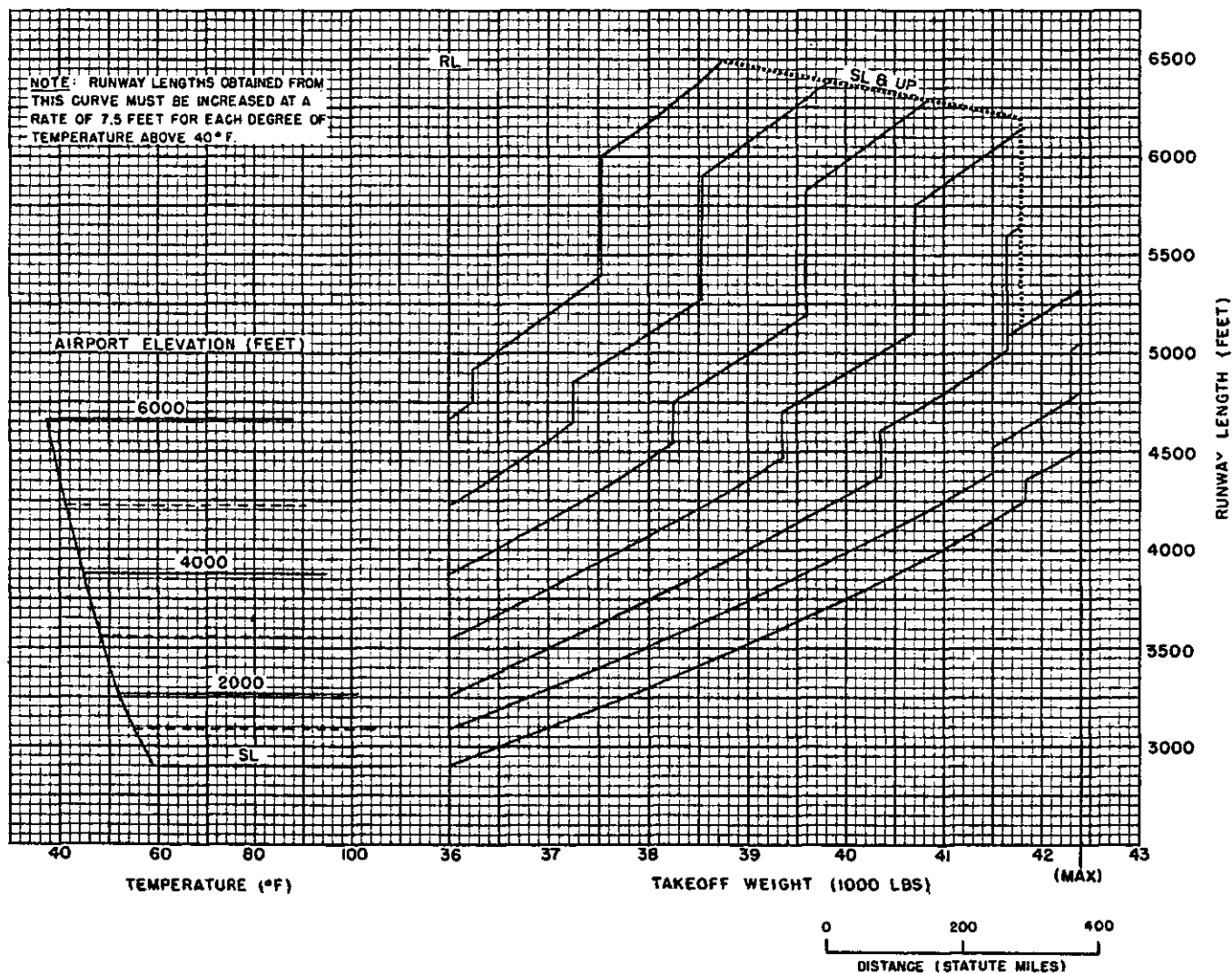
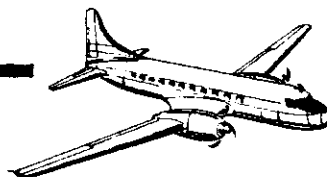


FIGURE 2. Aircraft Performance Curve, Takeoff (Convair 240)



CONVAIR 340 & 440

PRATT & WHITNEY R2800-CB3 ENGINE
R2800-CB4
R2800-CB16
R2800-CB17

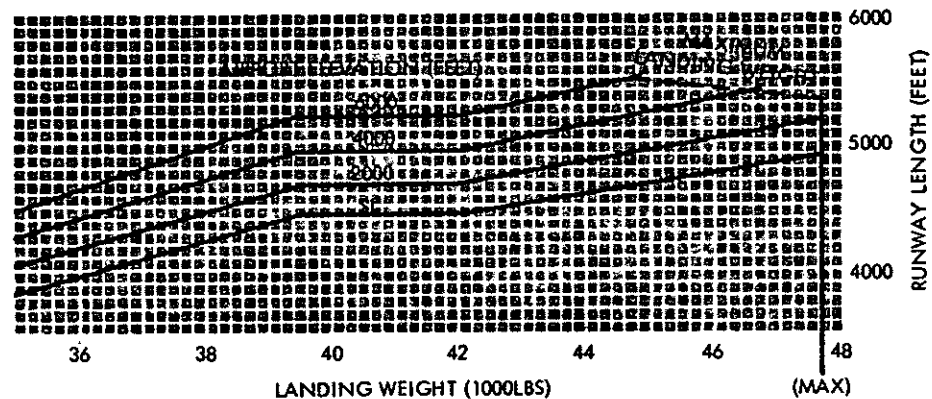


FIGURE 3. Aircraft Performance Curve, Landing (Convair 340 & 440)

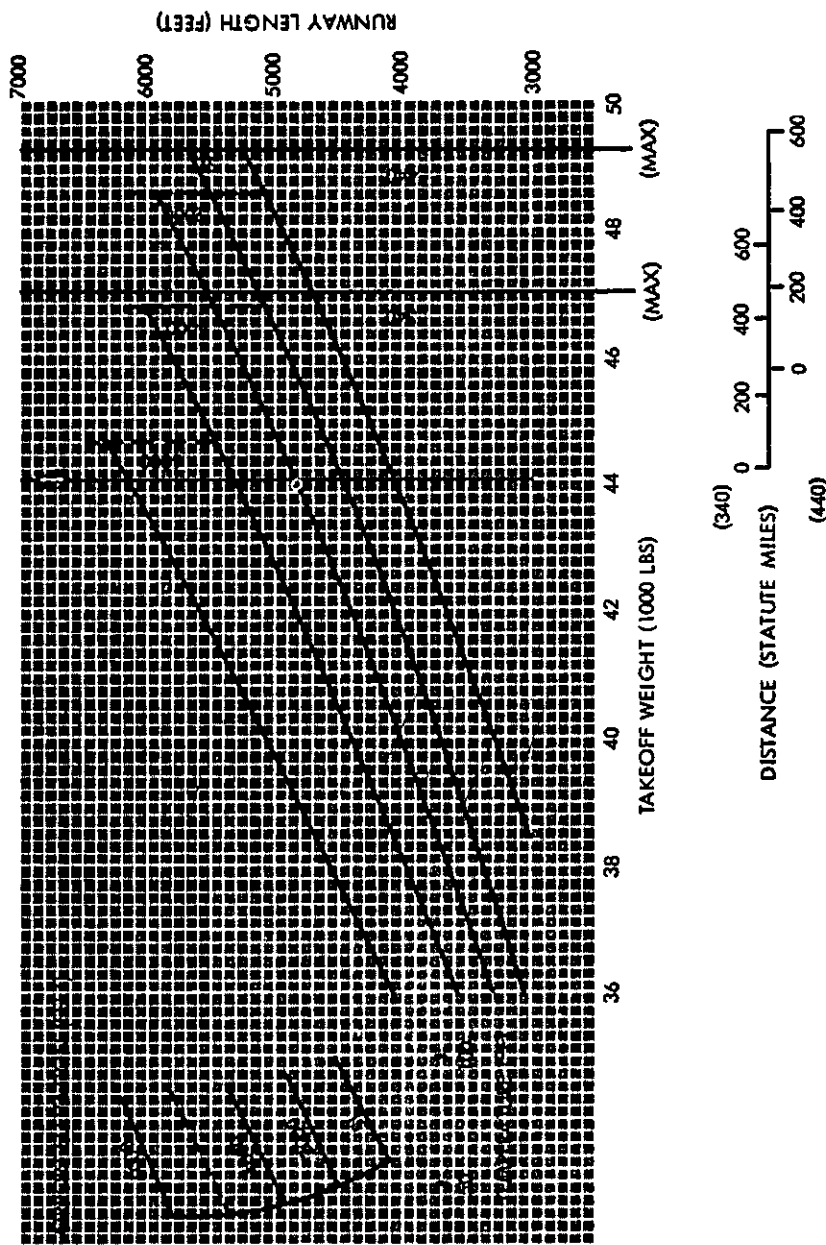
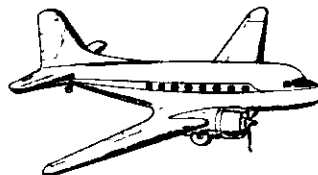


FIGURE 4. Aircraft Performance Curve, Takeoff (Convair 340 & 440)



DOUGLAS DC-3

NONTRANSPORT
PRATT & WHITNEY SIC 3G ENGINE
WRIGHT G-202A

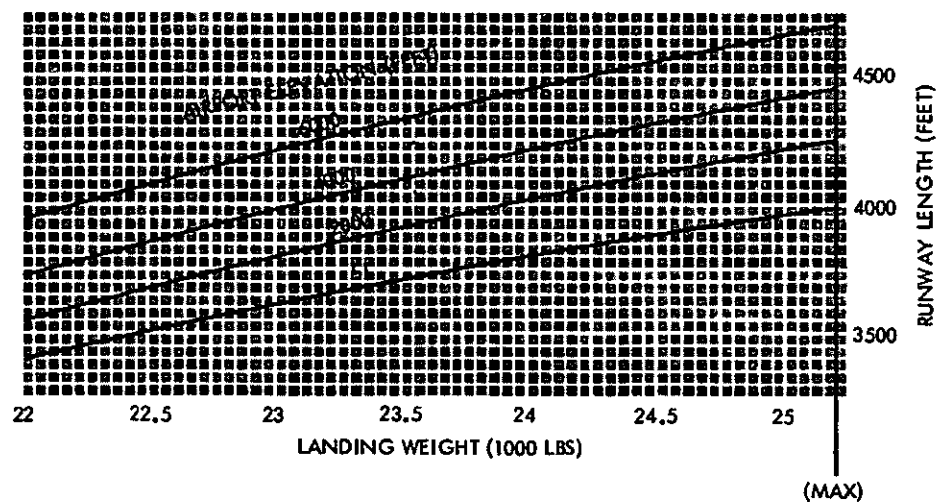


FIGURE 5. Aircraft Performance Curve, Landing (Douglas DC-3)

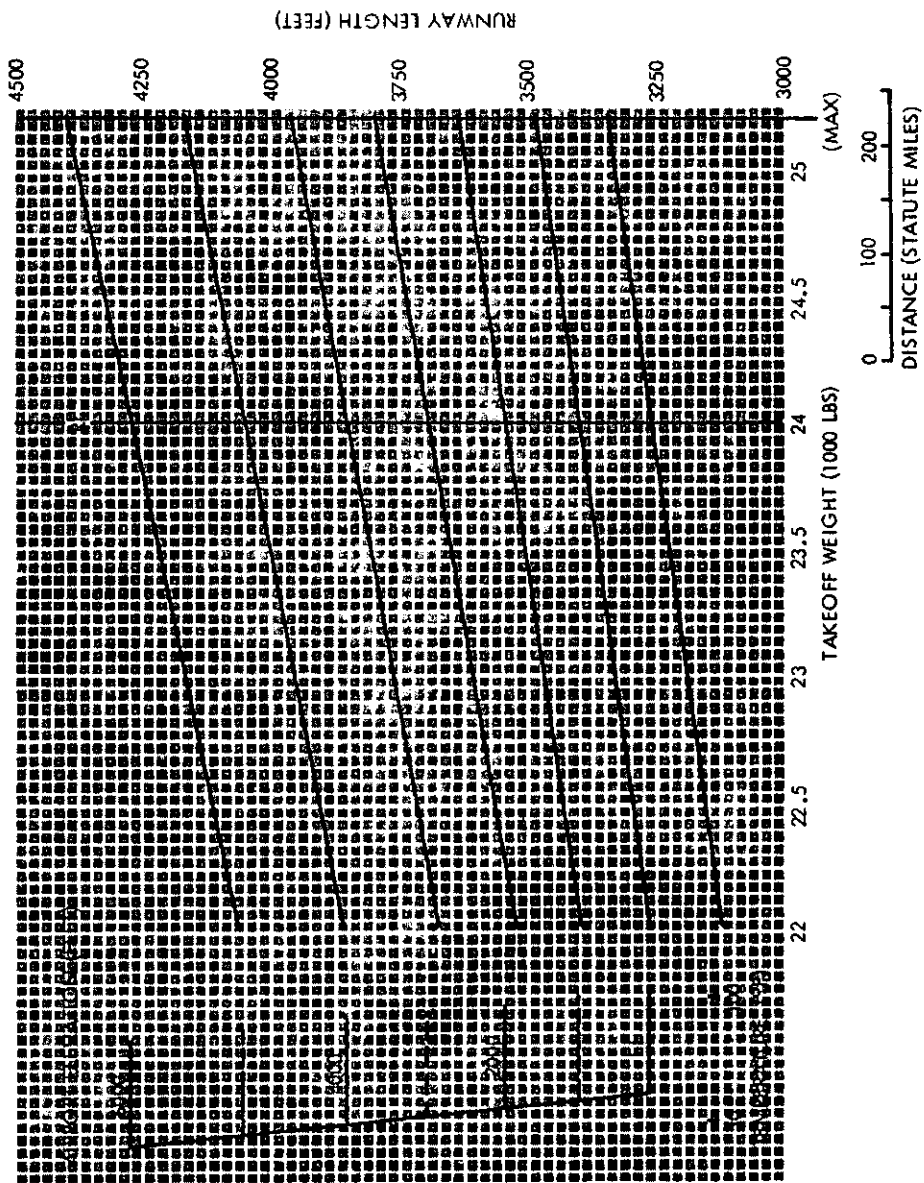


FIGURE 6. Aircraft Performance Curve, Takeoff (Douglas DC-3)



DOUGLAS DC-4
PRATT & WHITNEY R2000-7 ENGINE
R2000-11

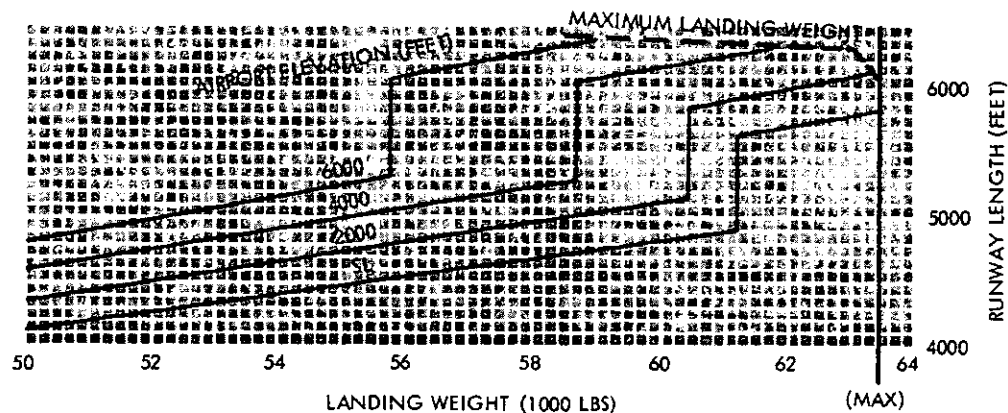


FIGURE 7. Aircraft Performance Curve, Landing (Douglas DC-4)

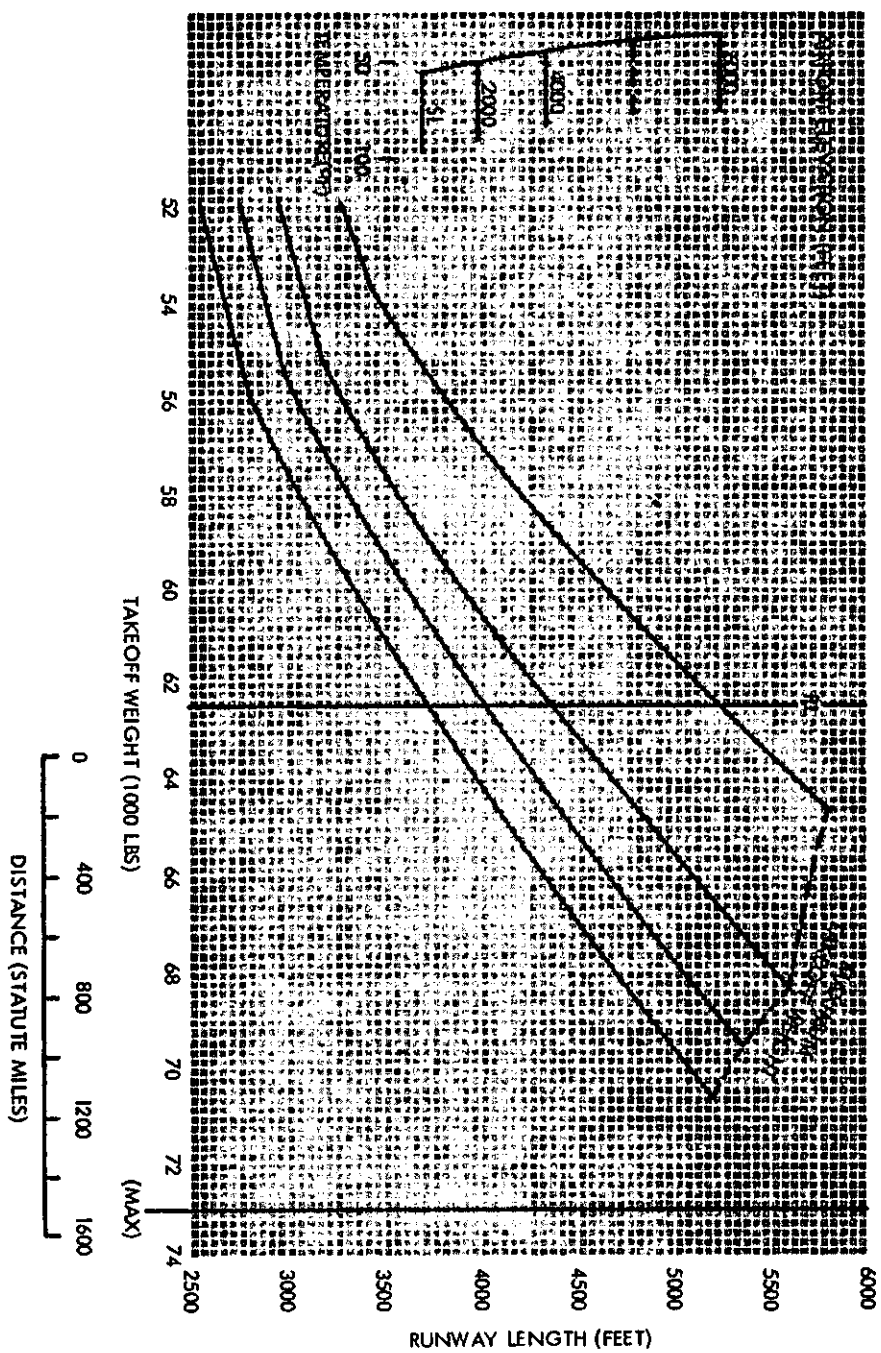
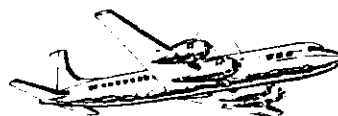


FIGURE 8. Aircraft Performance Curve, Takeoff (Douglas DC-4)



DOUGLAS DC-6A & 6B

PRATT & WHITNEY R2800-CB16 ENGINE

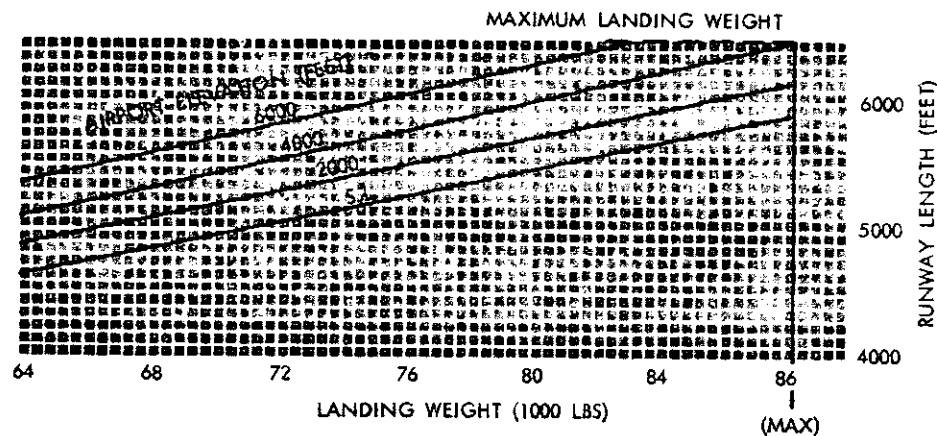


FIGURE 9. Aircraft Performance Curve, Landing (Douglas DC-6A & 6B)

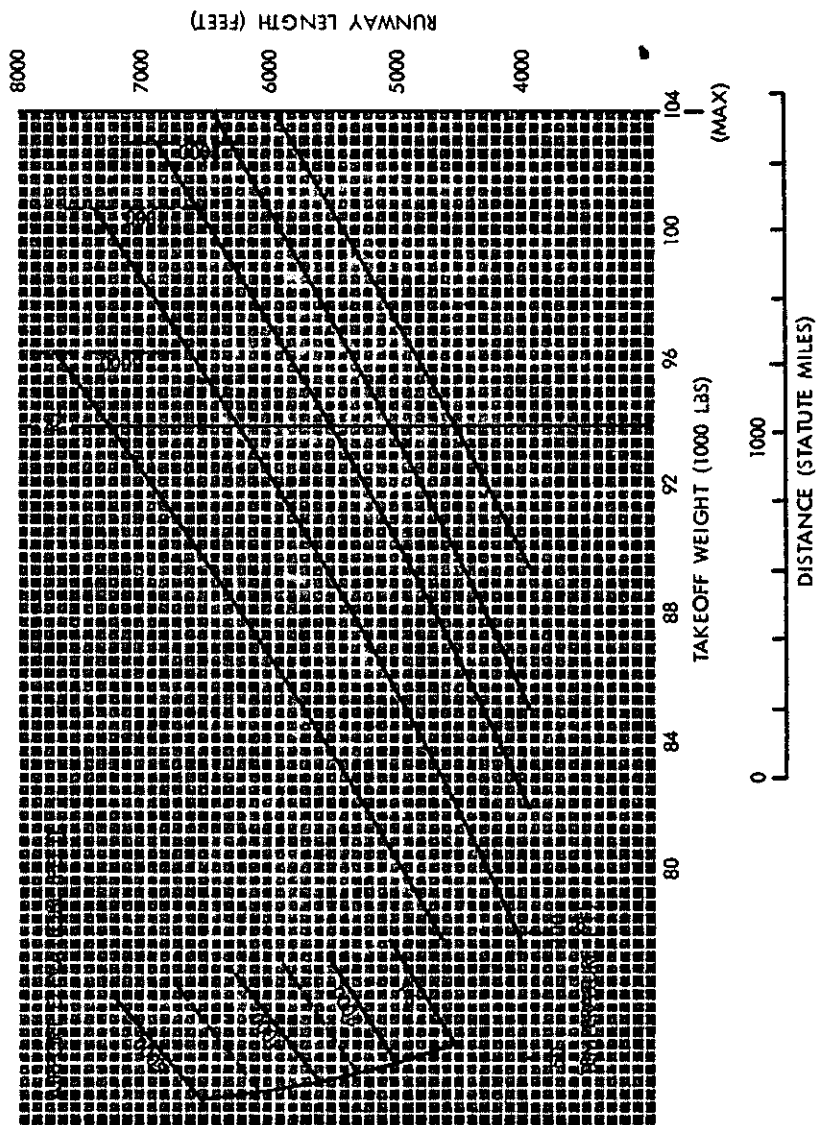


FIGURE 10. Aircraft Performance Curve, Takeoff (Douglas DC-6A & 6B)



DOUGLAS DC-7

WRIGHT 972 TC 18 DA2 ENGINE
972 TC 18 DA4

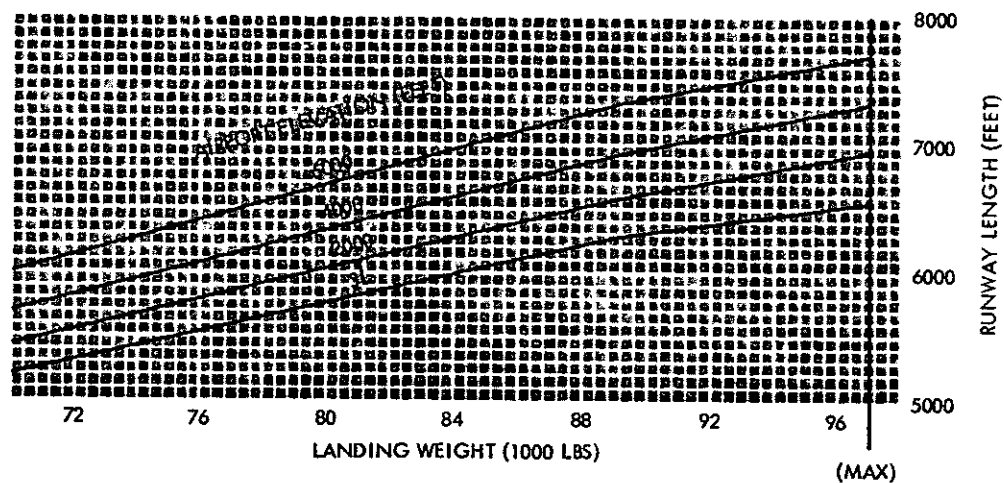


FIGURE 11. Aircraft Performance Curve, Landing (Douglas DC-7)

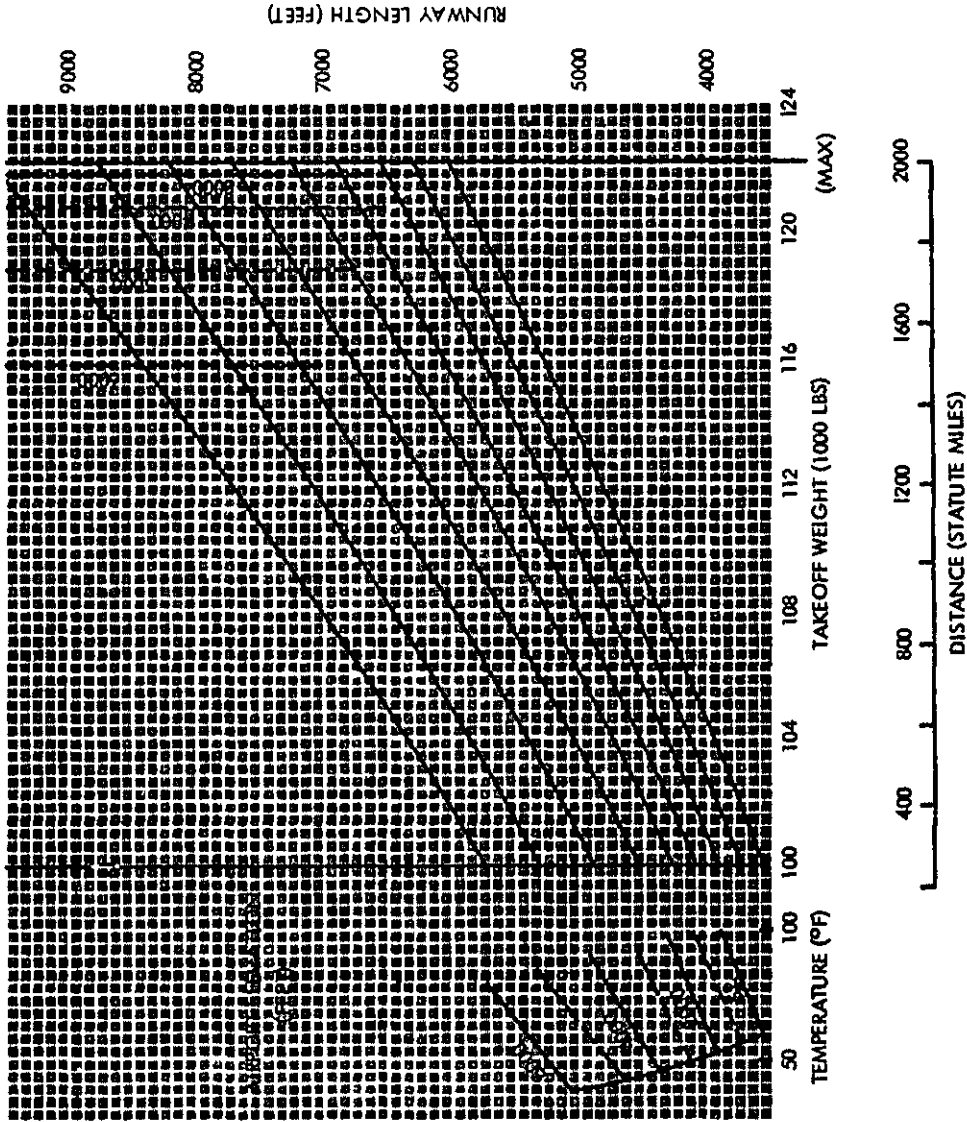
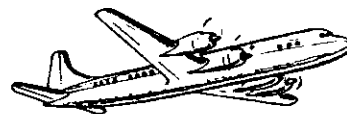


FIGURE 12. Aircraft Performance Curve, Takeoff (Douglas DC-7)



DOUGLAS DC-7B

WRIGHT 972 TC 18 DA2 ENGINE
972 TC 18 DA4
988 TC 18 EA1
988 TC 18 EA4

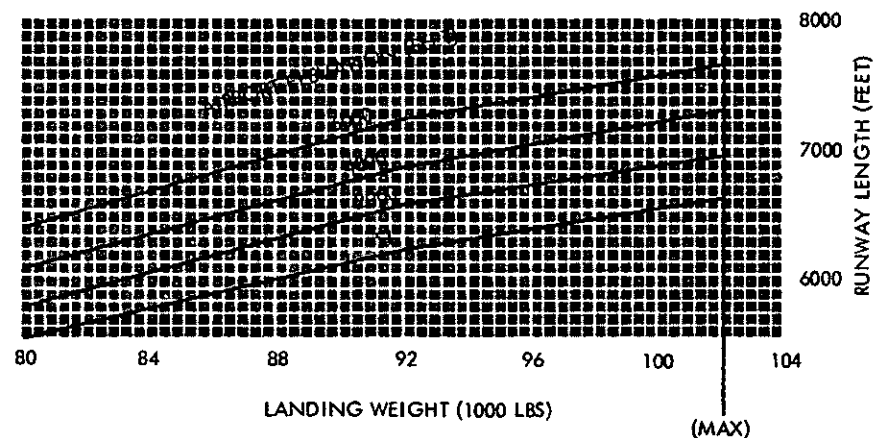


FIGURE 13. Aircraft Performance Curve, Landing (Douglas DC-7B)

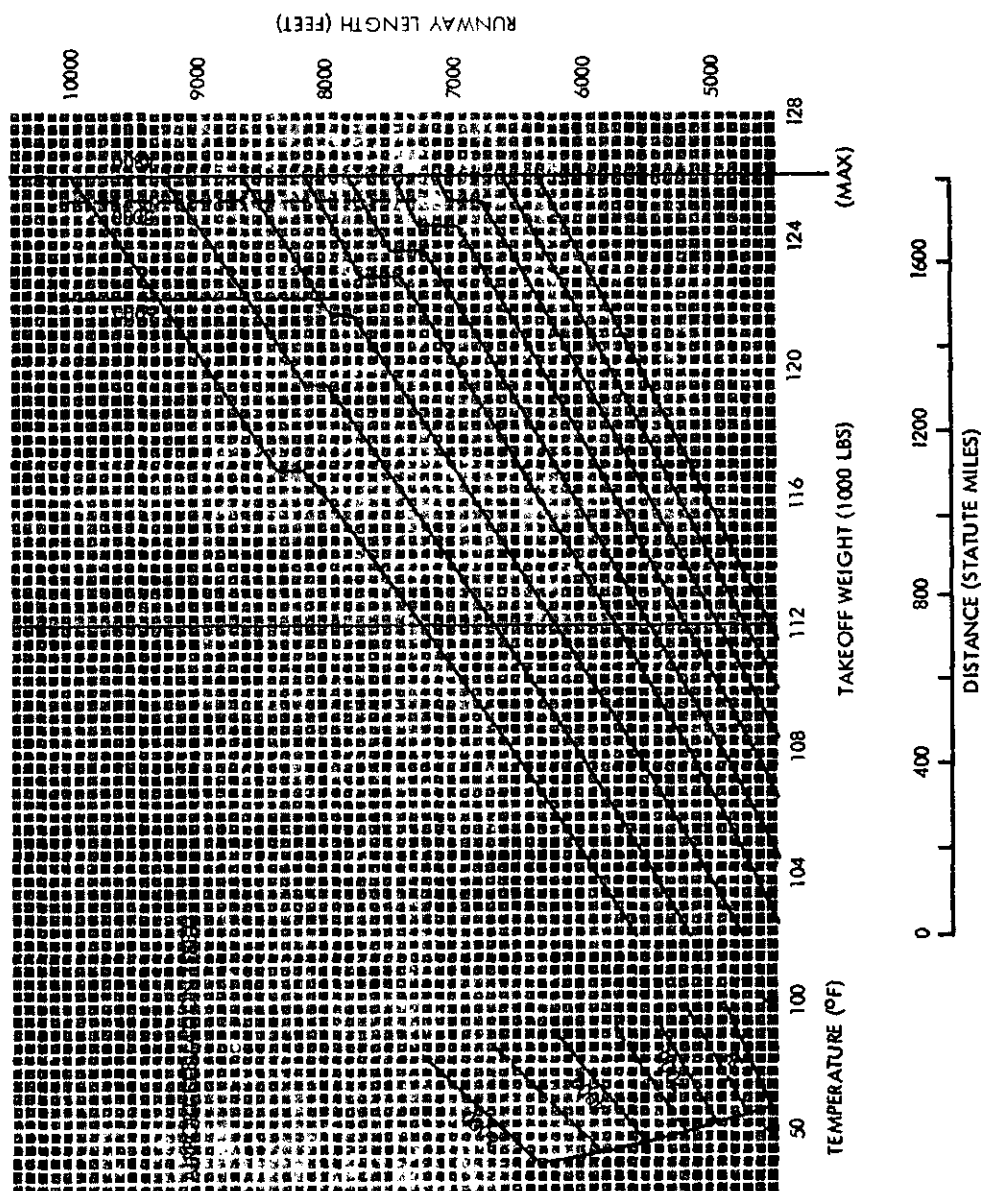
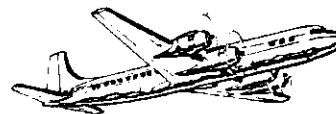


FIGURE 14. Aircraft Performance Curve, Takeoff (Douglas DC-7B)



DOUGLAS DC-7C

WRIGHT R3350 ENGINE

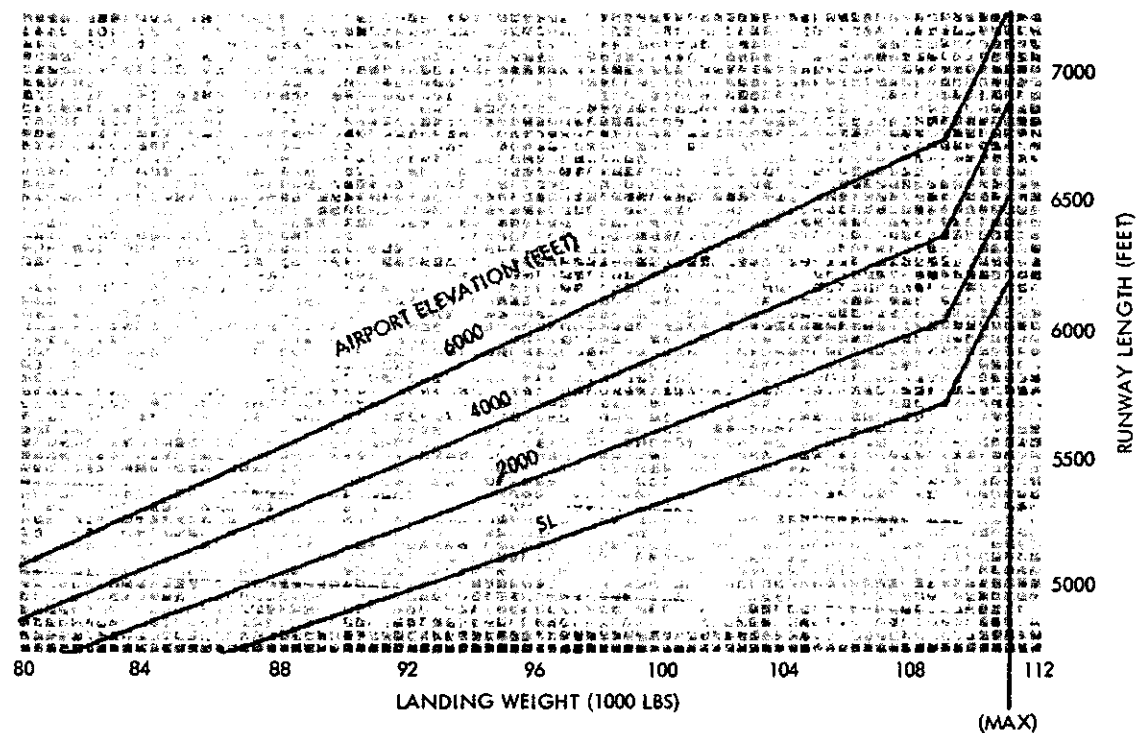


FIGURE 15. Aircraft Performance Curve, Landing (Douglas DC-7C)

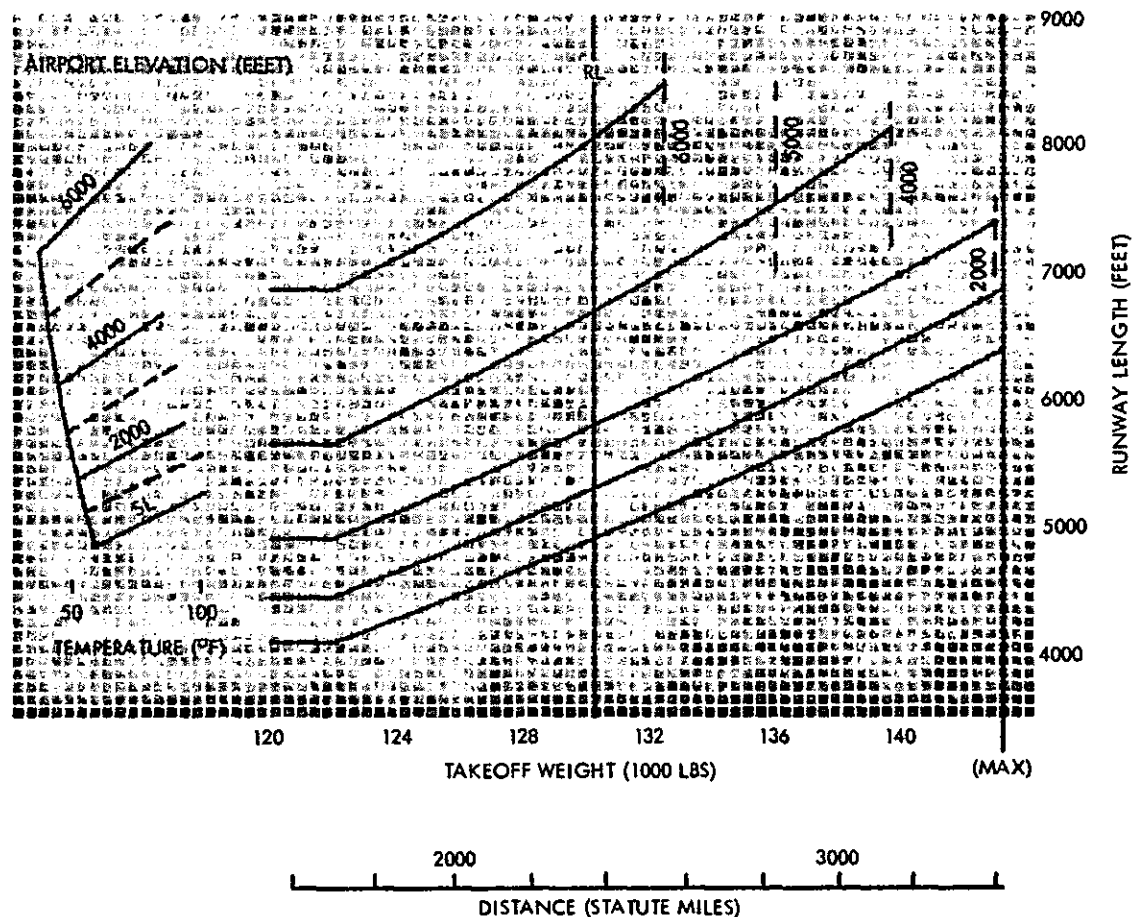


FIGURE 16. Aircraft Performance Curve, Takeoff (Douglas DC-7C)



LOCKHEED 49 SERIES & 149

WRIGHT 745 C 18 BA3 ENGINE

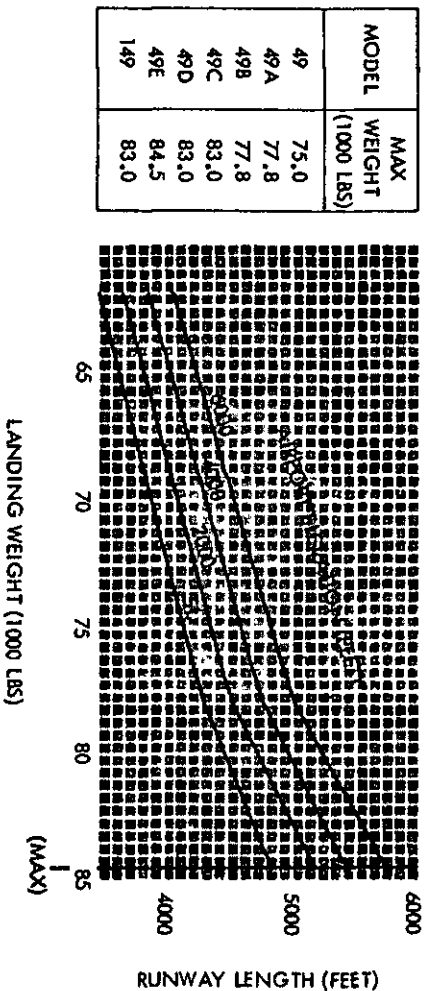


FIGURE 17. Aircraft Performance Curve, Landing (Lockheed 49 Series & 149)

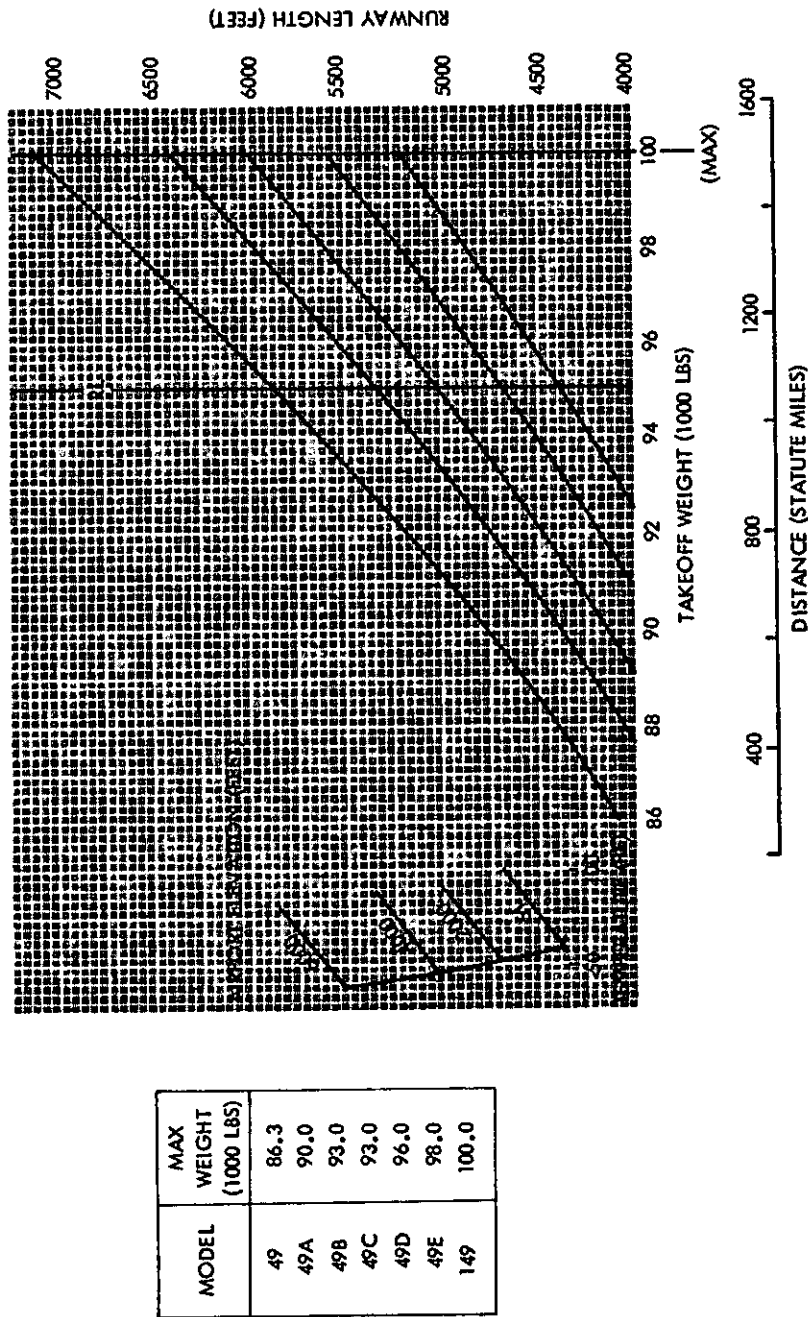


FIGURE 18. Aircraft Performance Curve, Takeoff (Lockheed 49 Series & 149)



LOCKHEED 649 & 749

WRIGHT 749 C 18 BD1 ENGINE

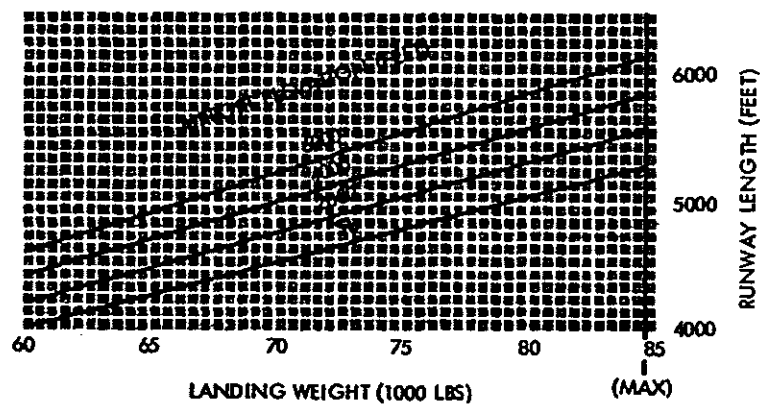


FIGURE 19. Aircraft Performance Curve, Landing (Lockheed 649 & 749)

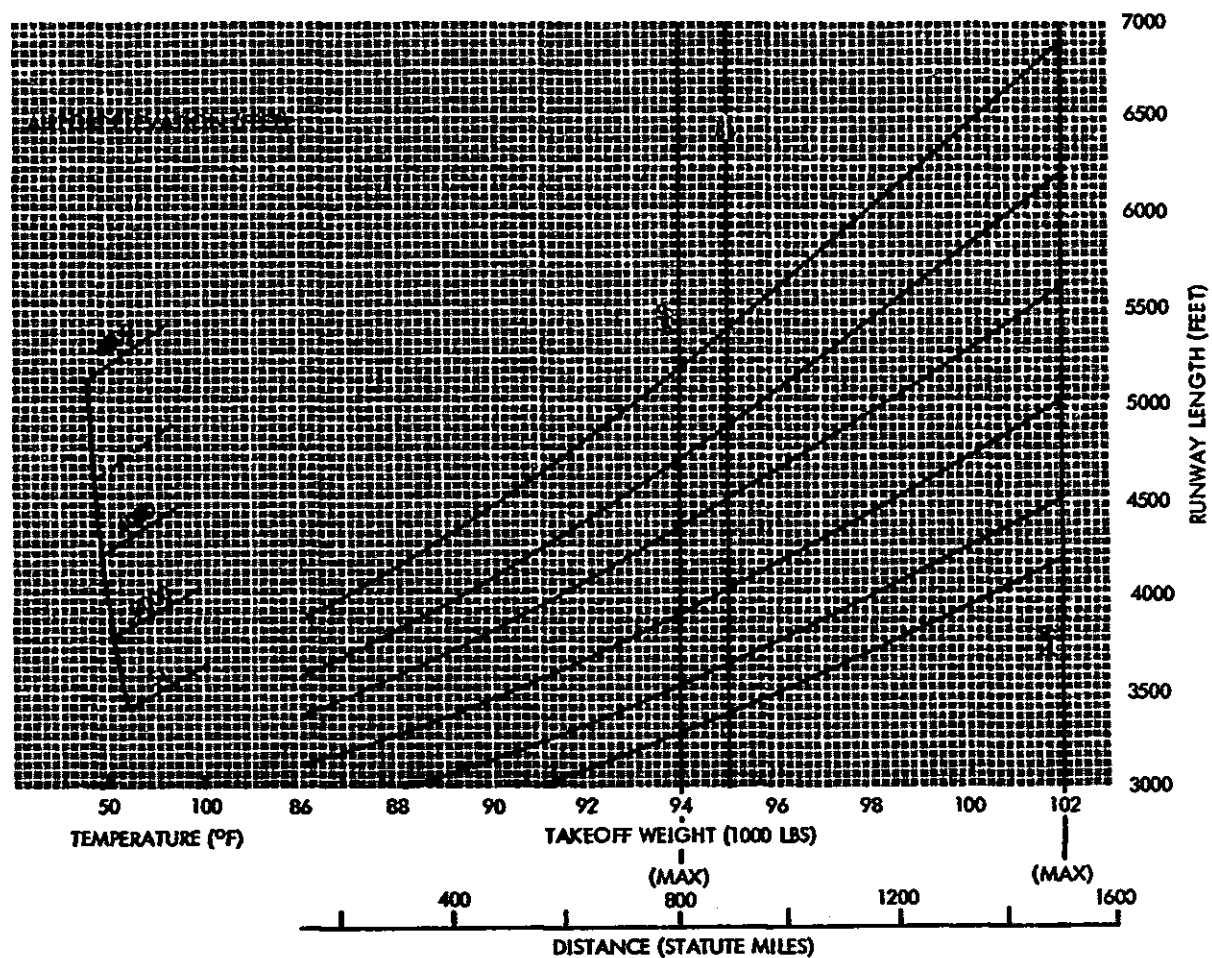


FIGURE 20. Aircraft Performance Curve, Takeoff (Lockheed 649 & 749)



LOCKHEED 649A & 749A

WRIGHT 749 C 18 BD1 ENGINE

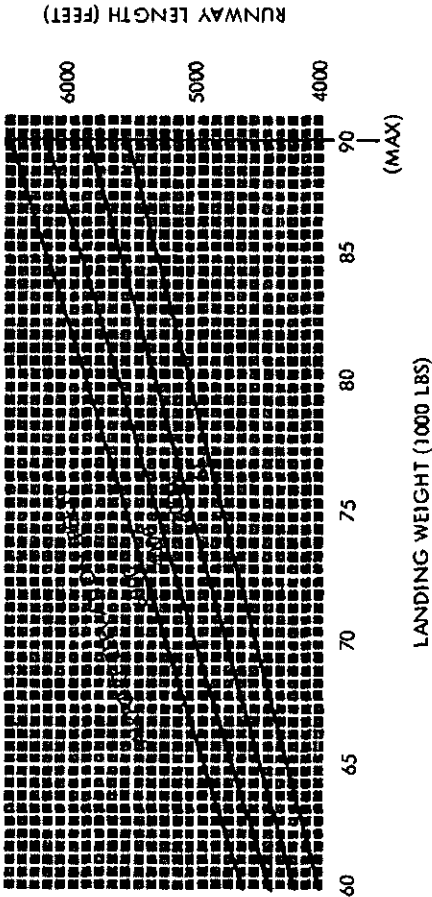


FIGURE 21. Aircraft Performance Curve, Landing (Lockheed 649A & 749A)

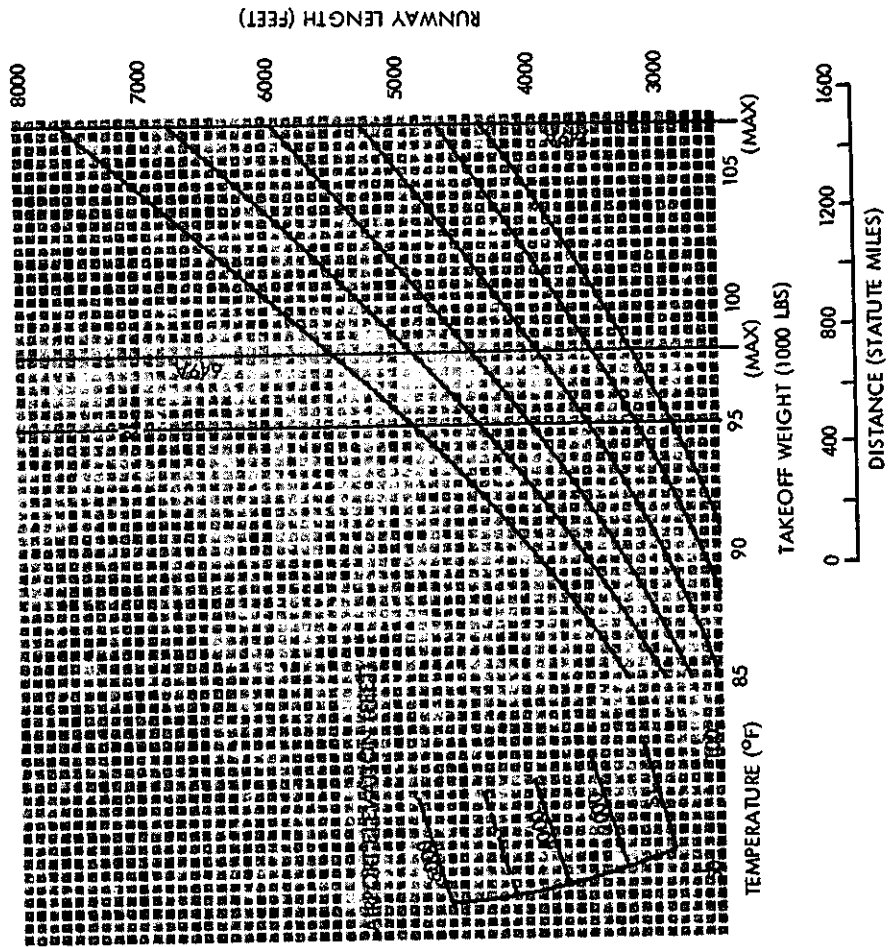
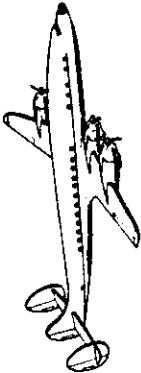


FIGURE 22. Aircraft Performance Curve, Takeoff (Lockheed 649A & 749A)



LOCKHEED 1049

WRIGHT 975 C 18 CBI ENGINE

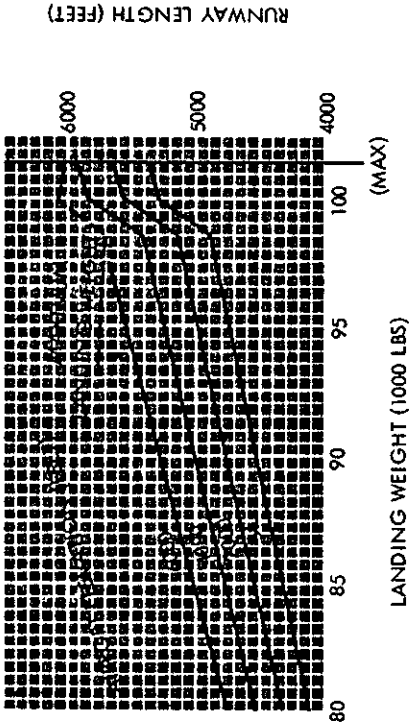


FIGURE 23. Aircraft Performance Curve, Landing (Lockheed 1049)

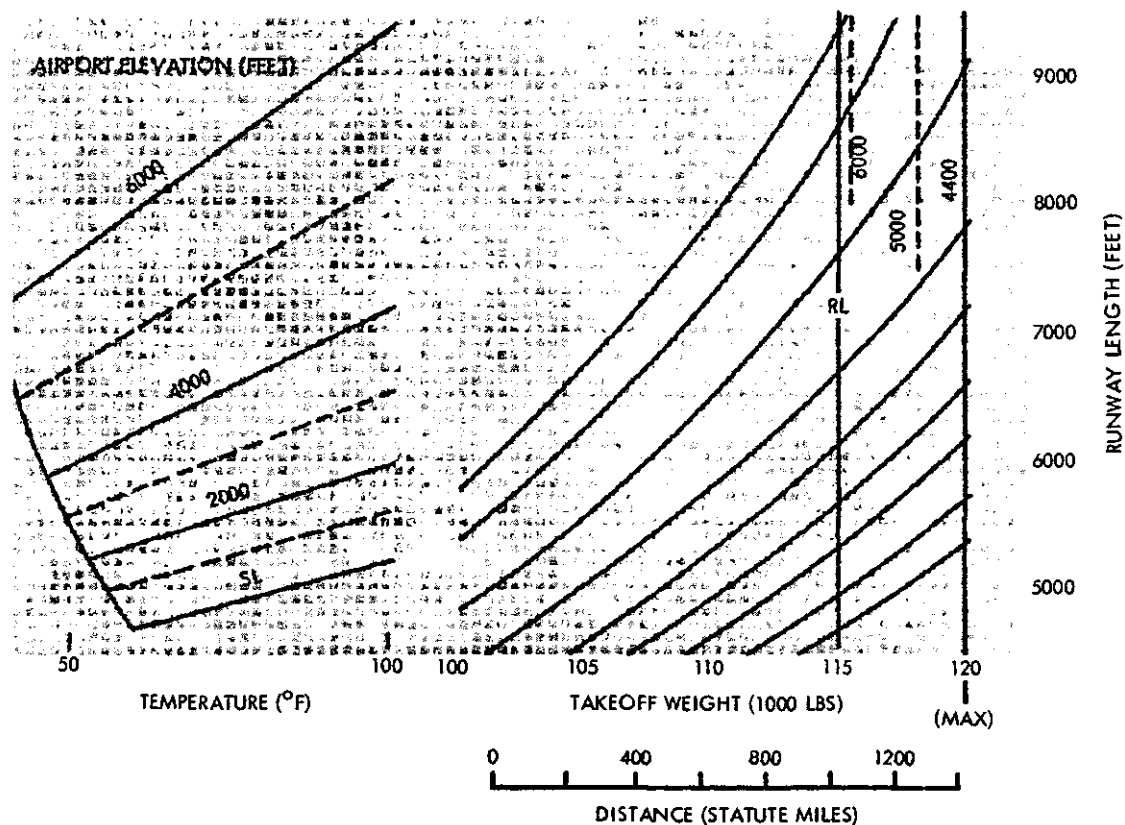


FIGURE 24. Aircraft Performance Curve, Takeoff (Lockheed 1049)



LOCKHEED 1049G

WRIGHT 988 TC 18 EA3 ENGINE
988 TC 18 EA6

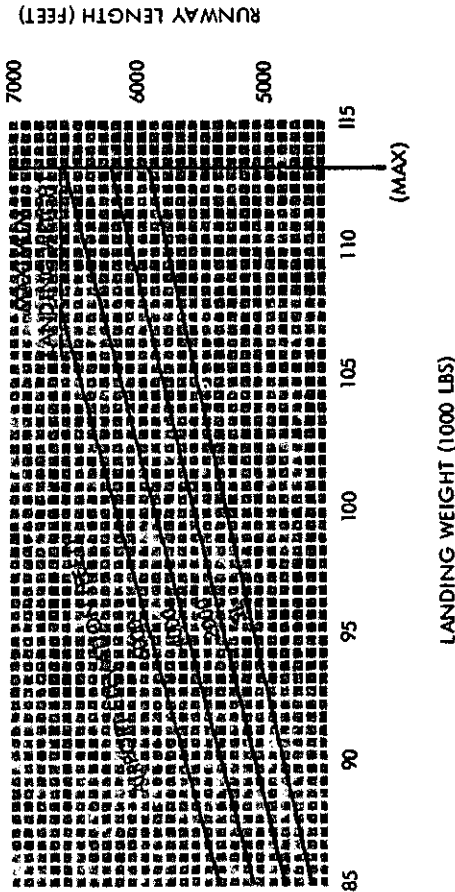


FIGURE 25. Aircraft Performance Curve, Landing (Lockheed 1049G)

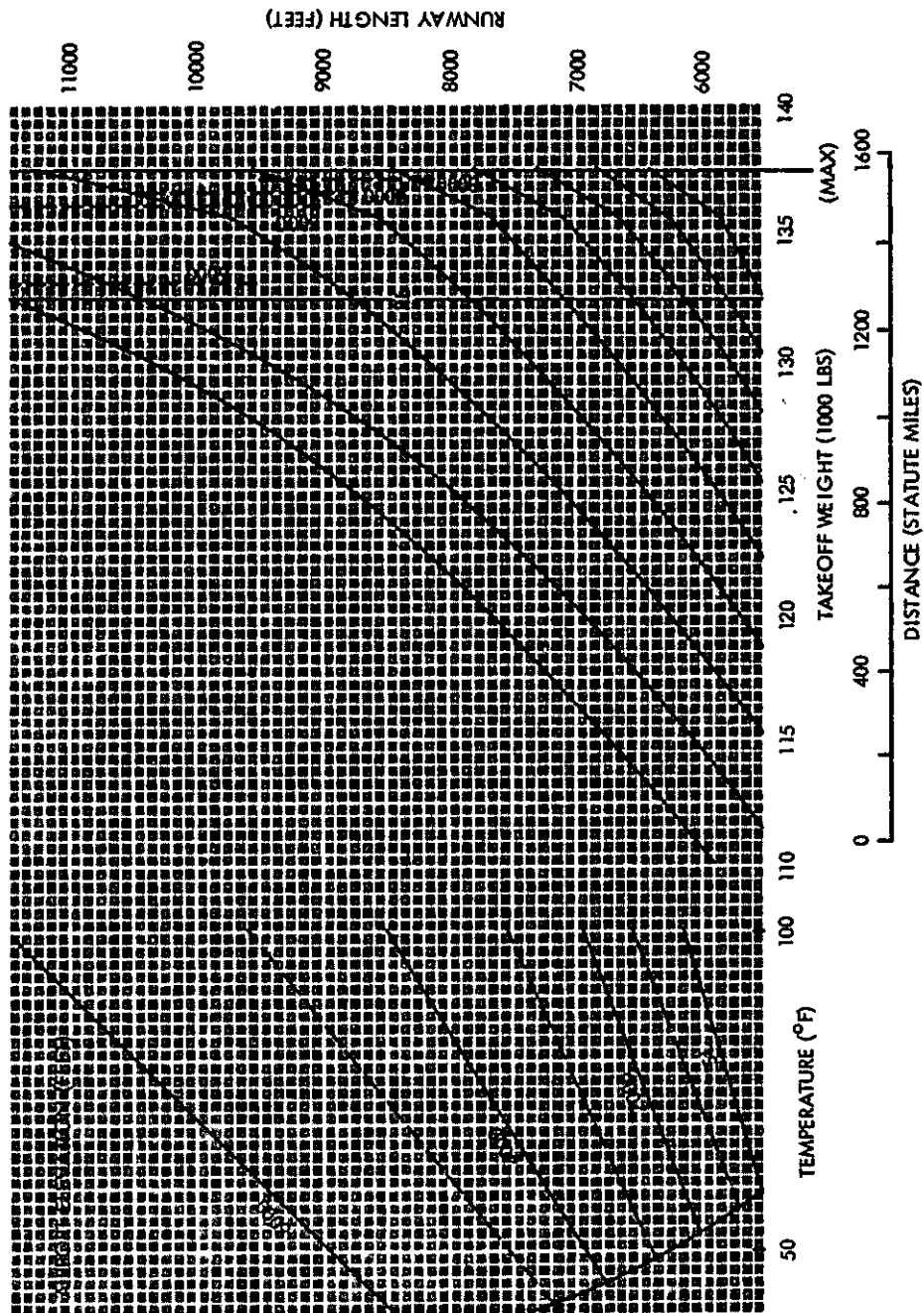


FIGURE 26. Aircraft Performance Curve, Takeoff (Lockheed 1049G)



LOCKHEED 1049H

WRIGHT 988 TC 18 EA3 ENGINE
988 TC 18 EA6

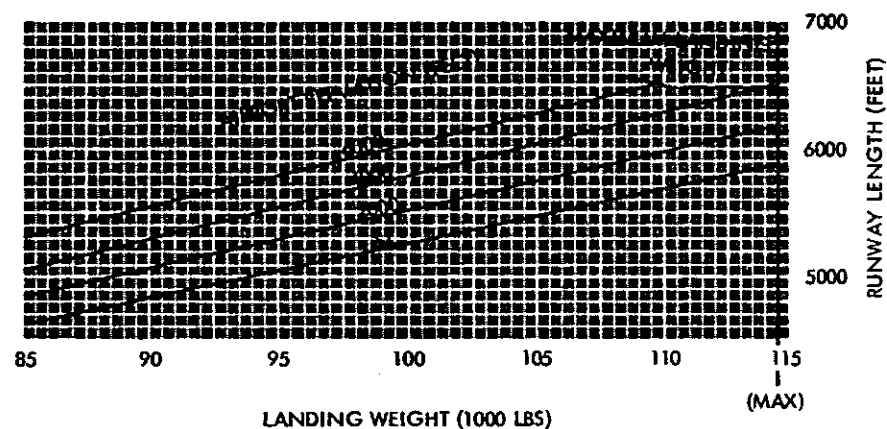


FIGURE 27. Aircraft Performance Curve, Landing (Lockheed 1049H)

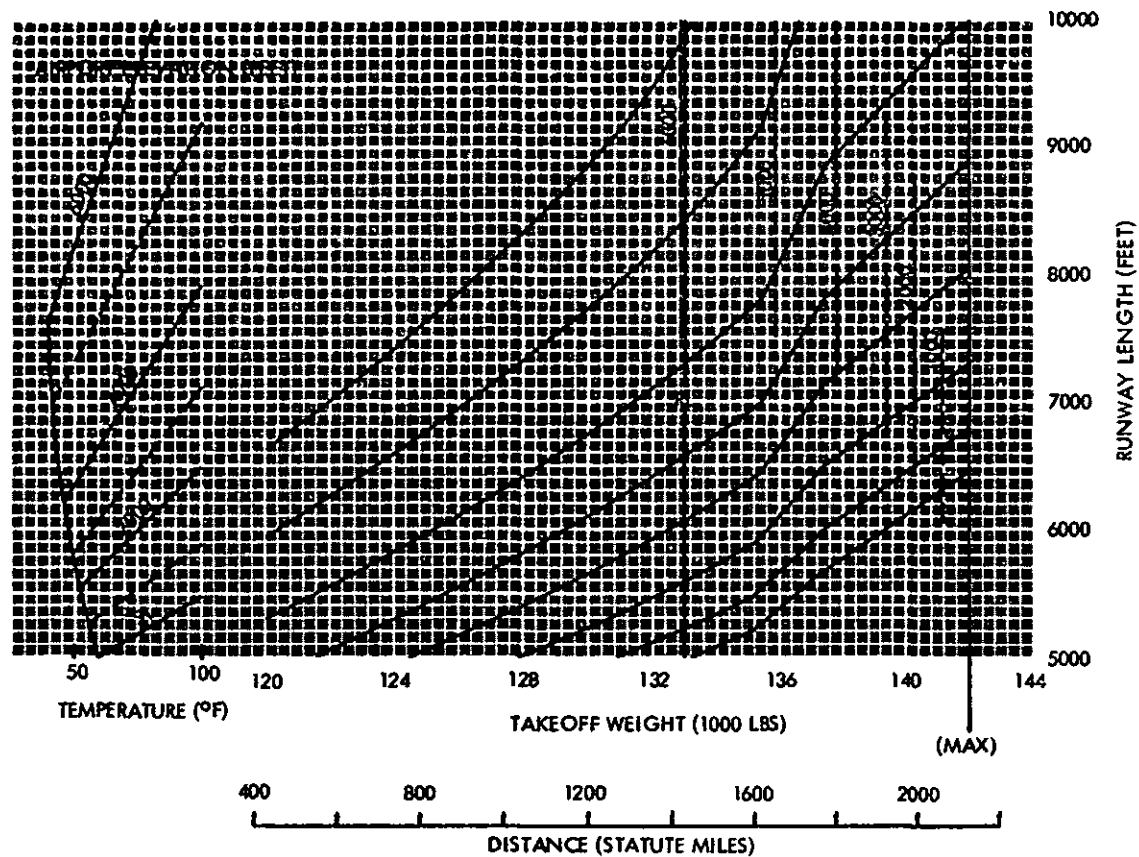
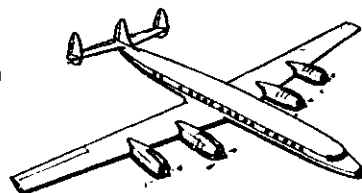


FIGURE 28. Aircraft Performance Curve, Takeoff (Lockheed 1049H)



LOCKHEED 1649A

WRIGHT 988 TC 18 EA2 ENGINE

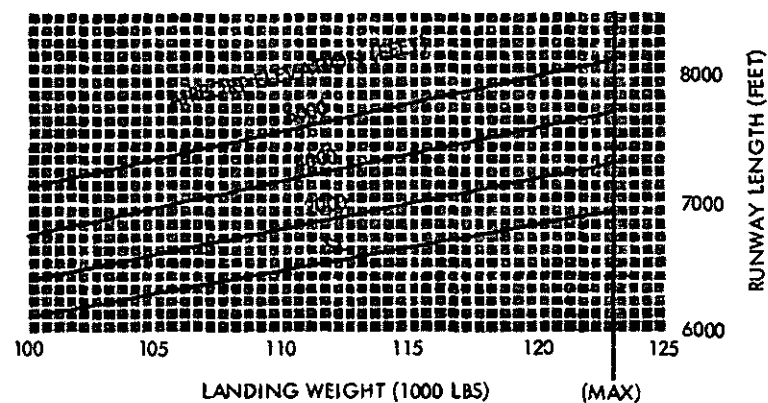


FIGURE 29. Aircraft Performance Curve, Landing (Lockheed 1649A)

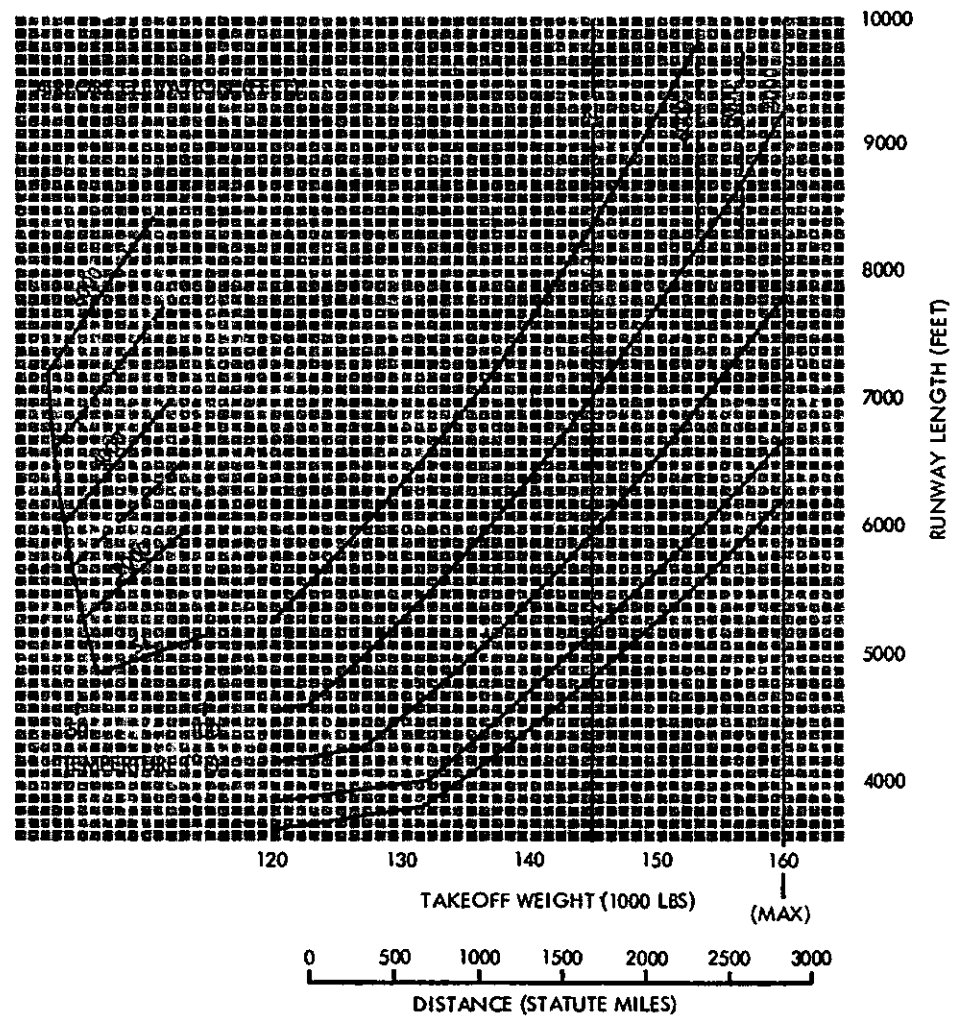
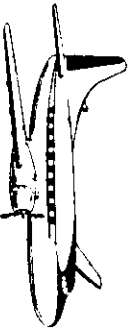


FIGURE 30. Aircraft Performance Curve, Takeoff (Lockheed 1649A)



MARTIN 202

PRAIRIE & WHITNEY R2800-CA3 ENGINE
R2800-CA15
R2800-CA18

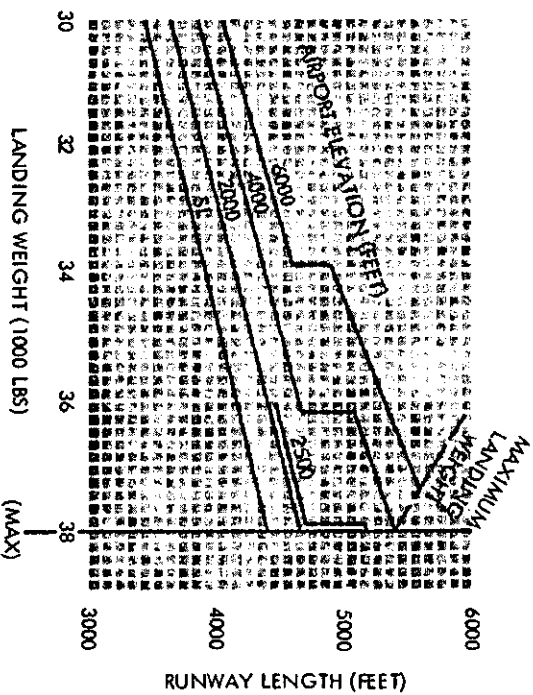


FIGURE 31. Aircraft Performance Curve, Landing (Martin 202)

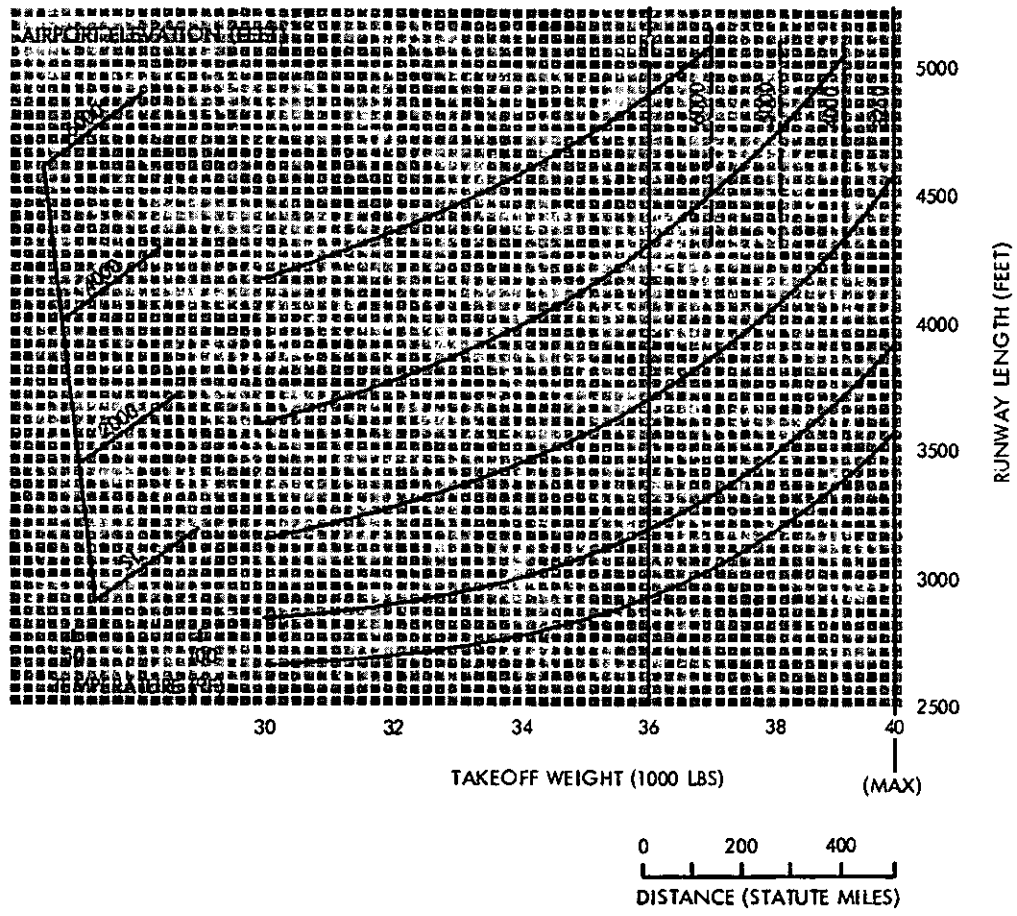
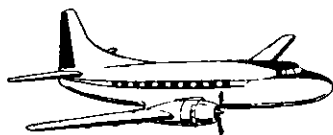


FIGURE 32. Aircraft Performance Curve, Takeoff (Martin 202)



MARTIN 404

PRATT & WHITNEY R2800-CB16 ENGINE

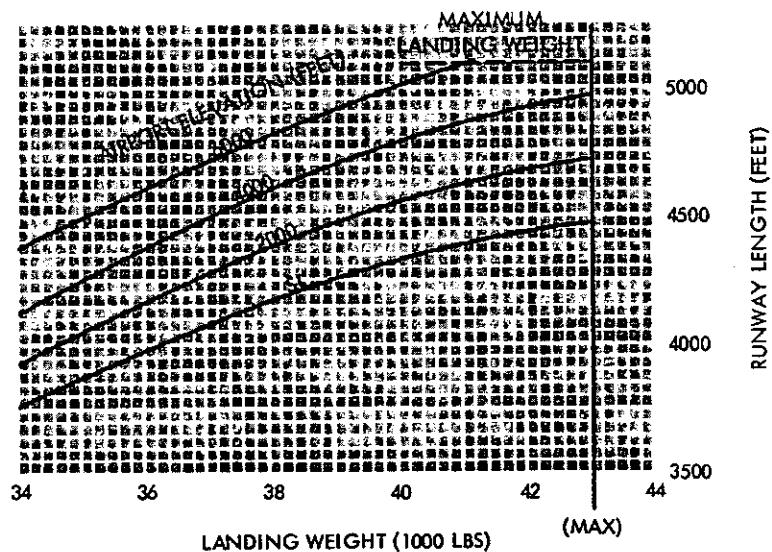


FIGURE 33. Aircraft Performance Curve, Landing (Martin 404)

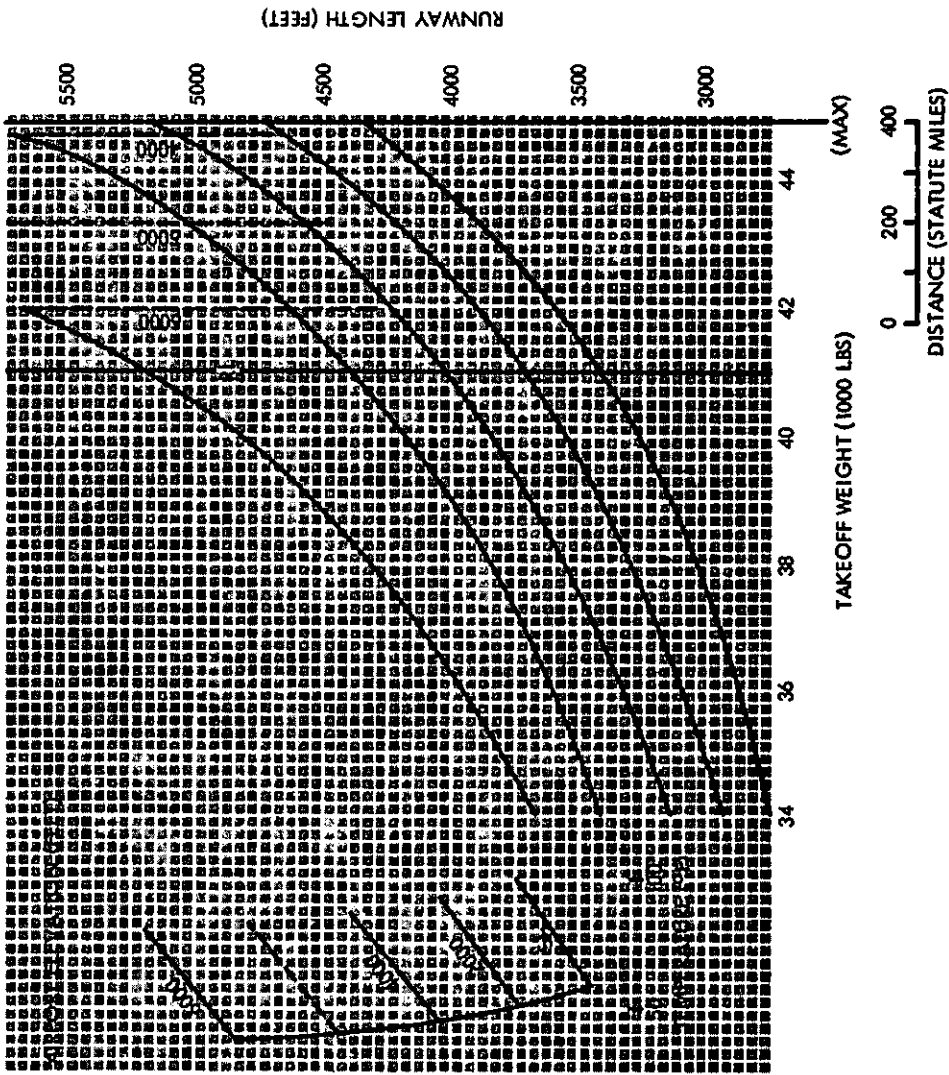


FIGURE 34. Aircraft Performance Curve, Takeoff (Martin 404)

APPENDIX 2. TURBOPROP POWERED LARGE AIRPLANES

1. AIRCRAFT PERFORMANCE CURVES. The aircraft performance curves contained in this appendix are for airplanes with the following items in common:
 - a. Multiengine (two or more engines).
 - b. Propeller and jet driven.
 - c. Equipped with turbine engines.
 - d. Certificated with a maximum takeoff weight of more than 12,500 pounds.
 - e. Transport category.
 - f. Type certificated in accordance with the performance requirements of SR-422, SR-422A, or SR-422B, with exception of the Vickers Viscount 745D and 810.
2. EXPLANATORY INSTRUCTIONS. For explanatory instructions and example problems on use of the aircraft performance curves contained in this appendix, see Paragraphs 6, 7, and 8 on Pages 3 and 4 of this circular.



CONVAIR 340/440

ALLISON 501-D13D ENGINE

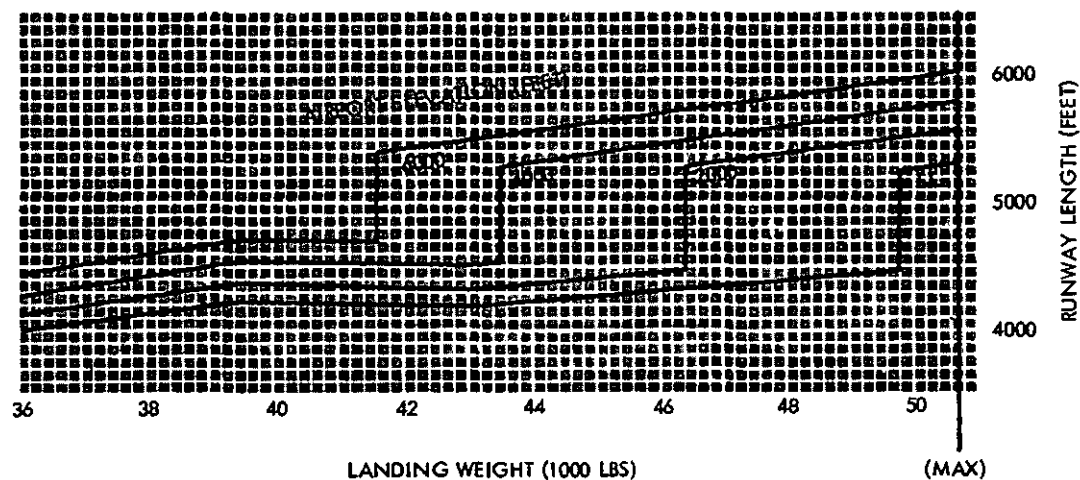
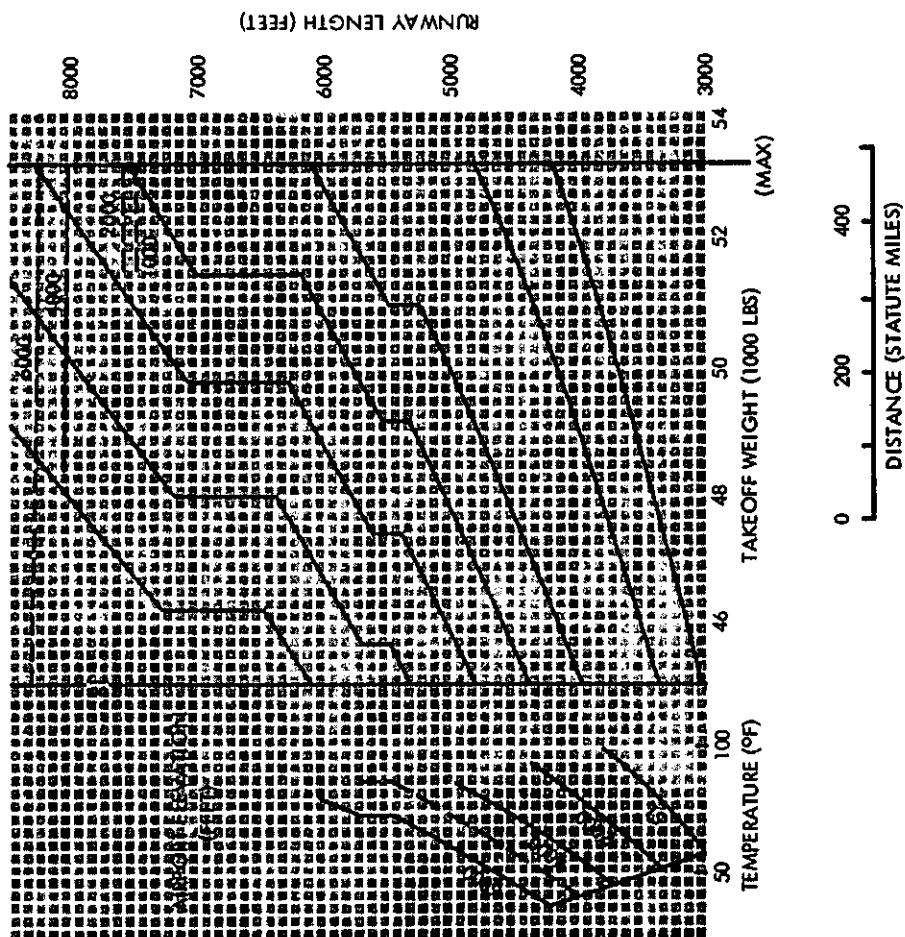


FIGURE 1. Aircraft Performance Curve, Landing (Convair 340/440) Allison





CONVAIR 340/440

ALLISON 501-D13H ENGINE

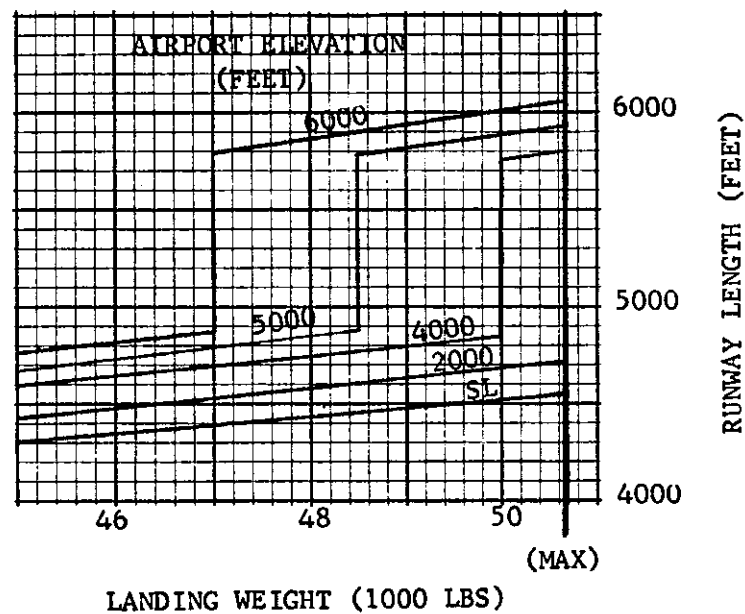
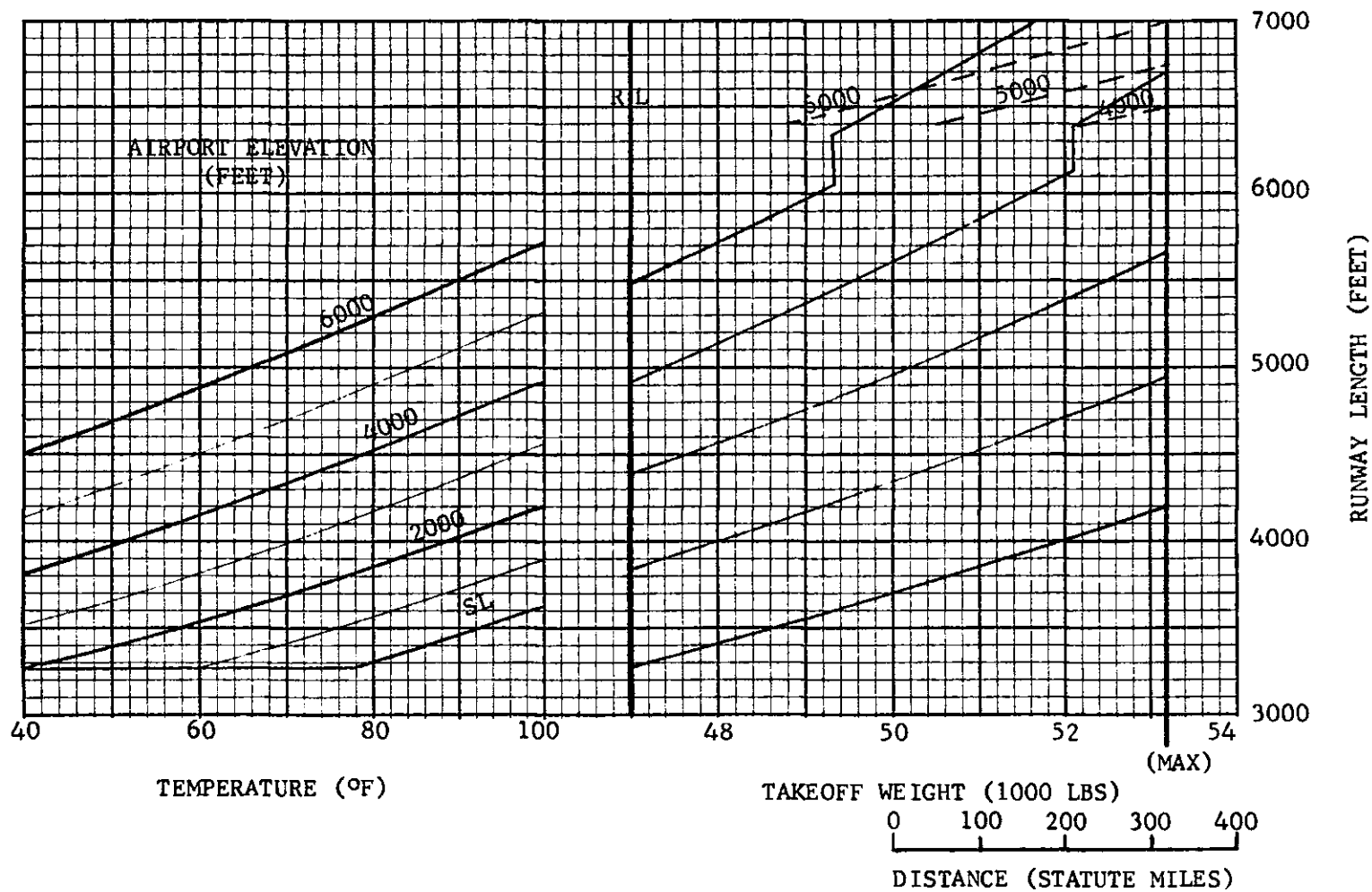


FIGURE 3. Aircraft Performance Curve, Landing (Convair 340/440) Allison





CONVAIR 340/440

NAPIER ELAND 504 ENGINE

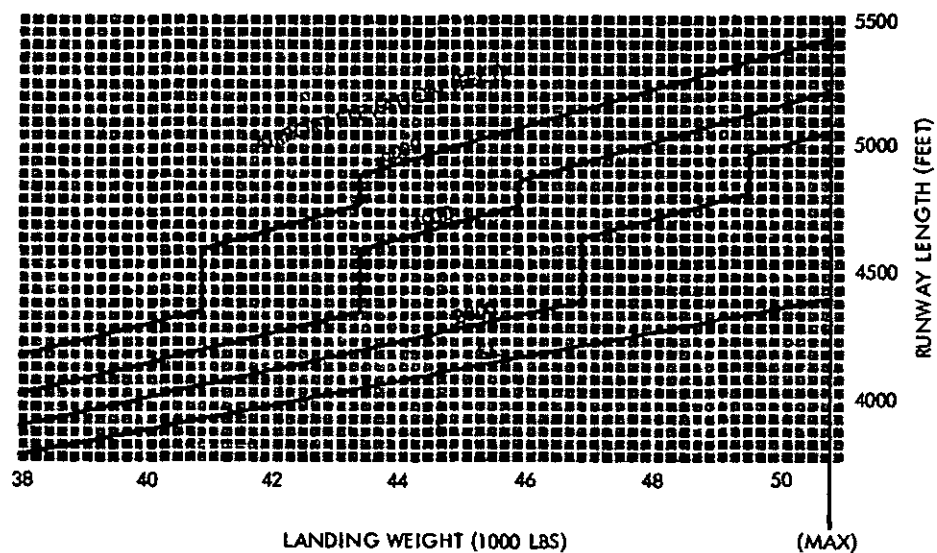
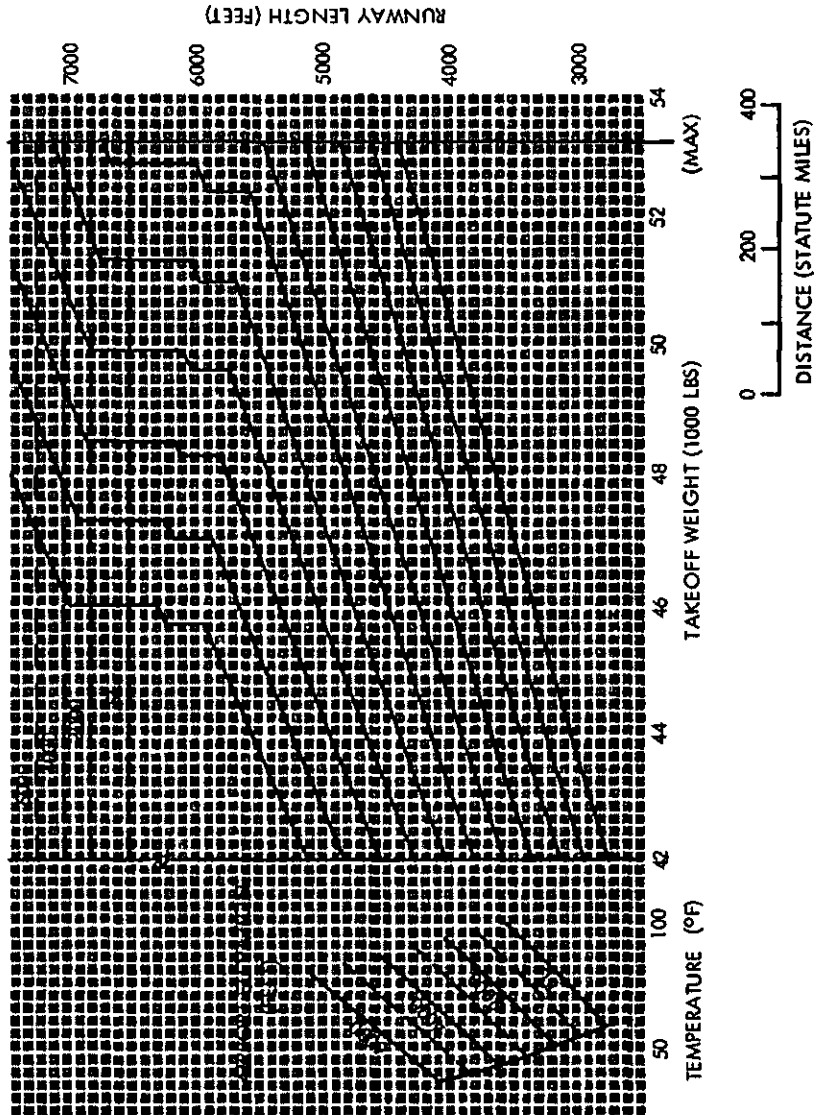
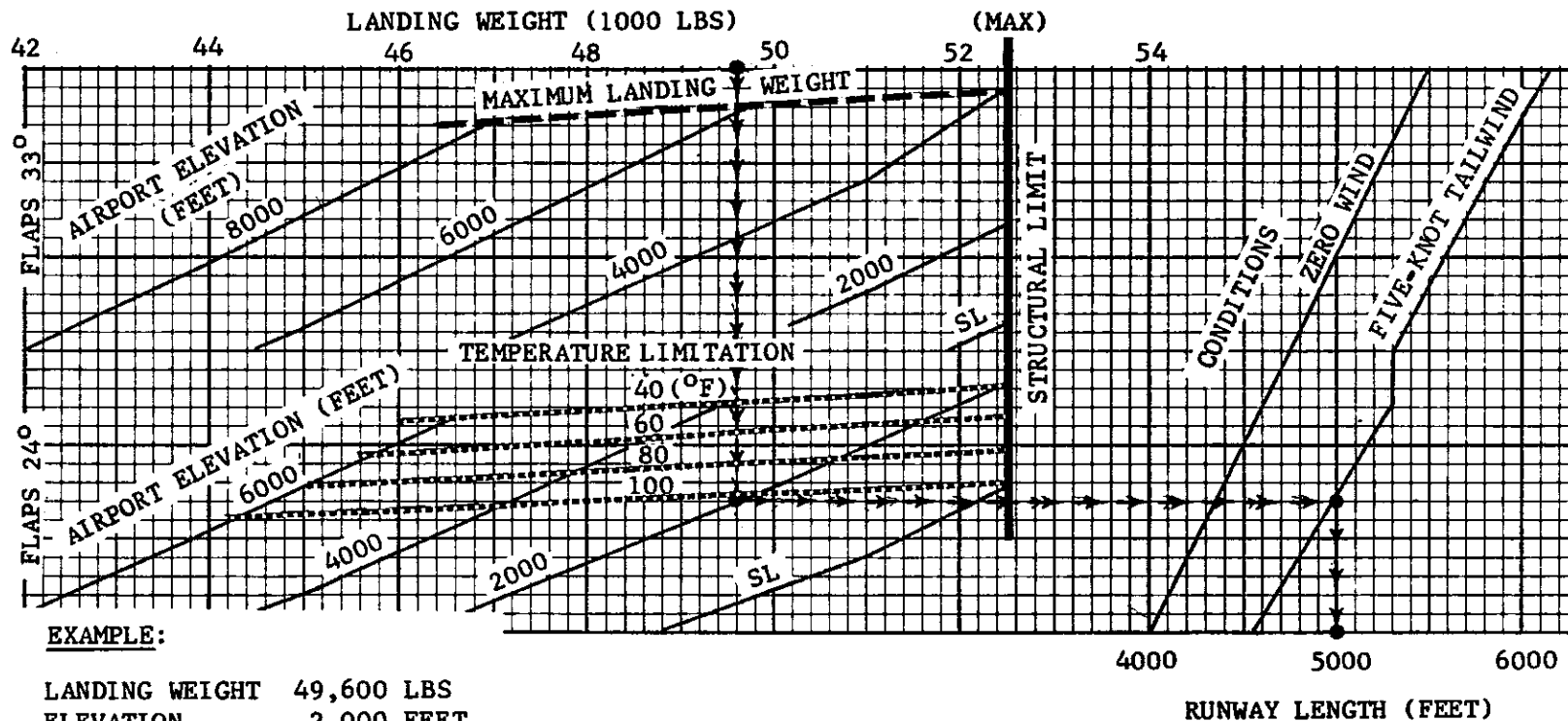


FIGURE 5. Aircraft Performance Curve, Landing (Convair 340/440) Napier



CONVAIR 640 (340D OR 440D)

ROLLS ROYCE DART 542-4 ENGINE



EXAMPLE:

LANDING WEIGHT 49,600 LBS
ELEVATION 2,000 FEET
TEMPERATURE 80° F.
RUNWAY LENGTH 5,000 FEET

FIGURE 6-1. AIRCRAFT PERFORMANCE CURVE, LANDING [CONVAIR 640 (340D OR 440D)
INCORPORATING THE MODIFICATION OF SERVICE BULLETIN 640 (340D) NO. 95-1 AND 95-3]

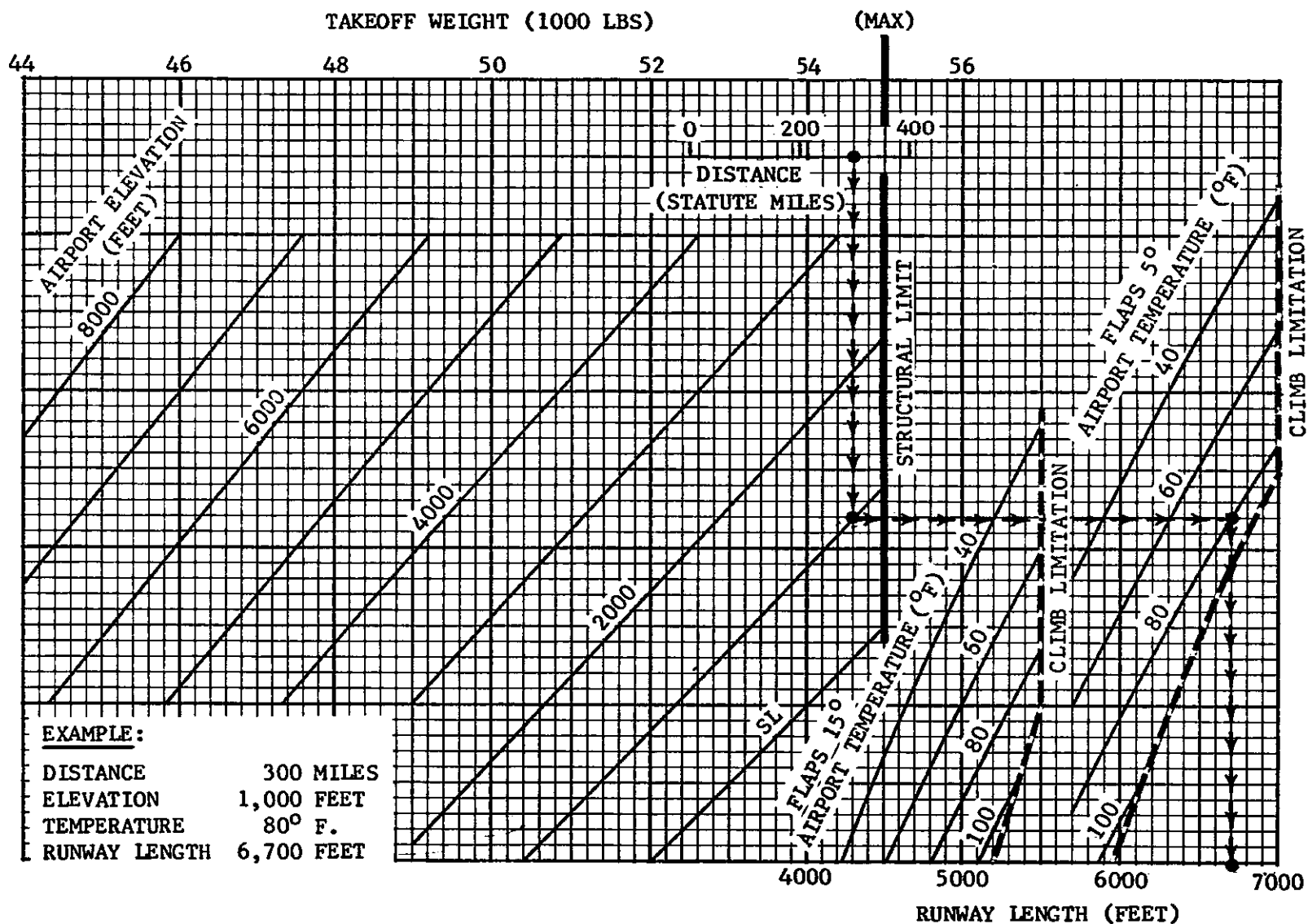


FIGURE 6-2 AIRCRAFT PERFORMANCE CURVE, TAKEOFF [CONVAIR 440 (3400 OR 4400)]

FAIRCHILD F-27 & F-27B

ROLLS ROYCE DART 511 ENGINE
511-7E

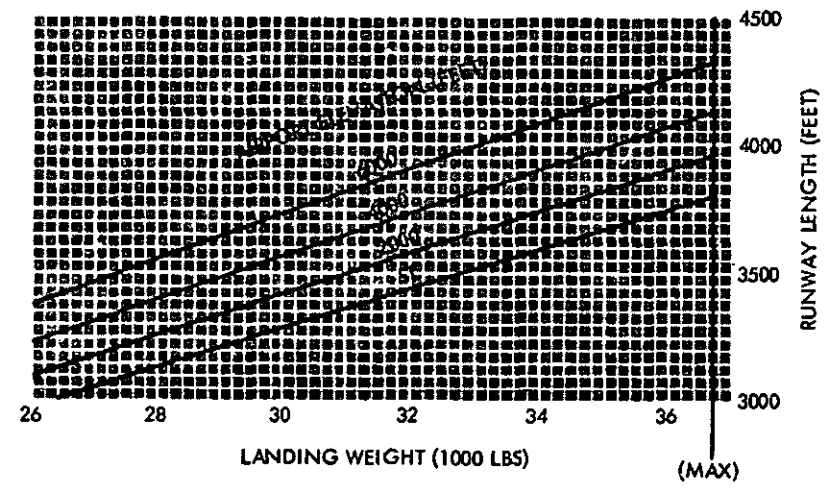
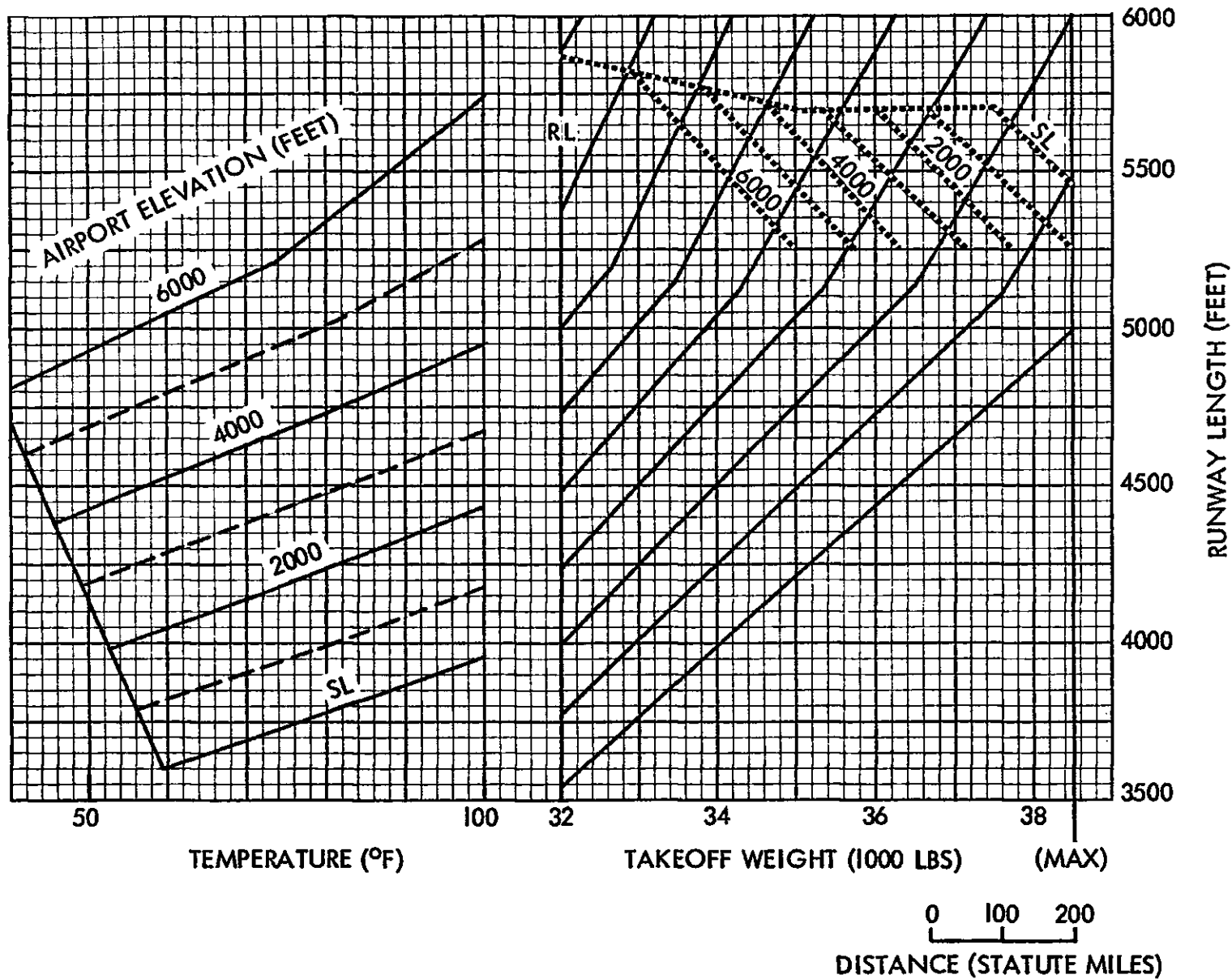


FIGURE 7. Aircraft Performance Curve, Landing (Fairchild F-27 & F-27B)



FAIRCHILD F-27 & F-27B

ROLLS ROYCE DART 514-7 ENGINE
514-7E

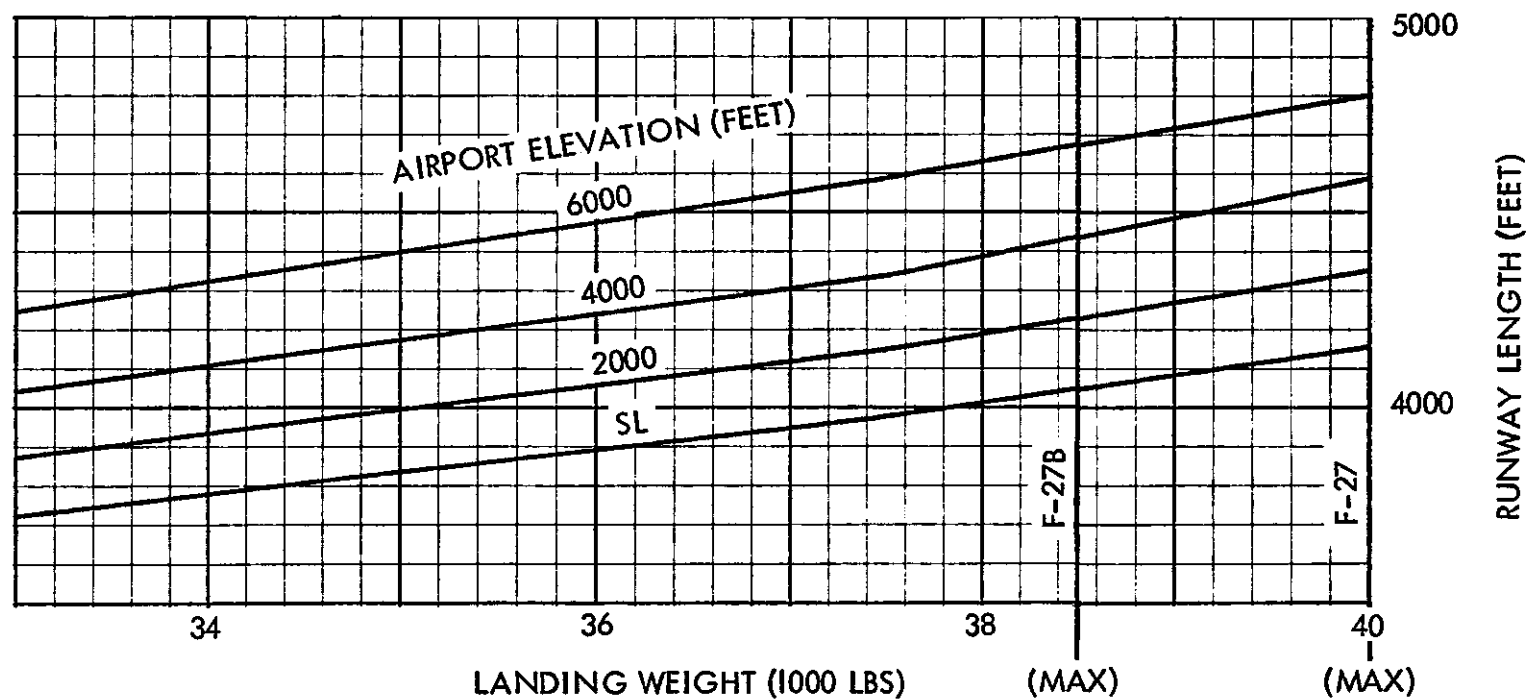
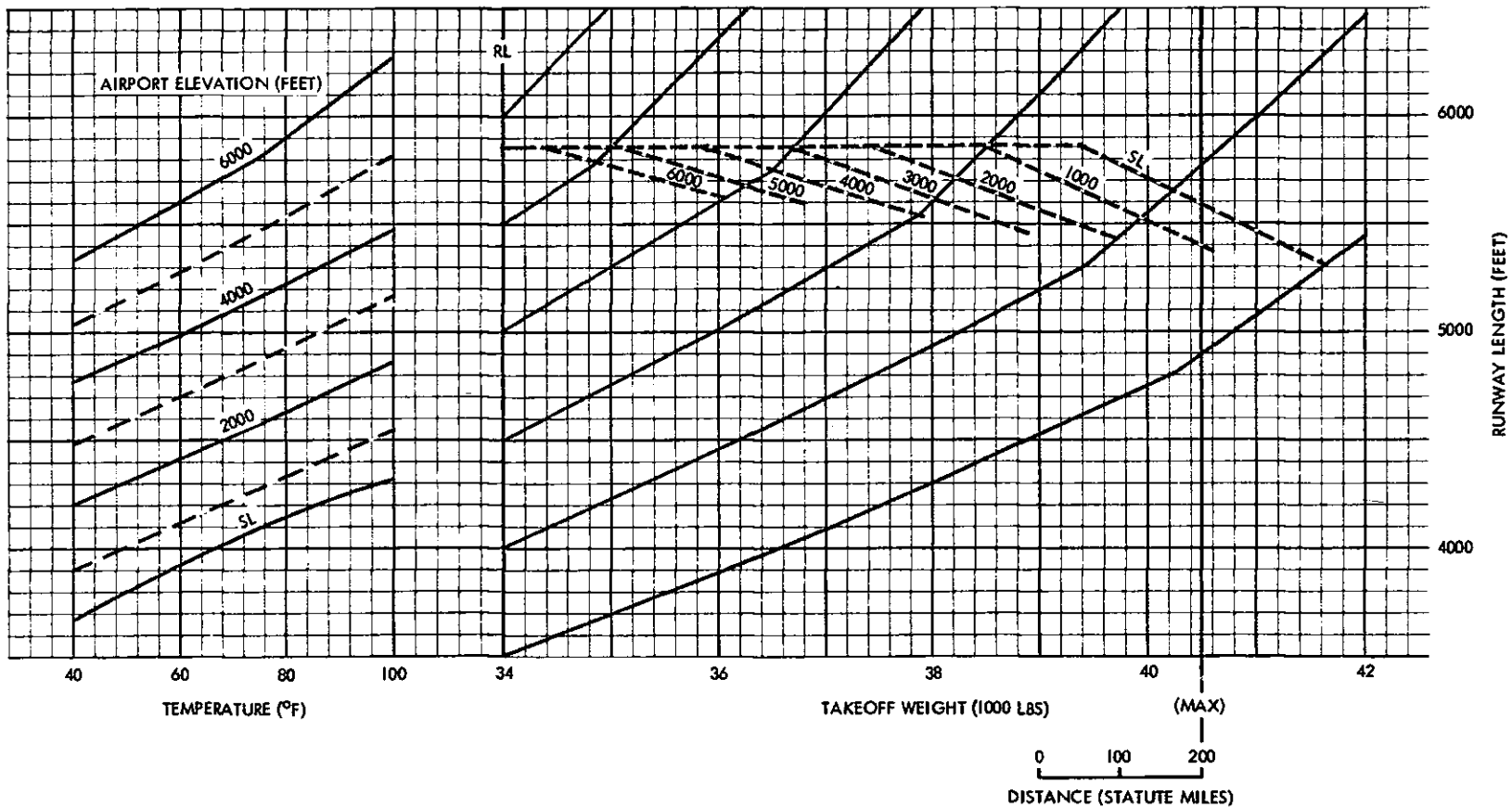


FIGURE 8-1. Aircraft Performance Curve, Landing (Fairchild F-27 & F-27B)



FAIRCHILD F-27A

ROLLS ROYCE DART 528-7E ENGINE

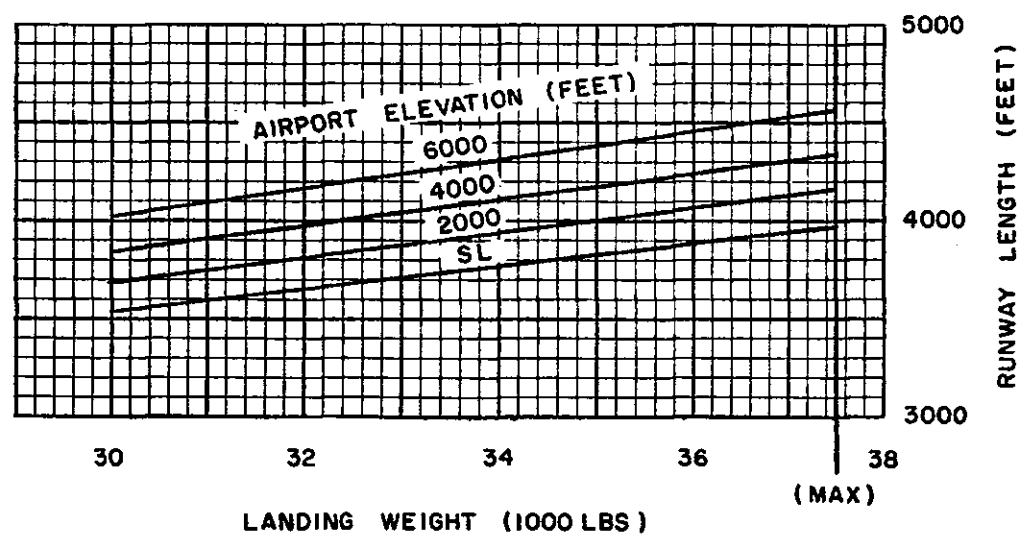


FIGURE 9. Aircraft Performance Curve, Landing (Fairchild F-27A)

LIST OF AIRCRAFT

AERO

500A; Appendix 5, Page 10
 500B; Appendix 5, Page 10
 560A; Appendix 5, Page 2
 560E; Appendix 5, Page 3
 680E; Appendix 5, Page 10
 680F; Appendix 5, Page 11

AERONCA

15AC; Appendix 5, Page 11

AIR PRODUCTS (See ERCOUBE)

415D; (See ERCOUBE 415D) Appendix 5, Page 11
 415E; (See ERCOUBE 415E) Appendix 5, Page 11
 415G; (See ERCOUBE 415G) Appendix 5, Page 11

BEECH

C18S; Appendix 5, Page 4
 D18S; Appendix 5, Page 5
 E18S; Appendix 5, Page 6
 35-A33; Appendix 5, Page 12
 A-35; Appendix 5, Page 12
 A-35B; Appendix 5, Page 12
 A-35R; Appendix 5, Page 12
 N-35; Appendix 5, Page 12
 C-45G; Appendix 5, Page 11
 C-45H; Appendix 5, Page 11
 G-50; Appendix 5, Page 13
 A-55; Appendix 5, Page 13
 65; Appendix 5, Page 13
 B-95A; Appendix 5, Page 13

BOEING

707-100 Series; Appendix 3, Pages 2 and 3
 707-100B Series; Appendix 4, Pages 2 and 3
 707-200 Series; Appendix 3, Pages 4 and 5
 707-300 Series; Appendix 3, Pages 6 thru 9
 707-300B Series; Appendix 4, Pages 4 and 5
 707-300C Series; Appendix 6, Pages 7 and 8
 707-400 Series; Appendix 3, Pages 10 and 11
 720-000 Series; Appendix 3, Pages 12 thru 14-1
 720-000B Series; Appendix 4, Pages 6-2 and 7
 727-00 Series; Appendix 4, Pages 8 and 9
 * 727-100 Series; JT8D-7 Engine; Appendix 6, Pages 61 thru 65 *
 727-200 Series; JT8D-7 Engine; Appendix 6, Pages 9 thru 18
 * 727-200 Series; JT8D-15 Engine; Appendix 6, Pages 66 thru 71 *
 737-200 Series; JT8D-9 Engine; Appendix 6, Pages 35 thru 42
 * 737-200 Series; JT8D-15 Engine; Appendix 6, Pages 72 thru 76 *
 747 Series; Appendix 6, Pages 56 thru 60

LIST OF AIRCRAFT (CONTINUED)

BRITISH AIRCRAFT CORP.

BAC 1-11 203 AE; Appendix 3, Pages 14-2 and 15
BAC 1-11 204 AF; Appendix 3, Pages 14-2 and 15

ARAVELLE

SE 210-1 ; Appendix 3, Pages 16 and 17
SE 210-6R; Appendix 3, Pages 18 and 19

CESSNA

140A; Appendix 5, Page 14
150 ; Appendix 5, Page 14
170 ; Appendix 5, Page 7
170A; Appendix 5, Page 7
170B; Appendix 5, Page 7
172 ; Appendix 5, Page 16
175 ; Appendix 5, Page 16
180 ; Appendix 5, Page 14
182 ; Appendix 5, Page 16
185 ; Appendix 5, Page 15
190 ; Appendix 5, Page 15
195A; Appendix 5, Page 15
210 ; Appendix 5, Page 15
310C; Appendix 5, Page 15
310D; Appendix 5, Page 15

CONVAIR

240; Appendix 1, Pages 2 and 3
340; Appendix 1, Pages 4 and 5
340/440; Appendix 2, Pages 2 thru 8-1
440; Appendix 1, Pages 4 and 5
580; (See Convair 340/440 with Allison Engines) Appendix 2, Pages 2 thru 5
640; (340D or 440D) Appendix 2, Pages 8 and 8-1
880; Appendix 3, Pages 20 and 21
880M; Appendix 3, Pages 22 and 23
990A; Appendix 4, Pages 10 and 11

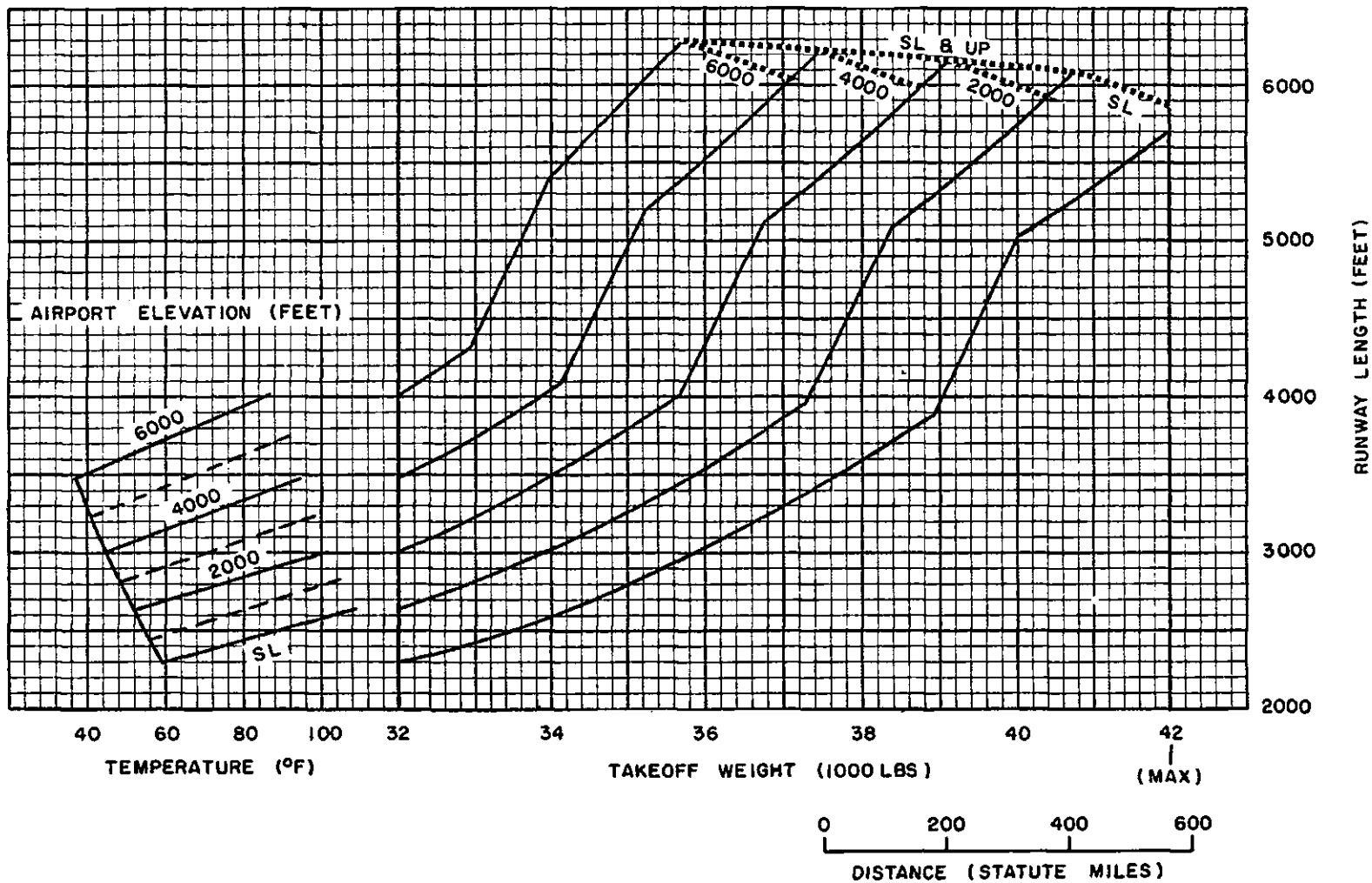
part 640; (See Convair 640 (340D or 440D)) Appendix 2, Pages 8 and 8-1

deHAVILLAND

104 Dove; Appendix 5, Page 16

DOUGLAS

DC-3 ; Appendix 1, Pages 6 and 7
DC-4 ; Appendix 1, Pages 8 and 9
DC-6A; Appendix 1, Pages 10 and 11
DC-6B; Appendix 1, Pages 10 and 11
DC-7 ; Appendix 1, Pages 12 and 13
DC-7B; Appendix 1, Pages 14 and 15



FAIRCHILD F-27J

ROLLS ROYCE DART 532-7 ENGINE

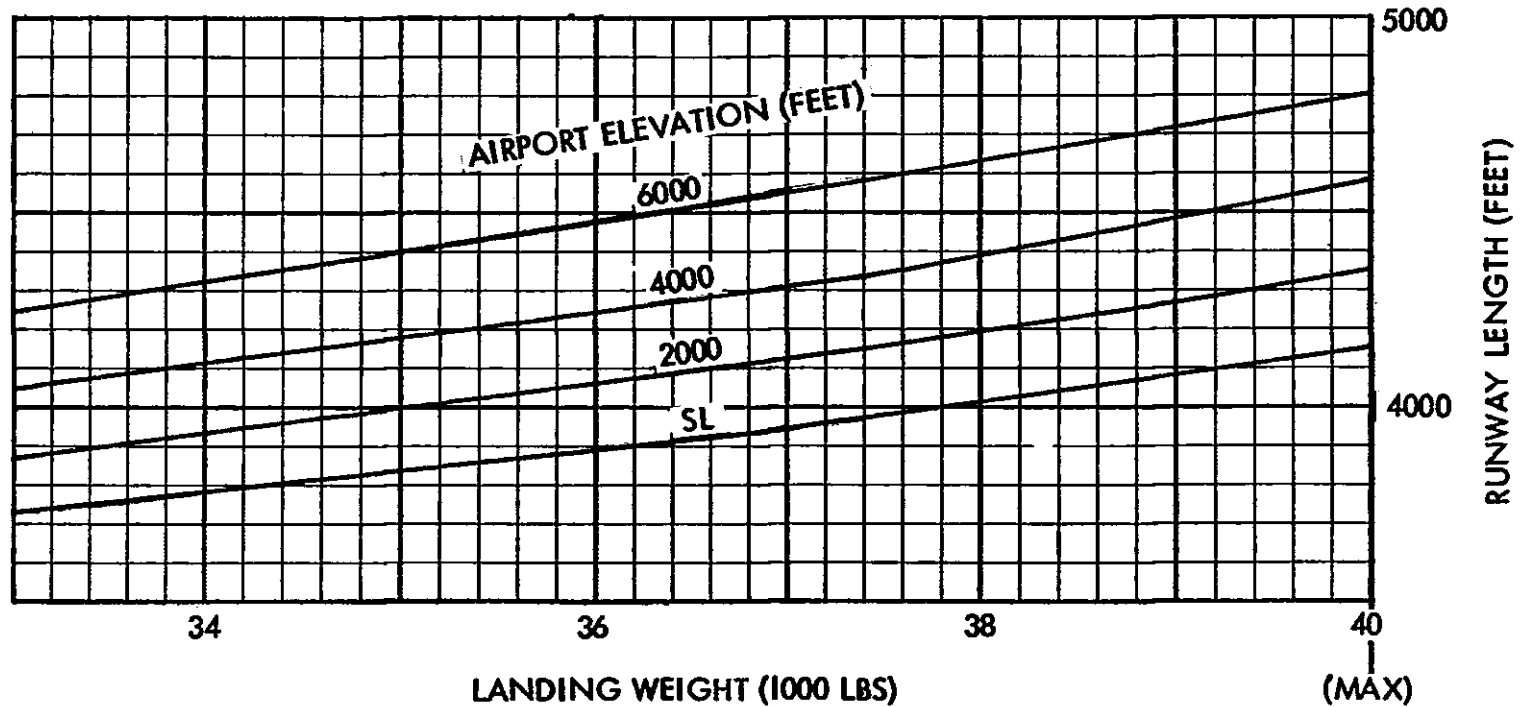
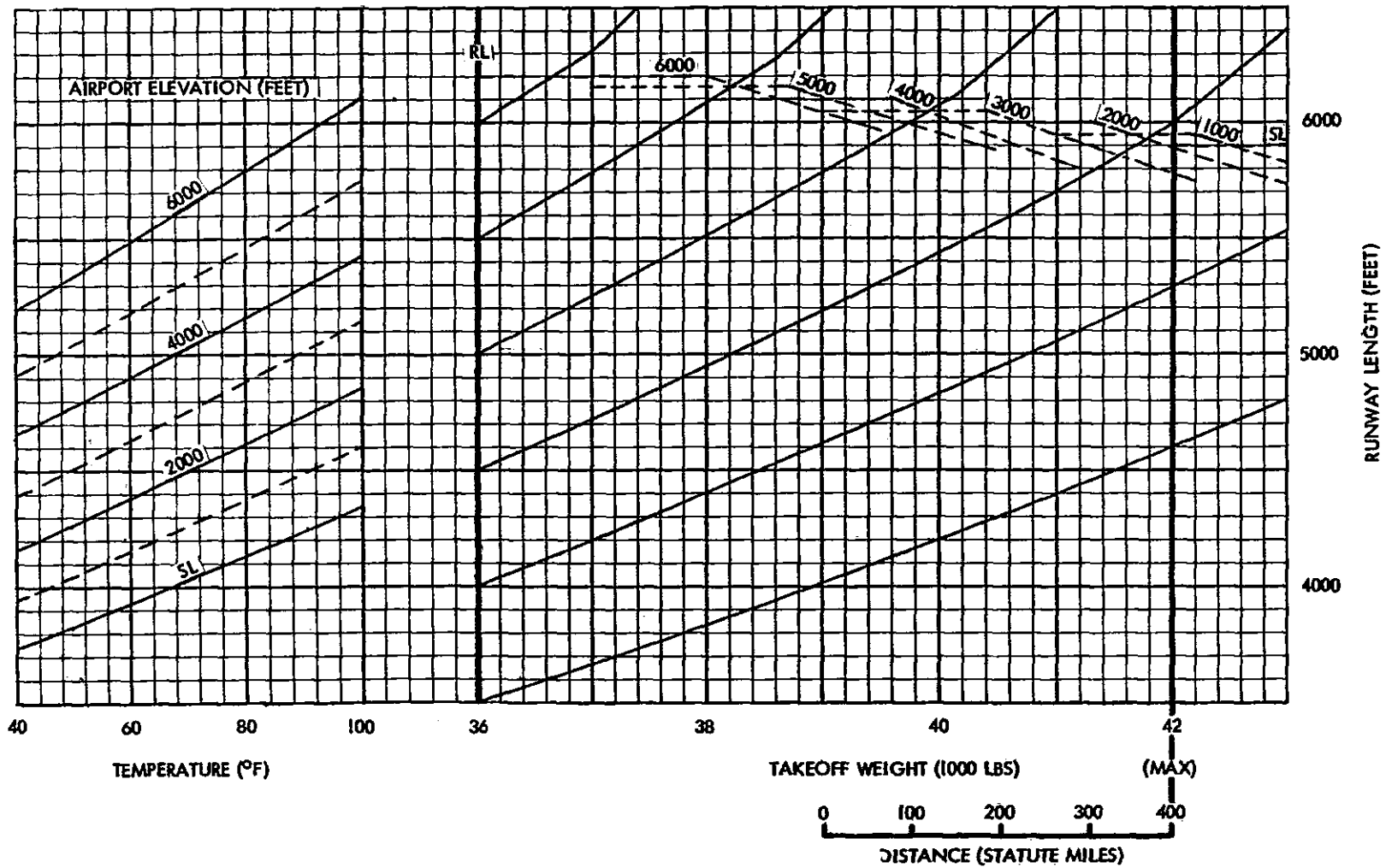
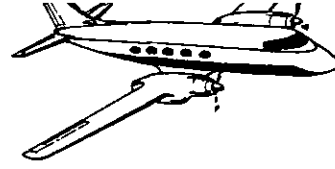


FIGURE 10-1. Aircraft Performance Curve, Landing (Fairchild F-27J)





GRUMMAN G-159

ROLLS ROYCE DART 529 (RDa-7/2) ENGINE

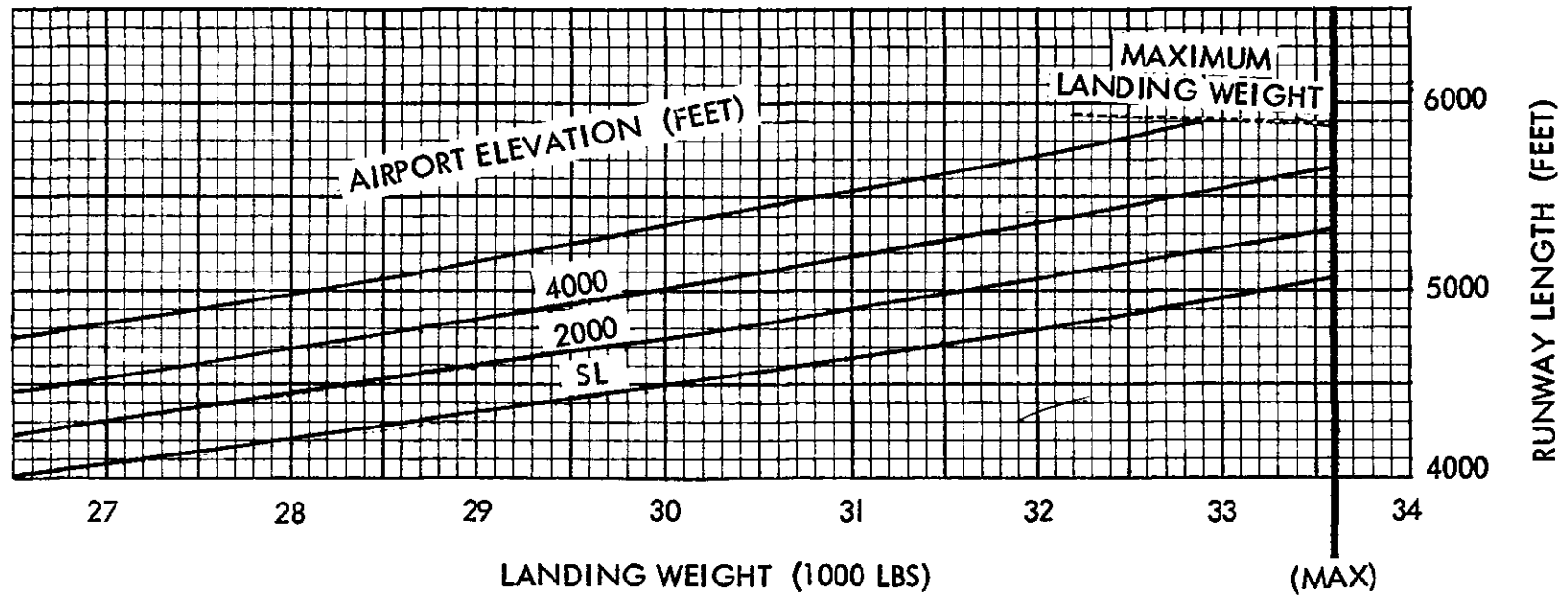
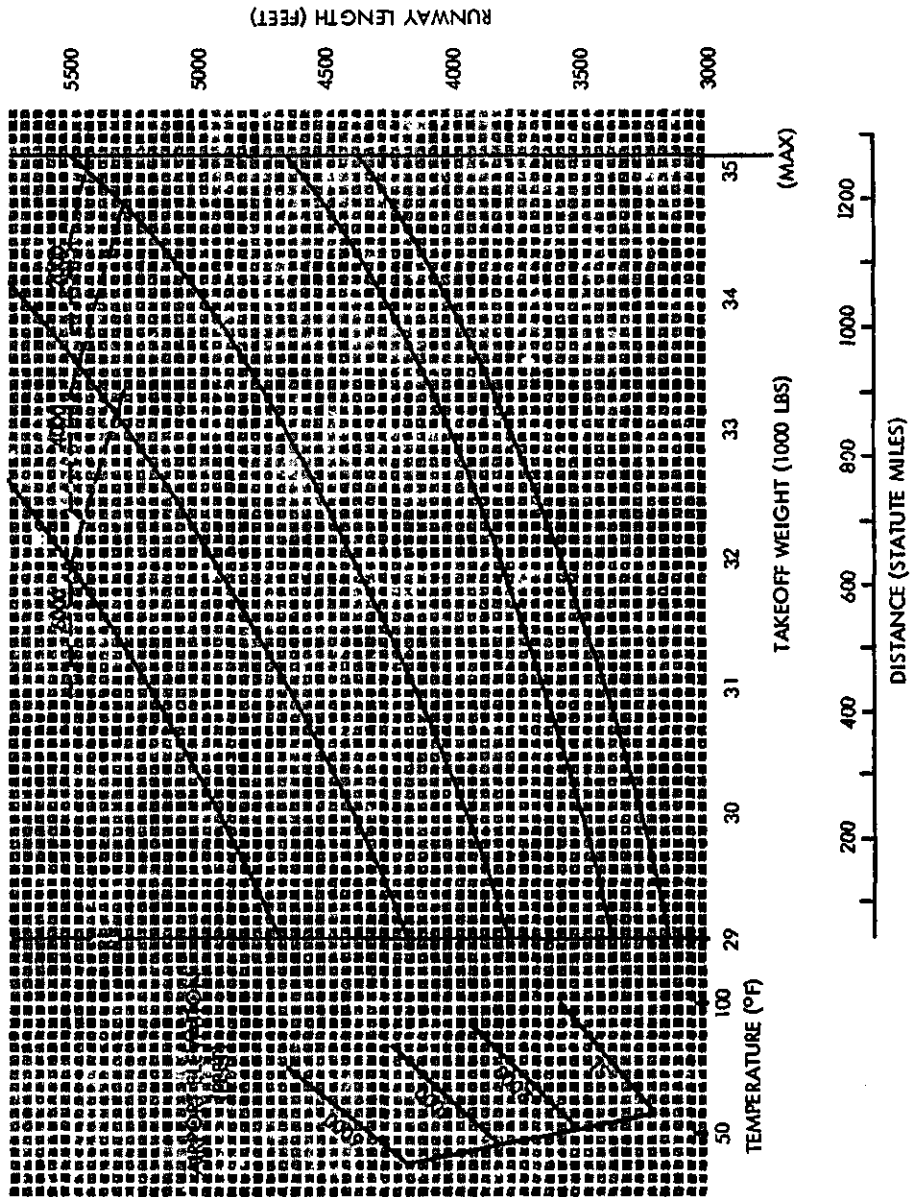


FIGURE 11. Aircraft Performance Curve, Landing (Grumman G-159)



LOCKHEED 188A & 188C

ALLISON 501-D13 ENGINE
501-D13A

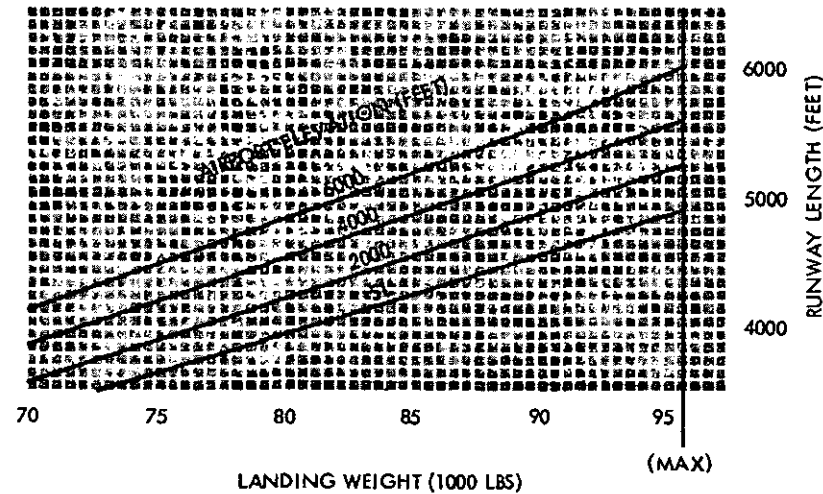


FIGURE 13. Aircraft Performance Curve, Landing (Lockheed 188A & 188C)

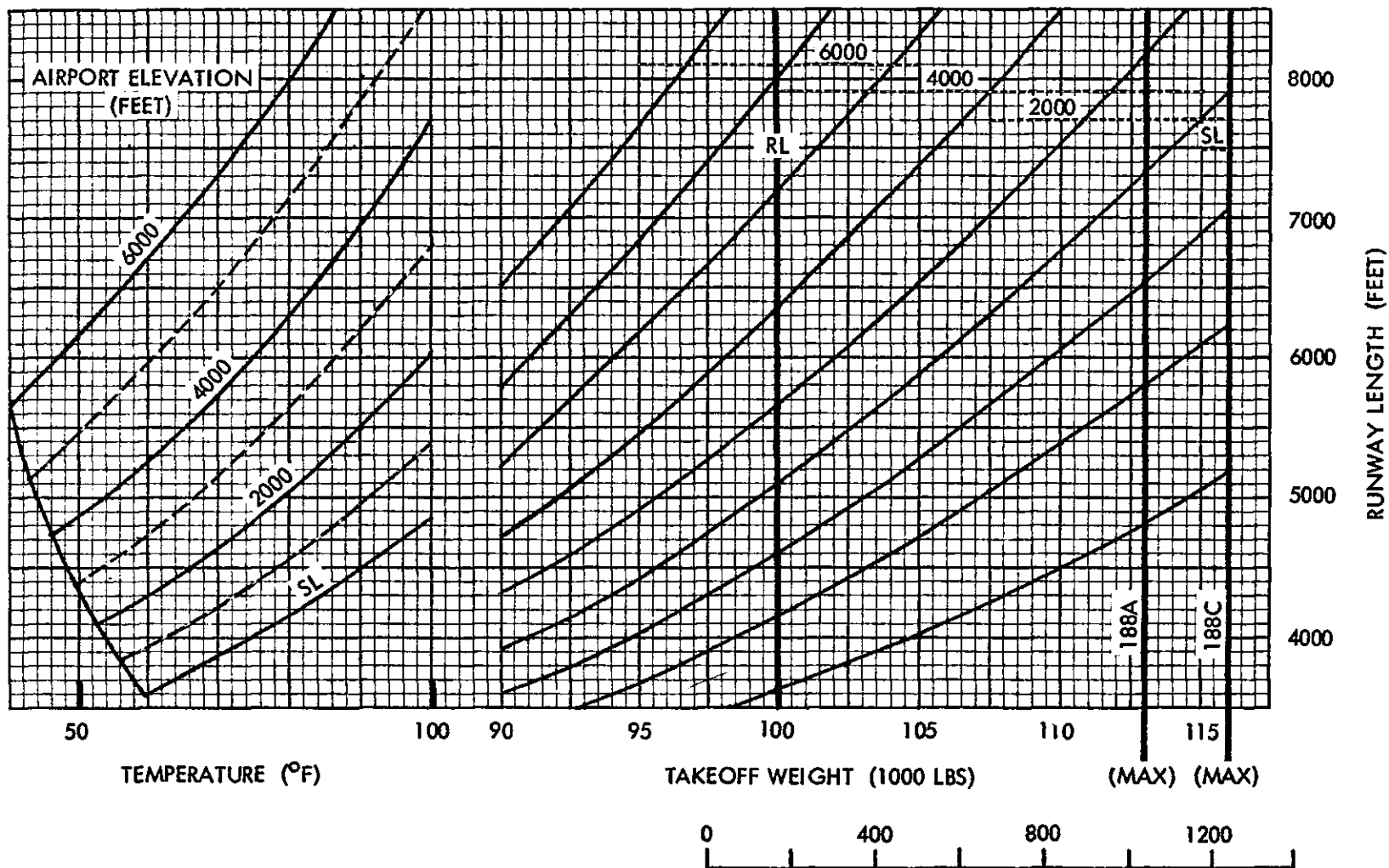


FIGURE 14. Aircraft Performance Curve Takeoff (Lockheed 188A & 188C)



NORD 262

TURBOMECA BASTAN VI CI ENGINE

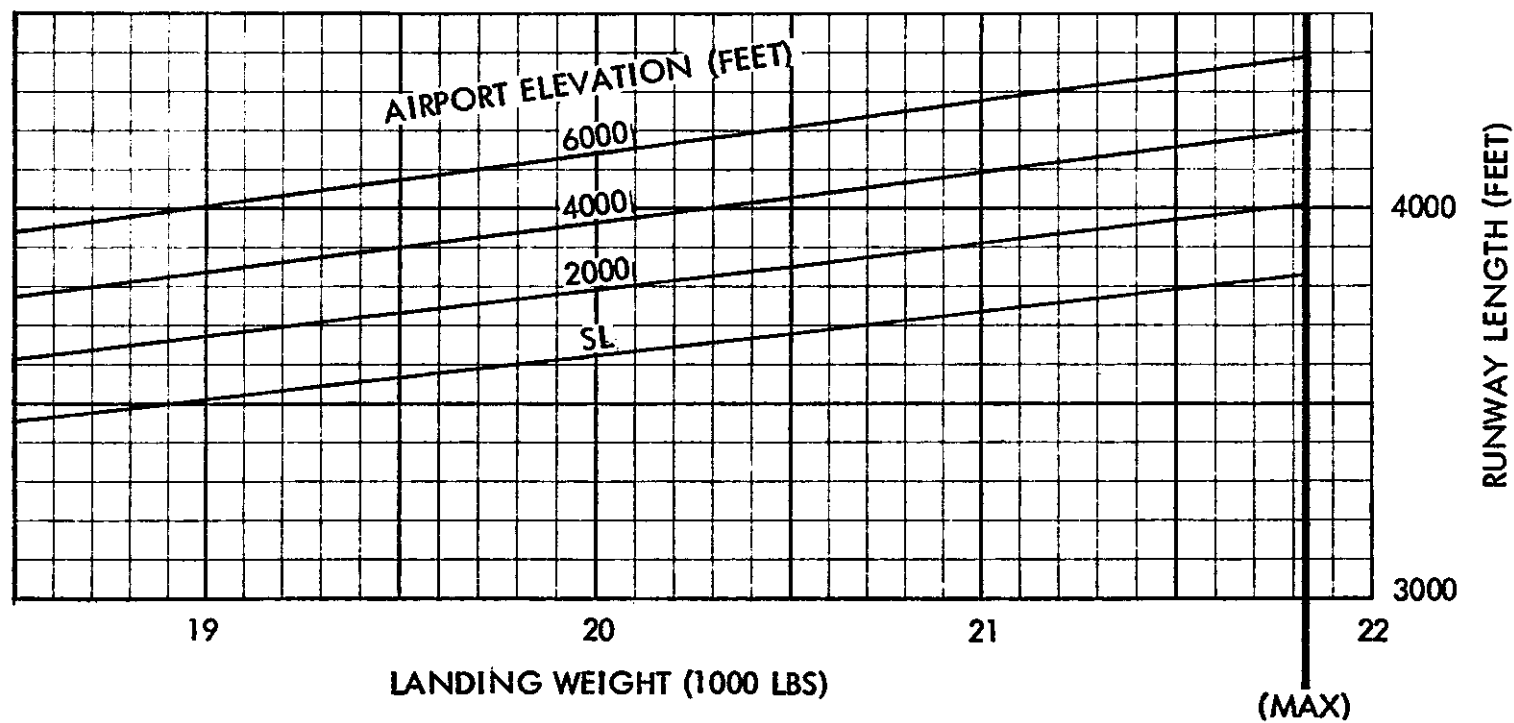
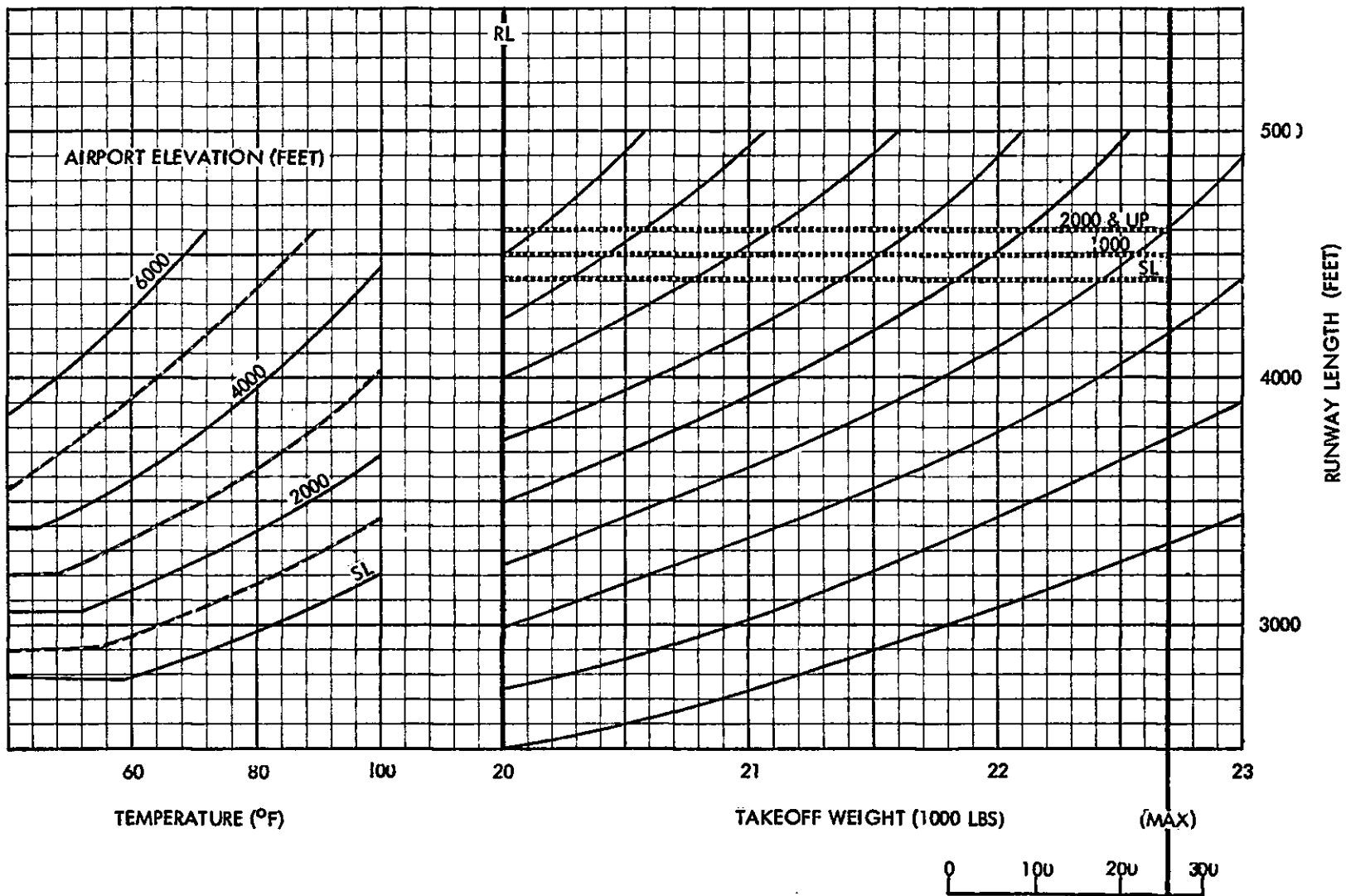
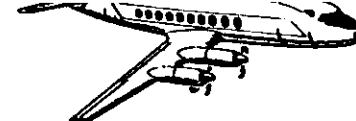


FIGURE 14-1. Aircraft Performance Curve, Landing (Nord 262)





VICKERS VISCOUNT 745D

ROLLS ROYCE DART 510 ENGINE

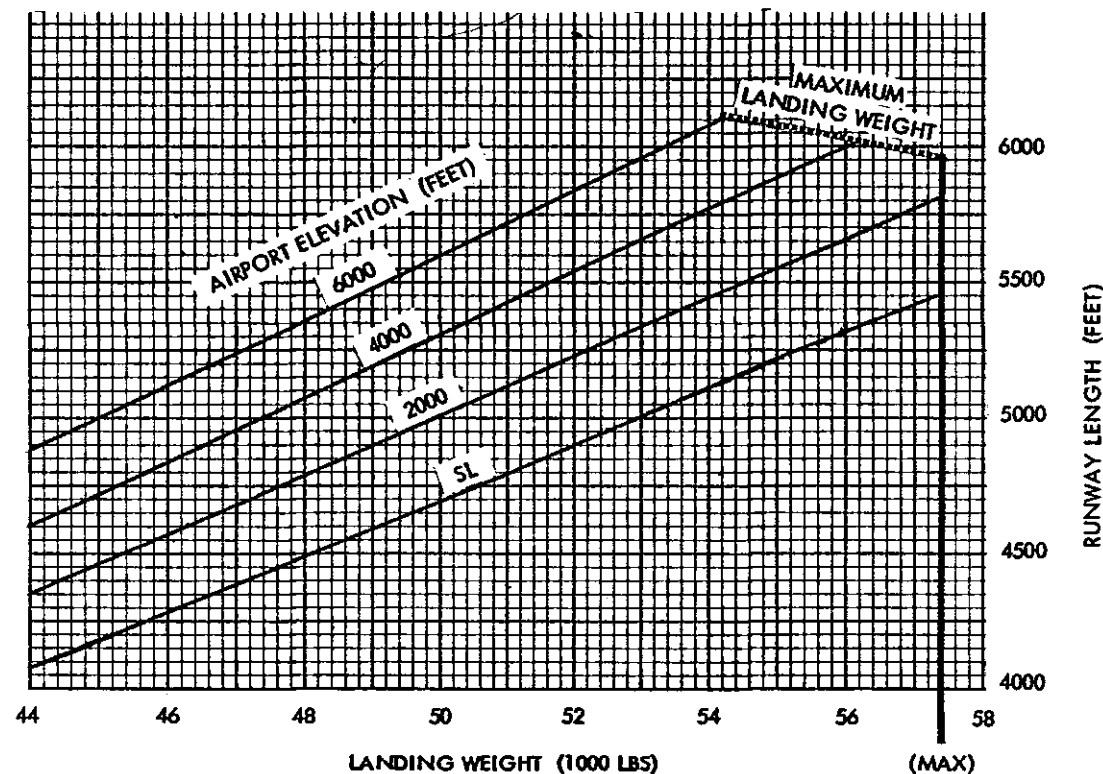


FIGURE 15. Aircraft Performance Curve, Landing (Vickers Viscount 745D)

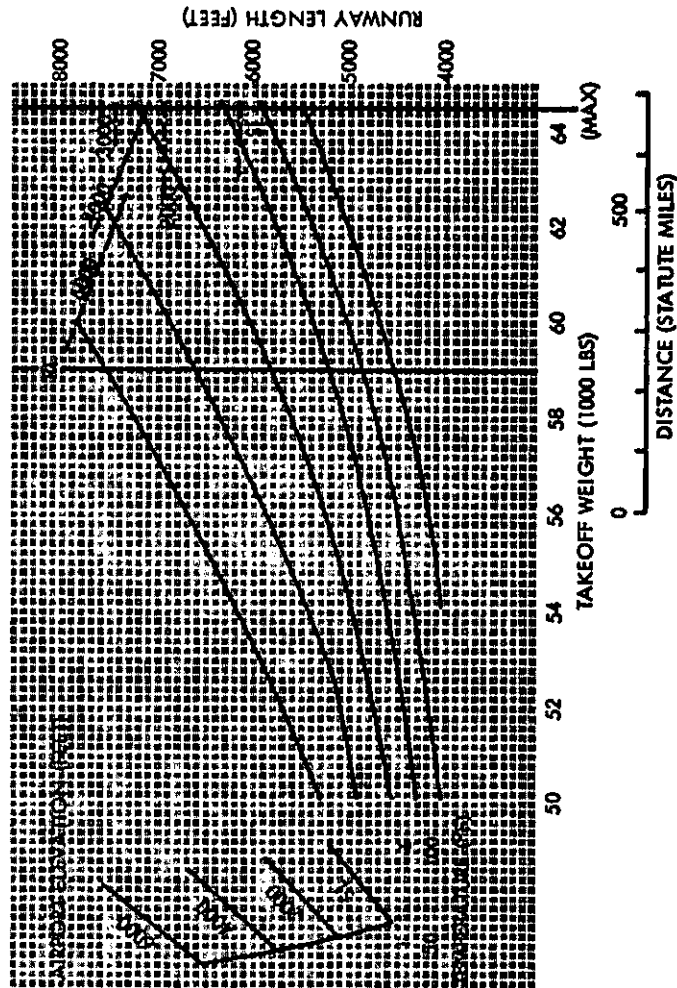


FIGURE 16 Aircraft Performance Curves Takeoff (Unknown Weight)



VICKERS VISCOUNT 810

ROLLS ROYCE DART 525 ENGINE

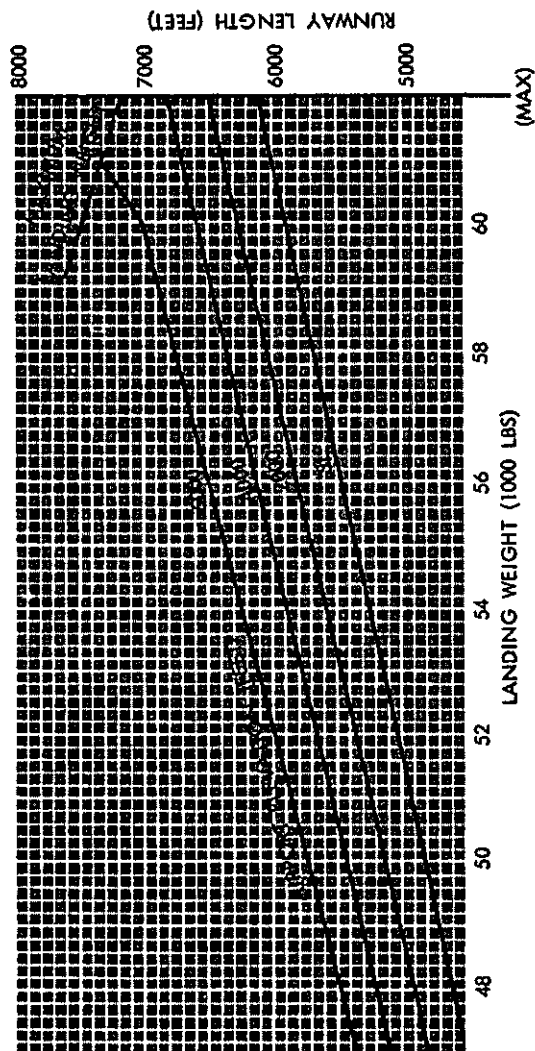
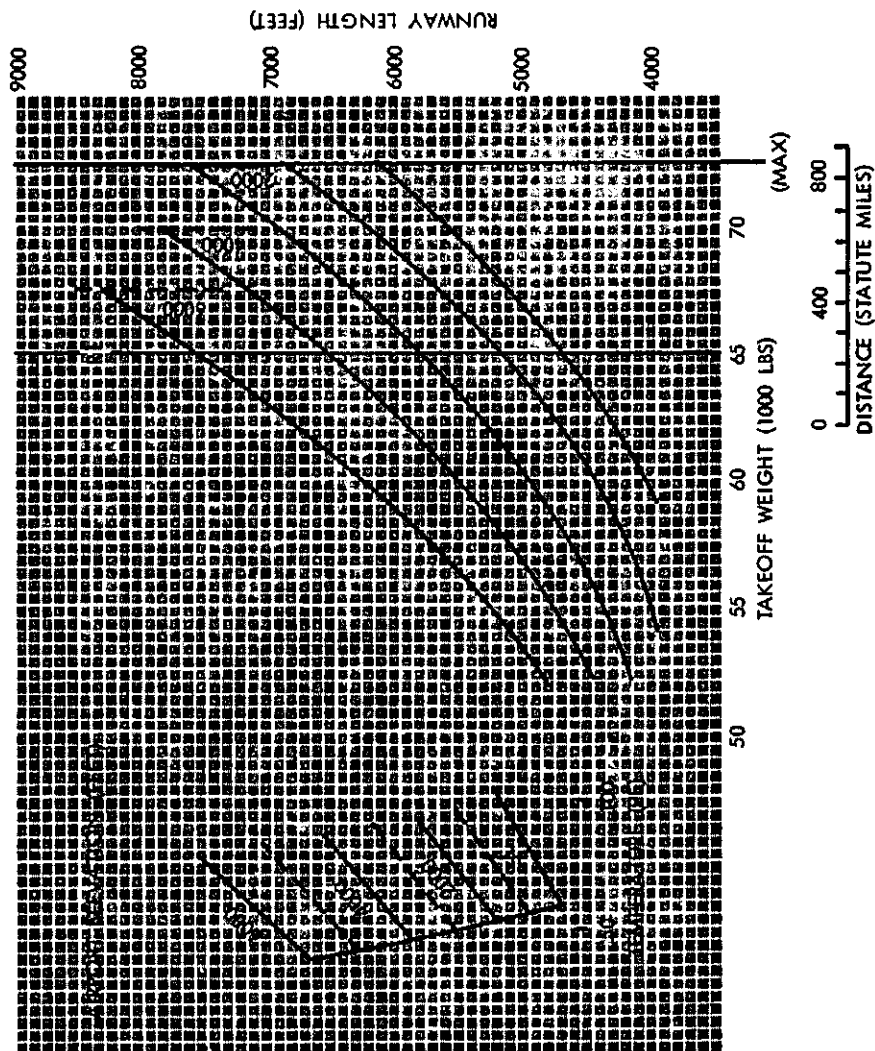


FIGURE 17. Aircraft Performance Curve, Landing (Vickers Viscount 810)



APPENDIX 3. TURBOJET POWERED LARGE AIRPLANES

1. AIRCRAFT PERFORMANCE CURVES. The aircraft performance curves contained in this appendix are for airplanes with the following items in common:
 - a. Multiengine (two or more engines).
 - b. Jet driven.
 - c. Equipped with turbine engines.
 - d. Certificated with a maximum takeoff weight of more than 12,500 pounds.
 - e. Transport category.
 - f. Type certificated in accordance with the performance requirements of SR-422, SR-422A, or SR-422B.
2. EXPLANATORY INSTRUCTIONS. For explanatory instructions and example problems on use of the aircraft performance curves contained in this appendix, see Paragraphs 6, 7, and 8 on Pages 3 and 4 of this circular.



BOEING 707-100 SERIES

PRATT & WHITNEY JT3C-6 ENGINE

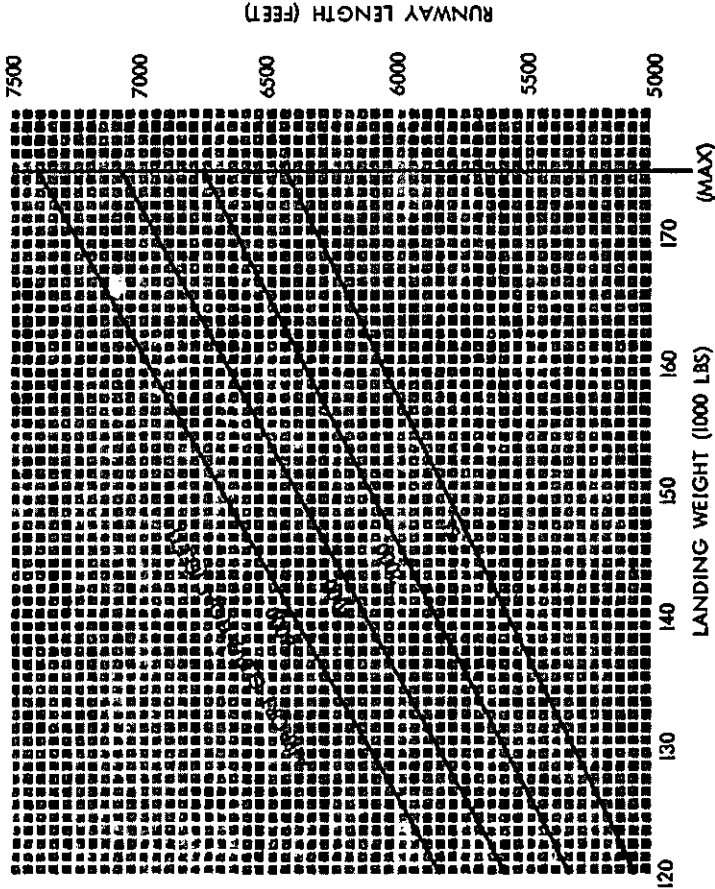


FIGURE 1. Aircraft Performance Curve, Landing (Boeing 707-100 Series)

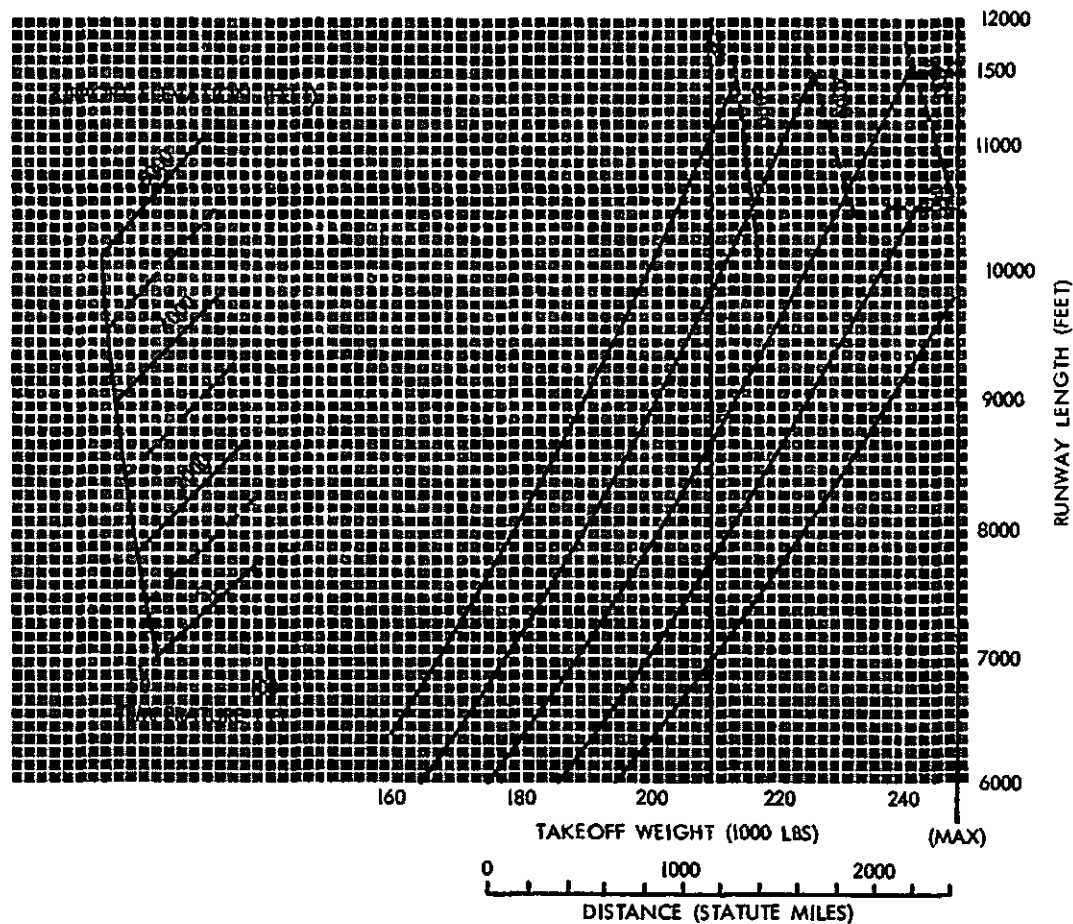


FIGURE 2. Aircraft Performance Curve, Takeoff (Boeing 707-100 Series)



BOEING 707-200 SERIES

PRATT & WHITNEY JT4A-3 ENGINE
JT4A-5

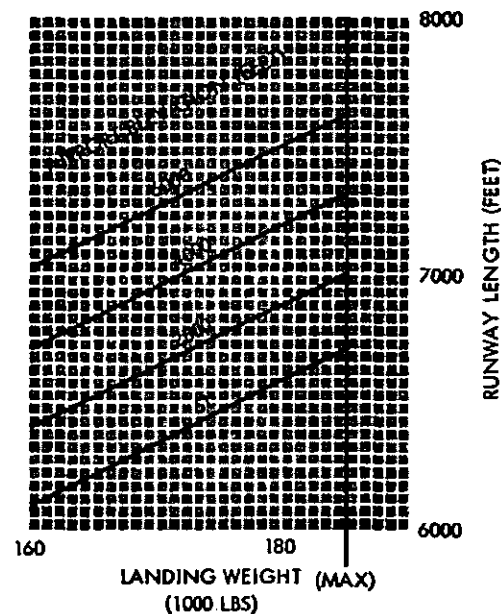


FIGURE 3. Aircraft Performance Curve, Landing (Boeing 707-200 Series)

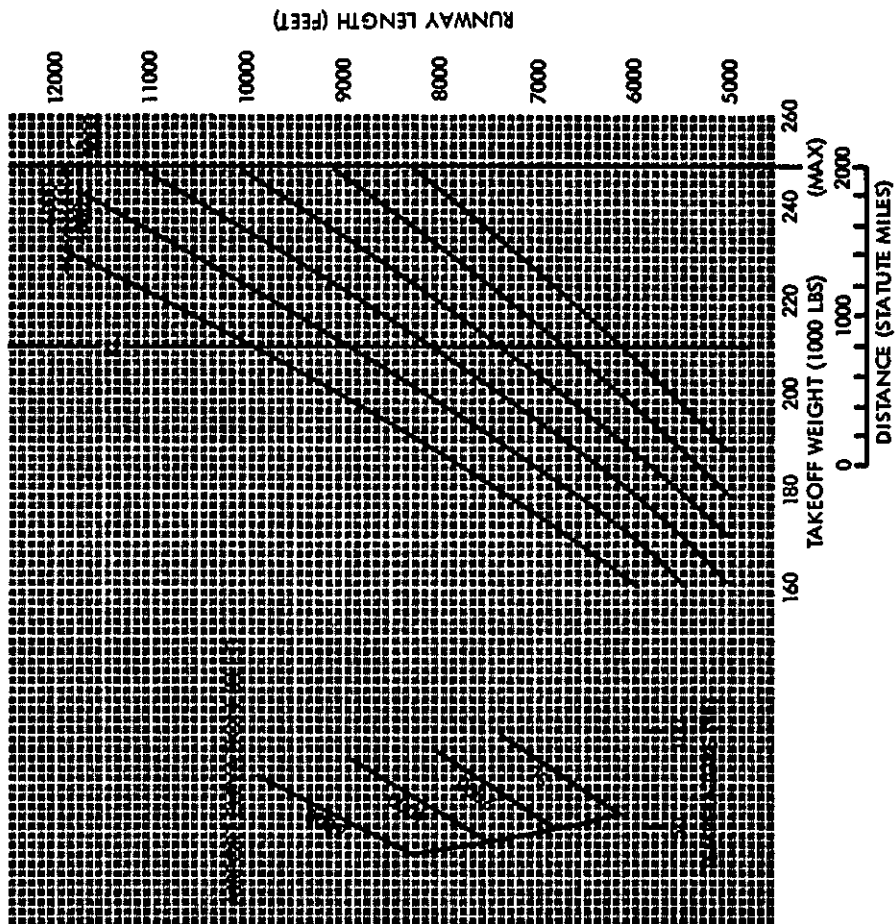


FIGURE 4. Aircraft Performance Curve, Takeoff (Boeing 707-200 Series)



BOEING 707-300 SERIES

PRATT & WHITNEY JT4A-3 ENGINE
JT4A-5

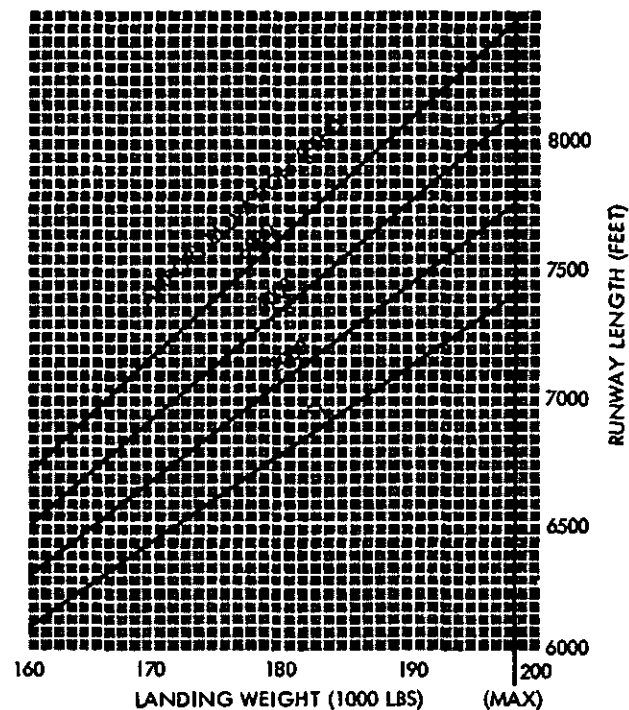


FIGURE 5. Aircraft Performance Curve, Landing (Boeing 707-300 Series)

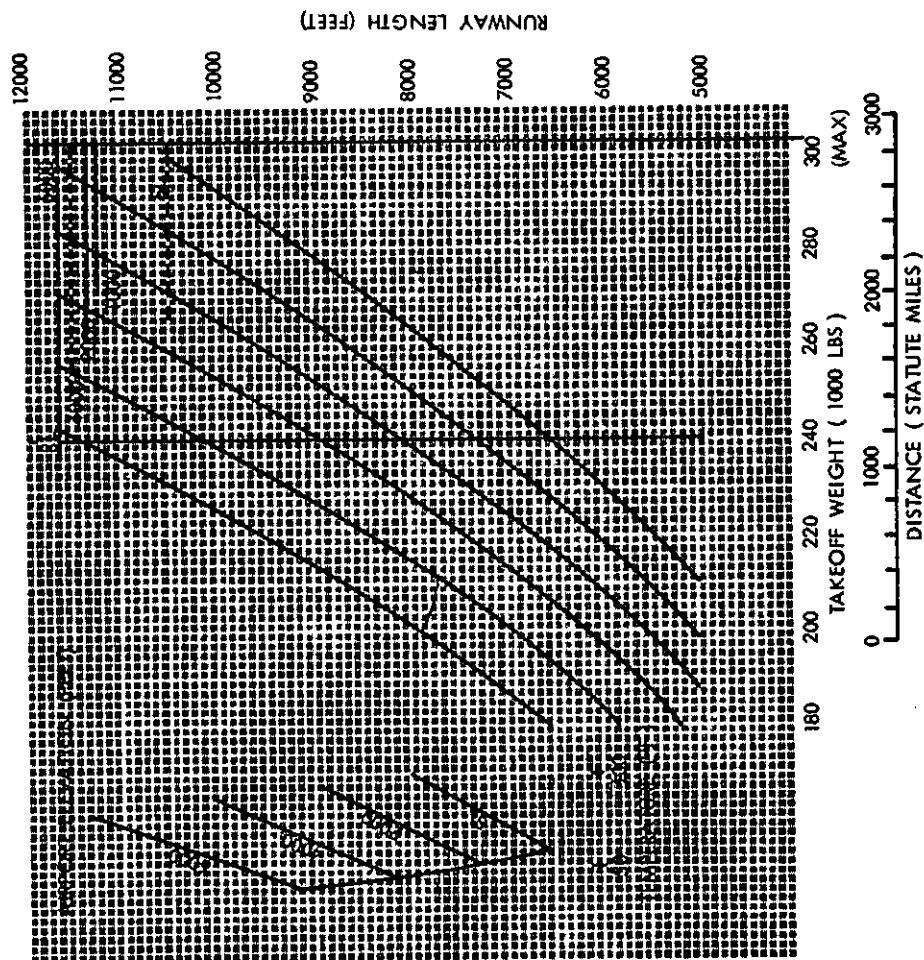


FIGURE 6. Aircraft Performance Curve, Takeoff (Boeing 707-300 Series)



BOEING 707-300 SERIES

PRATT & WHITNEY JT4A-11 ENGINE
JT4A-12

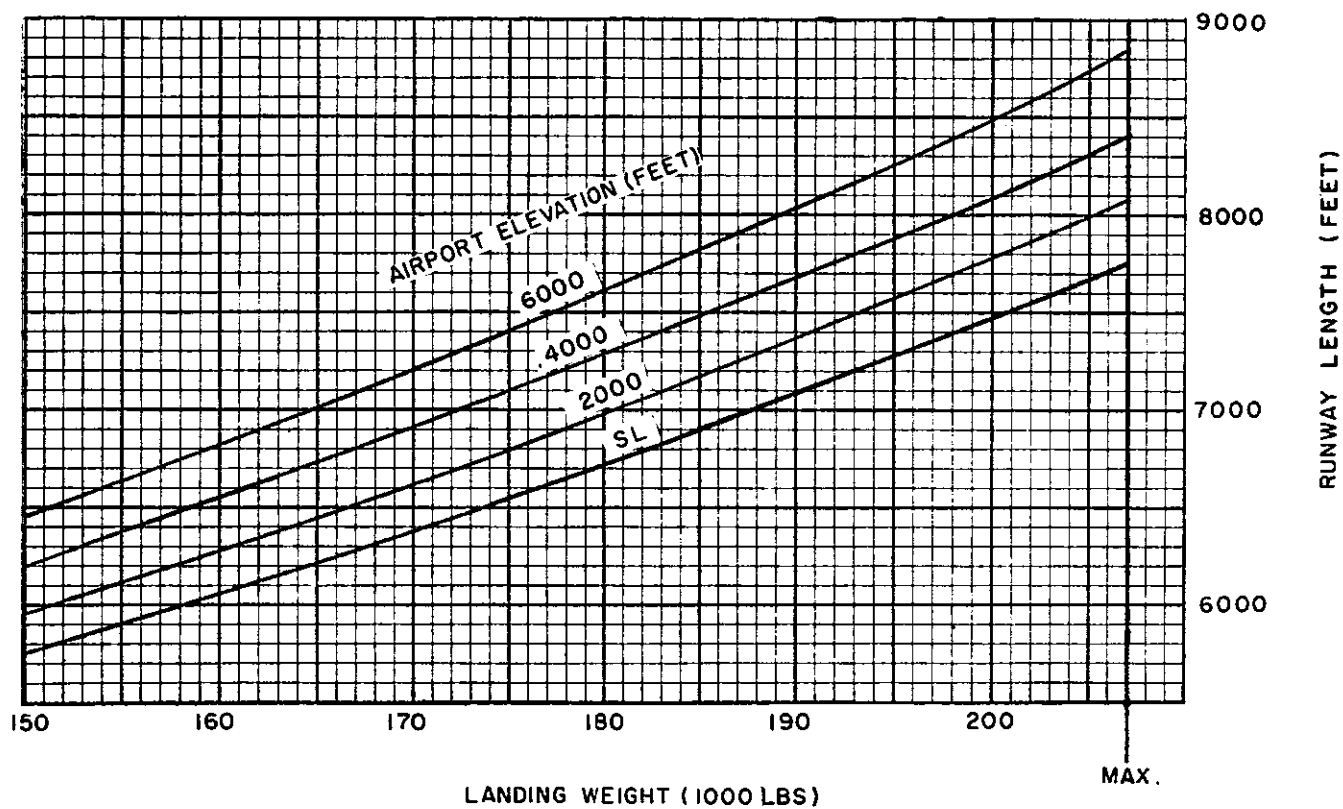


FIGURE 7. Aircraft Performance Curve, Landing (Boeing 707-300 Series)

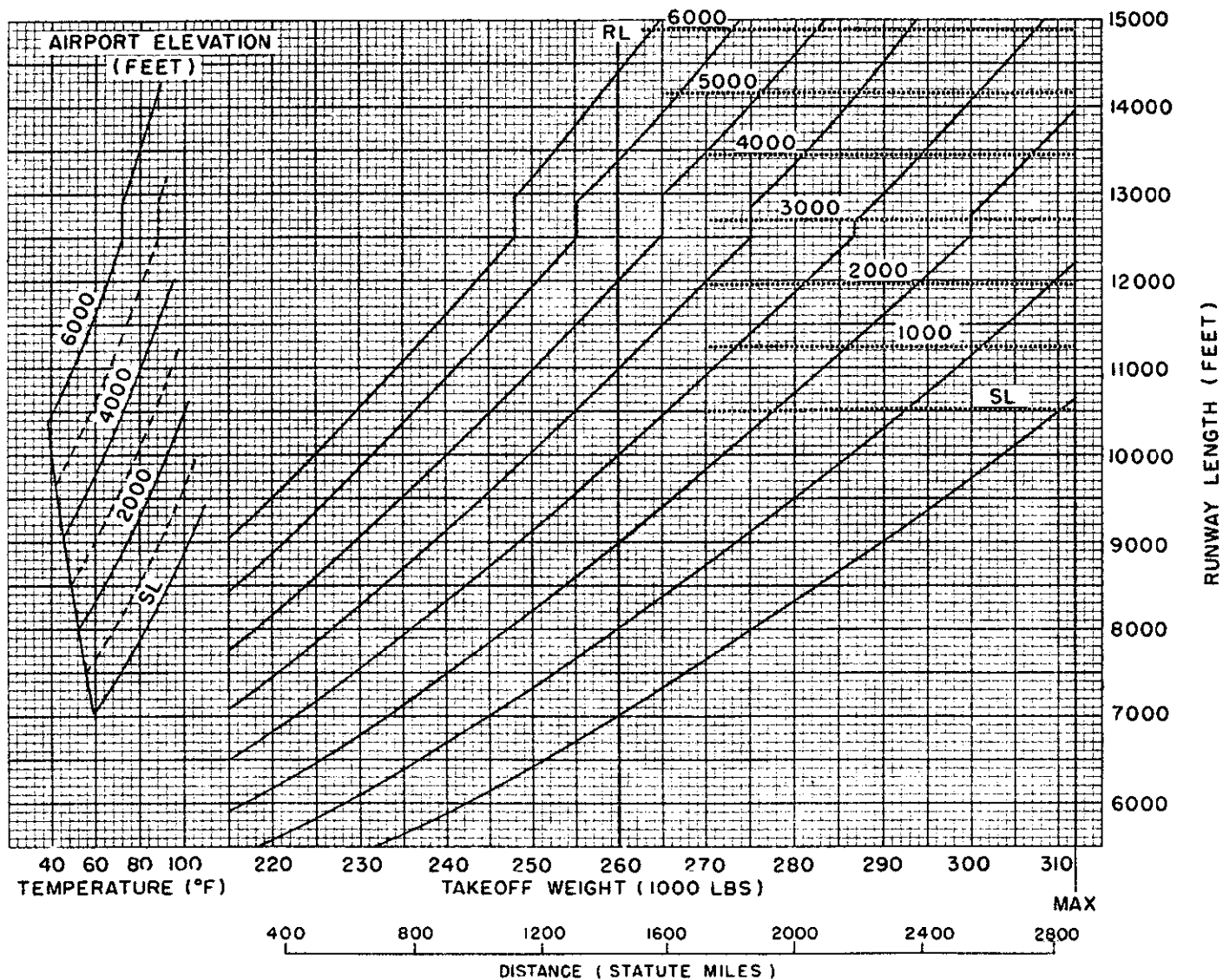


FIGURE 8. Aircraft Performance Curve, Takeoff (Boeing 707-300 Series)



BOEING 707-400 SERIES
ROLLS ROYCE CONWAY 508 ENGINE

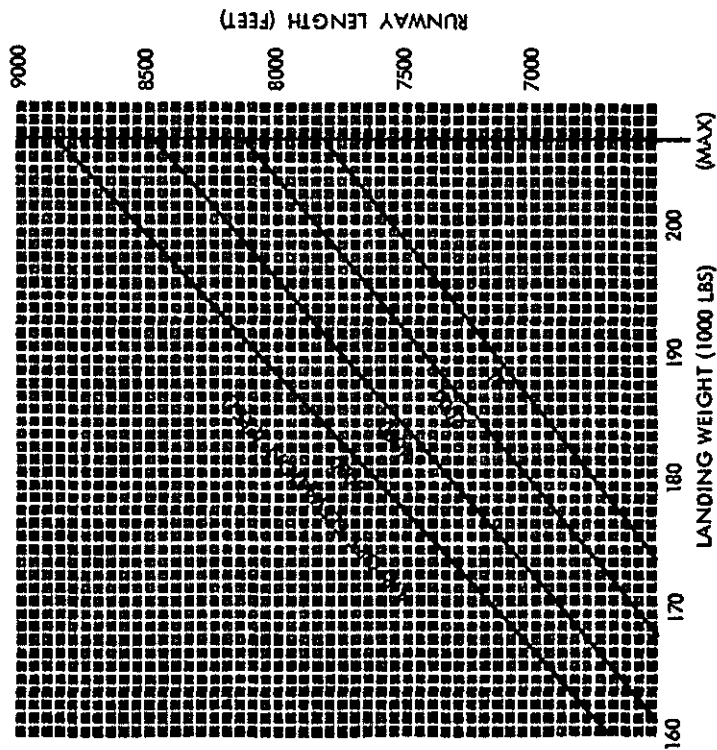


FIGURE 9. Aircraft Performance Curve, Landing (Boeing 707-400 Series)

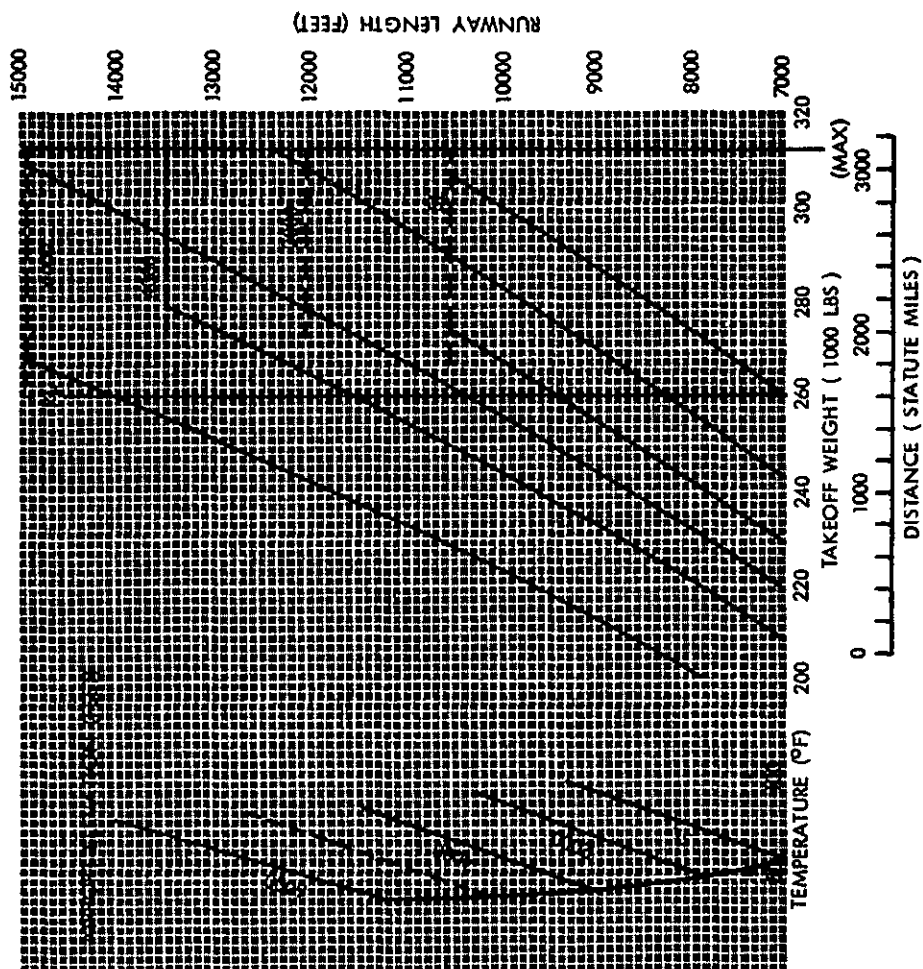


FIGURE 10. Aircraft Performance Curve, Takeoff (Boeing 707-400 Series)



BOEING 720-000 SERIES

PRAET & WHITNEY JT3C-7 ENGINE

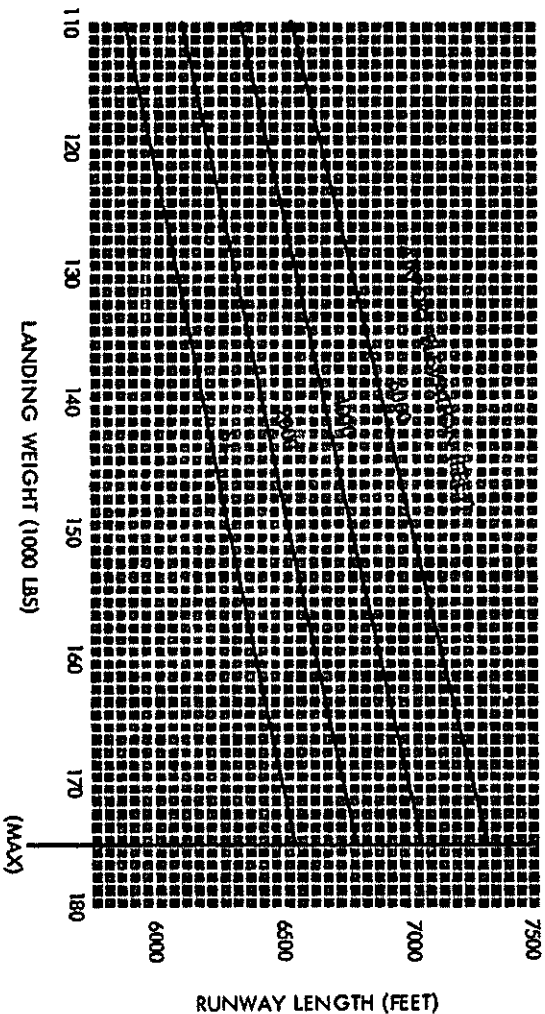
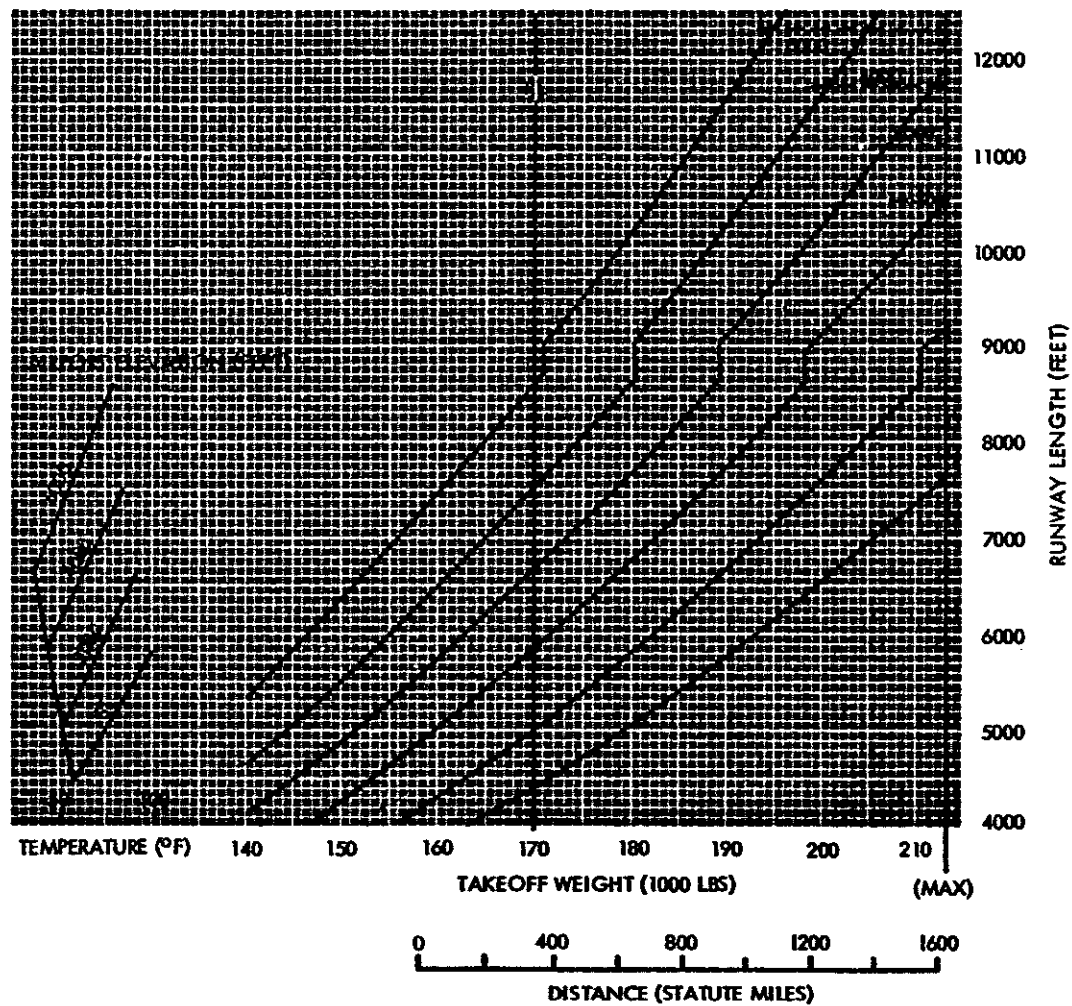
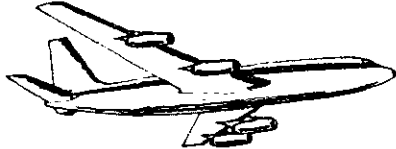


FIGURE 11. Aircraft Performance Curve, Landing (Boeing 720-000 Series)





BOEING 720-000 SERIES

PRATT & WHITNEY JT3C-12 ENGINE

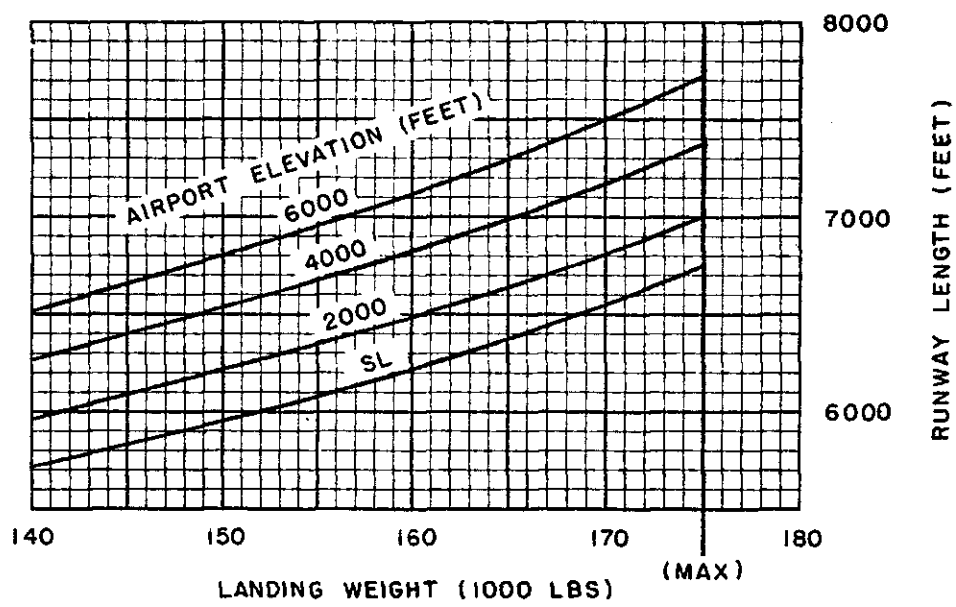


FIGURE 13. Aircraft Performance Curve, Landing (Boeing 720-000 Series)

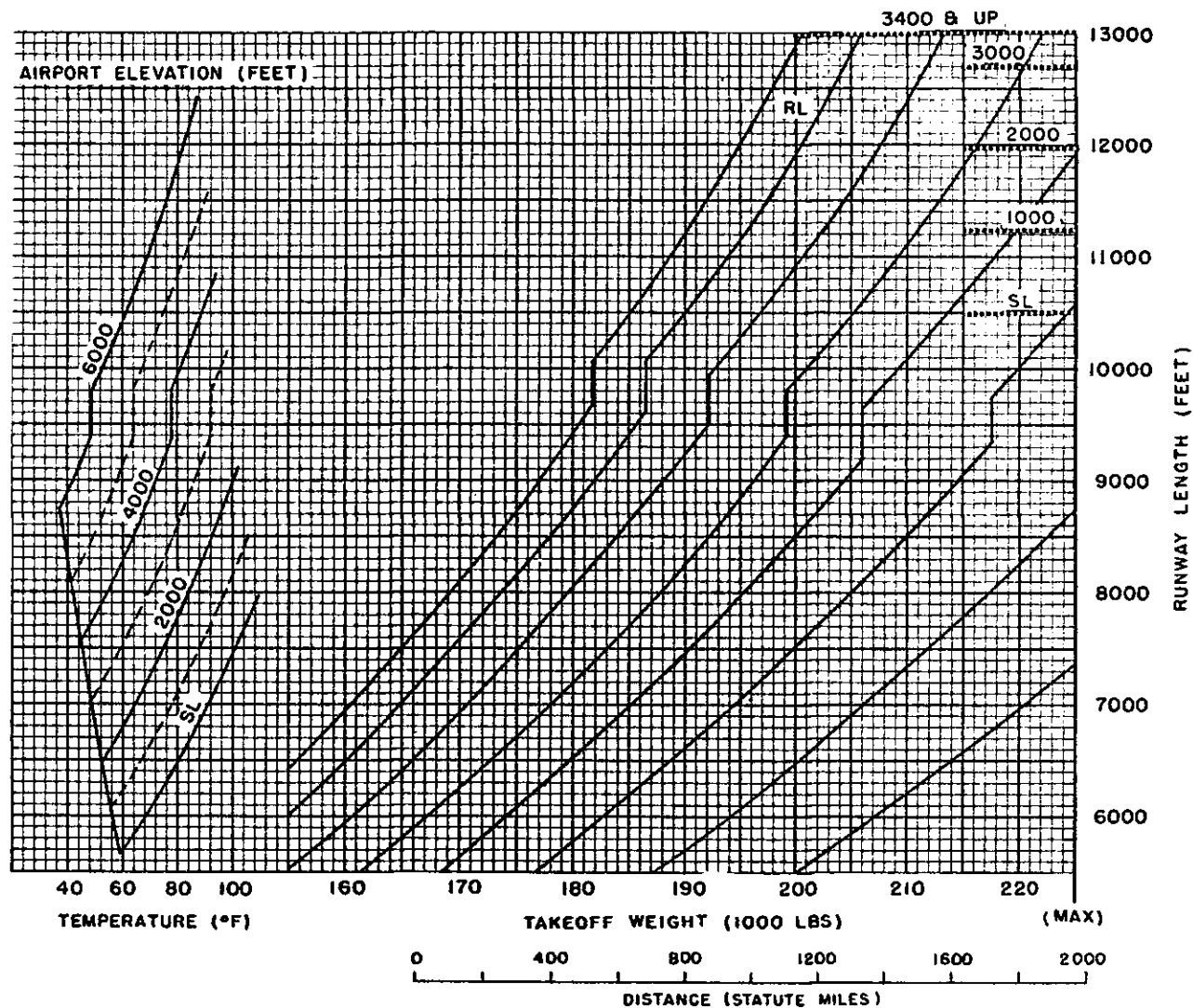
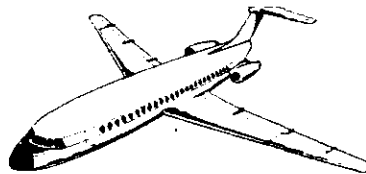


FIGURE 14. Aircraft Performance Curve, Takeoff (Boeing 720-000 Series)



BAC 1-11

Models 203 AE and 204 AF

ROLLS ROYCE SPEY 506-14 ENGINE

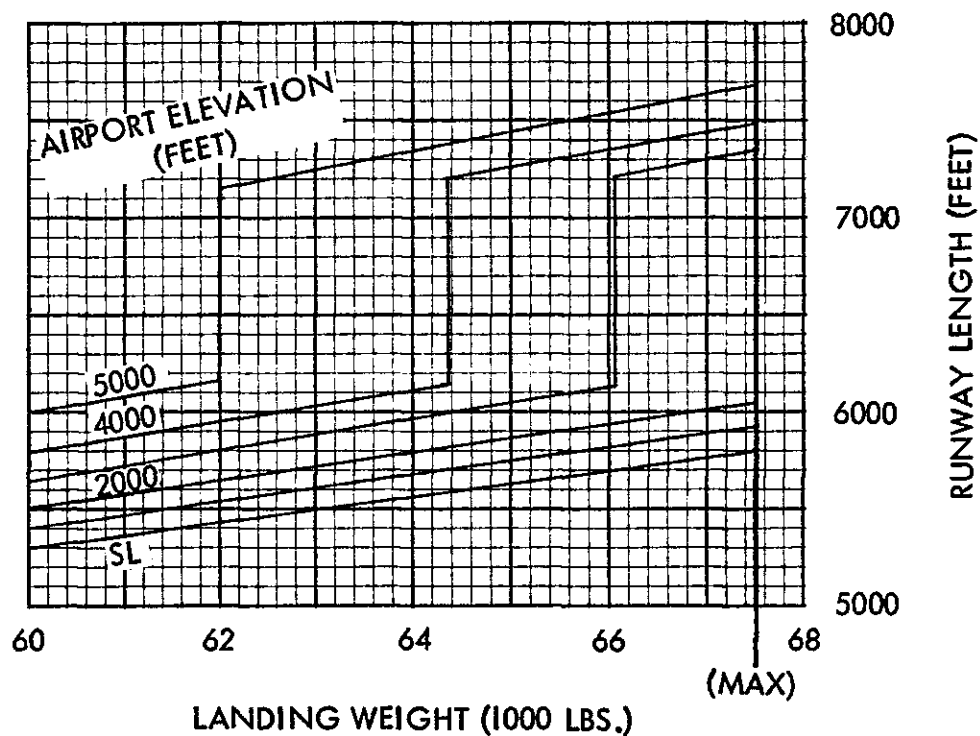


FIGURE 14-1. Aircraft Performance Curve, Landing (BAC 1-11)

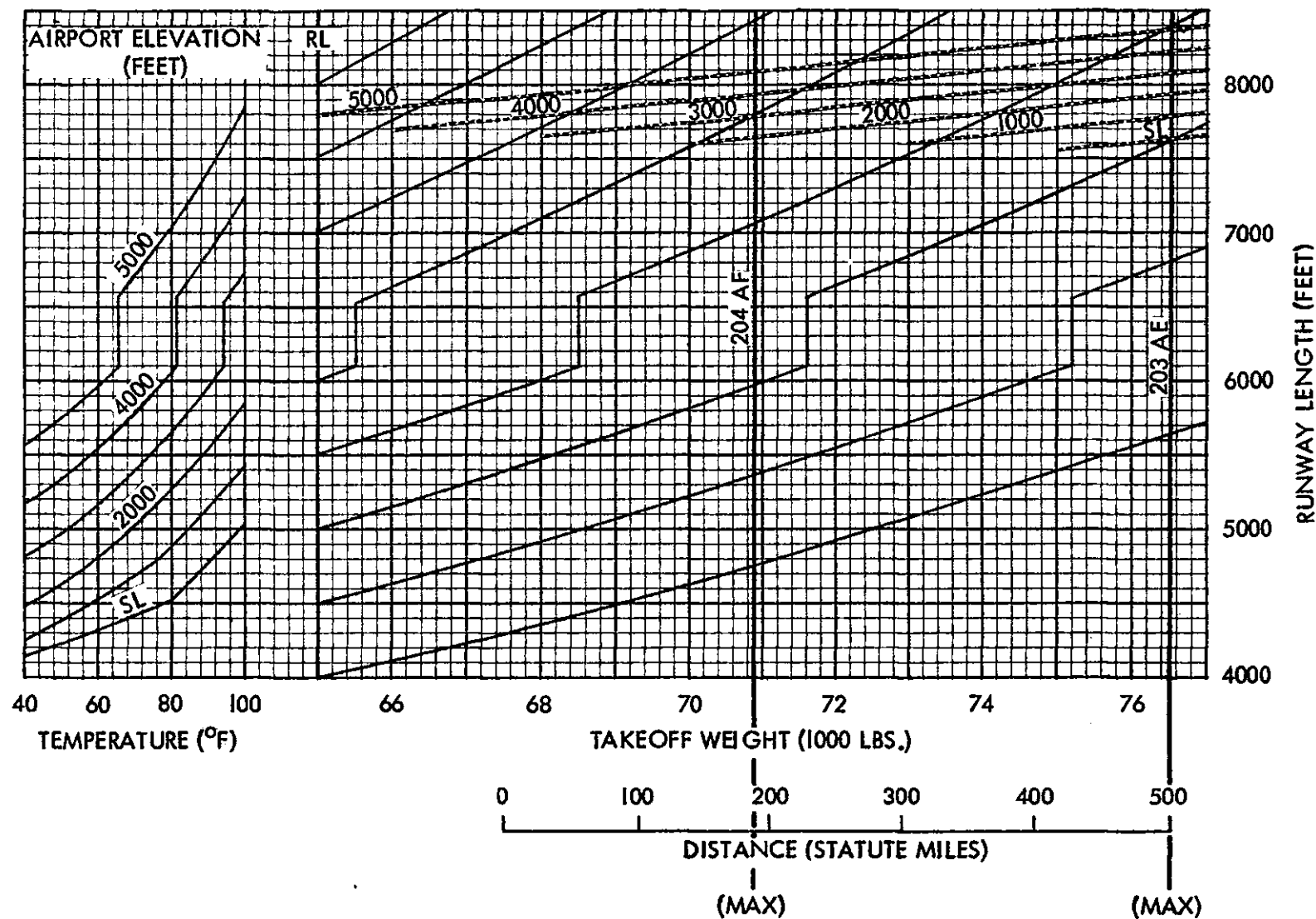


FIGURE 14-2. Aircraft Performance Curve, Takeoff (BAC 1-11)



CARAVELLE SE 210-1

ROLLS ROYCE AVON 522 ENGINE

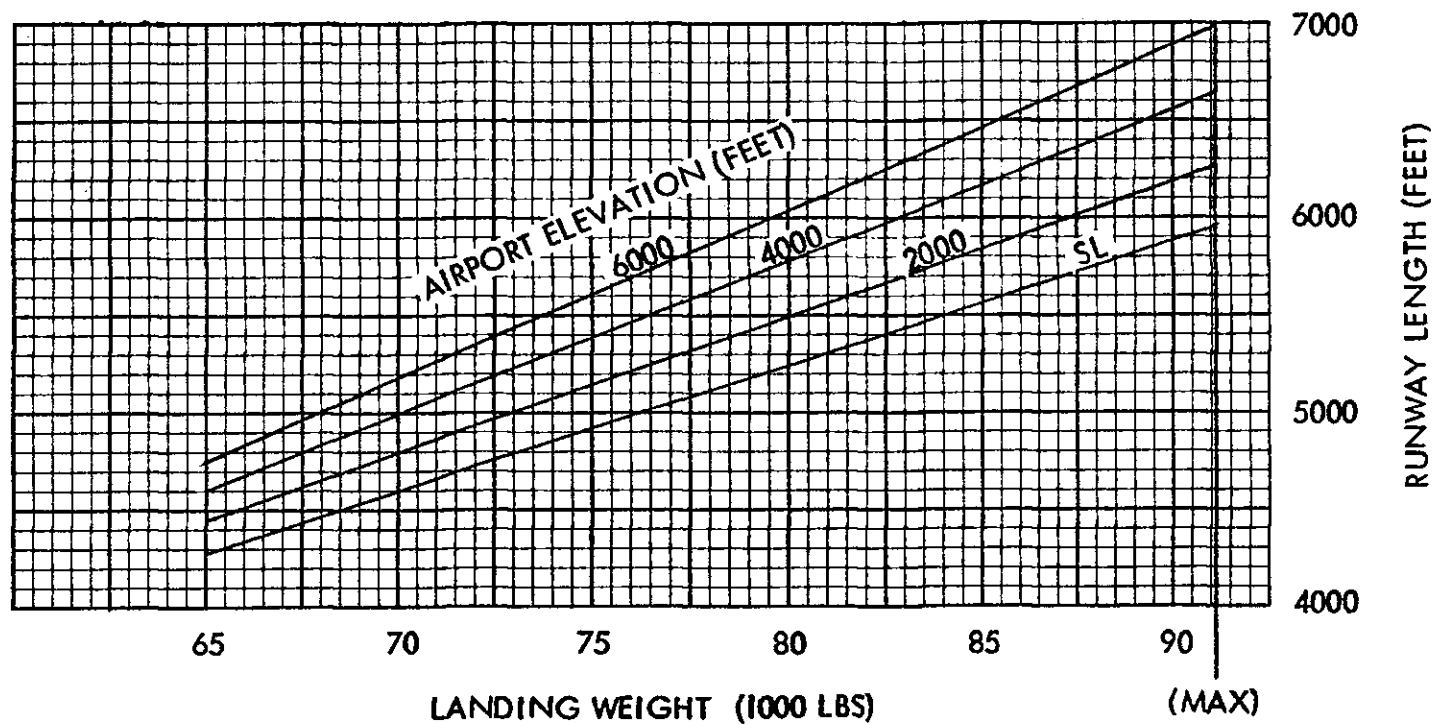


FIGURE 15. Aircraft Performance Curve, Landing (Caravelle SE 210-1)

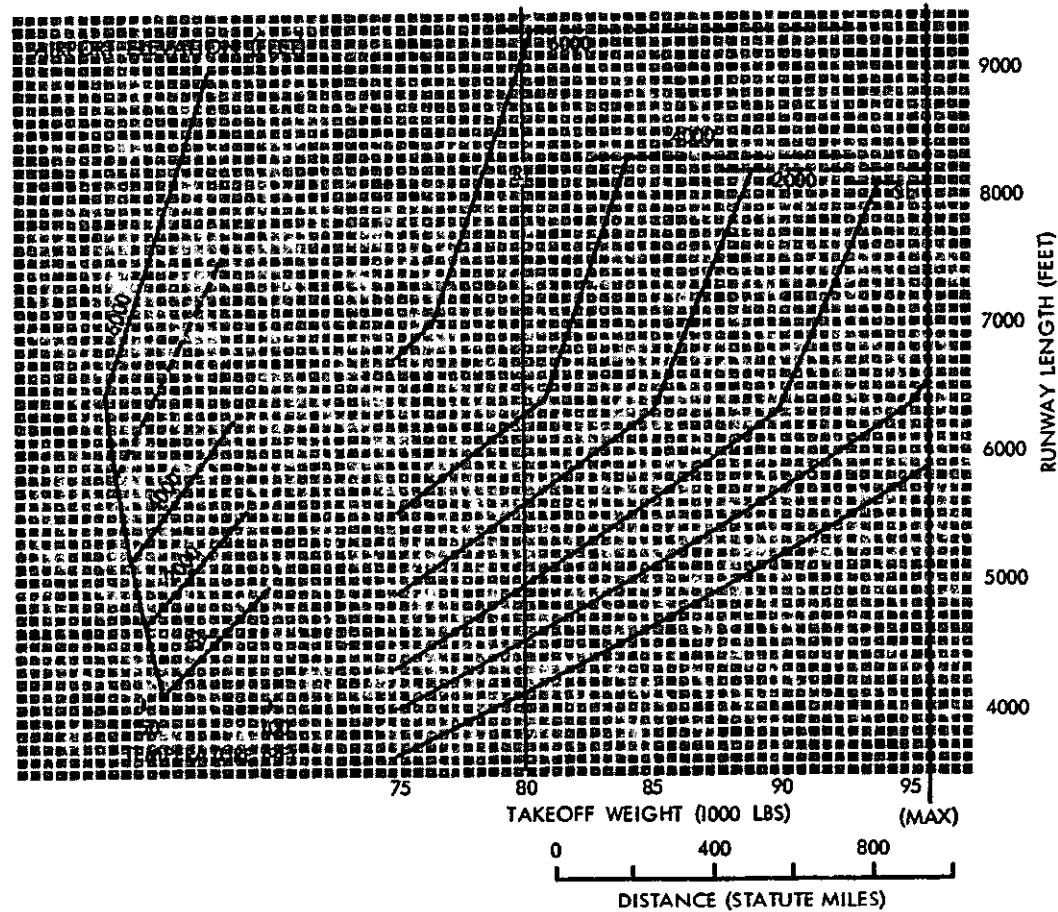
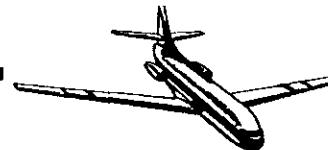


FIGURE 16. Aircraft Performance Curve, Takeoff (Caravelle SE 210-1)



CARAVELLE SE 210-6R ROLLS ROYCE AVON 532R ENGINE

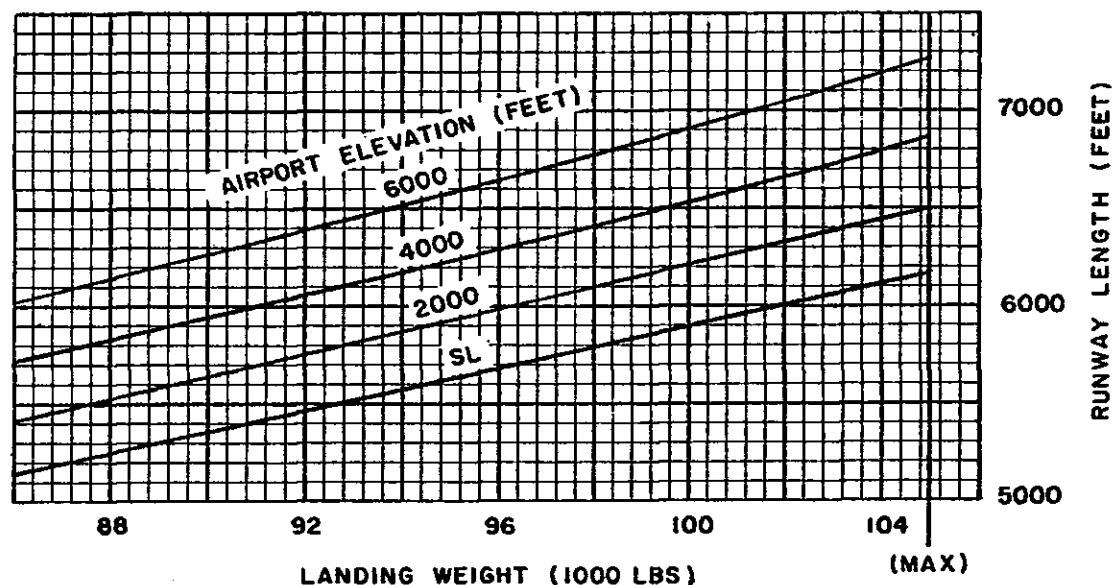


FIGURE 17. Aircraft Performance Curve, Landing (Caravelle SE 210-6R)

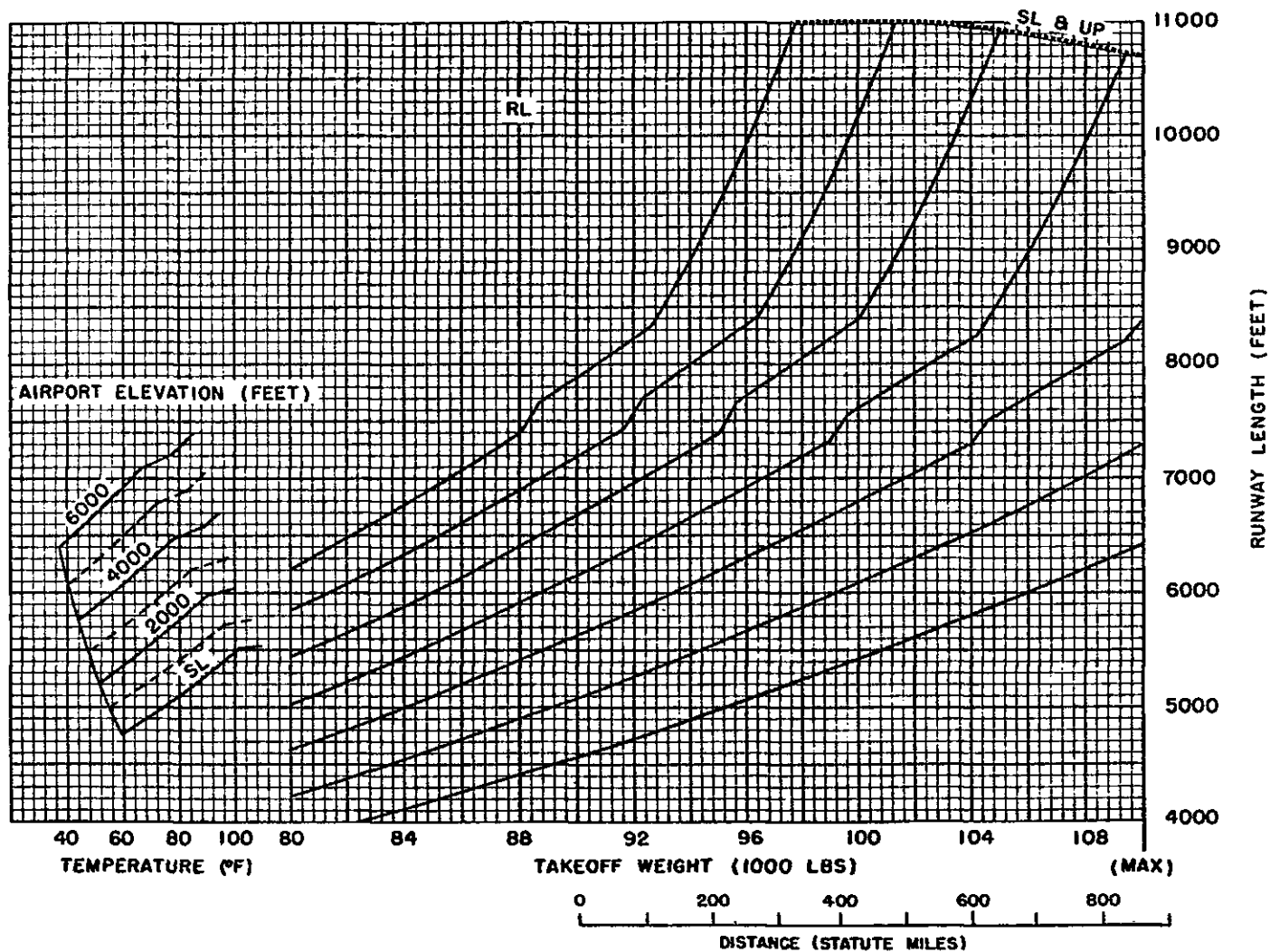


FIGURE 18. Aircraft Performance Curve, Takeoff (Caravelle SE 210-6R)



CONVAIR 880

GENERAL ELECTRIC CJ805-3 ENGINE

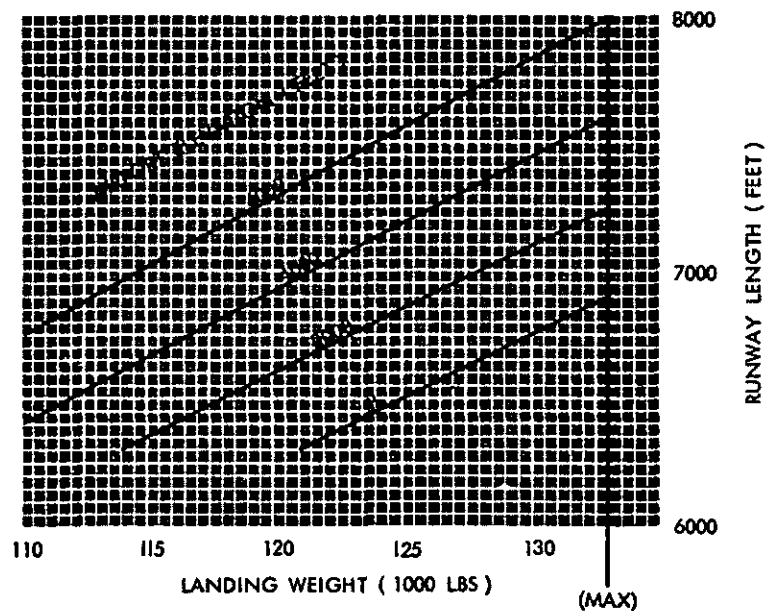


FIGURE 19. Aircraft Performance Curve, Landing (Convair 880)

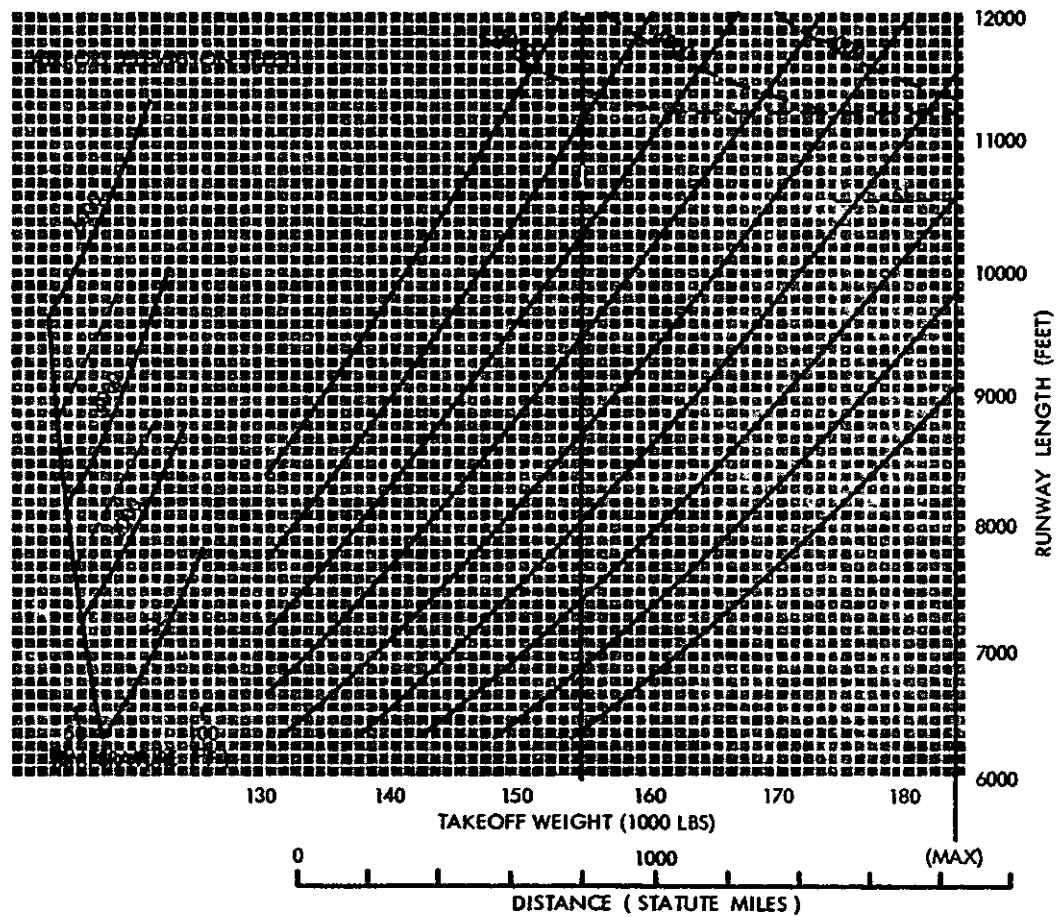


FIGURE 20. Aircraft Performance Curve, Takeoff (Convair 880)



CONVAIR 880M

GENERAL ELECTRIC CJ805-3B ENGINE

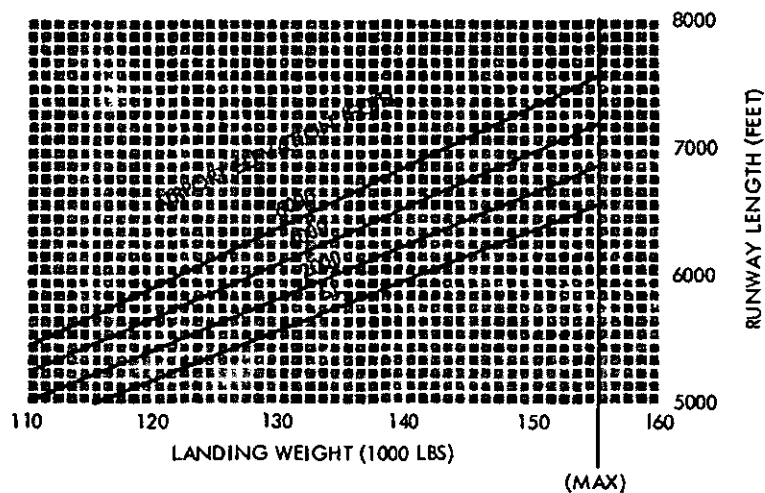


FIGURE 21. Aircraft Performance Curve, Landing (Convair 880M)

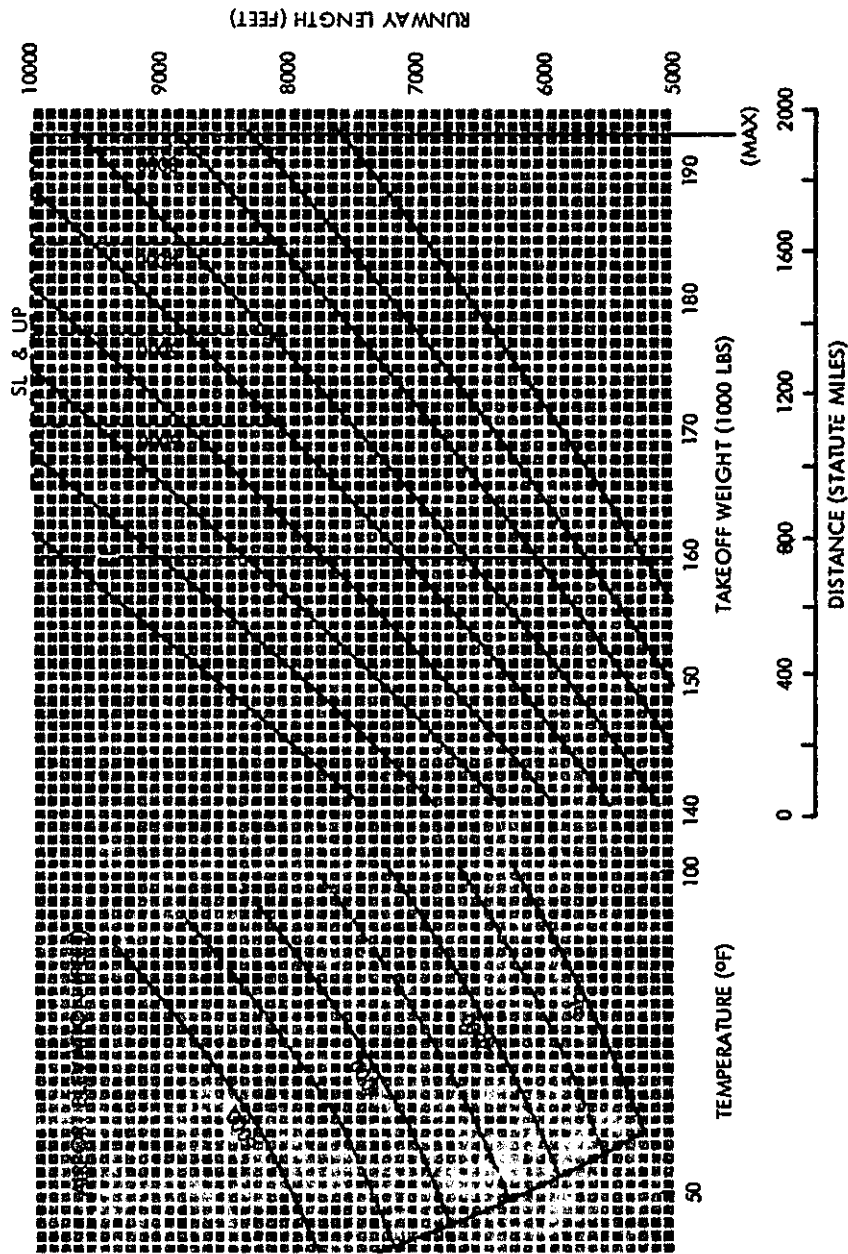
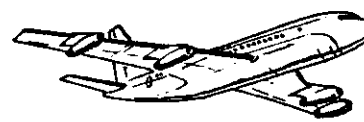


FIGURE 22. Aircraft Performance Curve, Takeoff (Convair 880M)



DOUGLAS DC-8-10 SERIES

PRATT & WHITNEY JT3C-6 ENGINE

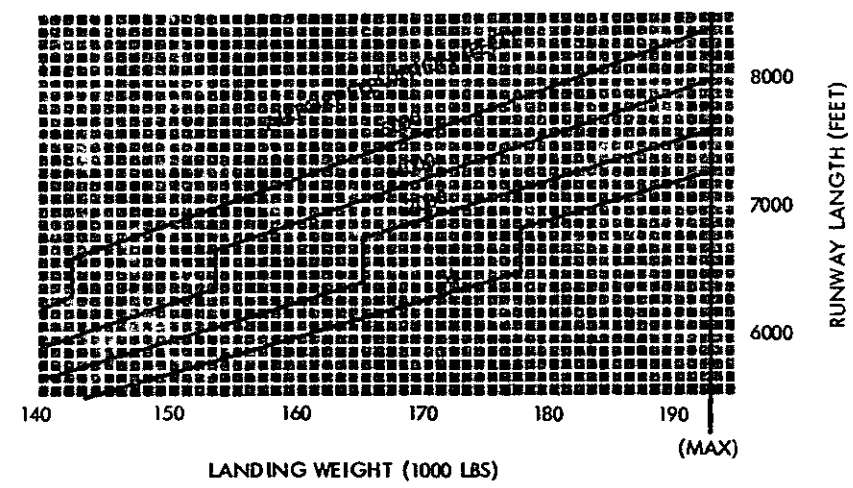


FIGURE 23. Aircraft Performance Curve, Landing (Douglas DC-8-10 Series)

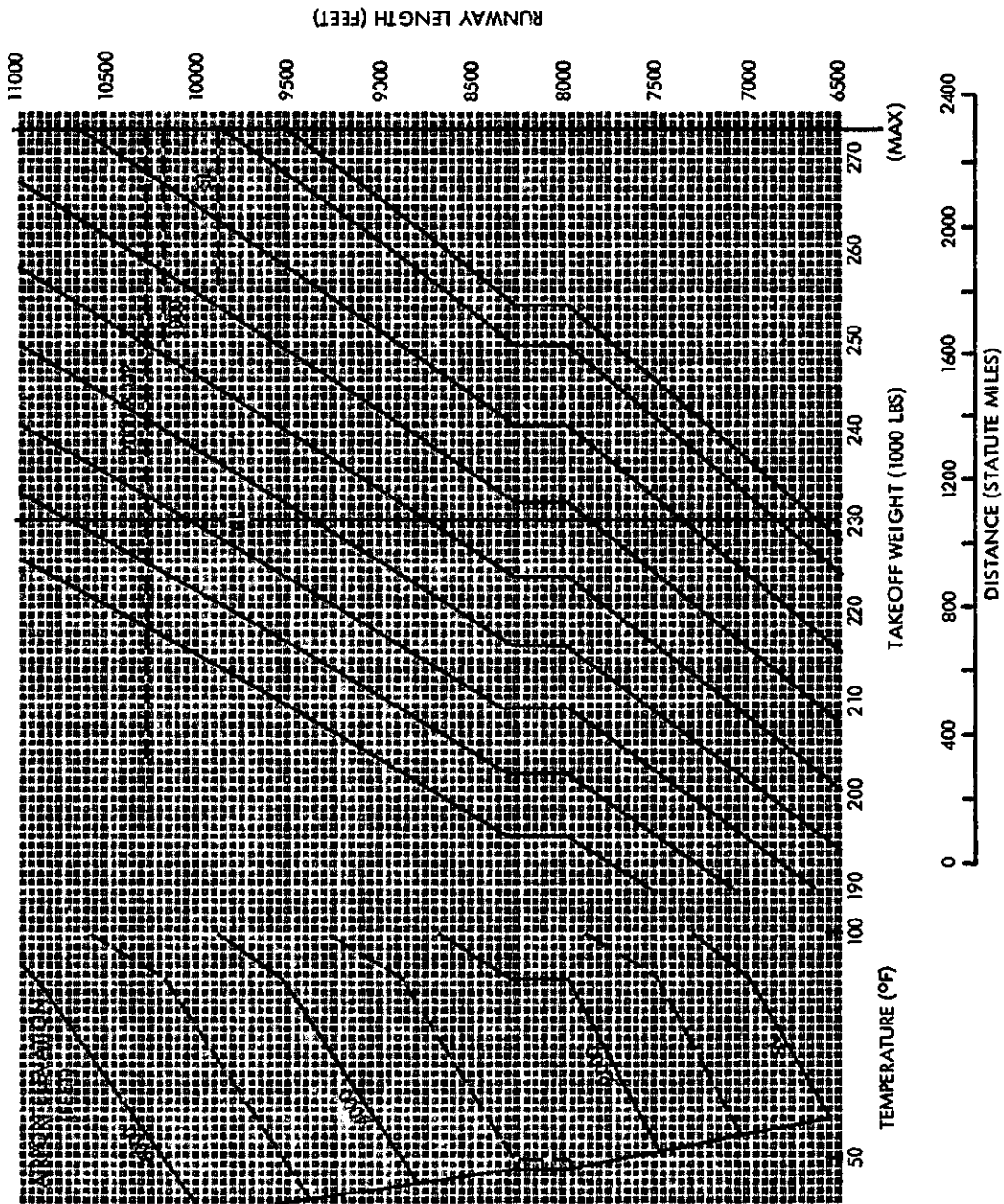


FIGURE 24. Aircraft Performance Curve, Takeoff (Douglas DC-8-10 Series)



DOUGLAS DC-8-20 SERIES

PRATT & WHITNEY JT4A-9 ENGINE
JT4A-10

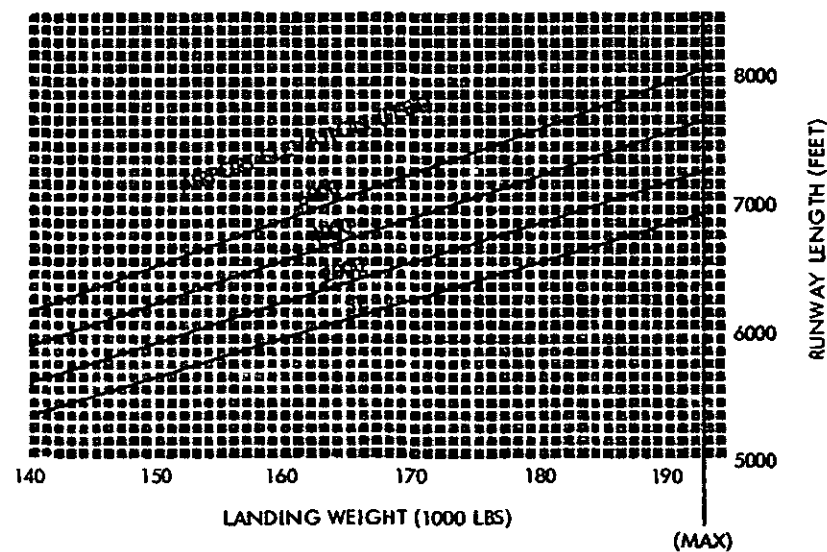


FIGURE 25. Aircraft Performance Curve, Landing (Douglas DC-8-20 Series)

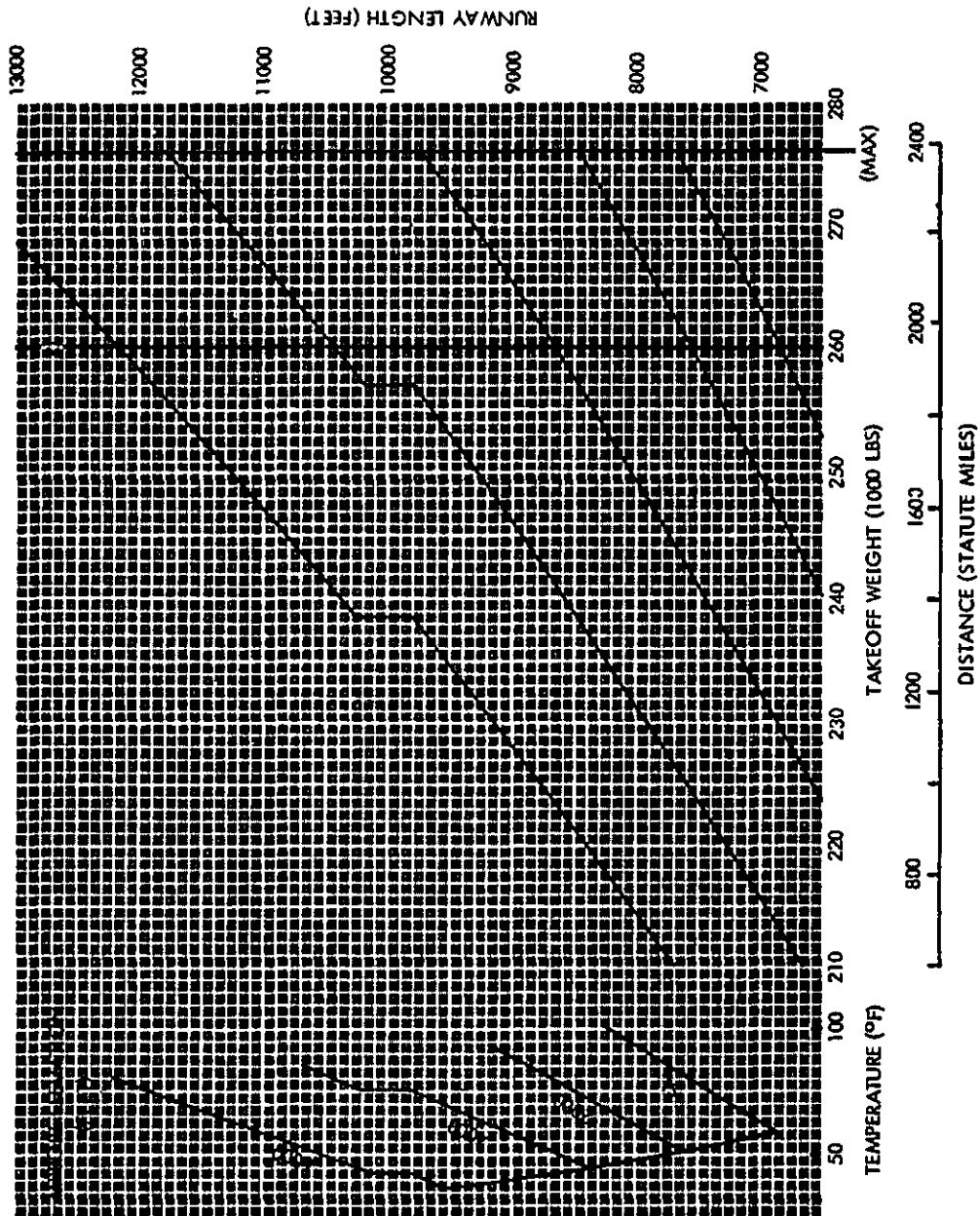


FIGURE 26. Aircraft Performance Curve, Takeoff (Douglas DC-8-20 Series)



DOUGLAS DC-8-30 SERIES

PRATT & WHITNEY JT4A-9 ENGINE
JT4A-10

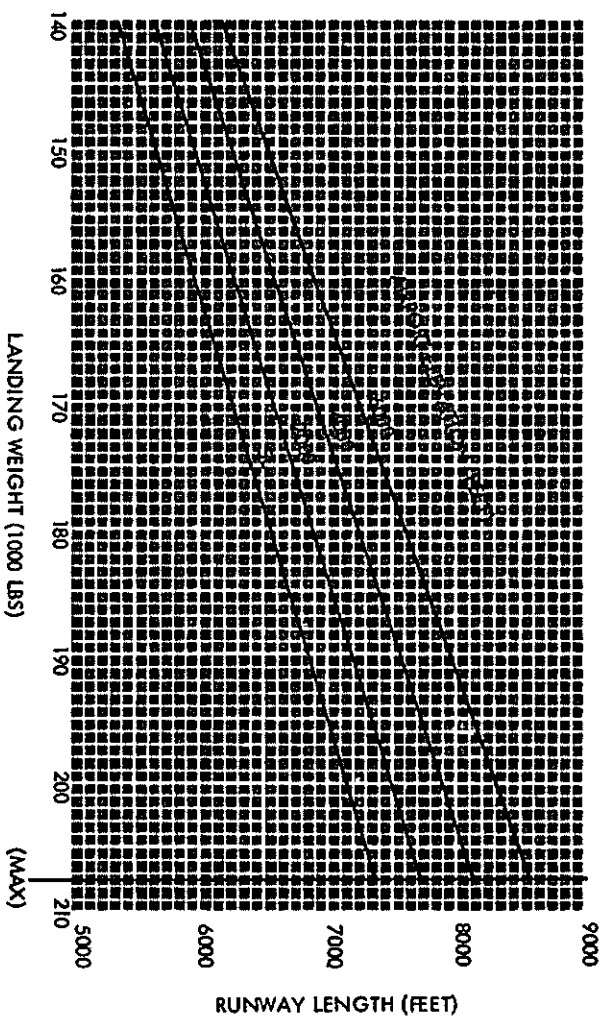


FIGURE 27. Aircraft Performance Curve, Landing (Douglas DC-8-30 Series)

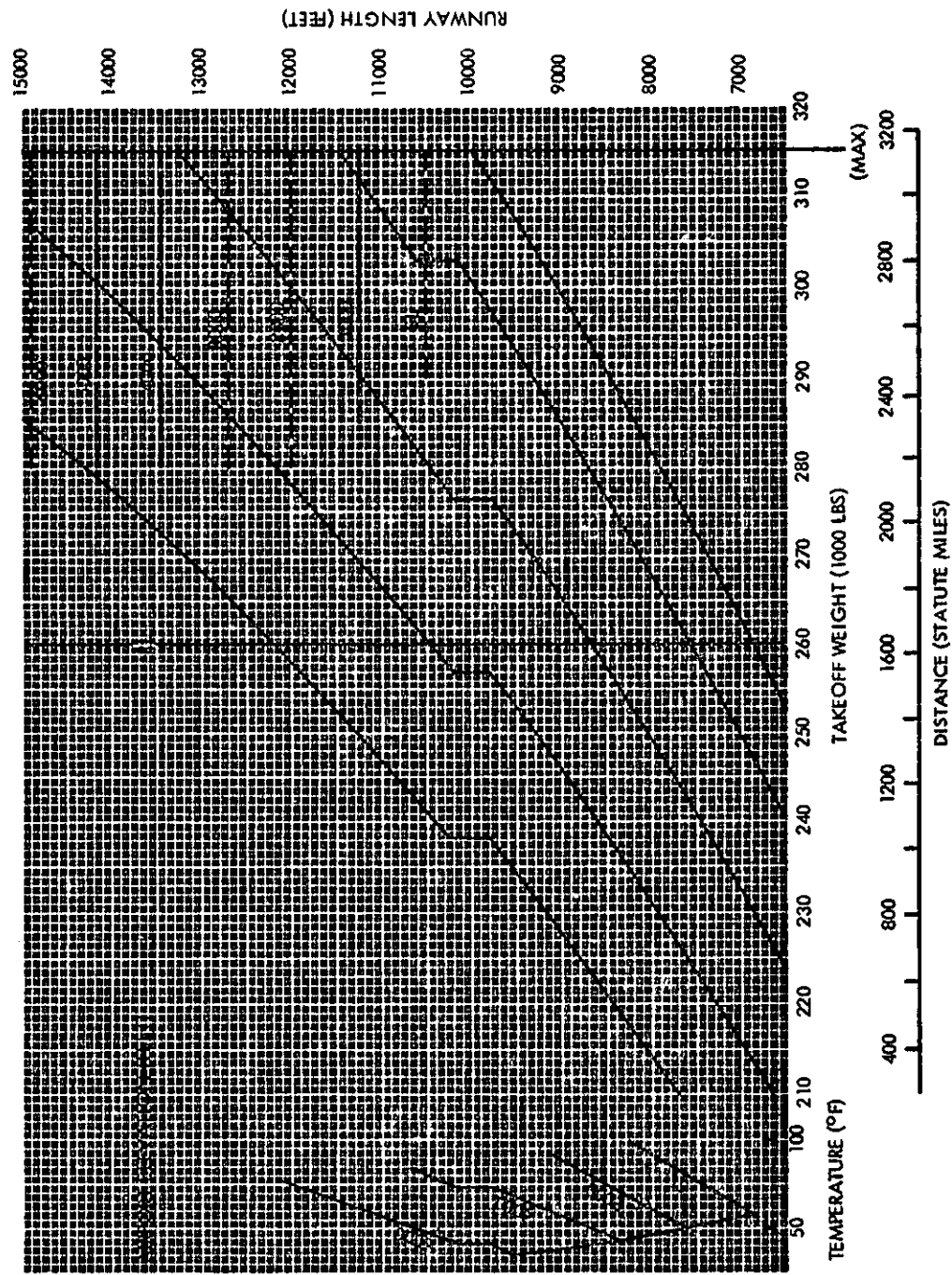


FIGURE 28. Aircraft Performance Curve, Takeoff (Douglas DC-8-30 Series)



DOUGLAS DC-8-40 SERIES
ROLLS ROYCE CONWAY 509 ENGINE

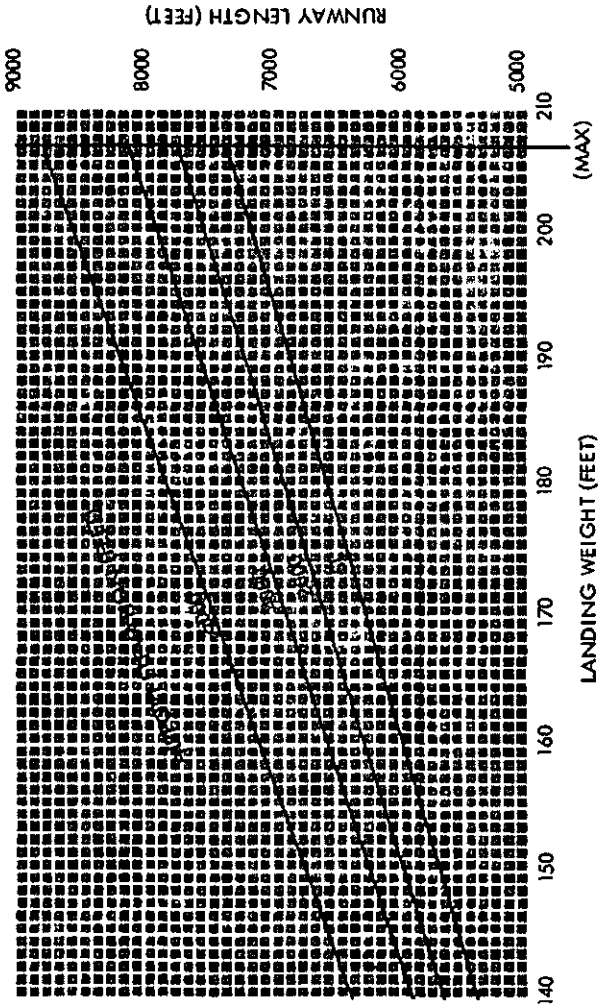


FIGURE 29. Aircraft Performance Curve, Landing (Douglas DC-8-40 Series)

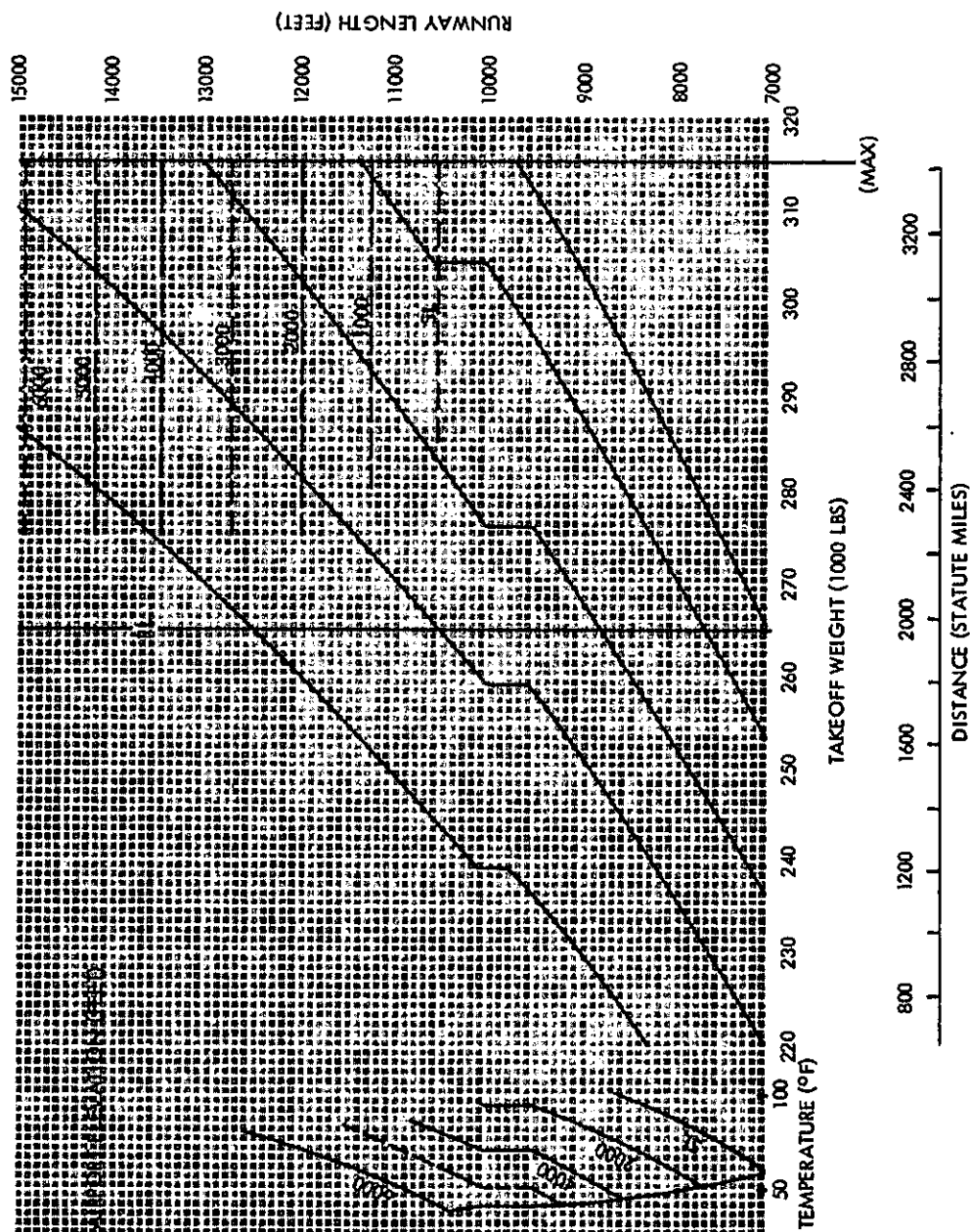


FIGURE 30. Aircraft Performance Curve, Takeoff (Douglas DC-8-40 Series)

APPENDIX 4. TURBOFAN AND AFTFAN POWERED LARGE AIRPLANES

1. AIRCRAFT PERFORMANCE CURVES. The aircraft performance curves contained in this appendix are for airplanes with the following items in common:
 - a. Multiengine (two or more engines).
 - b. Jet driven.
 - c. Equipped with turbine engines incorporating a fan to supply air for cooling, for ventilation, or for combustion.
 - d. Certificated with a maximum takeoff weight of more than 12,500 pounds.
 - e. Transport category.
 - f. Type certificated in accordance with the performance requirements of SR-422, SR-422A, or SR-422B.
2. EXPLANATORY INSTRUCTIONS. For explanatory instructions and example problems on use of the aircraft performance curves contained in this appendix, see Paragraphs 6, 7, and 8 on Pages 3 and 4 of this circular.



BOEING 707-100B SERIES

PRATT & WHITNEY JT3D-1 ENGINE

JT3D-1-MC6

JT3D-1-MC7

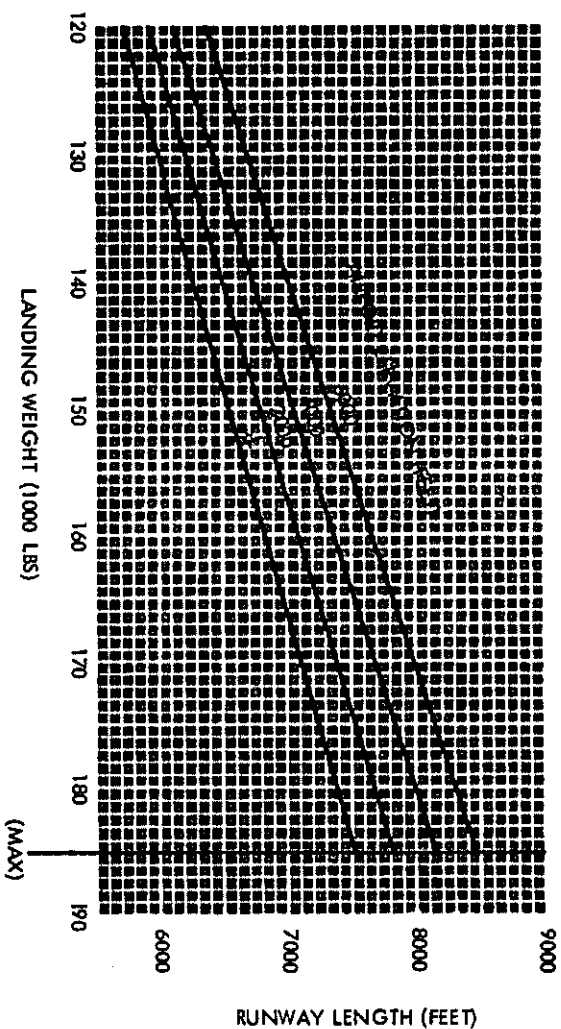


FIGURE 1. Aircraft Performance Curve, Landing (Boeing 707-100B Series)

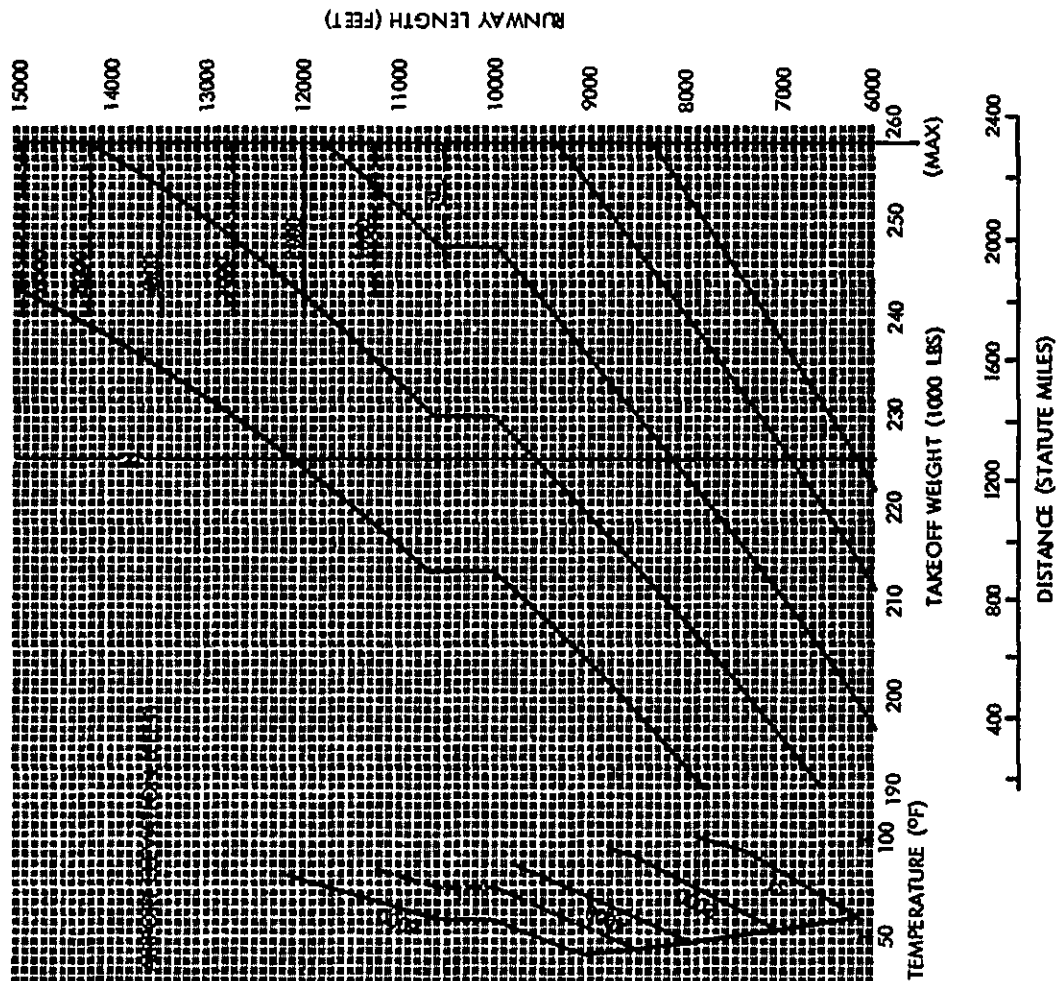


FIGURE 2. Aircraft Performance Curve, Takeoff (Boeing 707-100B Series)



BOEING 707-300B SERIES

PRATT & WHITNEY JT3D-3 ENGINE

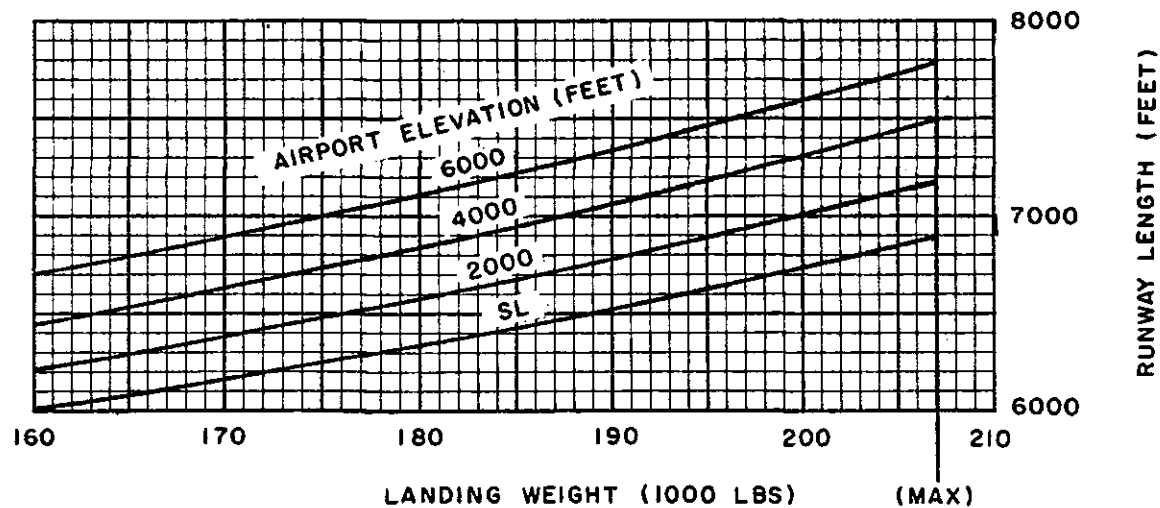


FIGURE 3. Aircraft Performance Curve, Landing (Boeing 707-300B Series)

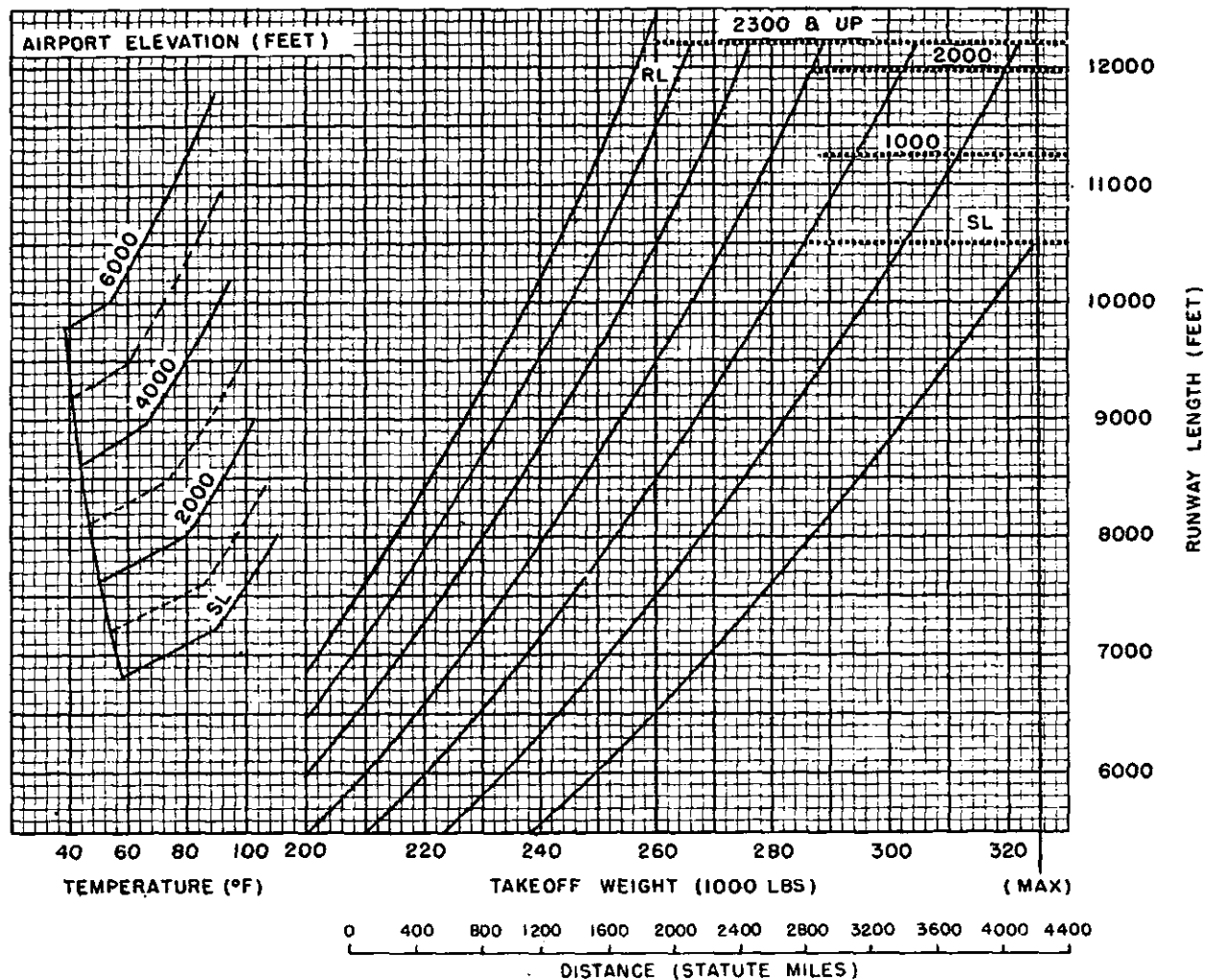


FIGURE 4. Aircraft Performance Curve, Takeoff (Boeing 707-300B Series)

WITHDRAWN--CHG 9

8/15/75

AC 150/5325-4 CHG 9
Appendix 4

WITHDRAWN--CHG 9



BOEING 720-000B SERIES

PRATT & WHITNEY JT3D-1 ENGINE
JT3D-1-MC6
JT3D-1-MC7

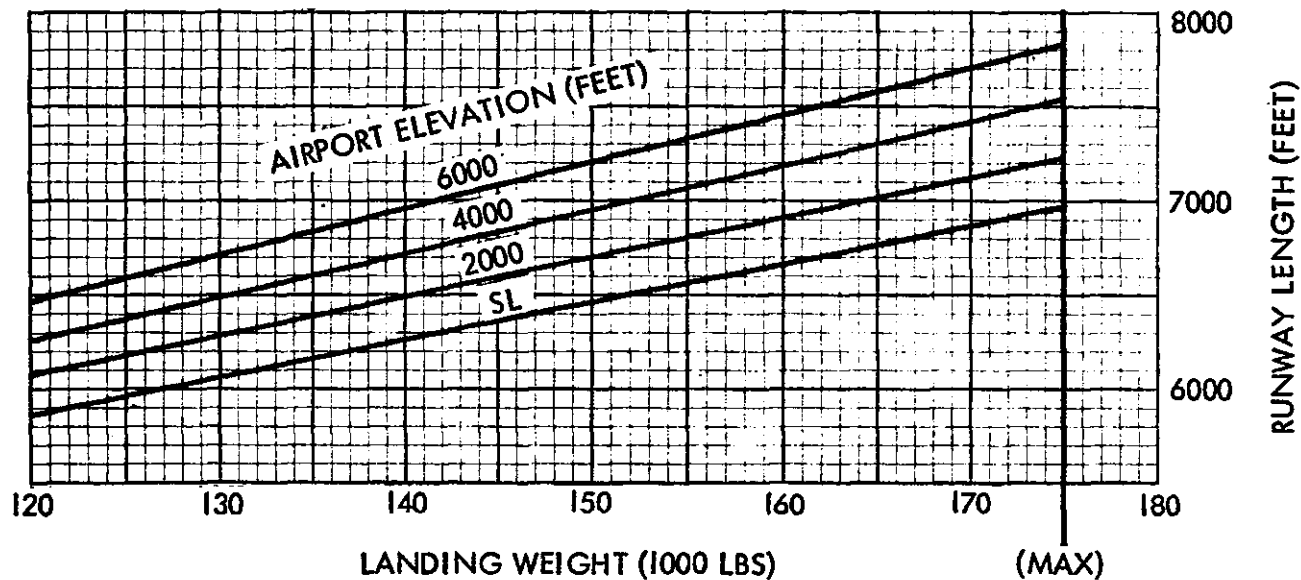


FIGURE 5. Aircraft Performance Curve, Landing (Boeing 720-000B Series)

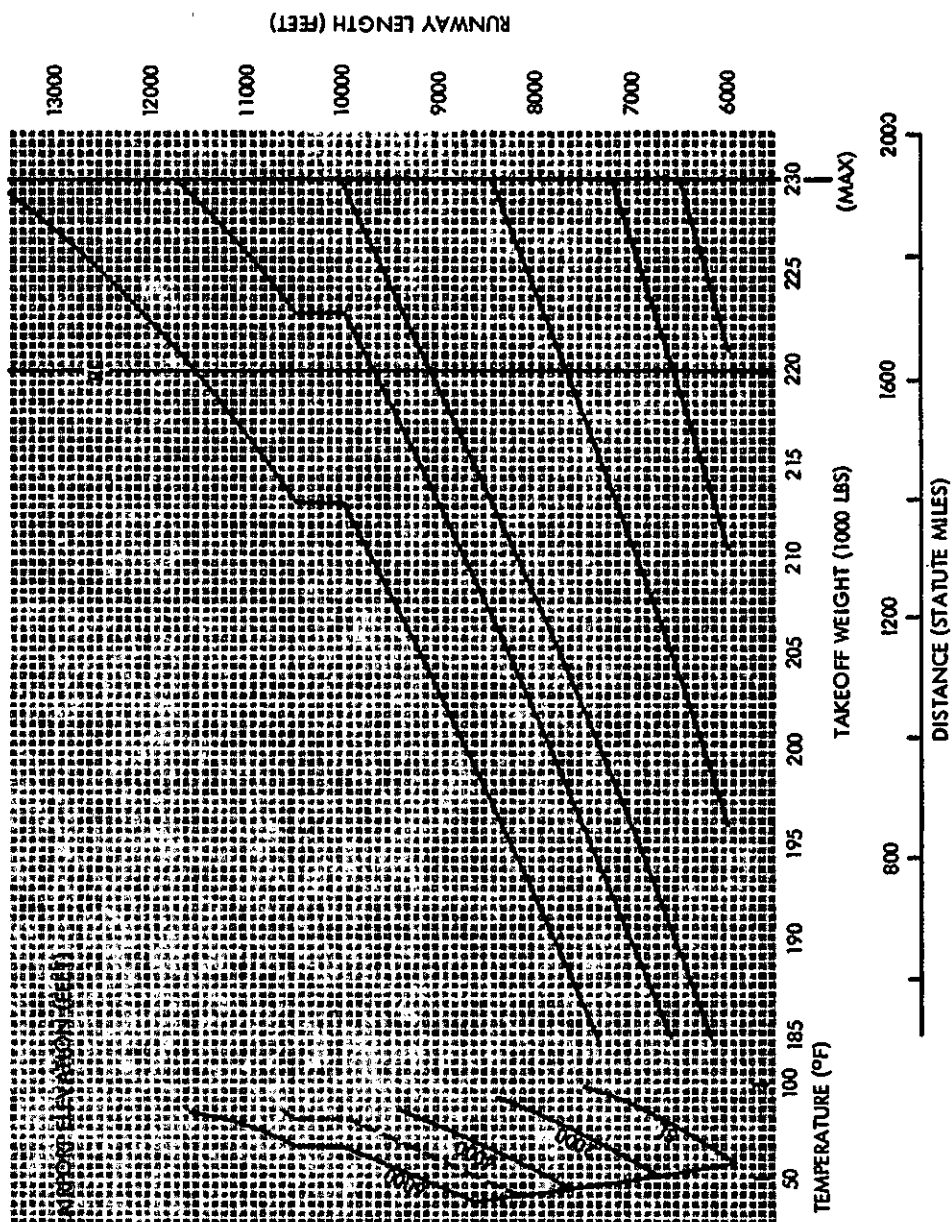


FIGURE 6. Aircraft Performance Curve, Takeoff (Boeing 720-000B Series)



BOEING 727-00 SERIES

Pratt & Whitney JT8D-1 Engine

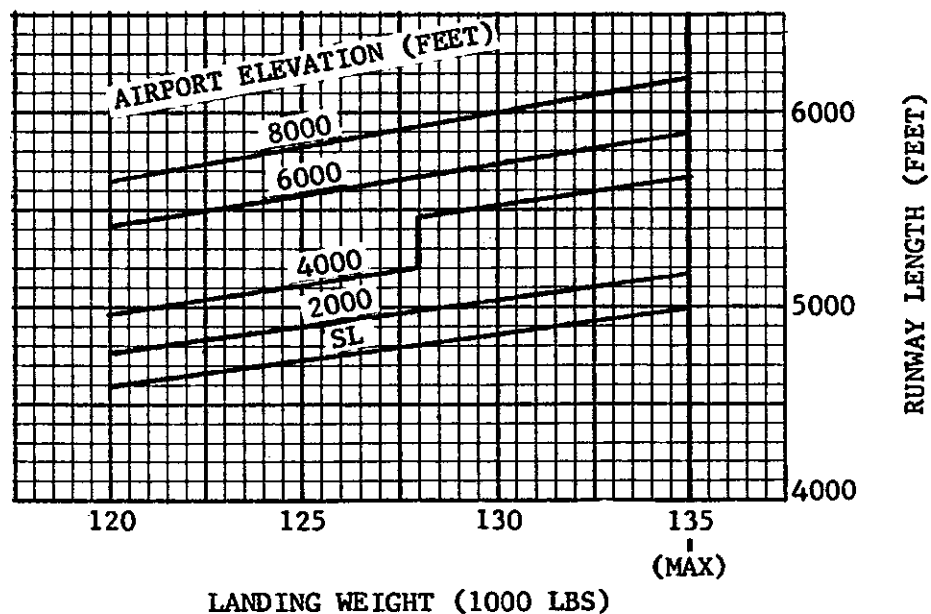


FIGURE 7. Aircraft Performance Curve, Landing (Boeing 727-00 Series)

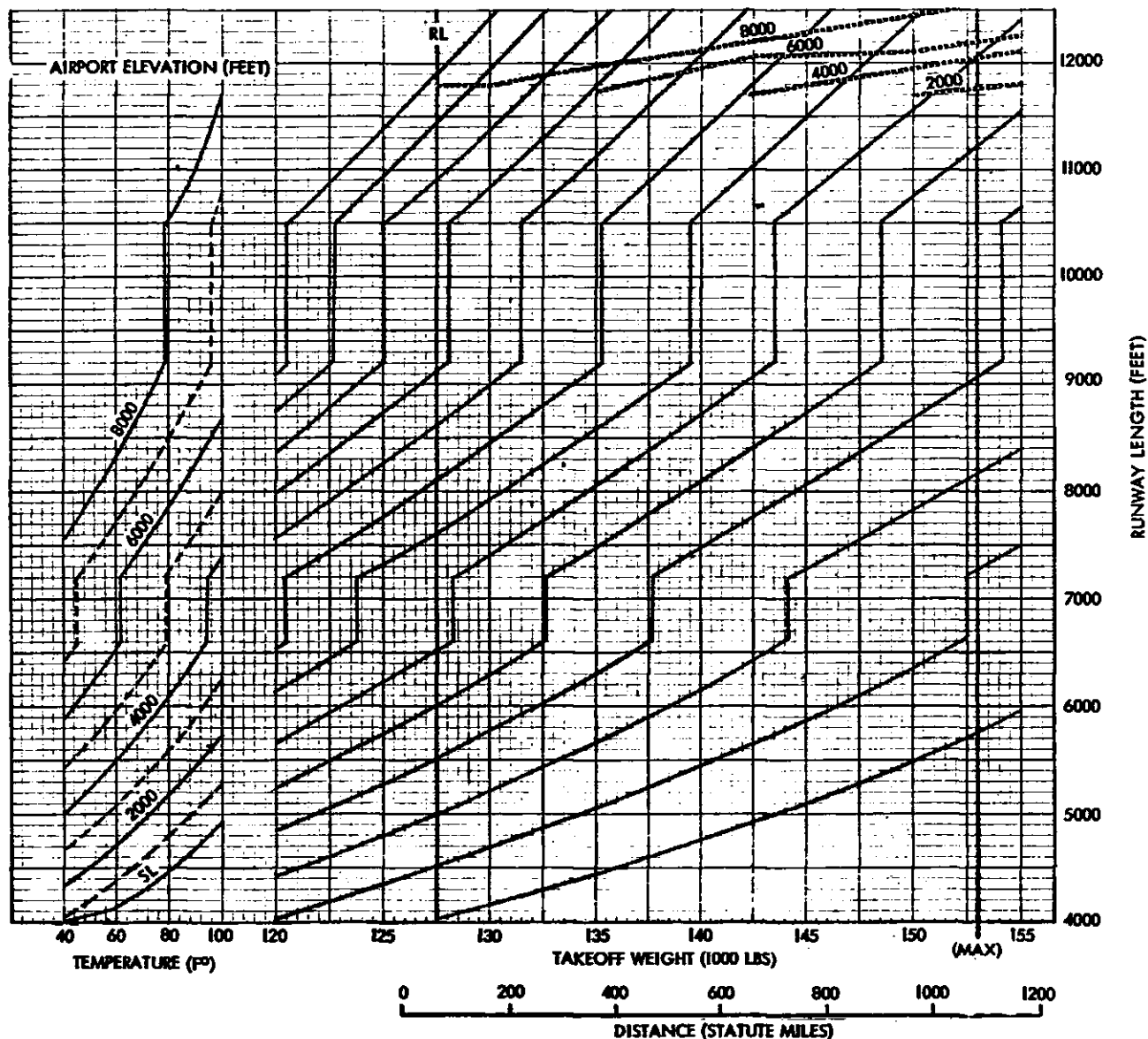
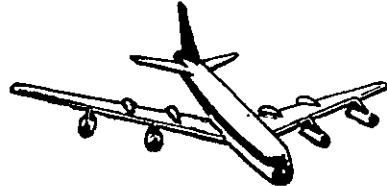


FIGURE 8. Aircraft Performance Curve, Takeoff (Boeing 727-00 Series)



CONVAIR 990A

GENERAL ELECTRIC CJ805-23B ENGINE

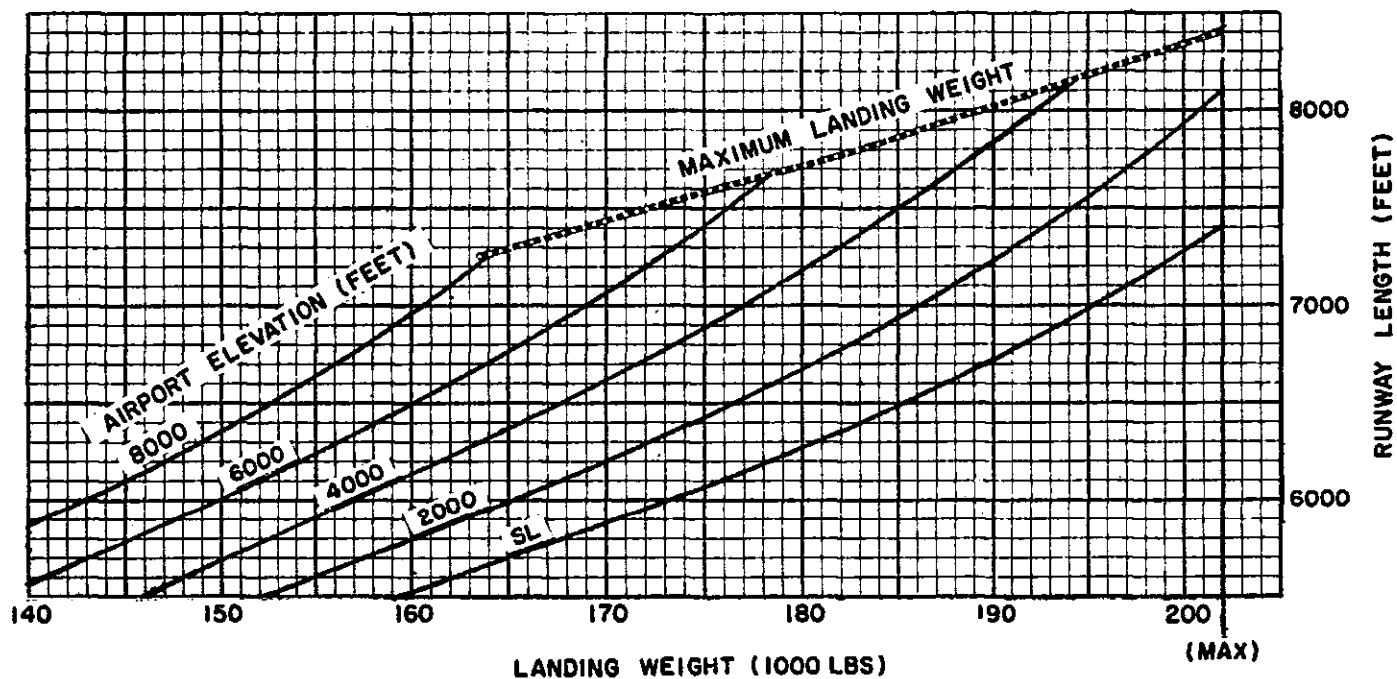


FIGURE 9. Aircraft Performance Curve, Landing (Convair 990A)

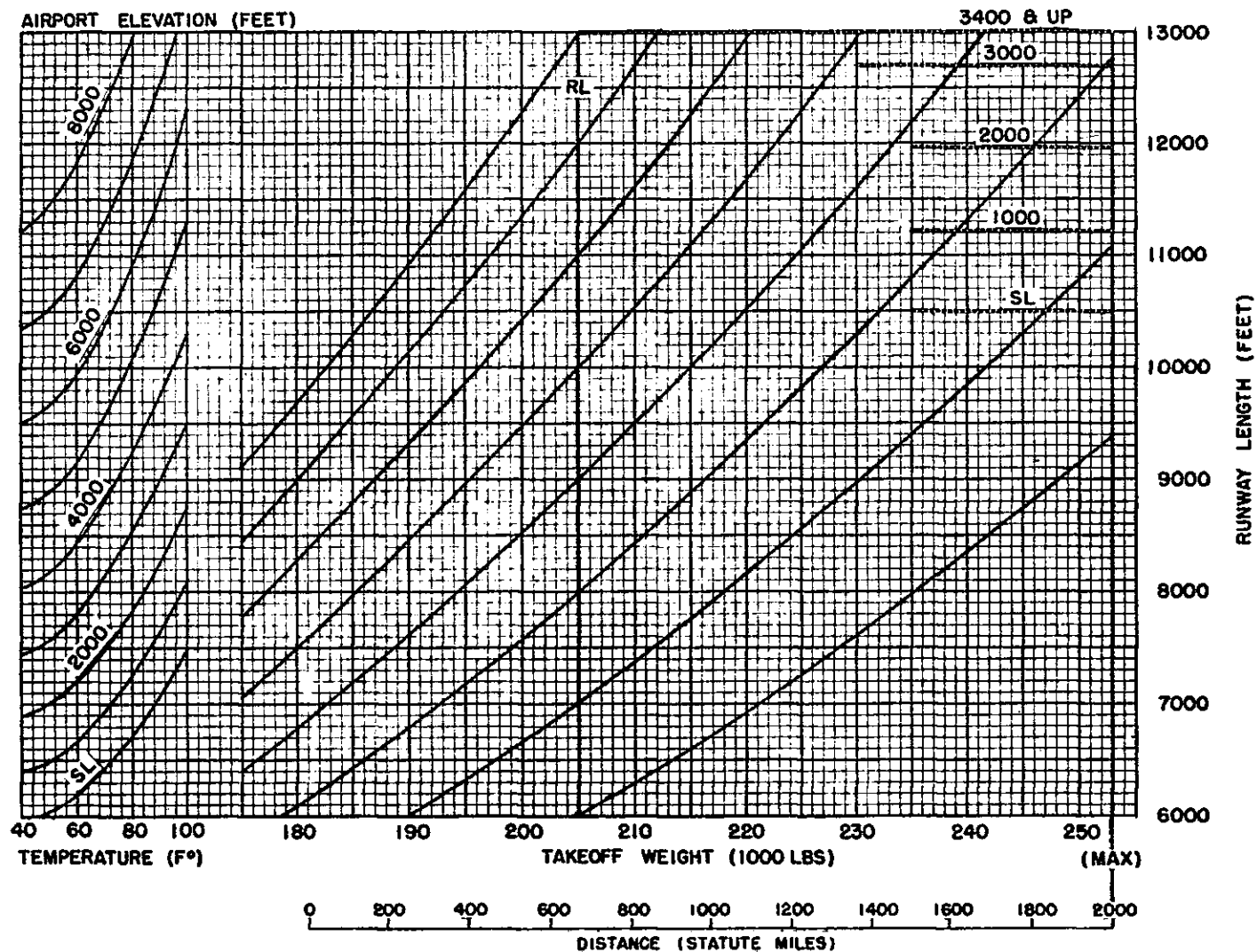


FIGURE 10. Aircraft Performance Curve, Takeoff (Convair 990A)



DOUGLAS DC-8-50 SERIES PRATT & WHITNEY JT3D-1 ENGINE

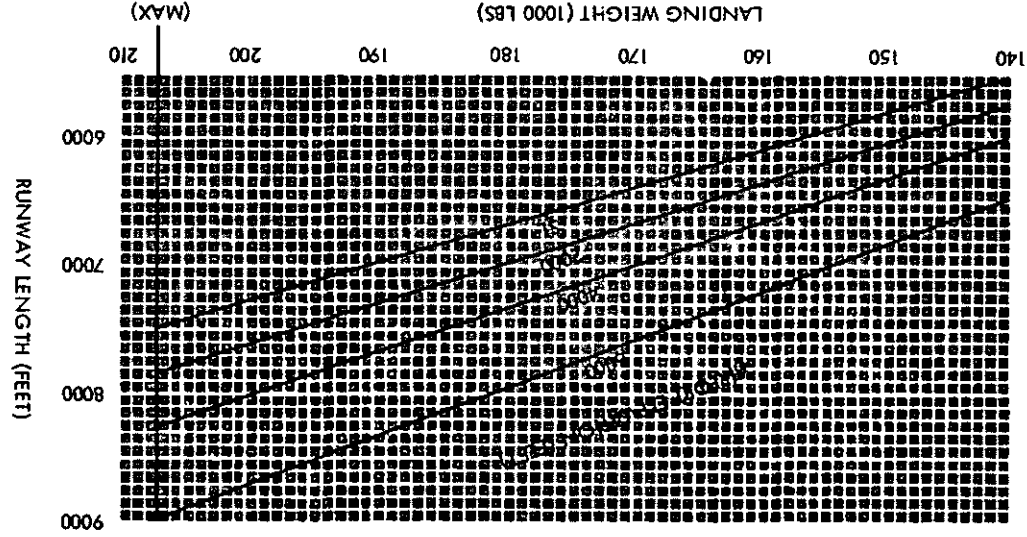


FIGURE 11. Aircraft Performance Curve, Landing (Douglas DC-8-50 Series)

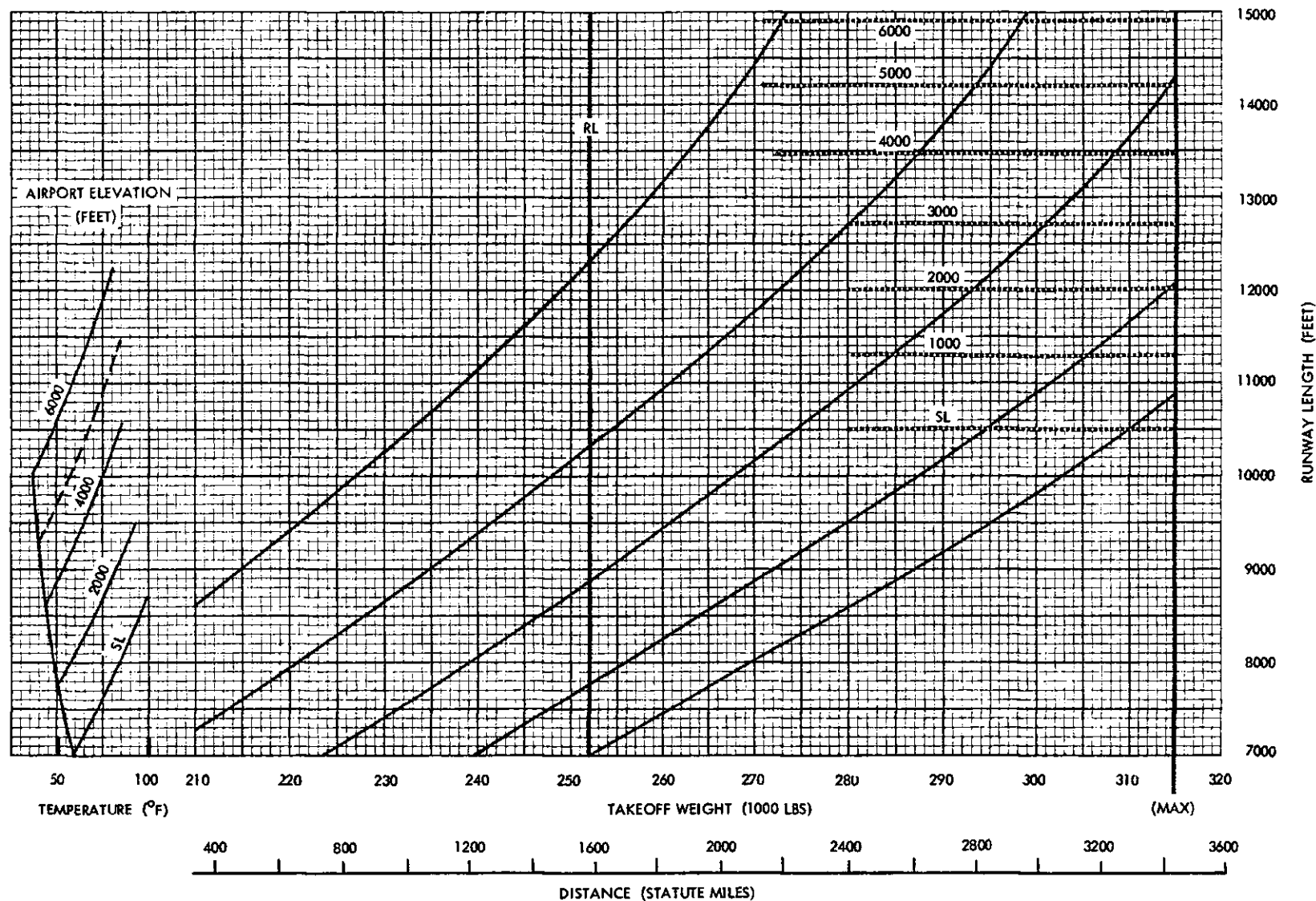
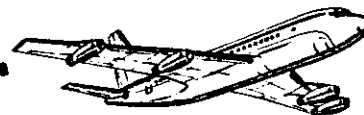


FIGURE 12. Aircraft Performance Curve, Takeoff (Douglas DC-8-50 Series)



DOUGLAS DC-8-55 & DC-8F-55

PRATT & WHITNEY JT 3D-3B ENGINE

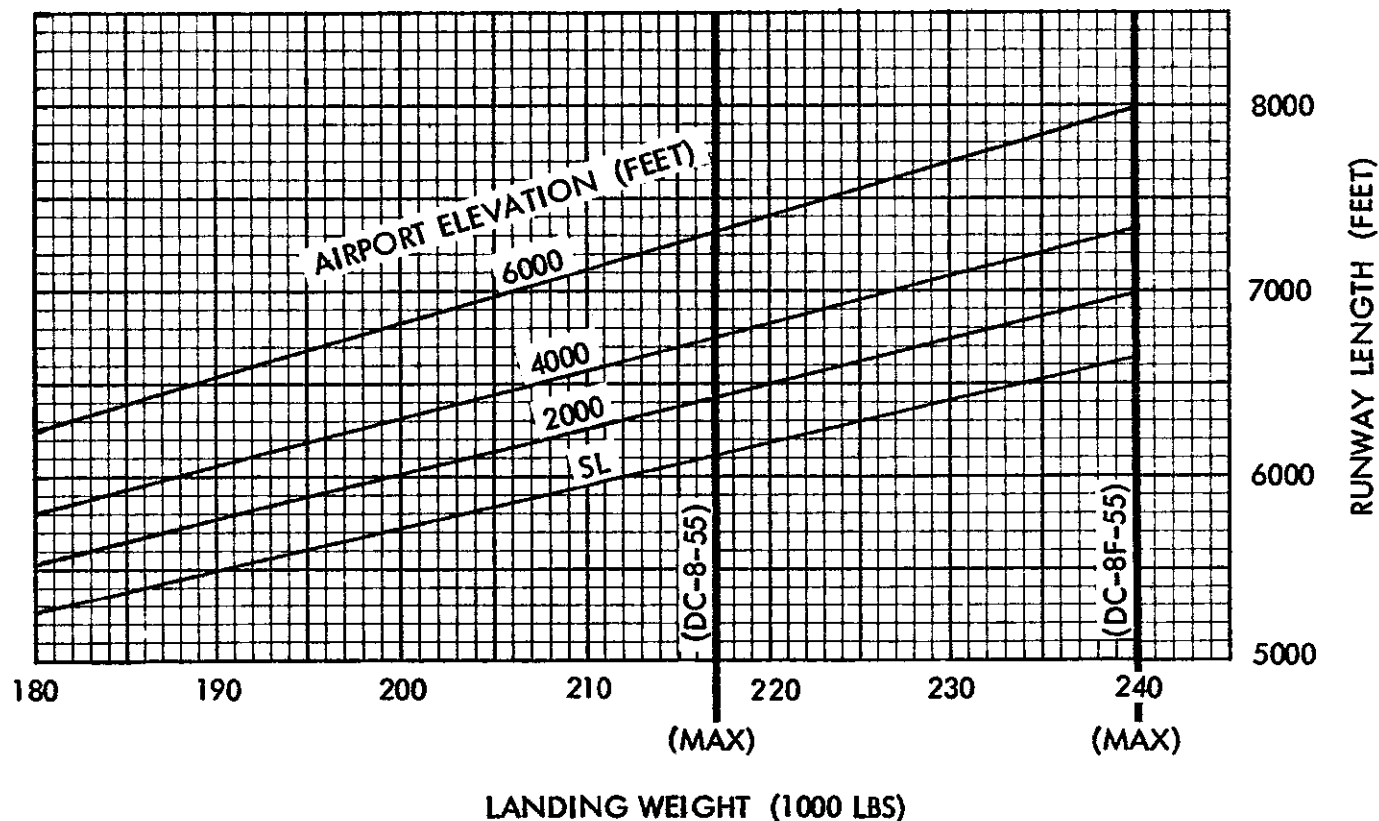


FIGURE 13. Aircraft Performance Curve, Landing (Douglas DC-8-55 & DC-8F-55)

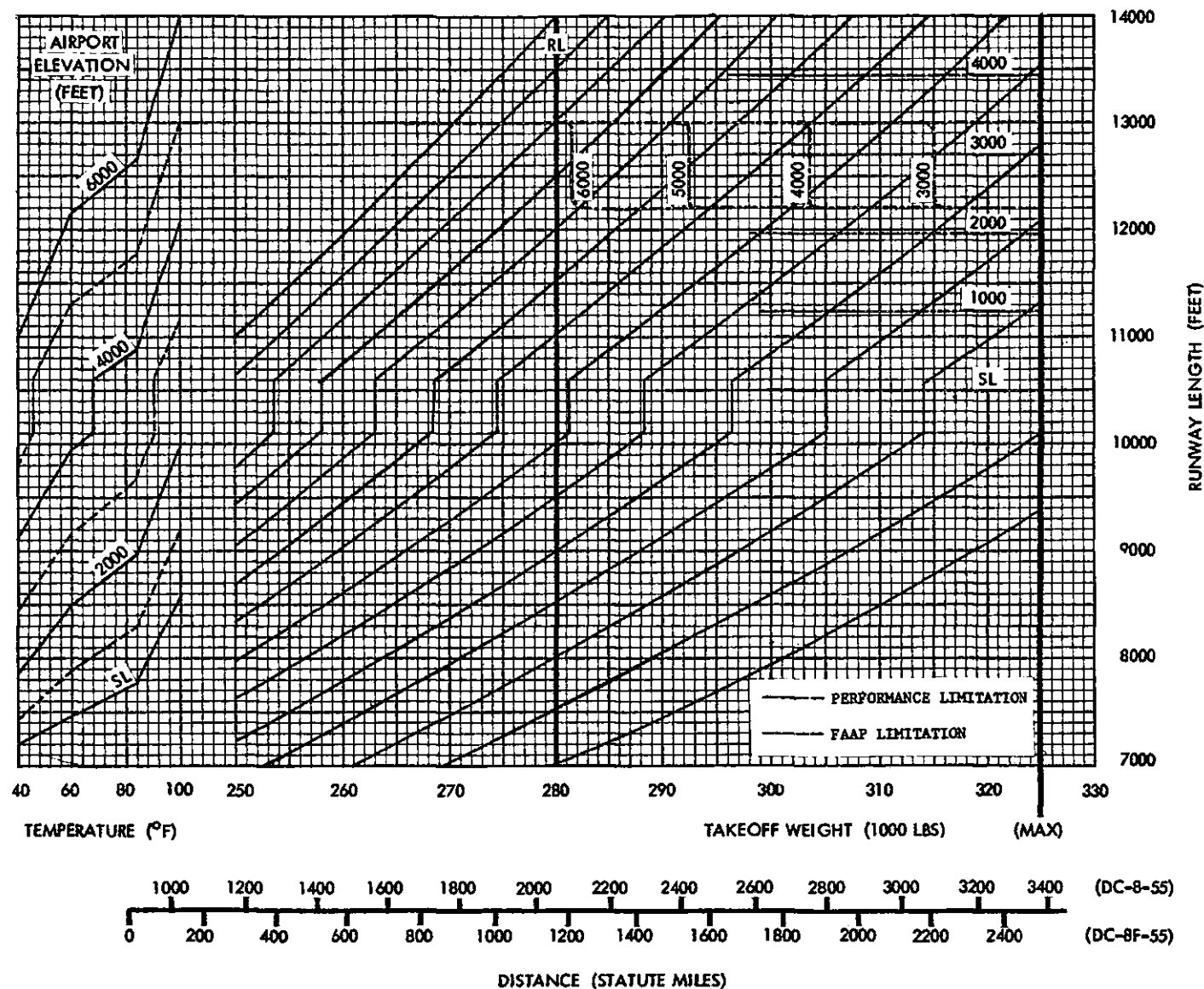
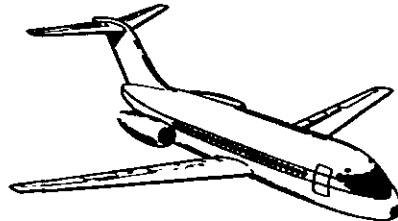


FIGURE 14. Aircraft Performance Curve, Takeoff (Douglas DC-8-55 & DC-8F-55)



DOUGLAS DC-9-10 SERIES

PRATT & WHITNEY JT8D-1 ENGINE

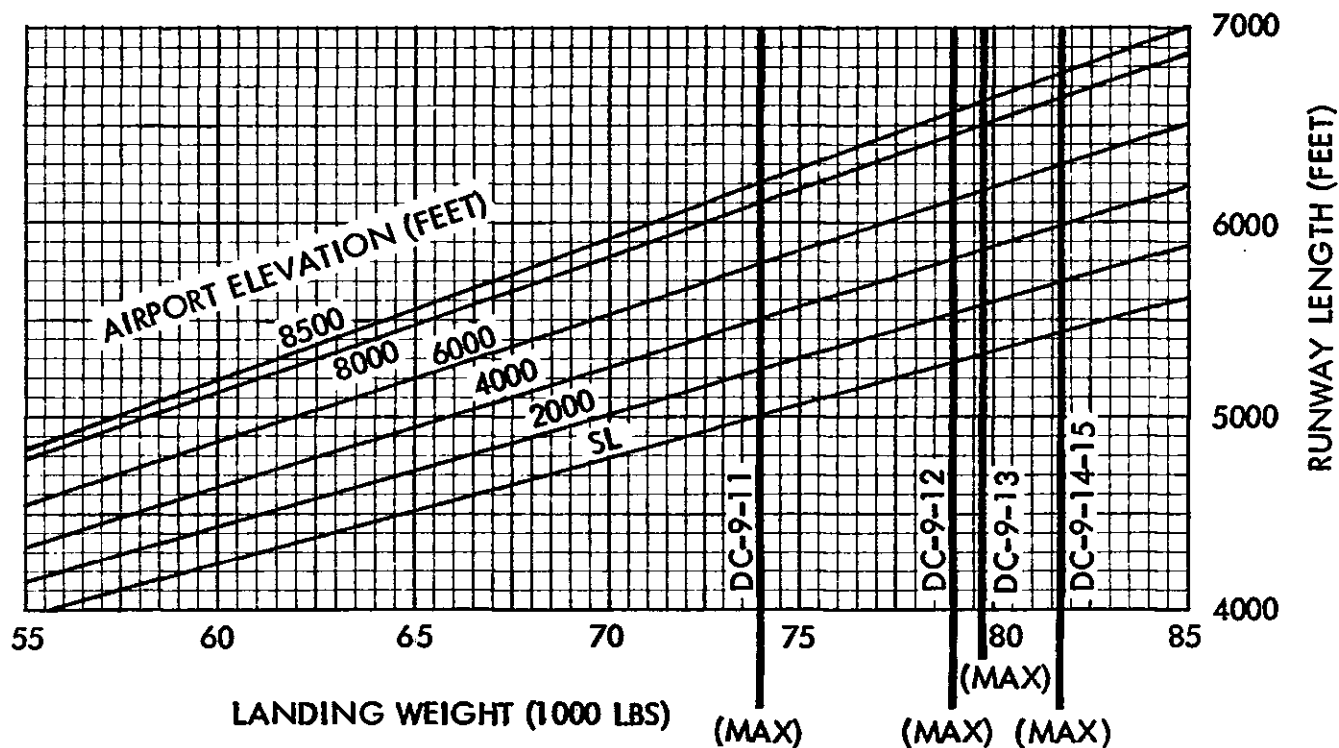


FIGURE 14-1 Aircraft Performance Curve, Landing (Douglas DC-9-10 Series)

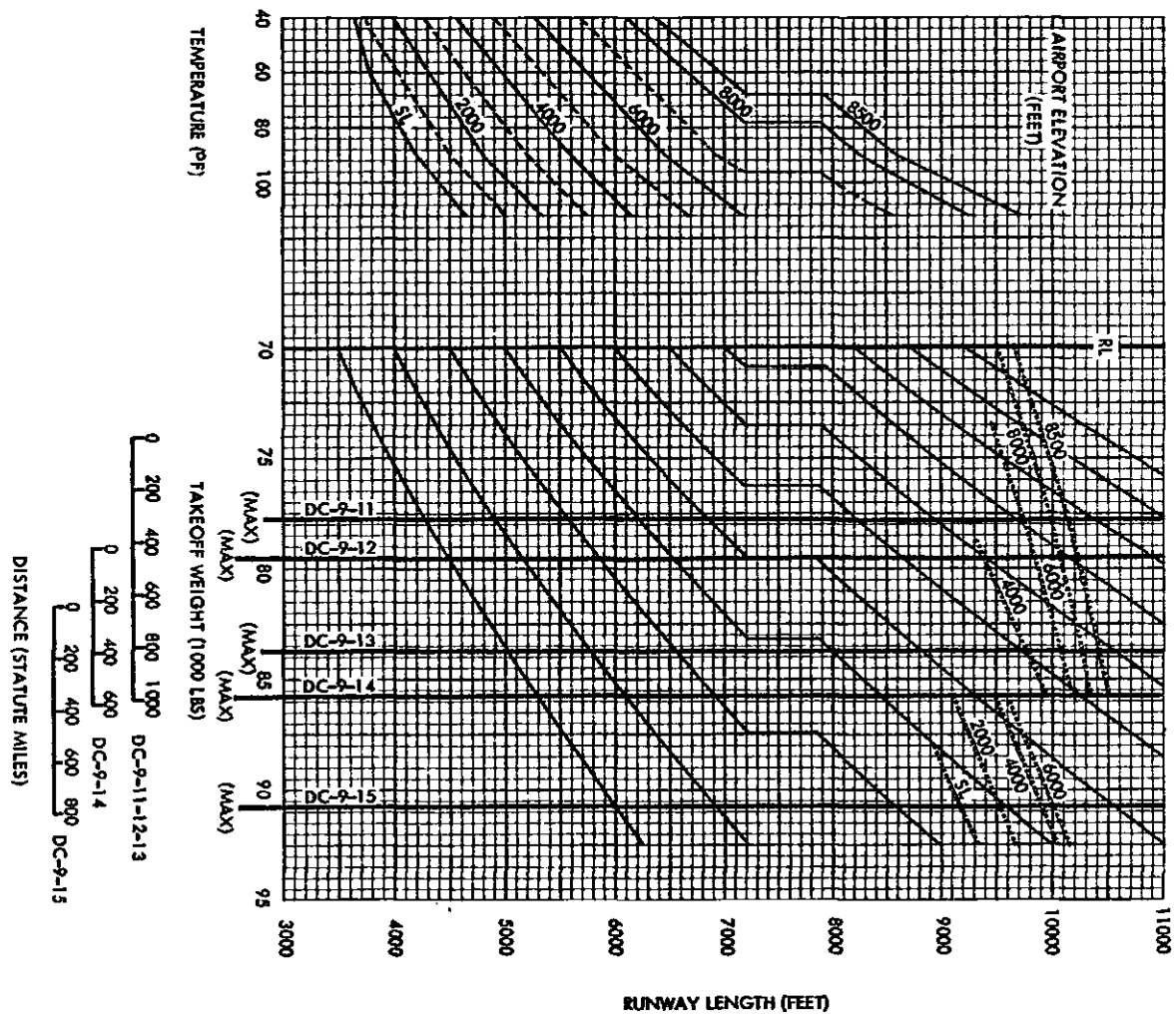
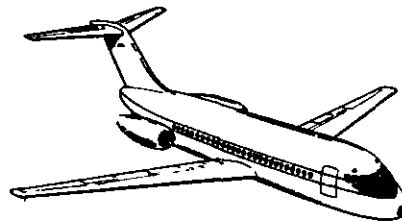


FIGURE 14-2 Aircraft Performance Curve, Takeoff (Douglas DC-9-10 Series)



DOUGLAS DC-9-10 SERIES

PRATT & WHITNEY JT8D-5 ENGINE

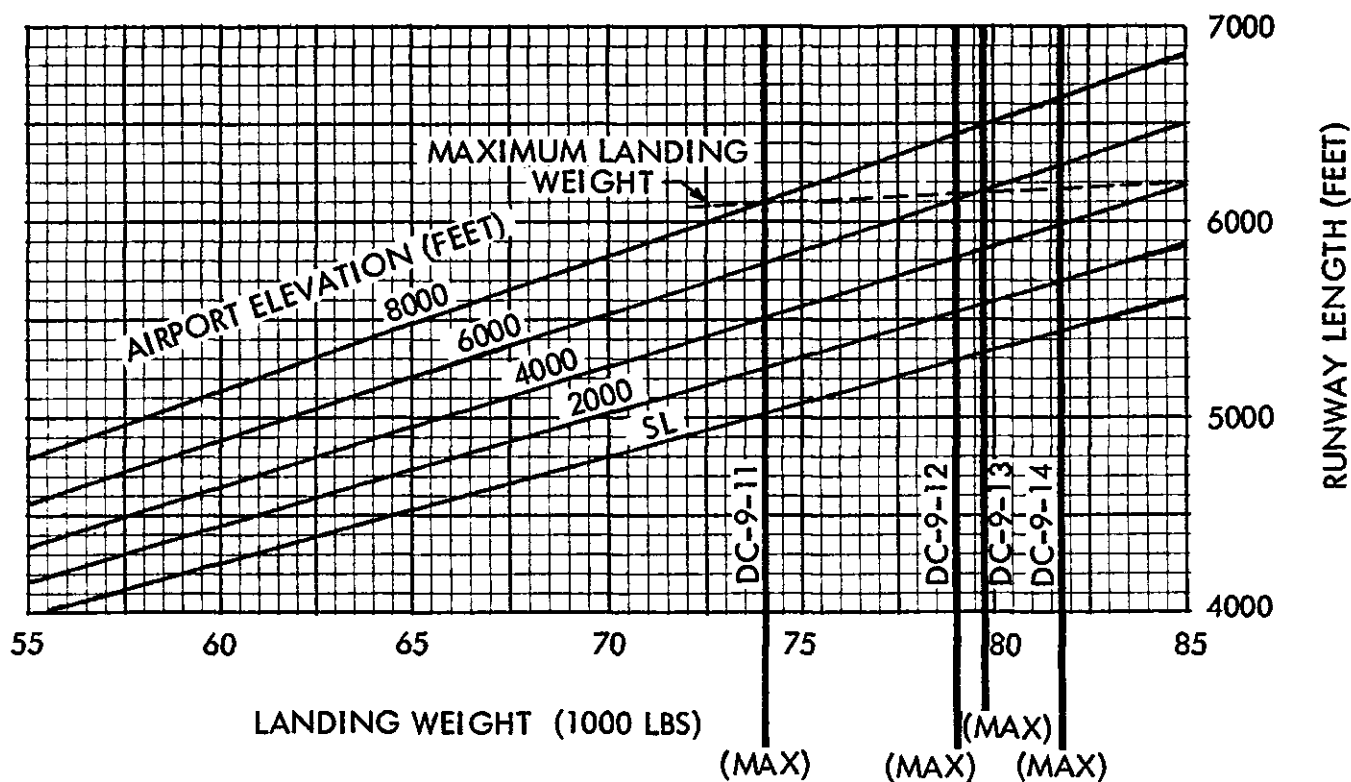


FIGURE 15. Aircraft Performance Curve, Landing (Douglas DC-9-10 Series)

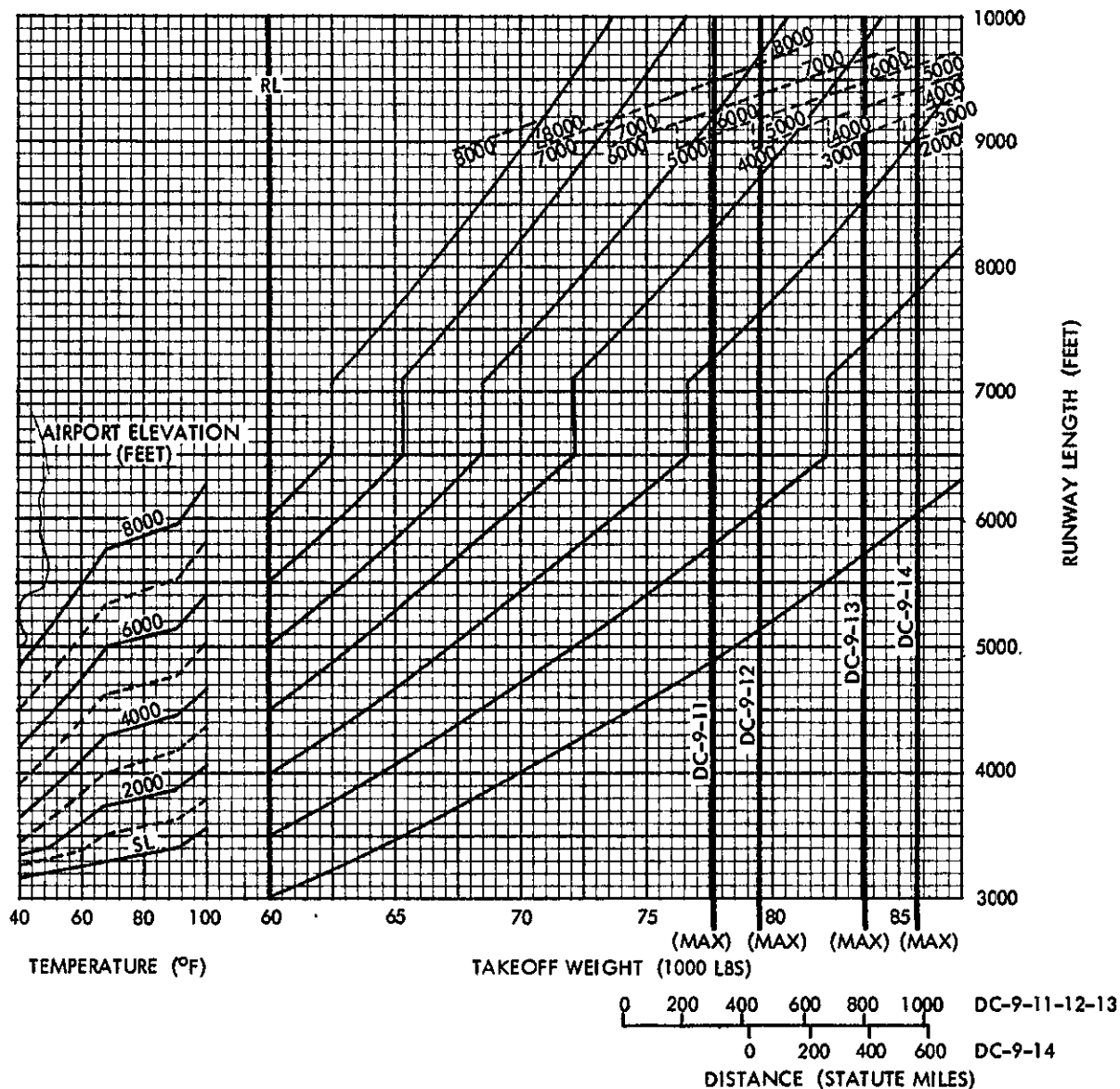
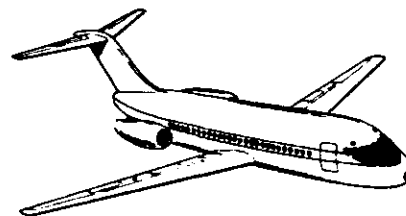


FIGURE 16. Aircraft Performance Curve, Takeoff (Douglas DC-9-10 Series)



DOUGLAS DC-9-30 SERIES

PRATT & WHITNEY JT8D-1 ENGINE

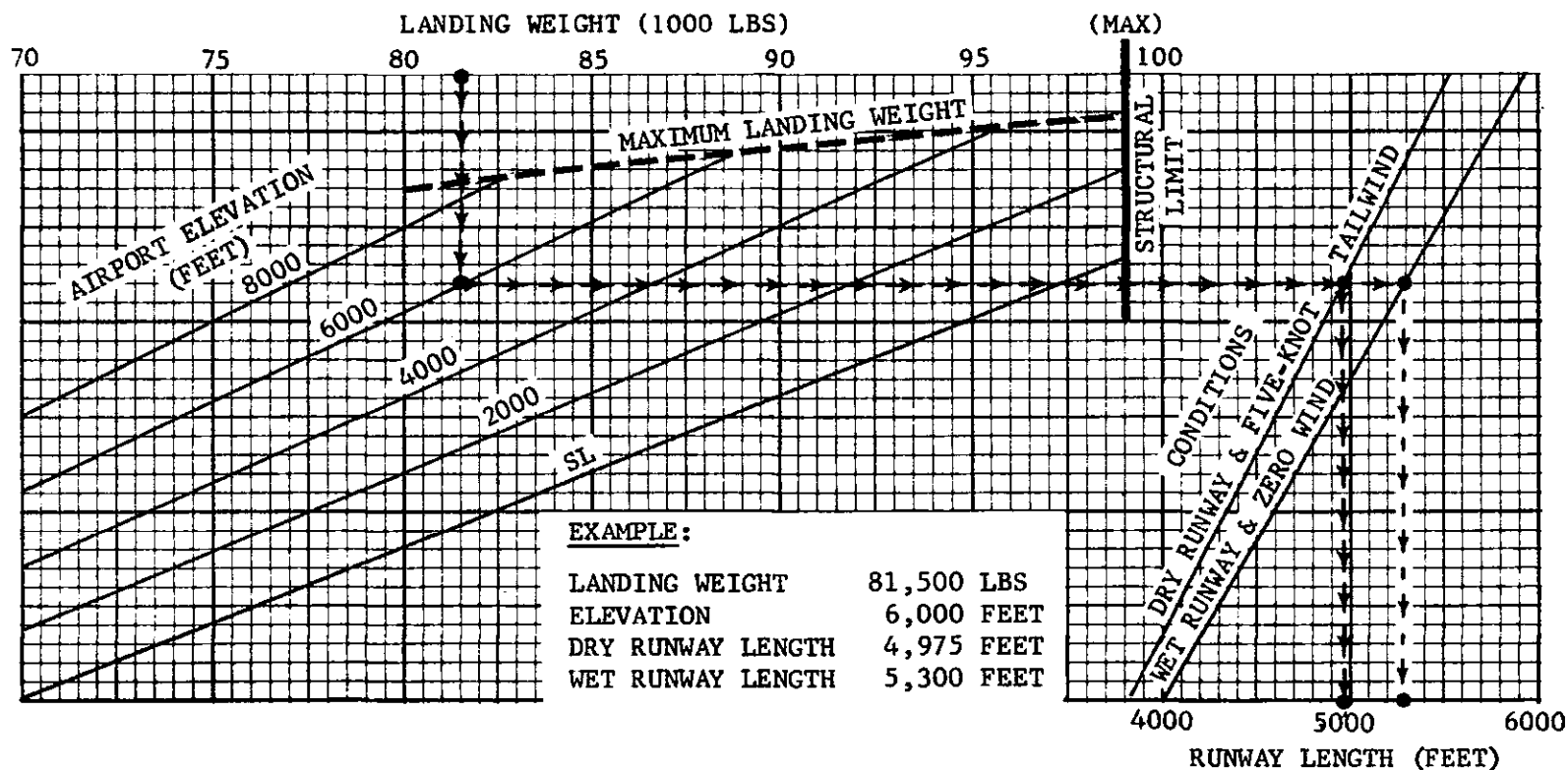


FIGURE 17. AIRCRAFT PERFORMANCE CURVE, LANDING (DOUGLAS DC-9-30 SERIES)

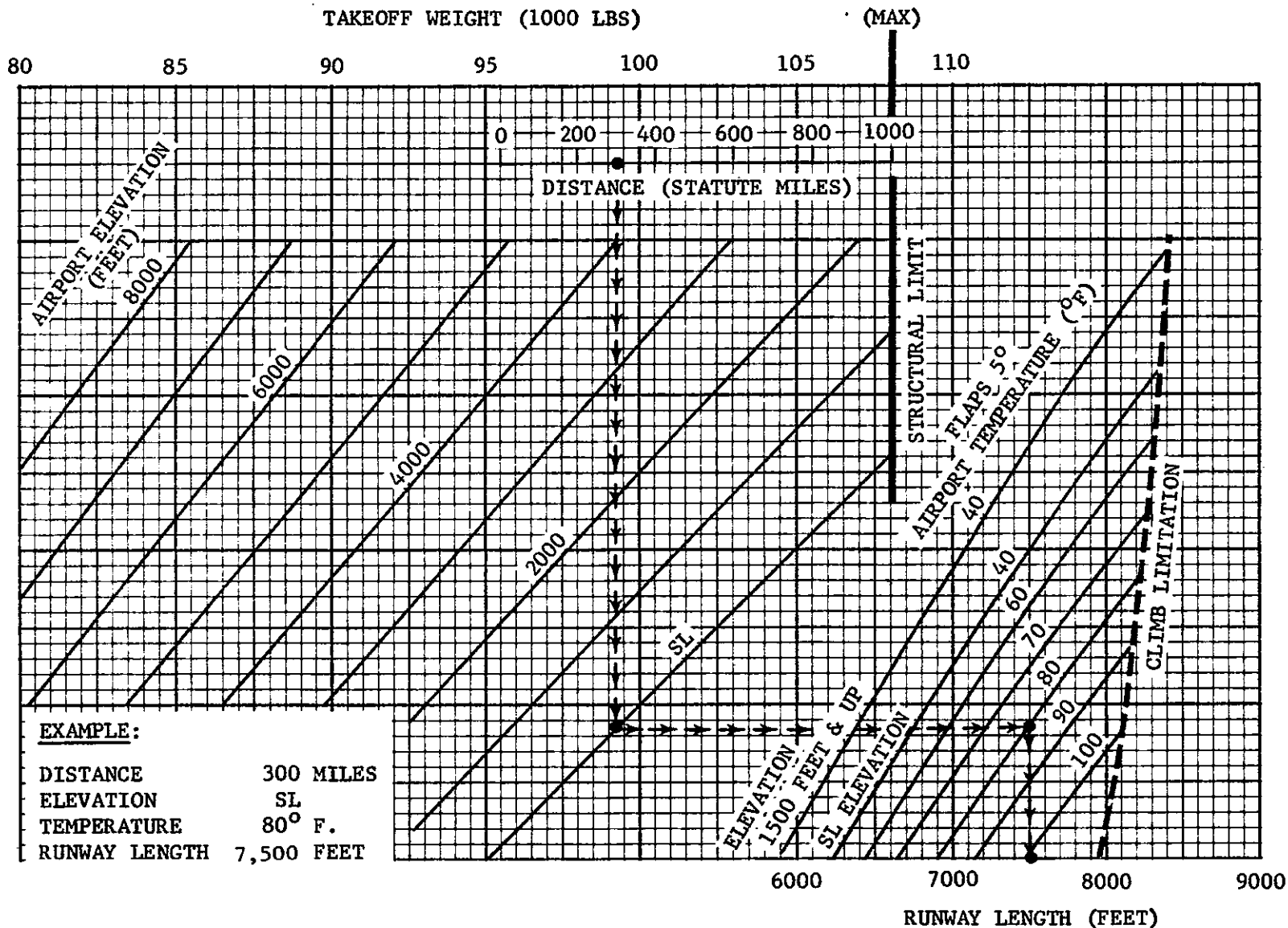
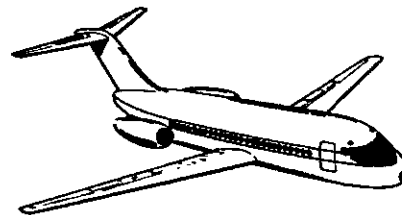


FIGURE 18. AIRCRAFT PERFORMANCE CURVE, TAKEOFF (DOUGLAS DC-9-30 SERIES)



DOUGLAS DC-9-30 SERIES PRATT & WHITNEY JT8D-7 ENGINE

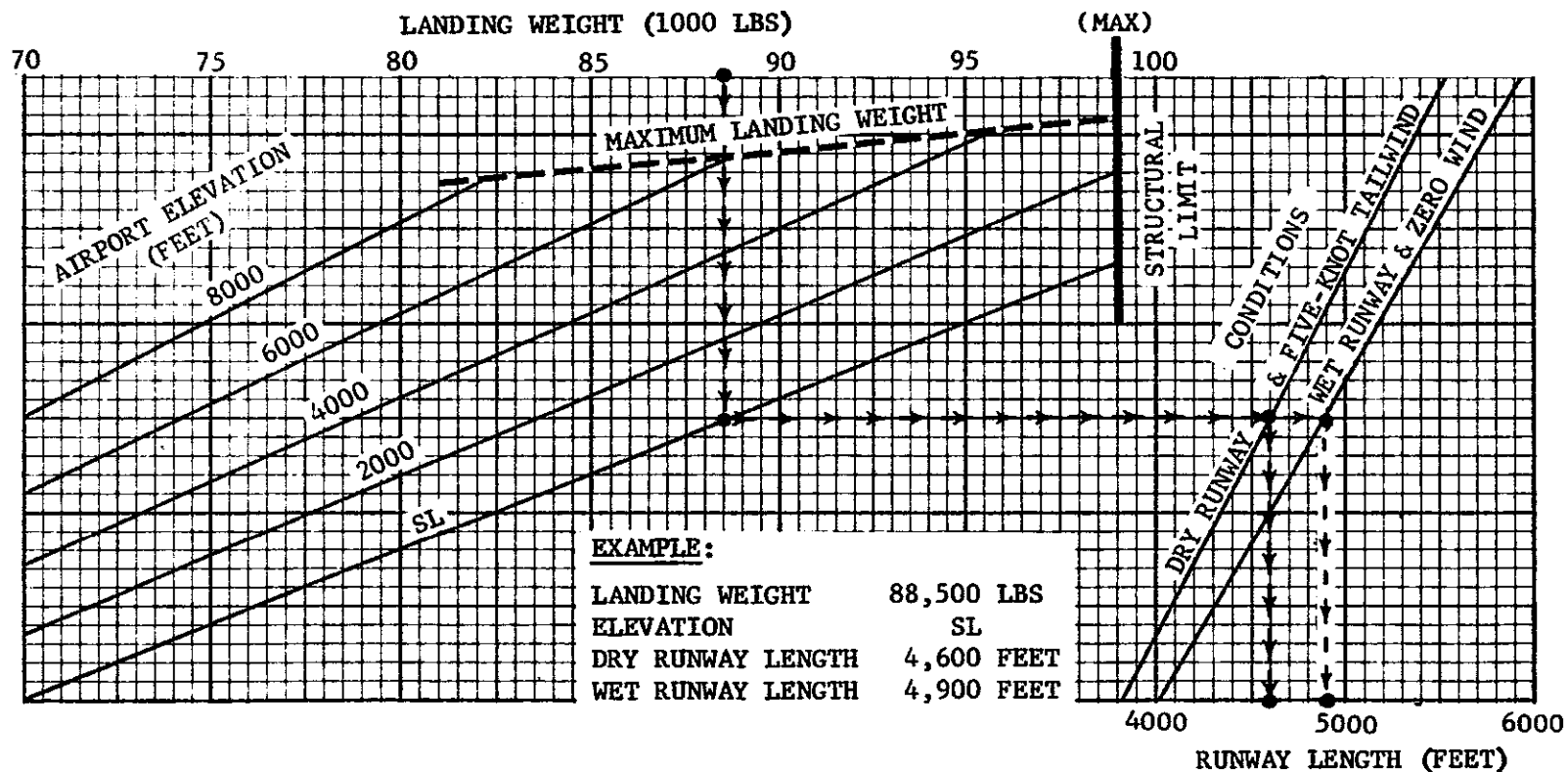


FIGURE 19. AIRCRAFT PERFORMANCE CURVE, LANDING (DOUGLAS DC-9-30 SERIES)

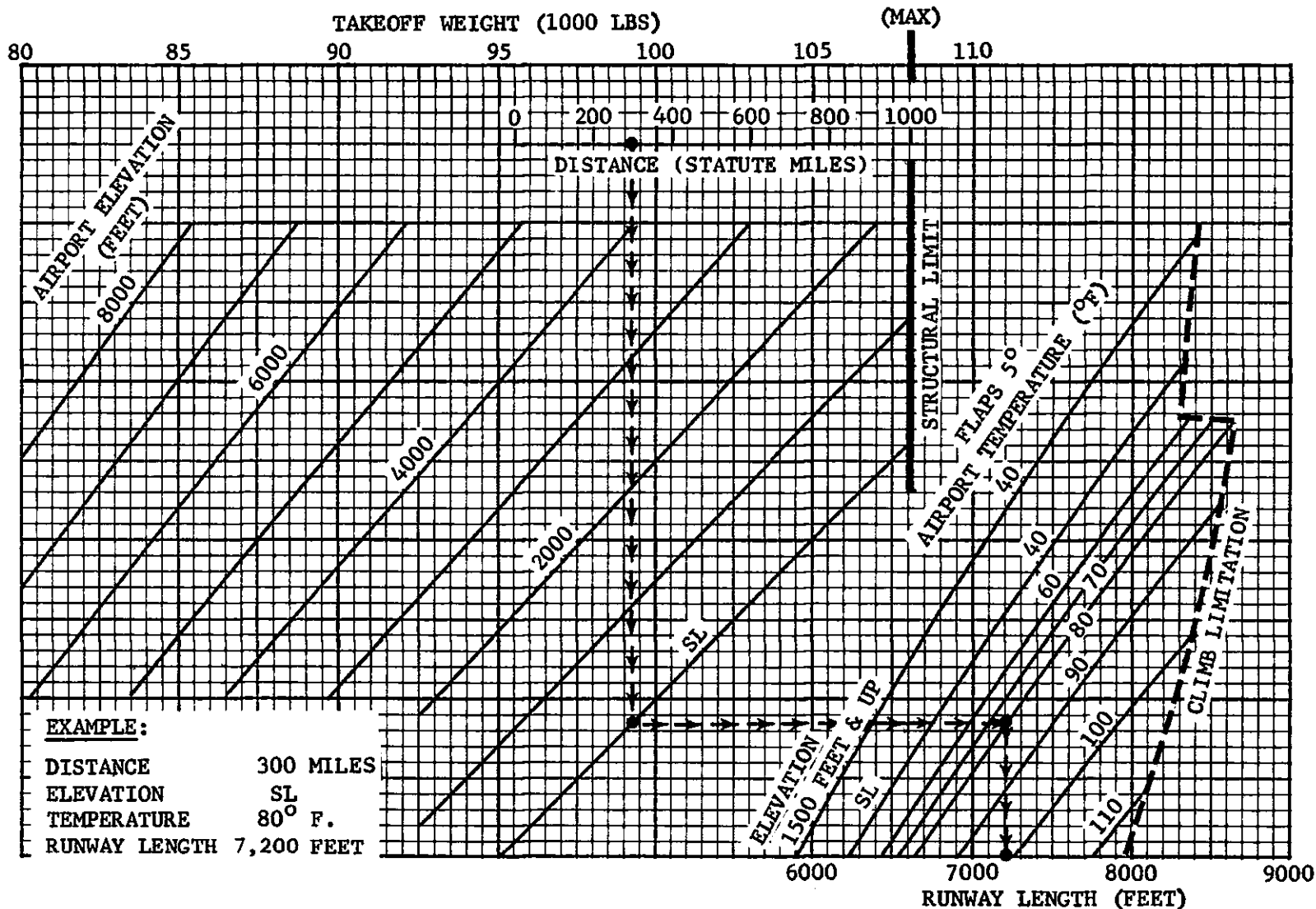


FIGURE 20. AIRCRAFT PERFORMANCE CURVE, TAKEOFF (DOUGLAS DC-9-30 SERIES)

APPENDIX 5. PISTON POWERED SMALL AIRPLANES

SECTION 1. PERFORMANCE CURVES - 10,000-FOOT ELEVATION

1. AIRCRAFT PERFORMANCE CURVES. The aircraft performance curves contained in this section are for airplanes with the following items in common:
 - a. Single or twin engine (one or two engines).
 - b. Propeller driven.
 - c. Equipped with reciprocating engines.
 - d. Certificated with a maximum takeoff weight of 12,500 pounds or less.
 - e. Other than transport category.
2. EXPLANATORY INSTRUCTIONS. This section contains curves for those small aircraft for which landing and takeoff performance through 10,000 feet of elevation can be plotted from available data. For explanatory instructions on use of the aircraft performance curves contained in this appendix, see Paragraph 10 on Page 7 of this circular.

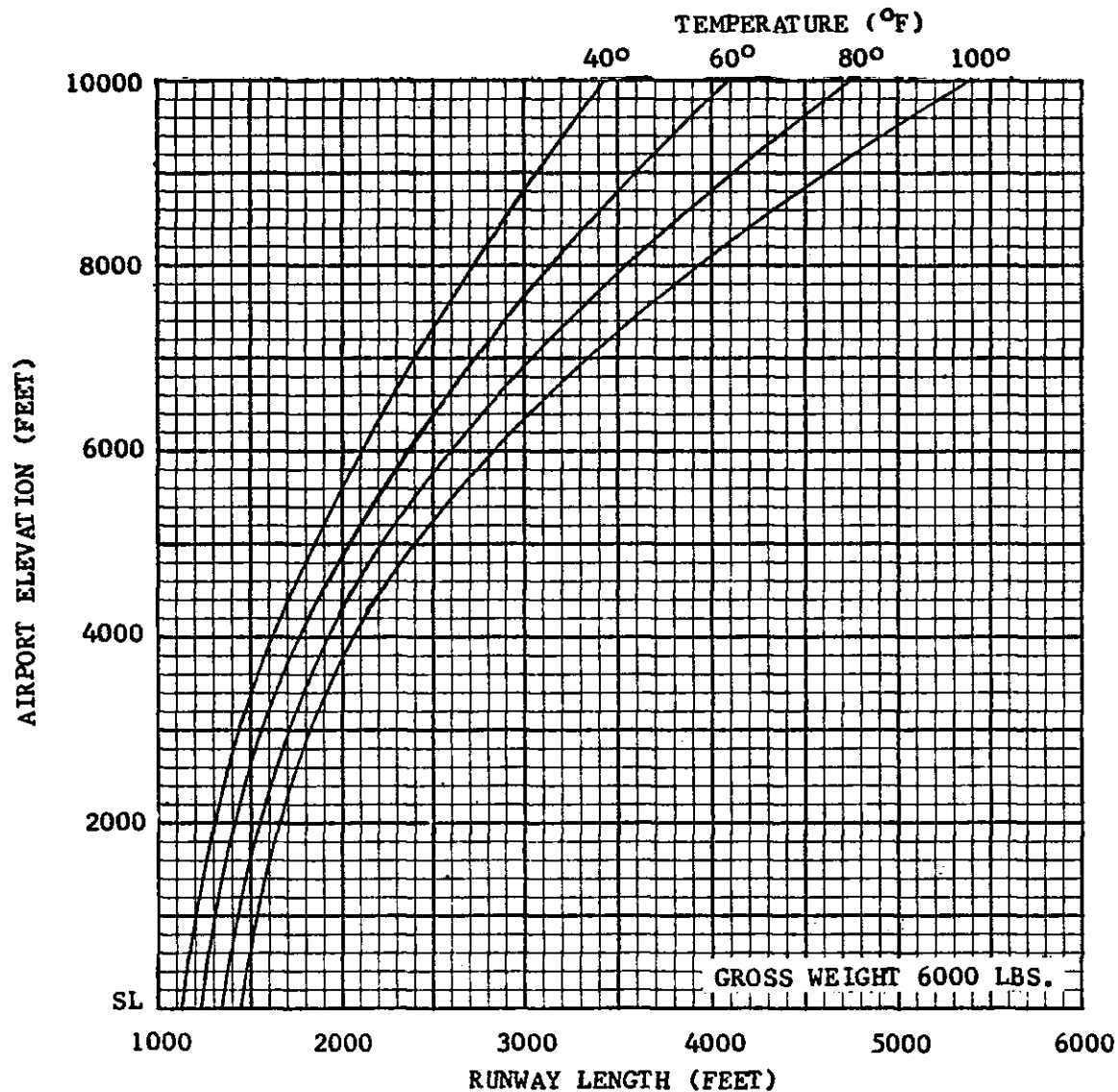


FIGURE 1. Aircraft Performance Curve (Aero 560A)

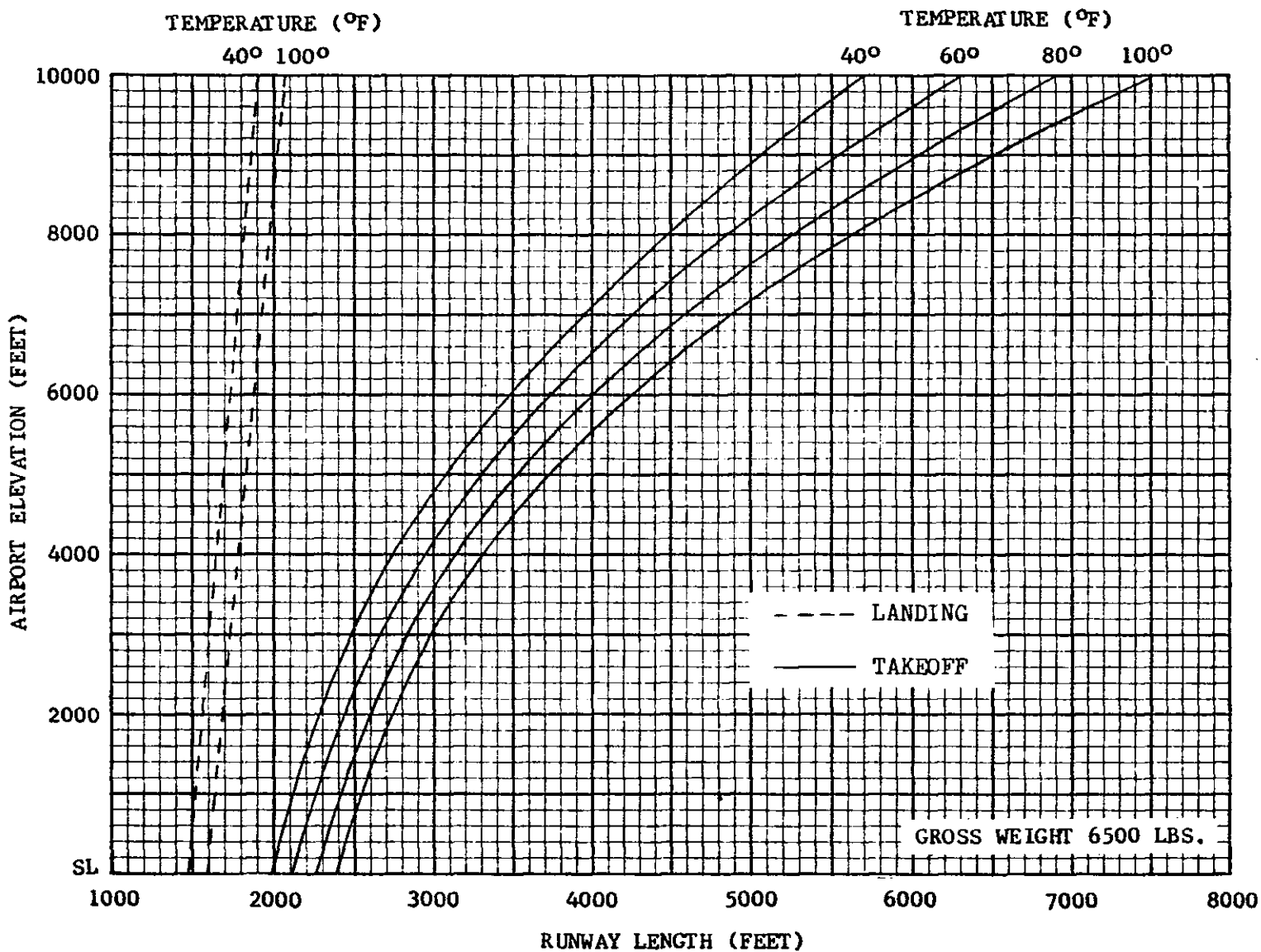


FIGURE 2. Aircraft Performance Curve (Aero 560E)

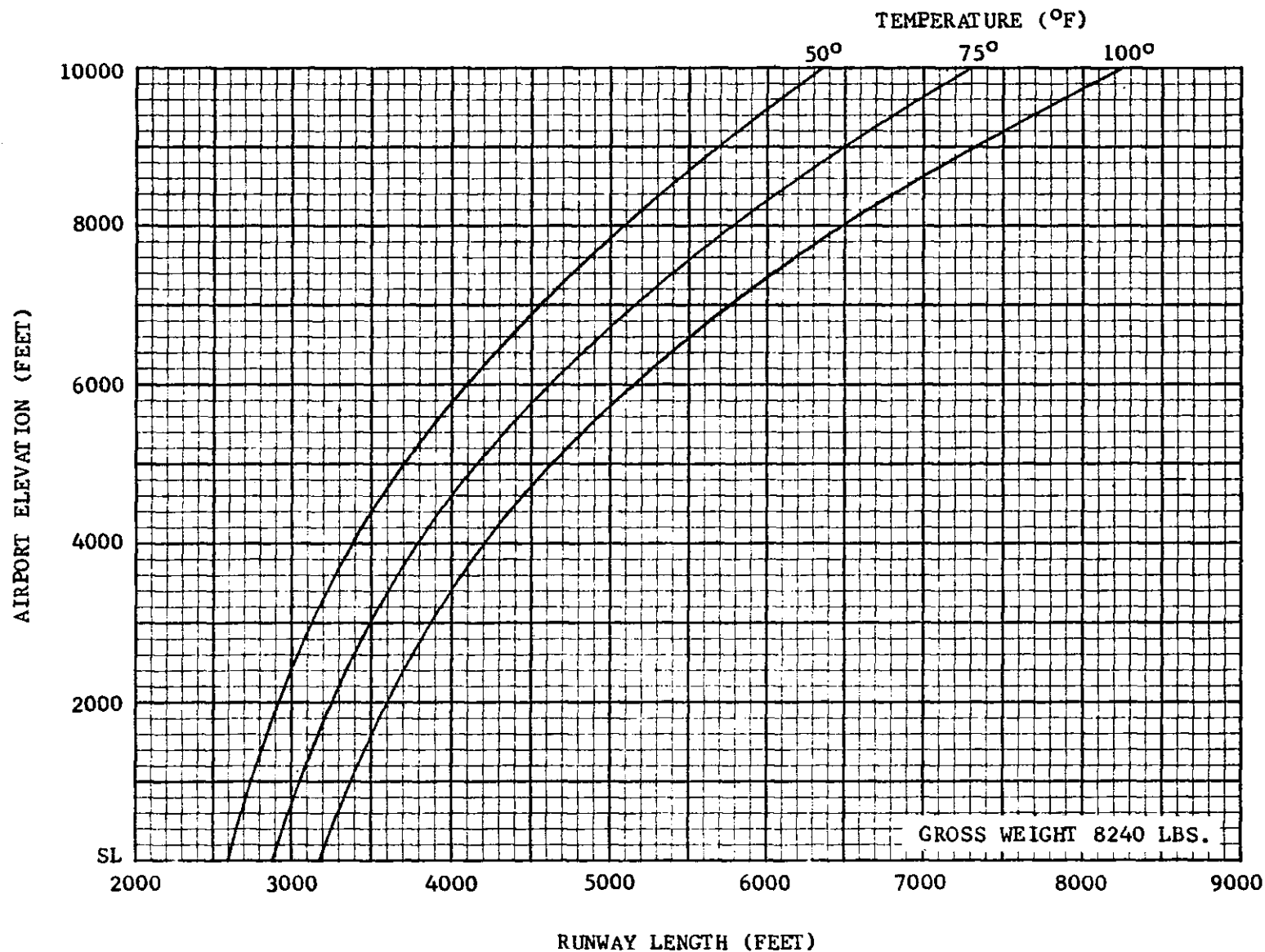


FIGURE 3. Aircraft Performance Curve (Beech C18S)

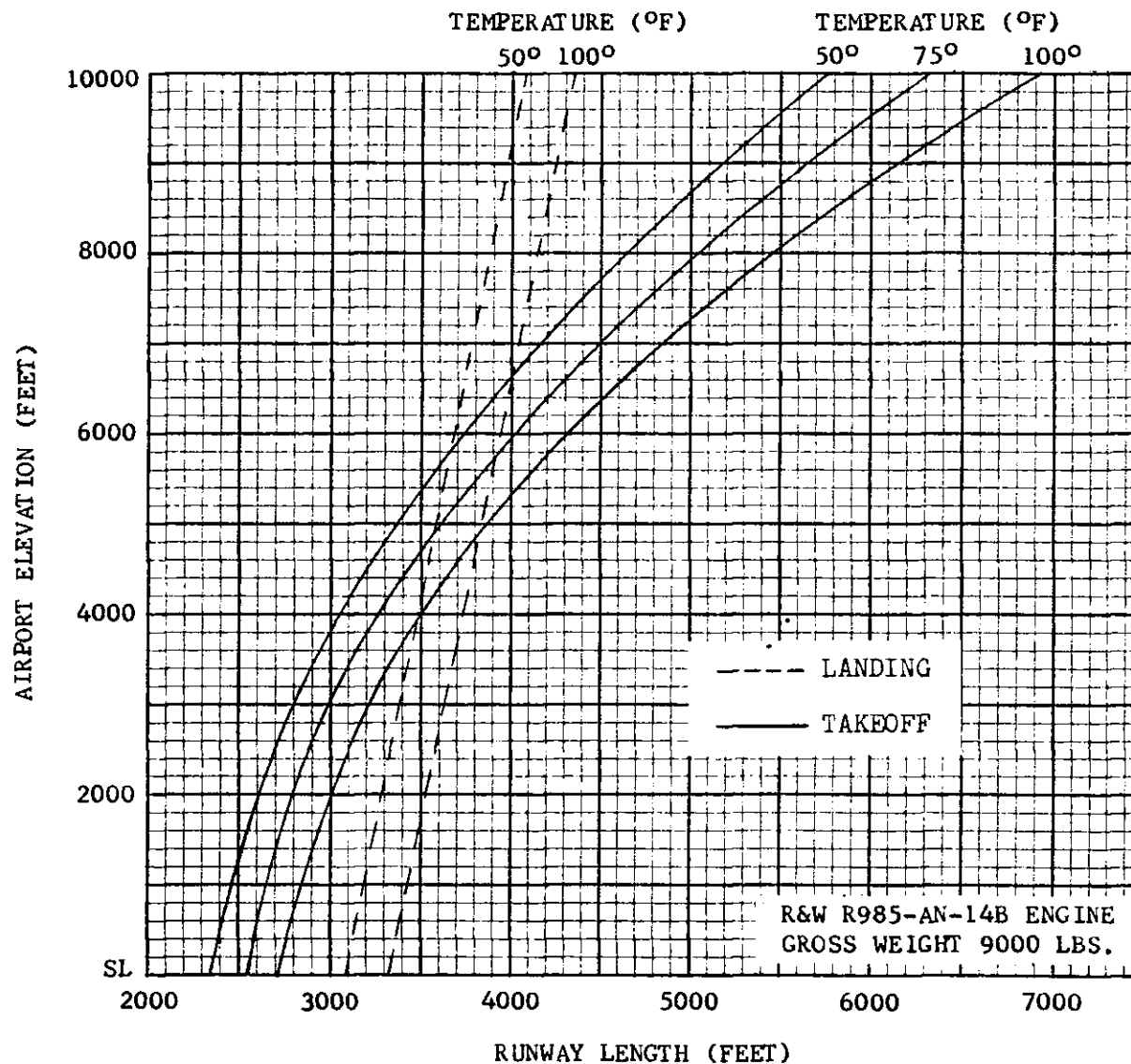


FIGURE 4. Aircraft Performance Curve (Beech D18S)

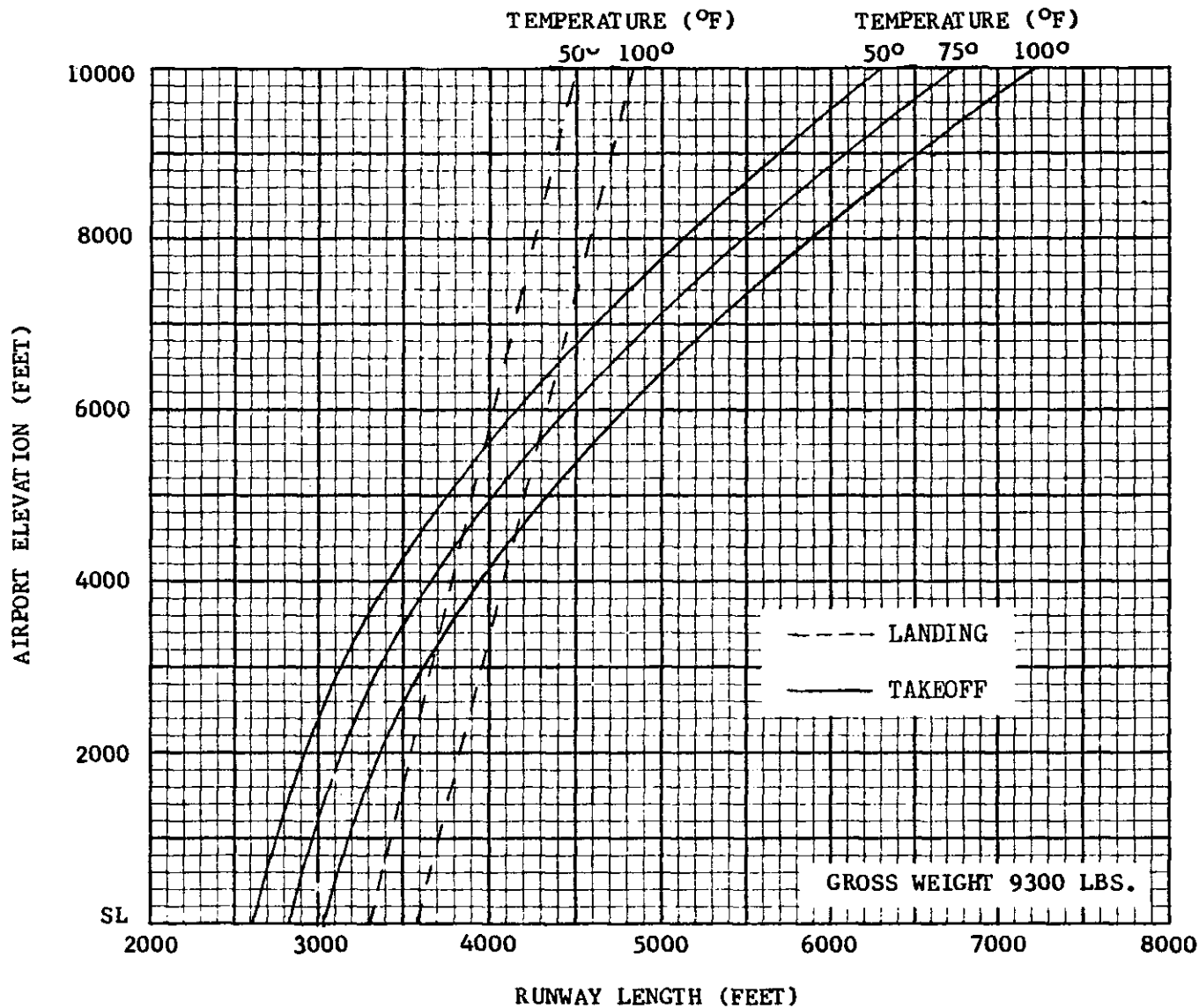


FIGURE 5. Aircraft Performance Curve (Beech E18S)

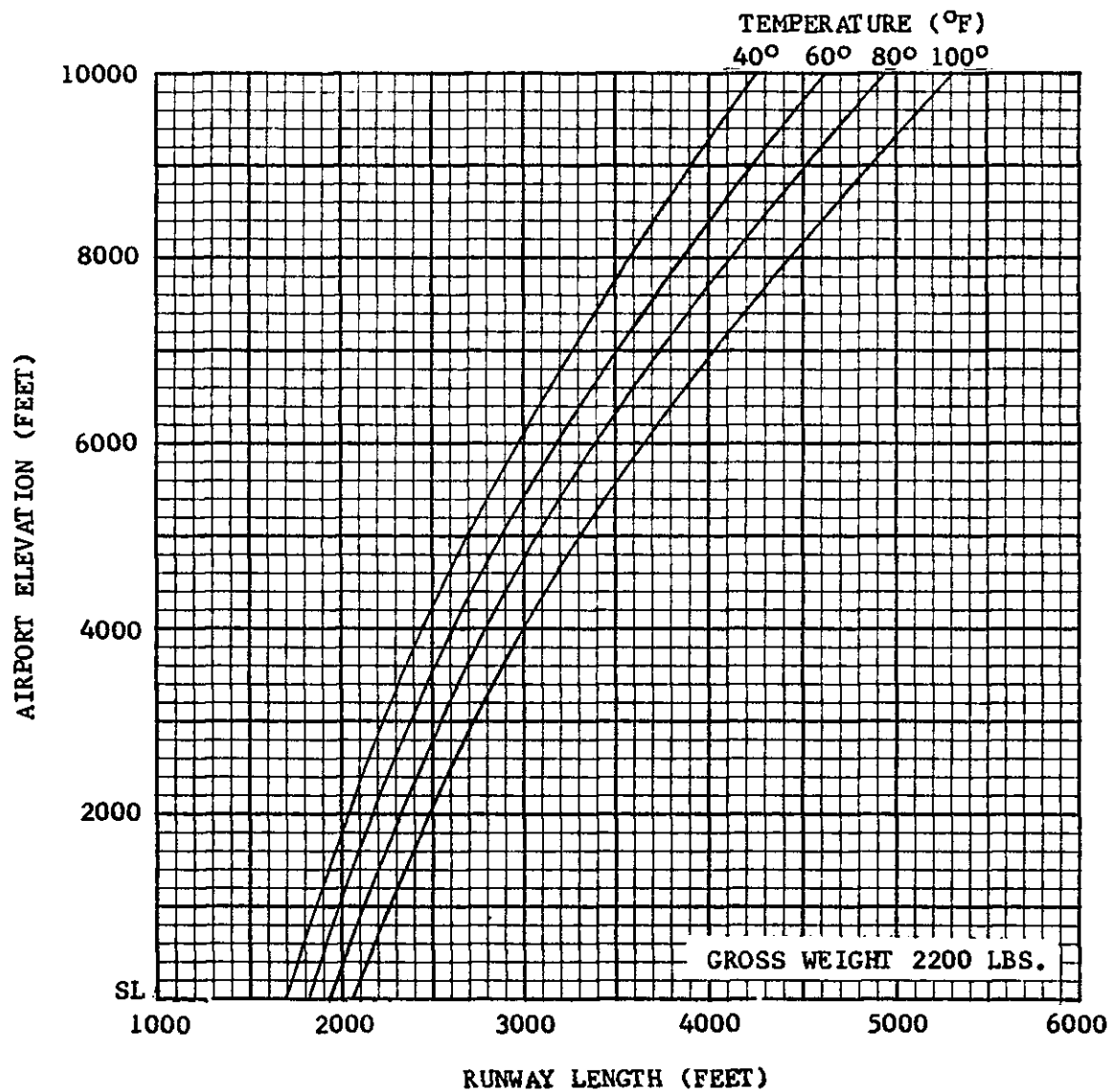


FIGURE 6. Aircraft Performance Curve (Cessna 170, 170A, & 170B)

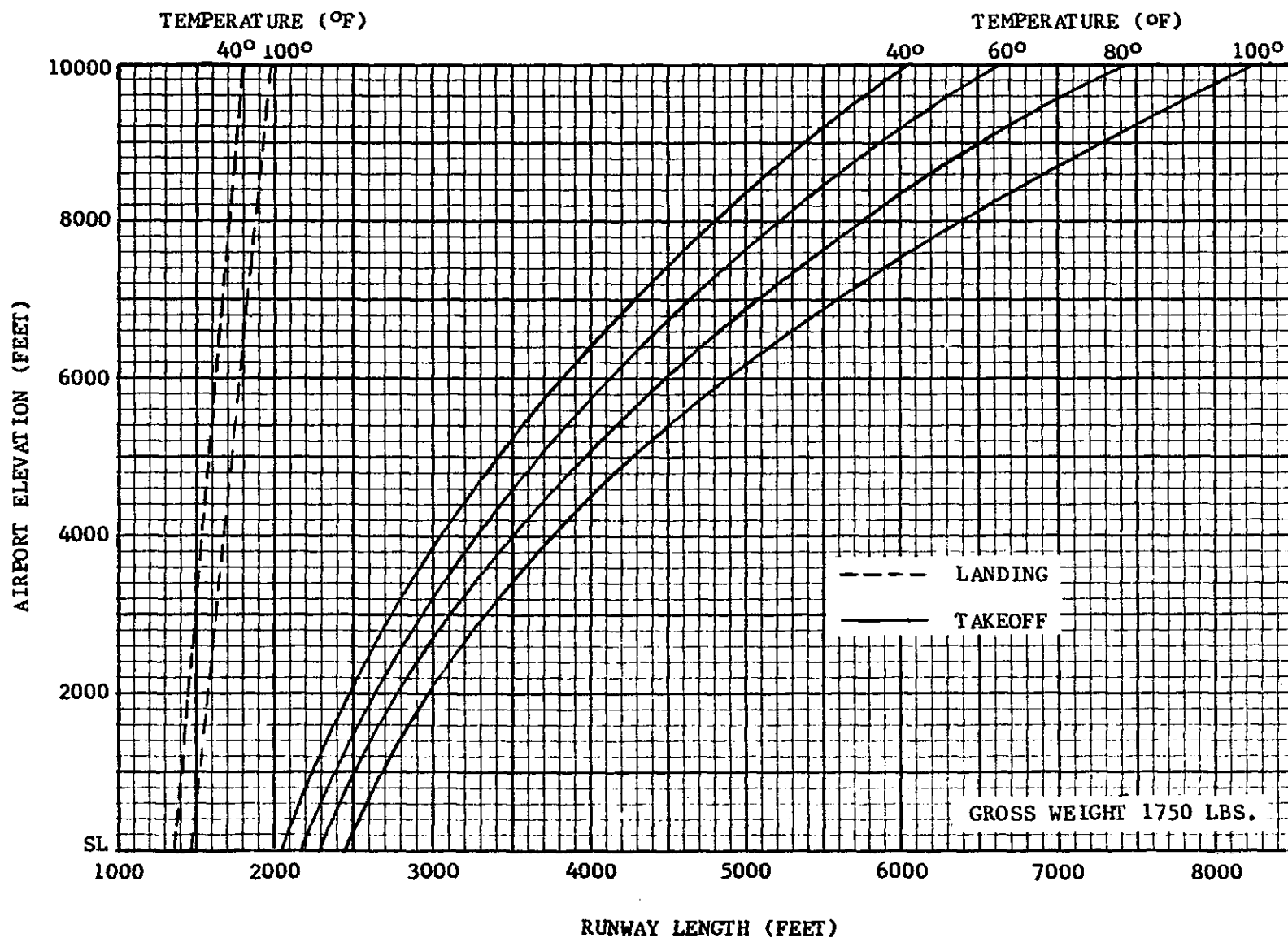


FIGURE 7. Aircraft Performance Curve (Piper PA-12)

SECTION 2. PERFORMANCE CURVES - OTHER THAN 10,000-FOOT ELEVATION

1. AIRCRAFT PERFORMANCE CURVES. The aircraft performance curves contained in this section are for airplanes with the following items in common:
 - a. Single or twin engine (one or two engines).
 - b. Propeller driven.
 - c. Equipped with reciprocating engines.
 - d. Certificated with a maximum takeoff weight of 12,500 pounds or less.
 - e. Other than transport category.
2. EXPLANATORY INSTRUCTIONS. This section contains performance curves for those small aircraft for which landing and takeoff performance data are available only up to elevations less than 10,000 feet. For explanatory instructions on use of the aircraft performance curves contained in this section, see Paragraph 10 on Page 7 of this circular.

AERO
500 A

AERO
500 B

AERO
680 E

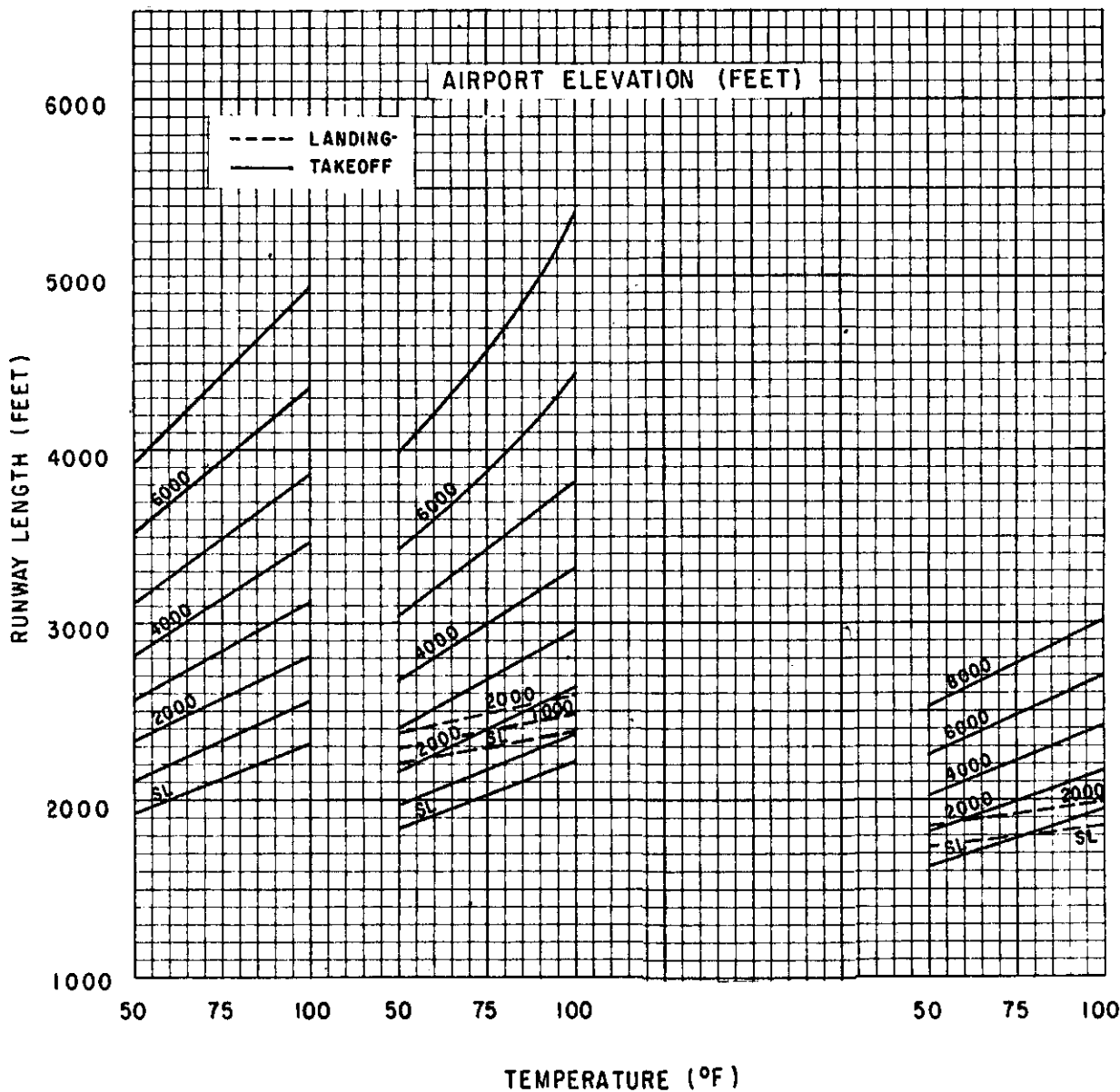


FIGURE 8. Aircraft Performance Curve (Aero 500A, 500B, & 680E)

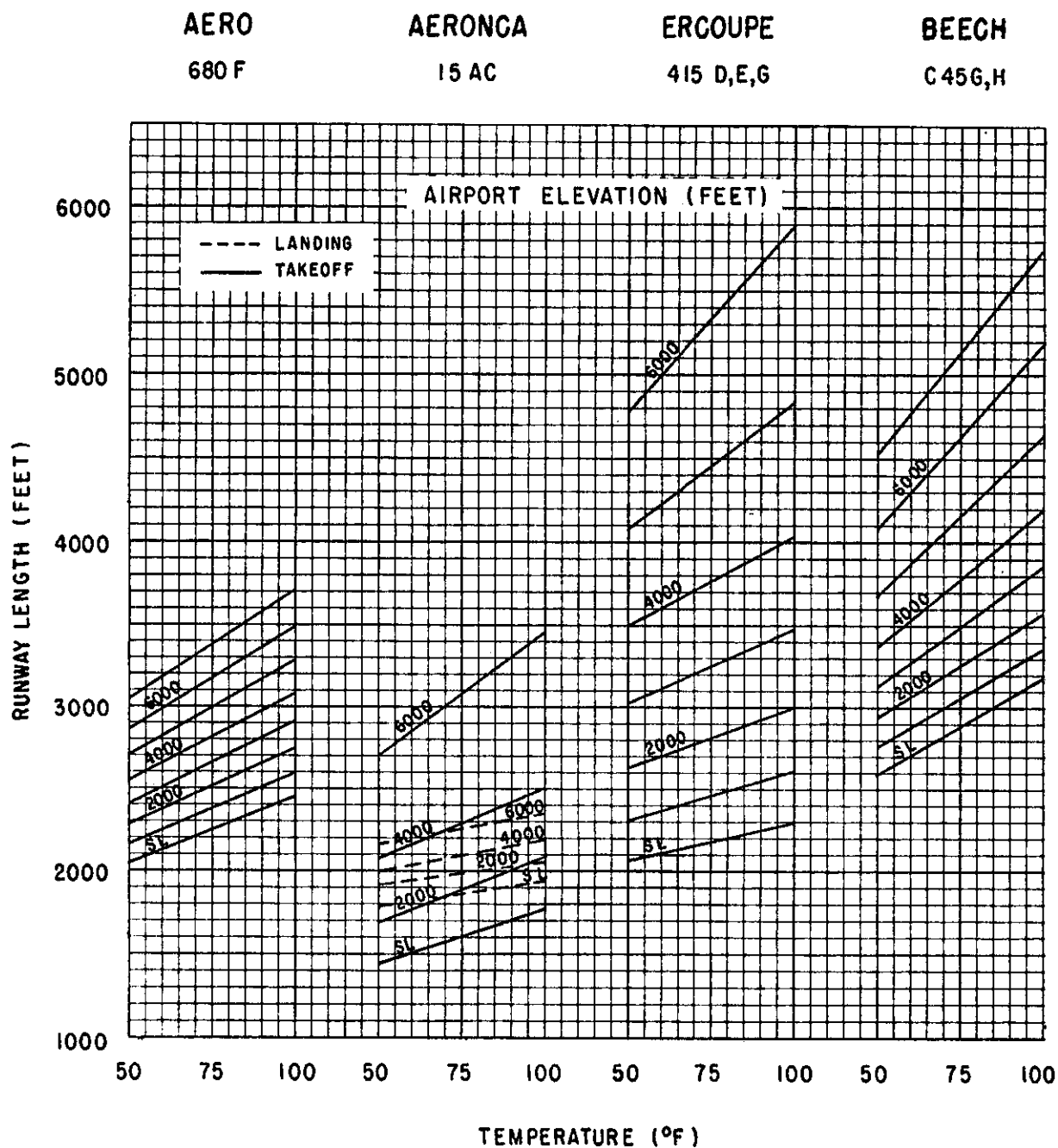


FIGURE 9. Aircraft Performance Curve (Aero 680F, Aeronca 15AC, Erco Coupe 415D, 415E, & 415G, & Beech C45G & C45H)

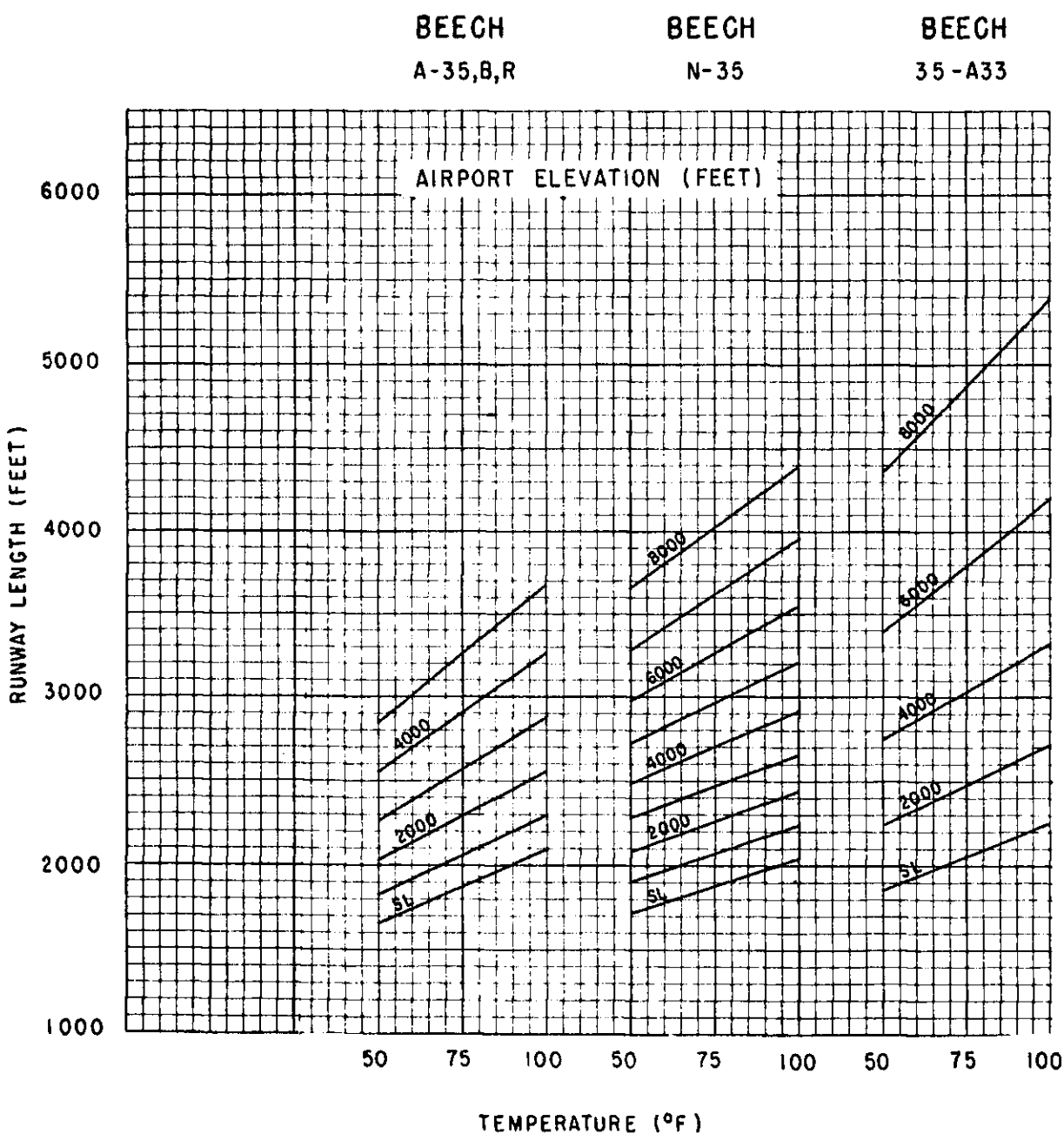


FIGURE 10. Aircraft Performance Curve (Beech A-35, A-35B, A-35R, N-35, & 35-A33)

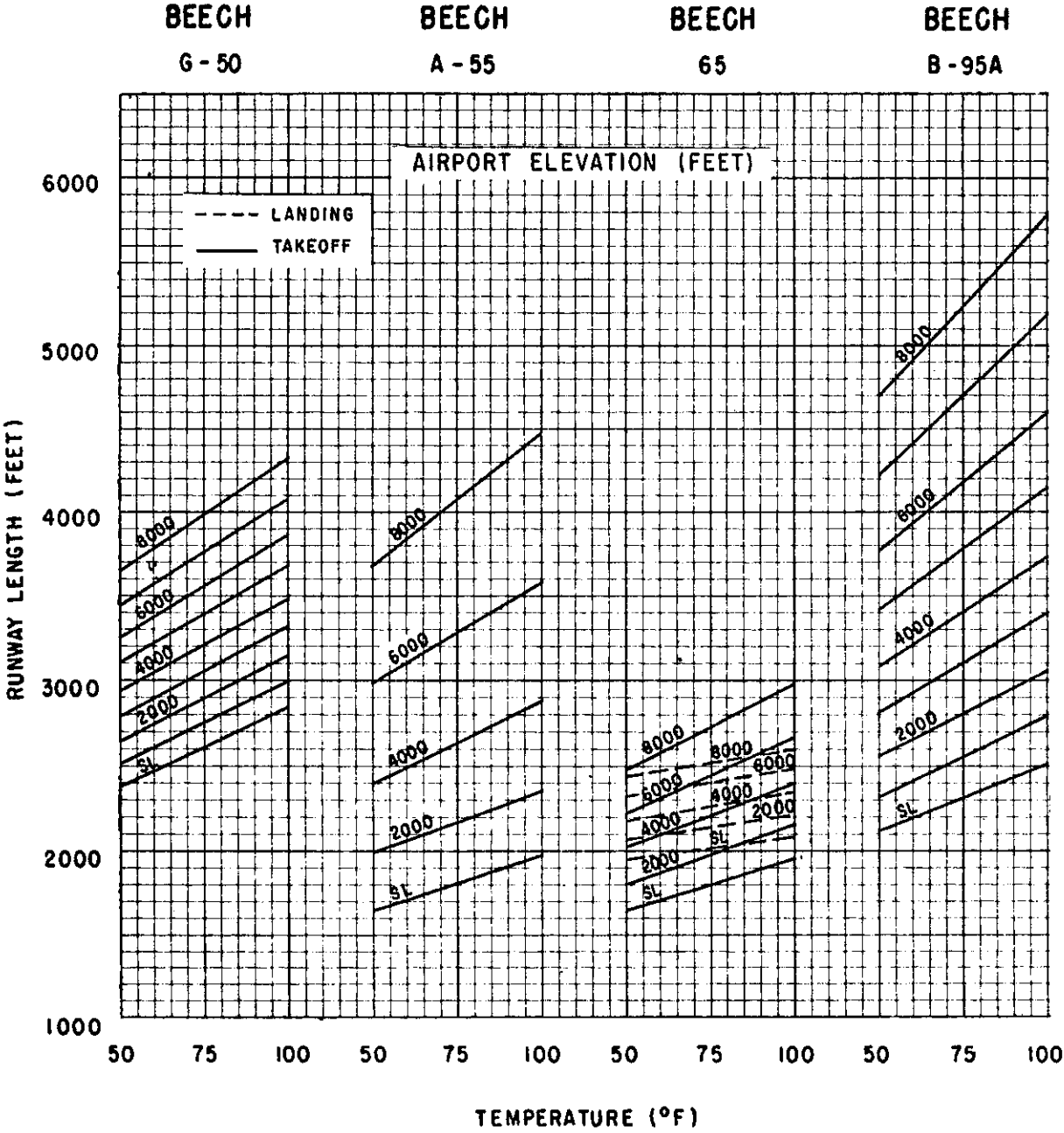


FIGURE 11. Aircraft Performance Curve (Beech G-50, A-55, 65, & B-95A)

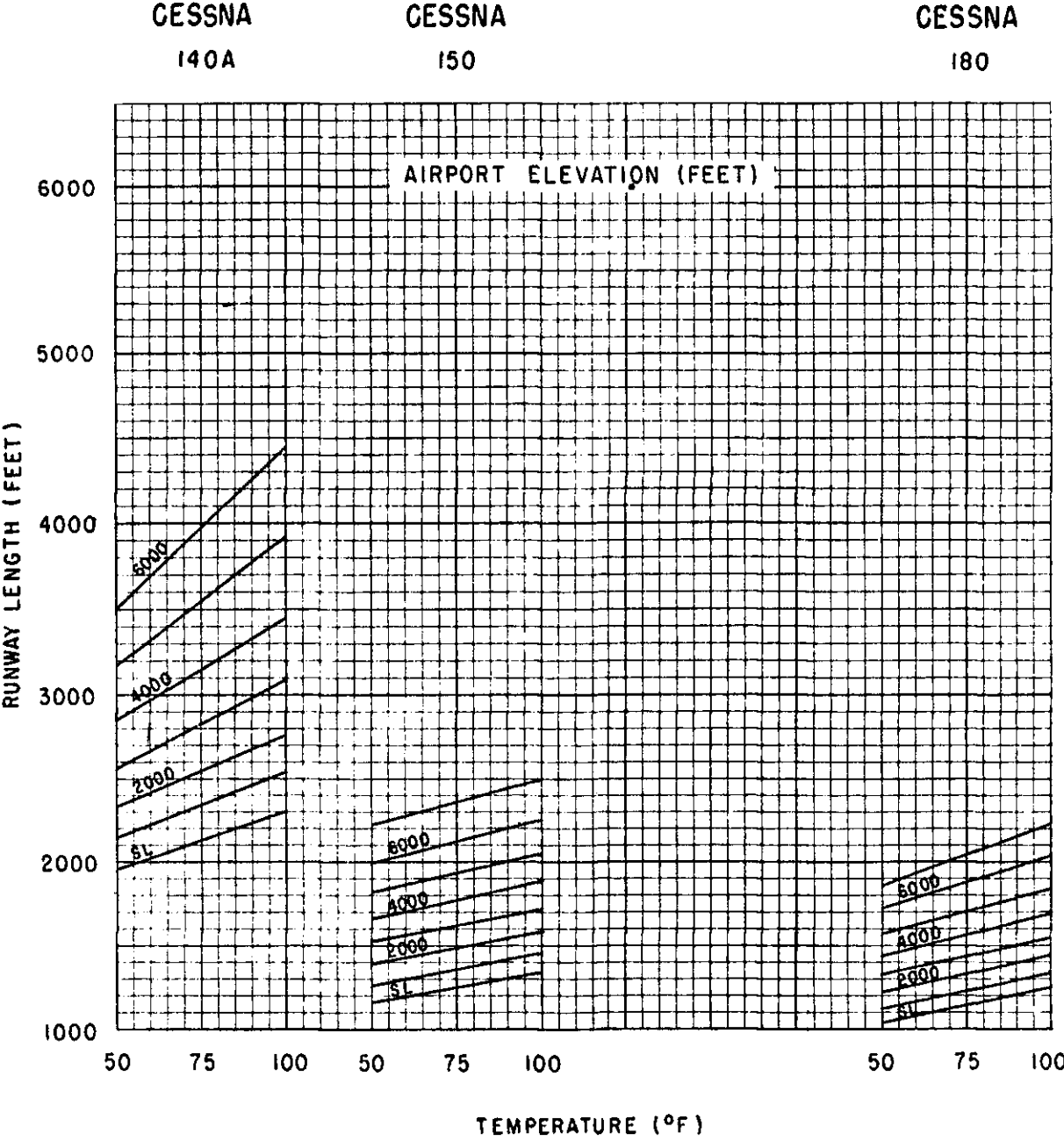


FIGURE 12. Aircraft Performance Curve
(Cessna 140A, 150, & 180)

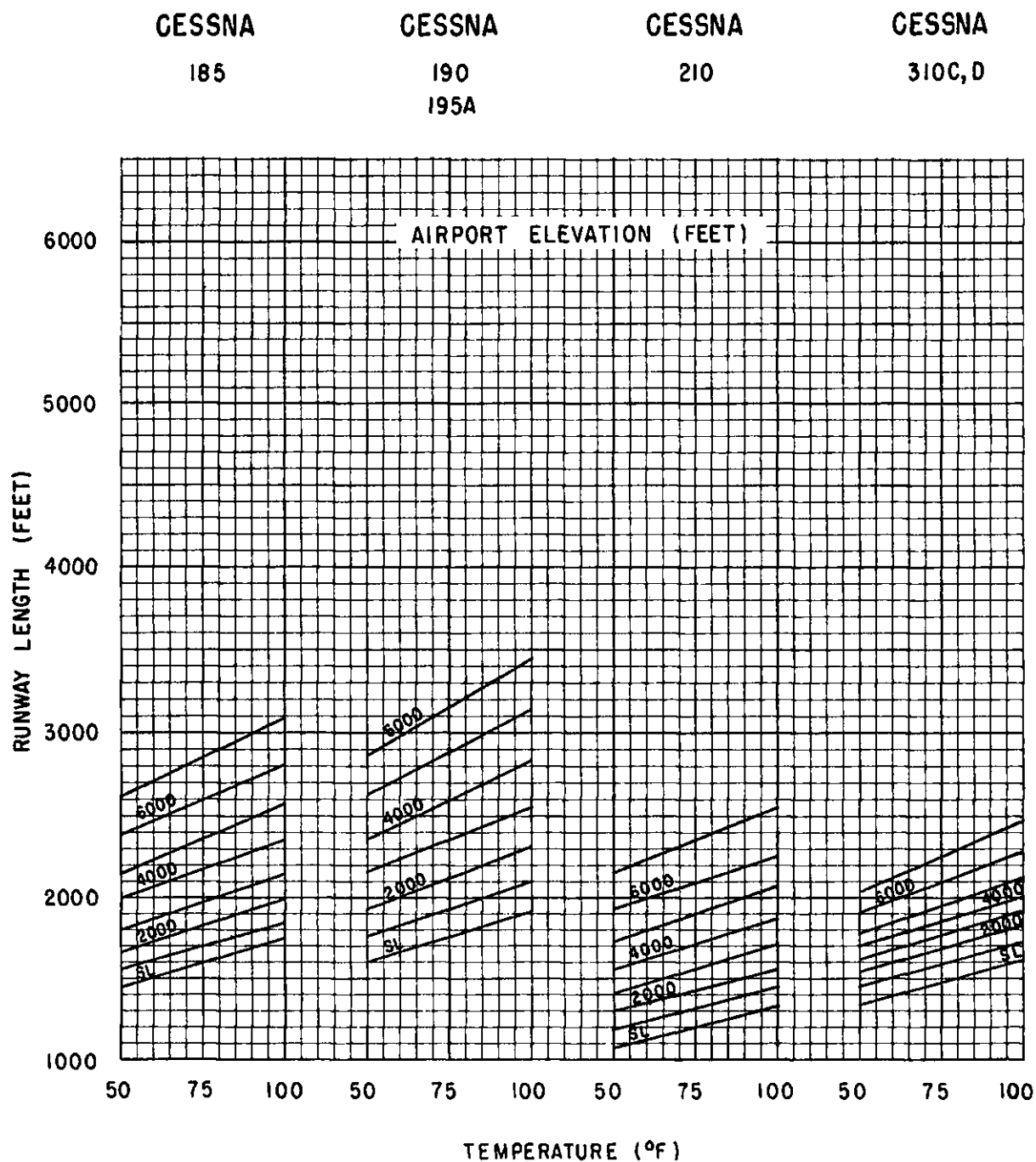


FIGURE 13. Aircraft Performance Curve (Cessna 185, 190, 195A, 210, 310C, & 310D)

CESSNA	CESSNA	CESSNA	de HAVILLAND
172	175	182	104 DOVE

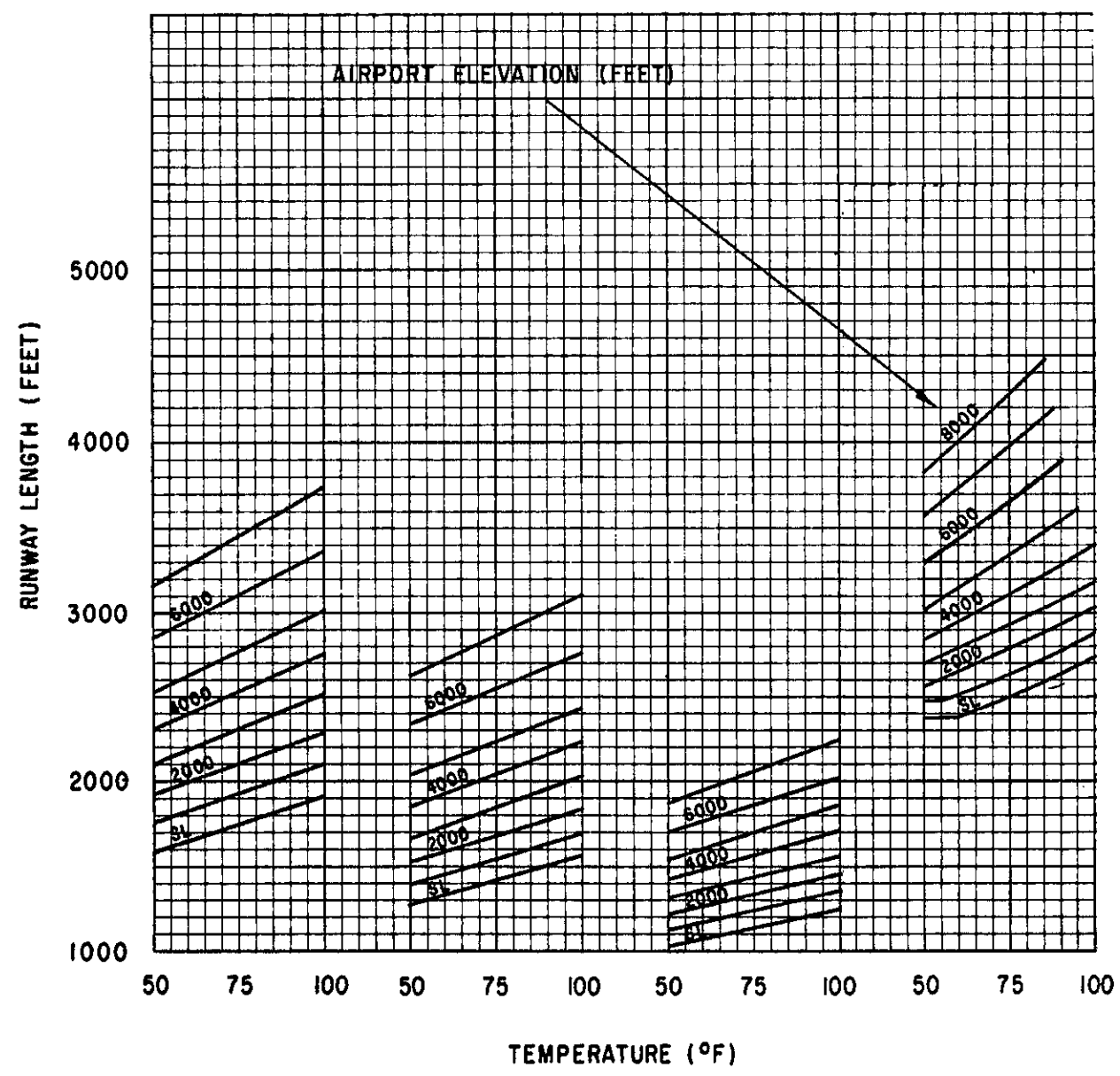


FIGURE 14. Aircraft Performance Curve (Cessna 172, 175, & 182 & deHavilland 104 Dove)

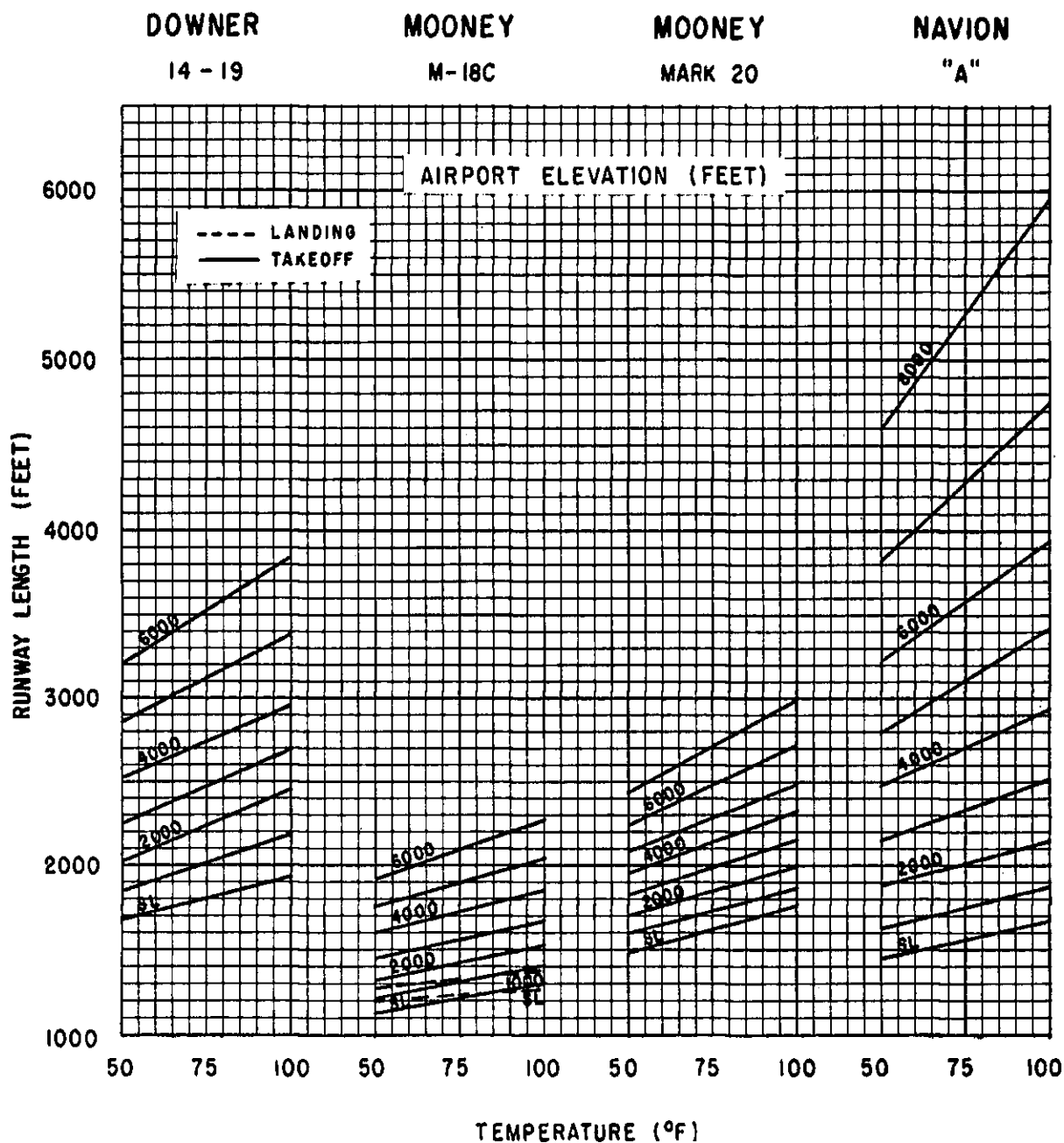


FIGURE 15. Aircraft Performance Curve (Downer 14-19, Mooney M-18C & Mark 20, & Navion "A")

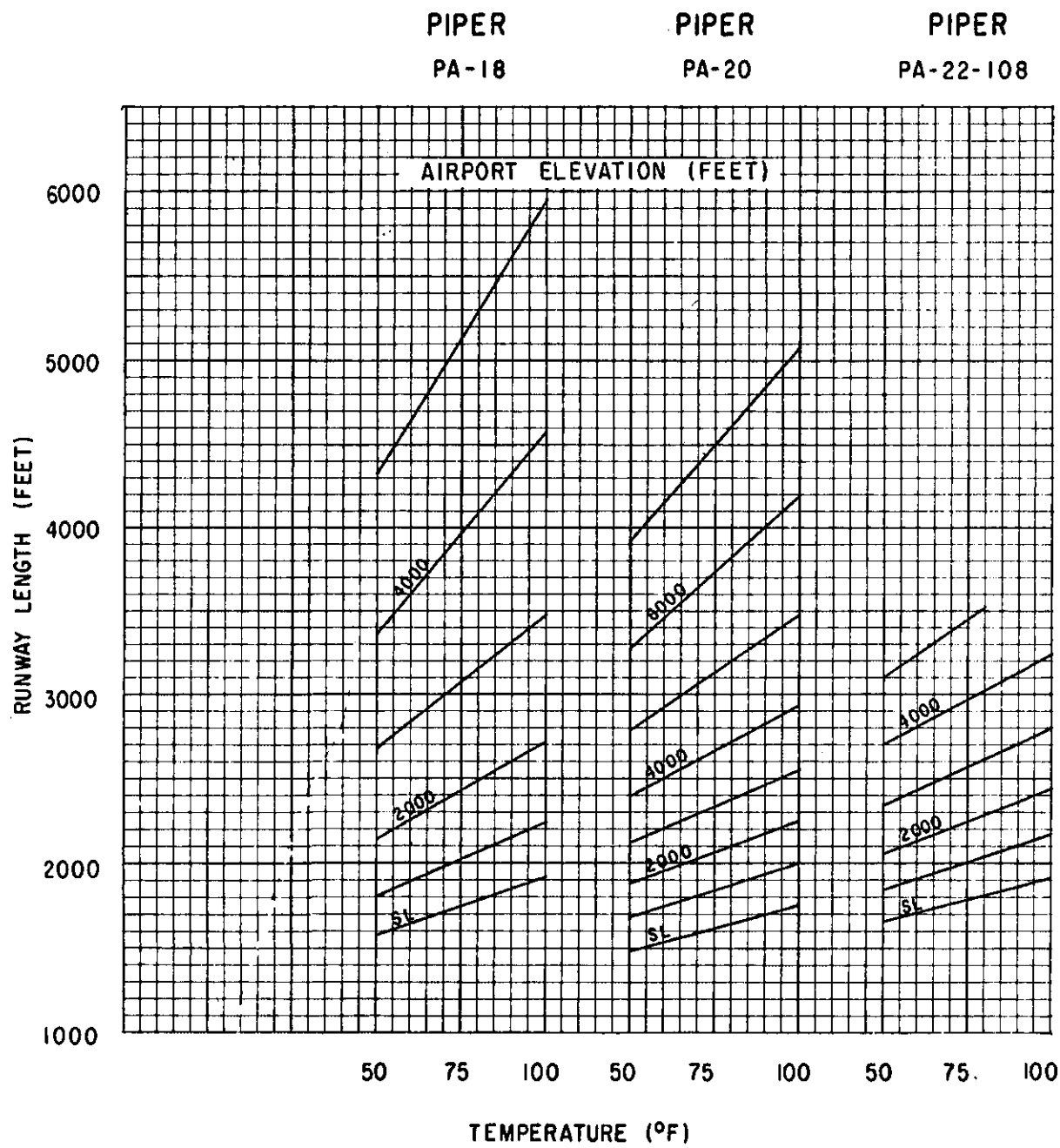


FIGURE 16. Aircraft Performance Curve (Piper PA-18, PA-20, & PA-22-108)

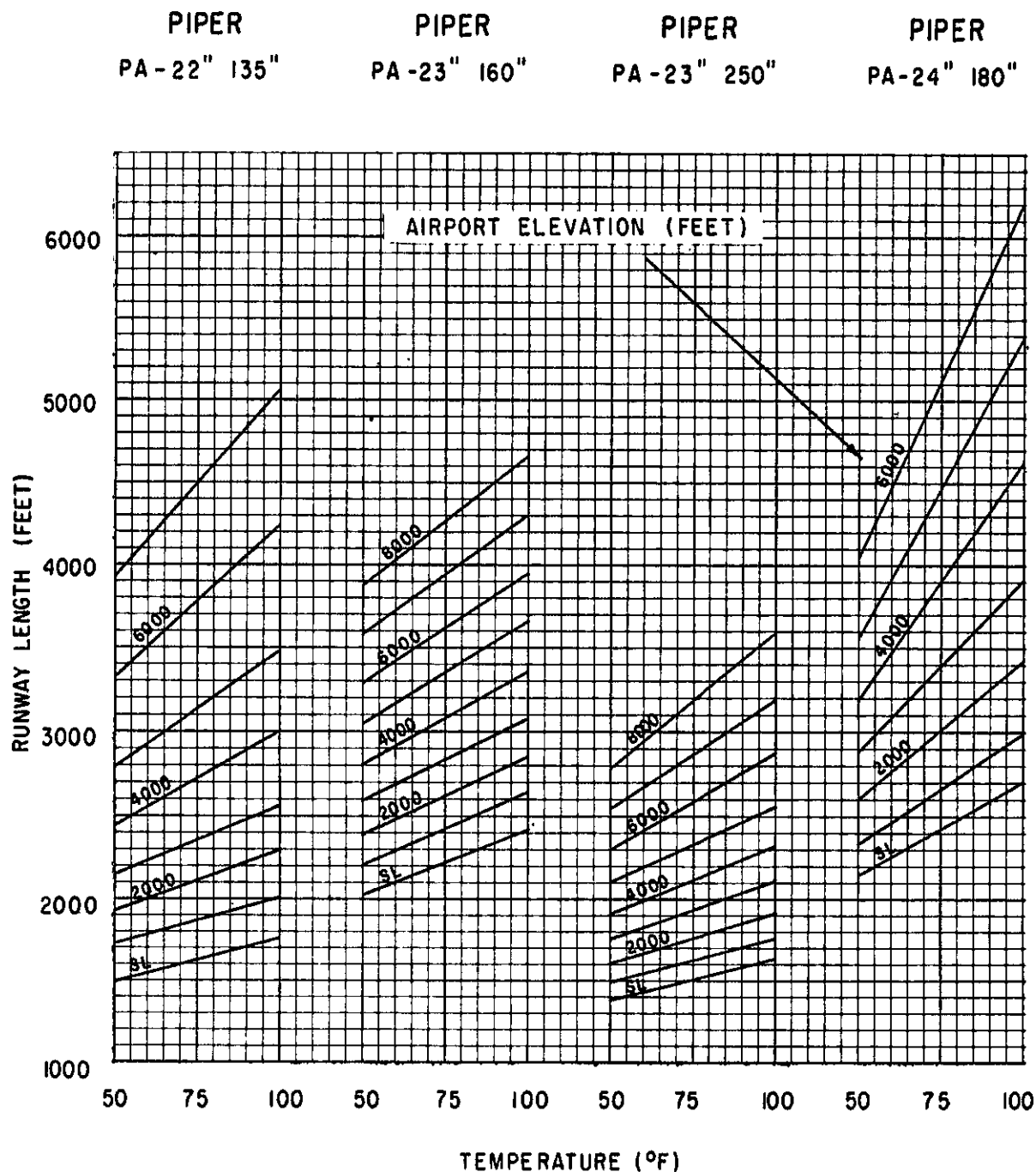


FIGURE 17. Aircraft Performance Curve (Piper PA-22 "135", PA-23 "160", PA-23 "250", & PA-24 "180")

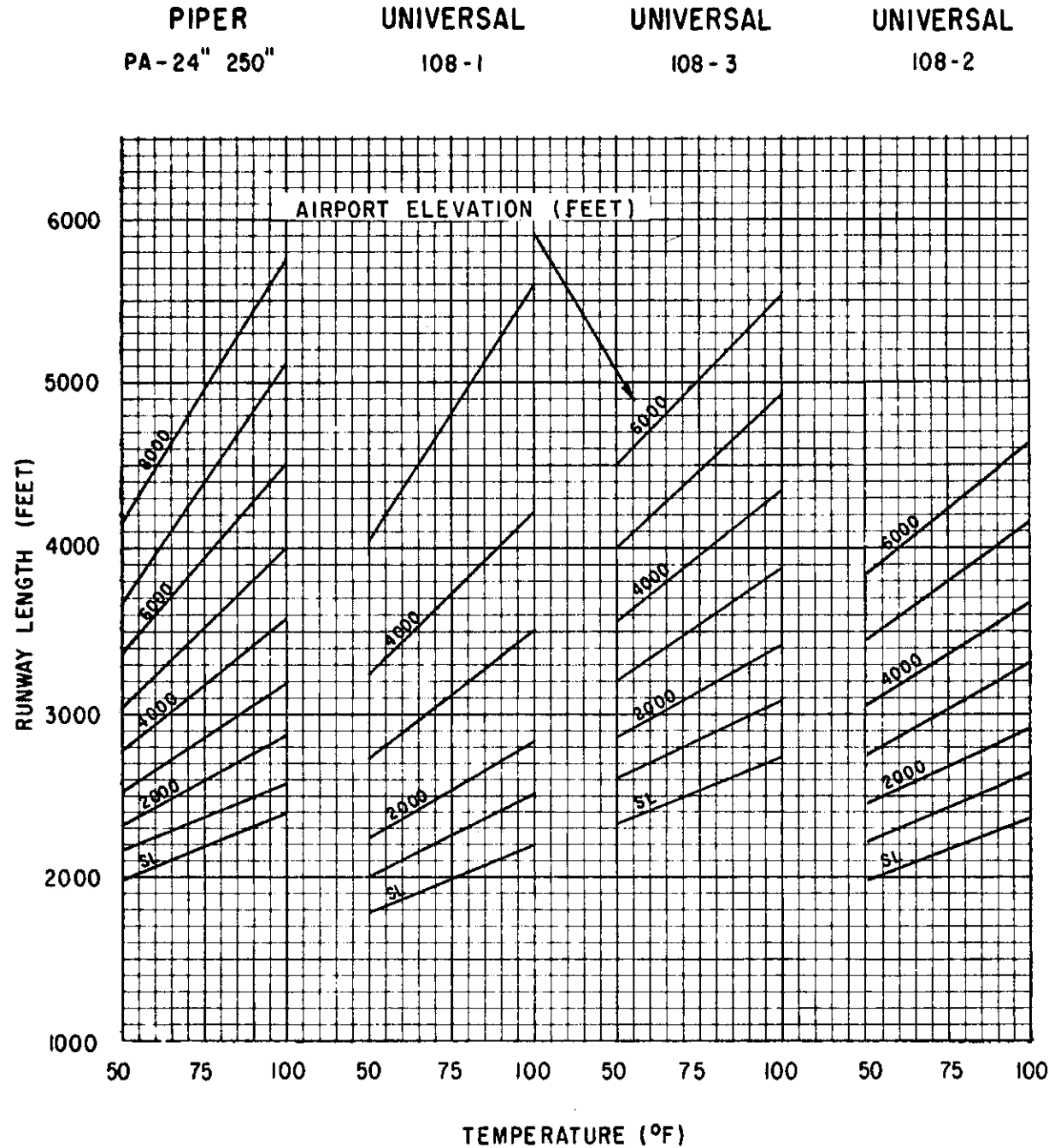


FIGURE 18. Aircraft Performance Curve (Piper PA-24 "250" & Universal 108-1, 108-2, & 108-3)

APPENDIX 6. AIRCRAFT PERFORMANCE TABLES

SECTION 1. ENGLISH TABLES

1. GENERAL NOTES AND EXPLANATORY INSTRUCTIONS.a. General Notes.

- (1) Source of Data. The factors presented in the aircraft performance tables, and their relationship to runway length requirements, are based on flight test and operational data.
- (2) Landing Runway Length. The runway length section of the aircraft performance landing table is based on zero wind and wet runway and requires no further adjustment in landing runway length.
- (3) Takeoff Runway Length. The runway length section of the aircraft performance takeoff table is based on zero wind and zero effective runway gradient. Runway lengths determined from this table should be increased by ten percent for each one percent of effective runway gradient.
- (4) Interpolation. Interpolation between applicable temperature, elevation, weight, and reference factor "R" limits will be required in calculating runway lengths.
- (5) Flap Settings. The flap settings presented are the ones authorized for certificated operations. Therefore, no interpolation between flap settings should be made.

b. Explanatory Instructions. Instructions for general use of the aircraft performance tables are as follows:

- (1) Using the site elevation and the mean daily maximum temperature, enter the landing performance table and determine the maximum allowable landing weight for each flap setting. Using the weight obtained and the airport elevation, determine the runway length required for landing for each flap setting.
- (2) Multiply the average fuel consumption rate (found at the end of the landing performance table) by the length of haul (in statute miles). Add this product to the value for the typical operating empty weight (plus reserve fuel) and the payload to obtain the desired takeoff weight. The length of haul used is the longest nonstop distance expected to be flown from the airport at least 250 times a year by the specific airplane used for airport design. This value may be adjusted to account for the effect of seasonal traffic variation and isolated or remote areas. The payload weight used will usually vary between the weight for the maximum passenger load and the maximum structural payload, and should be coordinated with the airport user.

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- * (3) Enter the takeoff performance tables and determine the maximum allowable takeoff weight and reference factor "R" from the given mean daily maximum temperature and elevation for each flap setting. Enter the runway length section of the takeoff tables using the lesser of either the desired takeoff weight or maximum allowable takeoff weight along with the value for reference factor "R" to determine the runway length required for each flap setting. *
- (4) Make any adjustment for runway gradient as per paragraph 1a(3).
- (5) Select the least length of those determined for the various flap settings, which will accommodate both the takeoff and landing weight requirements, as the design runway length. Although in most cases takeoff requirements govern, there are circumstances where landing controls. Therefore, both takeoff and landing requirements should always be examined.

2. EXAMPLES.

a. Example No. 1.

- (1) Statement. Determine the length of runway required to accommodate the following design conditions:
- (a) Airplane: Boeing 707-300C (JT3D-3B Eng.) Convert. Passenger.
- * (b) Mean Daily Maximum Temperature: 85°F. *
- (c) Airport Elevation: 3,000 Feet.
- (d) Effective Runway Gradient: 0.5 Percent.
- (e) Length of Haul: 1,200 Statute Miles.
- (f) Desired Payload: 74,900 Lbs.
- (2) Landing Runway Length.
- (a) Enter Table 1 with a temperature of 85°F. and an airport elevation of 3,000 feet and read a maximum landing weight of 247.0 (247,000) lbs.
- (b) Enter the runway length section of Table 1 with the maximum landing weight of 247.0 lbs. and the airport elevation of 3,000 feet and read those bracketing values of weight and runway length required to calculate the landing runway length.

<u>Weight</u>	<u>3,000' Elev.</u>	<u>Remarks</u>
250	7.73	Upper limit
240	<u>-7.45</u>	Lower limit
	.28	Range
	<u>x.7</u>	7,000 lbs./10,000 lbs. = .7
	.196	Adjustment factor/weight
	<u>+7.45</u>	Lower limit
	7.646	Interpolated Runway Length

Landing Runway Length: 7700 feet

- (3) Desired Takeoff Weight (DTW). Calculate the desired takeoff weight for a length of haul of 1,200 statute miles.

(a) Length of haul:	1,200 miles
(b) Average fuel consumption (Table 1):	x 27 lbs./mile
(c) Haul fuel:	32,400 lbs.
(d) Typical Operating Empty Weight (plus Reserve Fuel) (Table 1):	<u>+171,100 lbs.</u>
(e) Weight, no payload:	203,500 lbs.
(f) Payload (equals maximum structural payload for this example):	<u>+74,900 lbs.</u>
(g) Desired Takeoff Weight (DTW):	278,400 lbs.

- (4) Takeoff Runway Length.

- (a) Enter the maximum takeoff weight section of Table 2 with a temperature of 85°F and an airport elevation of 3,000 feet and read a maximum allowable takeoff weight of 311,400 lbs.

NOTE: DTW of 278,400 lbs. is less than the allowable maximum takeoff weight of 311,400 lbs. Therefore, use 278,400 lbs. for runway length calculations.

- (b) Enter the Reference Factor "R" section of Table 2 with a temperature of 85°F and an airport elevation of 3,000 feet and read a value for "R" of 82.9.
- (c) Enter the runway length section of Table 2 with the weight value determined in 2a(4)(a) and the "R" value of 82.9, and read those bracketing values of weight and runway length required to calculate takeoff runway length.

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<u>Weight</u>	<u>"R" 80</u>	<u>"R" 90</u>	<u>Remarks</u>
280	9.39	10.59	Upper limit
270	<u>-8.66</u>	<u>- 9.75</u>	Lower limit
	.73	.84	Range
	<u>x .84</u>	<u>x .84</u>	8,400 lbs./10,000 lbs. = .84
	.61	.71	Adjustment factor (weight)
	<u>+8.66</u>	<u>+9.75</u>	Lower limit
	9.27	10.46	
		<u>-9.27</u>	
		1.19	Range
		<u>x .29</u>	2.9/10 = .29
		.35	Adjustment factor ("R")
		<u>+9.27</u>	Lower limit
		9.62	Interpolated runway length

Takeoff runway length for zero wind and zero effective runway gradient: 9,620 feet

(d) Effective runway gradient adjustment:
 $9,620 + (9,620 \times .10 \times .5) = 9,620 + 480 = 10,100 \text{ feet}$

Takeoff Runway Length: 10,100 feet

(5) Example Answer.

Landing Weight:	247,000 lbs.
Takeoff Weight:	278,400 lbs.
Landing Runway Length:	7,700 feet
Takeoff Runway Length:	10,100 feet
Design Runway Length:	10,100 feet

The takeoff runway length exceeds the landing runway length and therefore would be the required runway length to meet the design conditions specified.

b. Example No. 2.

The design conditions and analysis are presented in a format which may be useful to the designer in determining runway length requirements (see next page).

RUNWAY LENGTH CALCULATION SHEETDesign Conditions

Airplane: BOEING 727-200; JT8D-7; STANDARD OPTION	
* Mean Daily Maximum Temperature (°F.):	<u>70</u>
Airport Elevation (Feet):	<u>4,000</u>
Effective Runway Gradient (Percent):	<u>0.5</u>
Length of Haul (Statute Miles):	<u>545</u>
Payload (lbs.):	<u>26,800</u>

Landing Runway Length (Flaps 40°, Table 3)

Temperature:	<u>70</u>
Airport Elevation:	<u>4,000</u>
Maximum Landing Weight:	<u>142,500</u>
Landing Runway Length:	<u>5,500</u>

Landing Runway Length (Flaps 30°, Table 4)

Temperature:	<u>70</u>
Airport Elevation:	<u>4,000</u>
Maximum Landing Weight:	<u>148,000</u>
Landing Runway Length:	<u>6,200</u>

Landing Runway Length (Flaps ____, Table ____)

Temperature:	<u> </u>
Airport Elevation:	<u> </u>
Maximum Landing Weight:	<u> </u>
Landing Runway Length:	<u> </u>

Desired Takeoff Weight (Table 3)

Length of Haul:	<u>545</u>	
Average Fuel Consumption:	<u>19</u>	x
Haul Fuel:	<u>10,355</u>	
Typical Operating Empty Weight Plus Reserve Fuel:	<u>114,800</u>	+
Weight, No Payload:	<u>125,155</u>	
Payload:	<u>26,800</u>	+
Desired Takeoff Weight:	<u>151,955</u>	*

RUNWAY LENGTH CALCULATION SHEET (CONTINUED)

* Takeoff Runway Length (Flaps 25°, Table 5)

Temperature:	70
Airport Elevation:	4,000
Maximum Takeoff Weight:	141,500
Reference Factor "R":	
Limiting Weight:	
Runway Length:	
Gradient Correction: _____(R/WL) x .10 x _____(ERG)=+	
Corrected Runway Length:	

Takeoff Runway Length (Flaps 15°, Table 6)

Temperature:	70
Airport Elevation:	4,000
Maximum Takeoff Weight:	158,900
Reference Factor "R":	54.8
Limiting Weight:	151,955
Runway Length:	9,050
Gradient Correction: <u>9,050</u> (R/WL) x .10 x <u>0.5</u> (ERG)=+	452
Corrected Runway Length:	9,502

Takeoff Runway Length (Flaps 5°, Table 7)

Temperature:	70
Airport Elevation:	4,000
Maximum Takeoff Weight:	165,800
Reference Factor "R":	78.2
Limiting Weight:	151,955
Runway Length:	10,170
Gradient Correction: <u>10,170</u> (R/WL) x .10 x <u>0.5</u> (ERG)=+	509
Corrected Runway Length:	10,679

Summary

Landing Weight:	148,000
Takeoff Weight:	151,955
Landing Runway Length:	6,200
Takeoff Runway Length:	9,500
Design Runway Length:	9,500

Remarks

1. For purposes of this example, a full passenger load of 26,800 lbs. was used as the payload.
2. Since the Flaps 25° setting would not allow the desired takeoff weight to be carried, the calculation was not completed.
3. A runway length of 30 feet and over is rounded upward to the next 100 feet.

c. Example No. 3.

- (1) Overview. Occasionally it is required to determine takeoff weight based on the length of an existing or a proposed runway. This calculation is essentially a back trace of the runway length determination, requiring only a slightly different evaluation process, as illustrated in the following example.
- (2) Statement. Determine the allowable takeoff weight based on the following existing conditions:

- (a) Airplane: Lockheed L-1011-385-1(RB.211-22B)
- (b) Mean Daily Maximum Temperature: 60.5°F.
- (c) Airport Elevation: 748 Feet.
- (d) Effective Runway Gradient: 0.32 Percent.
- (e) Existing Runway Length: 7,845 Feet.

(3) Allowable Takeoff Weight.

- (a) Convert the existing runway length to a length corresponding to zero effective runway gradient by dividing the existing runway length by the effective runway gradient adjustment factor:

$$\frac{7,845}{1.032} = 7,602. = 7.60$$

NOTE: The effective runway gradient adjustment factor is determined as follows:

Use 10 percent increase for each 1 percent of ERG for turbojet powered aircraft ($.1 \times .32 = .032$); then, convert this factor to percent increase of the total runway ($1.000 + .032 = 1.032$).

- (b) As a general rule, for field length limiting conditions, higher flap settings allow higher takeoff weights. Therefore, subsequent calculations will be based on aircraft performance data for 27° flaps, as presented in Table 25, Aircraft Performance, Takeoff (L-1011-385-1).

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*

1 MATW and "R"

Maximum allowable takeoff weight (MATW) and reference factor "R" are calculated in the normal manner for 60.5°F and an elevation of 748 feet:

Maximum Allowable Takeoff Weight: 414,820 lbs.

Reference Factor "R": 52.46

2 Converted Length Bracketing.

Enter the runway length section of Table 25 and bracket the converted length, expressed in thousands of feet, as follows:

<u>Weight</u>	<u>"R"50</u>	<u>"R"52.46</u>	<u>"R"60</u>
410	6.98	(7.35) <u>1</u> / 7.60	8.47
420	7.35	(7.74) <u>1</u> / 7.74	8.94

1/Subsequent calculations, paragraph 2c(b)(3).

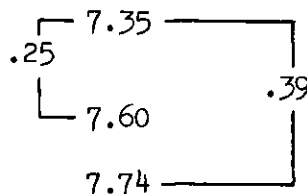
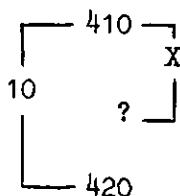
3 Interpolated Lengths.

Determine the lengths corresponding to the known reference factor "R" by horizontal interpolation:

<u>410 lbs.</u>	<u>420 lbs.</u>	<u>Remarks</u>
6.98	7.35	Horizontal bracket
-8.47	-8.94	Horizontal bracket
1.49	1.59	Range
x .246	x .246	2.46/10 = .246
.37	.39	Adjustment factor ("R")
+6.98	+7.35	Lower limits
7.35	7.74	Interpolated lengths for the given "R" *

4 Incremental Weight Determination.

Equate weights to lengths and determine the incremental weight:



$$\frac{x}{10} = \frac{.25}{.39}$$

Ratio of length to weight

$$x = \frac{(10)(.25)}{.39}$$

Expression in terms of x

$$x = 6.41$$

Incremental weight

5 Field Length Limiting Weight.

The field length limiting weight is determined by adding the incremental weight to the lower bracketing weight:

$$\begin{array}{r} 6.41 \\ + 410.000 \\ \hline 416.410 \\ 416,410 \text{ lbs.} \end{array}$$

Incremental weight
Lower bracketing weight

Field length limiting weight

6 Interpretation.

The field length limiting weight for the existing runway length of 7,845 feet and the given conditions of temperature, elevation, and gradient is 416,410 pounds; however, in this particular case, the takeoff weight is further limited by the maximum allowable takeoff weight of 414,820 pounds. Therefore, the lesser weight, 414,820 pounds, would be the takeoff weight used in subsequent calculations to determine payload and haul lengths and their relationship to the existing 7,845-foot runway.

d. Example No. 4.

- (1) Overview. The Boeing 737-200 aircraft performance tables enable a greater degree of flexibility to be achieved in determining runway length. As a result, it is recommended

*

* that airport designers and planners obtain operator/user input in regard to specific model, structural weights, and reserve fuel requirements in order to derive full benefit from this increased flexibility.

- (2) Design Weights. The design weight to be used in subsequent calculations is the lesser of two weights: the maximum takeoff/landing weight (structural), and the maximum allowable takeoff/landing weight (climb limited). The appropriate design weight can be evaluated as follows:

<u>TEMP.</u>	<u>ELEV.</u>	<u>FLAP</u>	<u>MLW</u>	<u>MALW</u>	<u>MTW</u>	<u>MATW</u>	<u>DESIGN WT.</u>
75	1000	40	98.0	101.5	-	-	98.0
75	1000	40	103.0	101.5	-	-	101.5
75	1000	1	-	-	109.0	110.4	109.0
75	1000	1	-	-	115.5	110.4	110.4

NOTE:

MLW: Maximum Landing Weight - Structural Limit

MALW: Maximum Allowable Landing Weight - Climb Limited

MTW: Maximum Takeoff Weight - Structural Limit

MATW: Maximum Allowable Takeoff Weight - Climb Limited

Design Weight: The weight to be used for determining runway length.

- (3) Reserve Fuel Requirement. The airport designer/planner is given the option, based on individual operator/user operational practice, to use values based on either 1.25 or 2.00 hours of reserve fuel. The 1.25-hour reserve fuel factor is predicated on 30 minutes flying time to reach the most distant alternate airport, and then 45 minutes of flying at normal cruising fuel consumption. The 2.00-hour reserve fuel factor includes additional time factors for bad weather and contingencies. These factors are applied in the same manner as described in paragraph 2a(3).
- *

TABLE 1. AIRCRAFT PERFORMANCE, LANDING (BOEING 707-300C SERIES)
JT3D-3B ENGINE, 50° FLAPS

MAXIMUM ALLOWABLE LANDING WEIGHT (1000 LBS)

TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	247.0	247.0	247.0	247.0	247.0	247.0	247.0	246.8	237.6
55	247.0	247.0	247.0	247.0	247.0	247.0	247.0	242.4	233.4
60	247.0	247.0	247.0	247.0	247.0	247.0	247.0	239.0	230.0
65	247.0	247.0	247.0	247.0	247.0	247.0	247.0	239.3	230.3
70	247.0	247.0	247.0	247.0	247.0	247.0	247.0	239.5	230.5
75	247.0	247.0	247.0	247.0	247.0	247.0	247.0	239.8	230.8
80	247.0	247.0	247.0	247.0	247.0	247.0	247.0	240.1	231.1
85	247.0	247.0	247.0	247.0	247.0	247.0	247.0	239.4	230.3
90	247.0	247.0	247.0	247.0	247.0	247.0	243.5	234.5	225.6
95	247.0	247.0	247.0	247.0	247.0	247.0	238.3	229.3	220.6
100	247.0	247.0	247.0	247.0	247.0	242.1	233.0	224.2	215.6
105	247.0	247.0	247.0	247.0	245.8	236.7	227.8	219.2	210.8
110	247.0	247.0	247.0	247.0	240.3	231.5	222.8	214.5	206.4

RUNWAY LENGTH (1000 FEET)

WEIGHT 1000 LBS	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
160	5.15	5.24	5.33	5.43	5.53	5.64	5.75	5.87	5.99
170	5.36	5.46	5.56	5.66	5.77	5.88	6.00	6.11	6.23
180	5.57	5.68	5.79	5.90	6.02	6.14	6.26	6.38	6.49
190	5.80	5.91	6.03	6.15	6.27	6.40	6.53	6.65	6.78
200	6.03	6.15	6.27	6.40	6.53	6.67	6.80	6.94	7.07
210	6.26	6.39	6.52	6.66	6.80	6.94	7.09	7.24	7.39
220	6.50	6.64	6.77	6.92	7.07	7.22	7.38	7.54	7.70
230	6.75	6.89	7.03	7.19	7.34	7.50	7.67	7.84	8.02
240	6.99	7.14	7.30	7.45	7.62	7.79	7.96	8.15	8.34
250	7.24	7.40	7.56	7.73	7.90	8.07	8.25	8.45	8.65

AIRPLANE CHARACTERISTICS	UNIT OF MEASURE	CONVERTIBLE		FREIGHTER
		PASSENGER	CARGO	
TYPICAL OPERATING EMPTY WEIGHT PLUS RESERVE FUEL	LBS.	171,100	164,300	151,500
AVERAGE FUEL CONSUMPTION	LBS./MILE	27	27	27
TYPICAL MAXIMUM PASSENGER LOAD @200 LBS./PASSENGER	LBS.	38,800	-	-
MAXIMUM STRUCTURAL PAYLOAD	LBS.	74,900	81,700	94,500

TABLE 2. AIRCRAFT PERFORMANCE, TAKEOFF (BOEING 707-300C SERIES)
JT3D-3B ENGINE, 14°FLAPS

TEMP °F	MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 LBS)								
	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	336.0	336.0	336.0	328.6	316.5	305.1	294.0	283.4	273.0
55	336.0	336.0	336.0	326.1	314.2	302.8	291.8	281.2	270.8
60	336.0	336.0	336.0	323.7	311.8	300.5	289.6	279.0	268.7
65	336.0	336.0	333.4	321.2	309.5	298.2	287.3	276.8	266.5
70	336.0	336.0	330.7	318.8	307.2	295.9	285.1	274.6	264.4
75	336.0	336.0	328.1	316.3	304.8	293.7	282.8	272.4	262.2
80	336.0	336.0	325.5	313.8	302.5	291.4	280.6	270.2	260.1
85	336.0	334.5	322.8	311.4	300.1	289.1	278.4	268.0	257.9
90	336.0	331.6	320.2	308.9	297.8	286.8	276.1	265.8	255.8
95	336.0	328.7	317.6	306.5	295.4	284.5	273.9	263.6	253.7
100	336.0	325.8	315.0	304.0	293.1	282.3	271.7	261.4	251.5
105	334.2	321.7	310.1	299.2	288.7	278.5	268.3	258.0	247.4
110	325.9	315.3	304.7	294.2	283.8	273.2	262.6	251.8	

TEMP °F	REFERENCE FACTOR "R"								
	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	61.0	65.0	67.5	73.0	79.2	86.0	93.6	101.8	110.8
55	62.4	65.7	68.6	74.3	80.7	87.7	95.4	103.9	113.2
60	63.6	66.3	69.8	75.7	82.1	89.3	97.2	105.9	115.5
65	64.6	66.8	71.0	77.0	83.6	90.8	98.9	107.8	117.7
70	65.5	67.1	72.3	78.3	85.0	92.4	100.6	109.7	119.8
75	66.2	68.0	73.6	79.8	86.5	94.0	102.4	111.7	122.0
80	66.8	69.3	75.0	81.3	88.1	95.7	104.2	113.7	124.3
85	67.2	70.7	76.5	82.9	89.8	97.6	106.2	115.9	126.8
90	67.5	72.2	78.1	84.6	91.7	99.5	108.4	118.3	129.5
95	68.1	73.8	79.9	86.4	93.6	101.7	110.7	120.9	132.4
100	69.7	75.5	81.7	88.4	95.8	104.1	113.4	123.9	135.8
105	71.4	77.4	83.7	90.6	98.2	106.7	116.3	127.2	139.5
110	73.2	79.4	85.9	93.0	100.8	109.6	119.6	130.9	

WEIGHT 1000 LBS	RUNWAY LENGTH (1000 FEET)								
	REFERENCE FACTOR "R"								
	60	70	80	90	100	110	120	130	140
160	4.00	4.00	4.00	4.00	4.00	4.00	4.25	4.53	4.72
170	4.00	4.00	4.00	4.00	4.04	4.44	4.83	5.17	5.45
180	4.00	4.00	4.00	4.13	4.56	5.00	5.44	5.84	6.21
190	4.00	4.00	4.15	4.62	5.11	5.60	6.08	6.55	7.00
200	4.00	4.08	4.61	5.14	5.68	6.22	6.76	7.30	7.83
210	4.00	4.49	5.09	5.69	6.29	6.89	7.49	8.09	8.70
220	4.25	4.93	5.60	6.27	6.94	7.60	8.27	8.94	9.62
230	4.66	5.40	6.15	6.88	7.62	8.36	9.10	9.85	10.60
240	5.10	5.91	6.72	7.54	8.36	9.18	10.00	10.82	11.65
250	5.58	6.45	7.33	8.23	9.14	10.05	10.96	11.87	12.76
260	6.09	7.02	7.98	8.97	9.98	10.99	12.00	12.99	13.95
270	6.64	7.62	8.66	9.75	10.88	12.00	13.12	14.20	15.22
280	7.23	8.25	9.39	10.59	11.84	13.09	14.32	15.49	
290	7.84	8.92	10.15	11.48	12.86	14.25			
300	8.49	9.63	10.96	12.43	13.96				
310	9.16	10.37	11.82	13.43	15.13				
320	9.87	11.14	12.72	14.50					
330	10.59	11.95	13.67						
340	11.35	12.79	14.67						

TABLE 3. AIRCRAFT PERFORMANCE, LANDING (BOEING 727-200 SERIES)
JT8D-7 ENGINE, 40° FLAPS

MAXIMUM ALLOWABLE LANDING WEIGHT (1000 LBS)									
TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	142.5	142.5	142.5	142.5	142.5	142.5	137.9	132.7	127.7
55	142.5	142.5	142.5	142.5	142.5	141.8	135.7	130.8	126.2
60	142.5	142.5	142.5	142.5	142.5	139.0	134.5	130.4	126.2
65	142.5	142.5	142.5	142.5	142.5	139.0	134.5	130.4	126.2
70	142.5	142.5	142.5	142.5	142.5	139.0	134.5	130.4	126.2
75	142.5	142.5	142.5	142.5	142.5	139.0	134.5	130.4	126.2
80	142.5	142.5	142.5	142.5	142.5	139.0	134.5	130.2	125.0
85	142.5	142.5	142.5	142.5	142.5	138.3	133.1	128.1	123.3
90	142.5	142.5	142.5	142.5	140.6	135.4	130.3	125.5	120.8
95	142.5	142.5	142.5	142.5	137.4	132.3	127.3	122.6	118.0
100	142.5	142.5	142.5	139.4	134.2	129.2	124.3	119.5	114.9
105	142.5	142.5	141.2	136.0	131.0	126.0	121.2	116.6	112.0
110	142.5	142.5	137.7	132.7	127.8	123.0	118.3	113.8	109.4

RUNWAY LENGTH (1000 FEET)									
WEIGHT 1000 LBS	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
110	4.01	4.09	4.17	4.26	4.36	4.46	4.56	4.66	4.75
115	4.15	4.23	4.31	4.40	4.50	4.60	4.70	4.81	4.92
120	4.29	4.38	4.47	4.56	4.66	4.76	4.87	4.98	5.10
125	4.43	4.54	4.64	4.73	4.83	4.94	5.05	5.17	5.30
130	4.59	4.70	4.81	4.91	5.02	5.13	5.24	5.37	5.51
135	4.74	4.86	4.98	5.09	5.20	5.32	5.44	5.57	5.72
140	4.91	5.03	5.14	5.26	5.38	5.50	5.63	5.77	5.92
145	5.08	5.19	5.30	5.42	5.55	5.68	5.82	5.96	6.11
150	5.25	5.34	5.44	5.56	5.69	5.83	5.98	6.14	6.30

AIRPLANE CHARACTERISTICS	UNIT OF MEASURE	STANDARD OPTION
TYPICAL OPERATING EMPTY WEIGHT PLUS RESERVE FUEL	LBS.	114,800
AVERAGE FUEL CONSUMPTION	LBS./MILE	19
TYPICAL MAXIMUM PASSENGER LOAD @200 LBS./PASSENGER	LBS.	26,800
MAXIMUM STRUCTURAL PAYLOAD	LBS.	38,800

TABLE 4. AIRCRAFT PERFORMANCE, LANDING (BOEING 727-200 SERIES)
JT8D-7 ENGINE, 30° FLAPS

MAXIMUM ALLOWABLE LANDING WEIGHT (1000 LBS)

TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	148.0	148.0	148.0	148.0	148.0	148.0	148.0	148.0	145.7
55	148.0	148.0	148.0	148.0	148.0	148.0	148.0	148.0	143.7
60	148.0	148.0	148.0	148.0	148.0	148.0	148.0	148.0	143.7
65	148.0	148.0	148.0	148.0	148.0	148.0	148.0	148.0	143.7
70	148.0	148.0	148.0	148.0	148.0	148.0	148.0	148.0	143.7
75	148.0	148.0	148.0	148.0	148.0	148.0	148.0	148.0	143.7
80	148.0	148.0	148.0	148.0	148.0	148.0	148.0	147.8	142.3
85	148.0	148.0	148.0	148.0	148.0	148.0	148.0	146.0	140.5
90	148.0	148.0	148.0	148.0	148.0	148.0	148.0	142.6	137.2
95	148.0	148.0	148.0	148.0	148.0	148.0	144.9	139.4	134.2
100	148.0	148.0	148.0	148.0	148.0	147.1	141.6	136.2	131.0
105	148.0	148.0	148.0	148.0	148.0	143.7	138.3	132.9	127.5
110	148.0	148.0	148.0	148.0	145.7	140.2	134.8	129.2	123.3

RUNWAY LENGTH (1000 FEET)

WEIGHT 1000 LBS	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
110	4.43	4.52	4.62	4.72	4.82	4.93	5.04	5.15	5.27
115	4.58	4.67	4.78	4.88	4.99	5.10	5.21	5.33	5.46
120	4.73	4.83	4.94	5.05	5.16	5.28	5.40	5.52	5.66
125	4.88	4.99	5.10	5.22	5.33	5.46	5.59	5.72	5.86
130	5.04	5.15	5.27	5.39	5.52	5.64	5.78	5.92	6.06
135	5.20	5.32	5.44	5.57	5.70	5.83	5.97	6.12	6.27
140	5.37	5.49	5.62	5.75	5.88	6.02	6.17	6.32	6.47
145	5.53	5.66	5.79	5.93	6.07	6.21	6.36	6.52	6.67
150	5.70	5.83	5.97	6.11	6.25	6.40	6.56	6.71	6.86

TABLE 5. AIRCRAFT PERFORMANCE, TAKEOFF (BOEING 727-200 SERIES)
JT8D-7 ENGINE, 25° FLAPS

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 LBS)									
TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	164.2	162.4	156.8	151.2	145.7	140.3	135.1	130.0	125.1
55	164.2	160.2	154.6	149.0	143.5	138.1	132.9	128.0	123.3
60	163.8	158.2	152.4	146.8	141.5	136.4	131.8	127.5	123.3
65	163.8	158.2	152.4	146.8	141.5	136.4	131.8	127.5	123.3
70	163.8	158.2	152.4	146.8	141.5	136.4	131.8	127.5	123.3
75	163.8	158.2	152.4	146.8	141.5	136.4	131.8	127.5	123.3
80	163.8	158.2	152.4	146.8	141.5	136.4	131.8	127.4	122.2
85	163.2	157.4	151.8	146.3	140.9	135.7	130.6	125.7	120.9
90	159.7	154.0	148.5	143.1	137.9	132.8	127.9	123.1	118.5
95	156.2	150.7	145.3	140.0	134.9	129.9	125.0	120.4	115.9
100	152.7	147.3	142.0	136.9	131.8	126.9	122.2	117.6	113.1
105	149.2	143.9	138.8	133.7	128.8	124.0	119.3	114.8	
110	145.7	140.6	135.5	130.5	125.7	121.0	116.5	112.2	

REFERENCE FACTOR "R"									
TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	35.2	36.8	39.5	42.5	46.0	49.9	54.3	59.1	64.3
55	35.7	37.7	40.6	43.9	47.5	51.5	56.0	60.9	66.3
60	36.0	38.7	41.7	45.1	48.9	53.2	56.8	61.2	66.7
65	36.3	38.9	42.0	45.4	49.3	53.6	57.2	61.7	67.4
70	36.5	39.2	42.2	45.7	49.6	53.9	57.8	62.2	67.7
75	36.8	39.4	42.5	46.0	49.9	54.3	58.3	62.8	68.2
80	37.0	39.7	42.8	46.3	50.3	54.6	58.7	63.6	69.5
85	37.3	40.2	43.4	46.9	50.8	55.2	60.0	65.3	71.1
90	38.4	41.5	44.9	48.7	52.8	57.3	62.3	67.7	73.7
95	39.8	43.1	46.6	50.5	54.8	59.5	64.7	70.4	76.6
100	41.3	44.7	48.5	52.6	57.0	61.9	67.3	73.3	79.7
105	43.0	46.5	50.4	54.7	59.4	64.5	70.1	76.3	
110	44.8	48.5	52.6	57.0	61.9	67.2	73.1	79.5	

RUNWAY LENGTH (1000 FEET)										
WEIGHT 1000 LBS	REFERENCE FACTOR "R"									
	35	40	45	50	55	60	65	70	75	80
110	3.42	3.55	3.80	4.12	4.51	4.94	5.38	5.80	6.19	6.51
115	3.41	3.74	4.12	4.55	5.01	5.47	5.94	6.38	6.79	7.15
120	3.51	4.00	4.50	5.00	5.50	6.01	6.50	6.99	7.46	7.92
125	3.70	4.32	4.91	5.47	6.02	6.56	7.10	7.66	8.25	8.87
130	3.97	4.70	5.35	5.96	6.55	7.14	7.76	8.44	9.19	
135	4.30	5.12	5.83	6.48	7.11	7.78	8.50			
140	4.69	5.57	6.33	7.02	7.72	8.47				
145	5.11	6.04	6.85	7.59	8.37					
150	5.55	6.53	7.38	8.19	9.08					
155	5.99	7.03	7.93	8.83						
160	6.42	7.51	8.48							
165	6.83	7.98	9.04							

TABLE 6. AIRCRAFT PERFORMANCE, TAKEOFF (BOEING 727-200 SERIES)
JT8D-7 ENGINE, 15° FLAPS

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 LBS)

TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	173.0	173.0	173.0	169.5	163.4	157.4	151.6	145.9	140.2
55	173.0	173.0	173.0	167.0	161.0	155.1	149.4	144.0	138.9
60	173.0	173.0	170.9	164.7	158.9	153.4	148.3	143.4	138.9
65	173.0	173.0	170.9	164.7	158.9	153.4	148.3	143.4	138.9
70	173.0	173.0	170.9	164.7	158.9	153.4	148.3	143.4	138.9
75	173.0	173.0	170.9	164.7	158.9	153.4	148.3	143.4	138.9
80	173.0	173.0	170.9	164.7	158.9	153.4	148.3	142.8	137.5
85	173.0	173.0	170.2	164.0	158.1	152.3	146.7	141.2	135.8
90	173.0	172.7	166.5	160.4	154.6	148.9	143.5	138.1	132.9
95	173.0	168.9	162.8	156.9	151.1	145.6	140.2	135.1	130.0
100	171.2	165.1	159.1	153.3	147.7	142.3	137.1	132.0	127.1
105	167.2	161.3	155.5	149.8	144.4	139.0	133.9	128.9	
110	163.2	157.4	151.8	146.3	141.0	135.8	130.7	125.9	

REFERENCE FACTOR "R"

TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	40.0	41.0	44.0	47.4	51.2	55.3	59.8	64.8	70.1
55	40.0	42.1	45.4	49.0	52.9	57.1	61.7	66.8	72.5
60	40.0	43.1	46.3	49.8	53.8	58.3	62.6	67.4	72.6
65	40.3	43.4	46.7	50.3	54.3	58.8	63.1	67.7	73.2
70	40.7	43.8	47.1	50.7	54.8	59.3	63.3	68.2	73.7
75	41.0	44.2	47.5	51.2	55.2	59.9	63.8	69.0	74.4
80	41.4	44.5	47.9	51.6	55.7	60.3	64.7	70.1	75.5
85	42.0	45.2	48.7	52.5	56.8	61.3	66.4	71.8	77.8
90	43.4	46.6	50.2	54.2	58.6	63.3	68.5	74.2	80.4
95	44.9	48.3	52.0	56.1	60.6	65.6	71.0	77.0	83.4
100	46.6	50.1	54.0	58.2	62.9	68.1	73.8	80.0	86.8
105	48.4	52.0	56.0	60.4	65.3	70.7	76.7	83.3	
110	50.2	54.0	58.2	62.7	67.8	73.4	79.7	86.6	

RUNWAY LENGTH (1000 FEET)

WEIGHT 1000 LBS	REFERENCE FACTOR "R"										
	40	45	50	55	60	65	70	75	80	85	90
110	3.38	3.78	4.19	4.61	5.03	5.45	5.87	6.28	6.68	7.06	7.44
115	3.69	4.14	4.59	5.05	5.51	5.96	6.42	6.87	7.31	7.75	8.17
120	4.01	4.51	5.01	5.51	6.00	6.50	7.00	7.50	8.00	8.49	8.99
125	4.34	4.89	5.44	5.98	6.53	7.07	7.62	8.18	8.74	9.32	9.91
130	4.69	5.29	5.89	6.48	7.08	7.68	8.29	8.92	9.57	10.25	10.95
135	5.04	5.71	6.36	7.01	7.66	8.33	9.02	9.74	10.50	11.30	12.15
140	5.42	6.14	6.86	7.57	8.29	9.04	9.82	10.65	11.53	12.48	
145	5.81	6.60	7.38	8.17	8.97	9.81	10.70	11.66			
150	6.22	7.09	7.94	8.81	9.71	10.65	11.67				
155	6.66	7.60	8.54	9.50	10.50	11.57					
160	7.12	8.15	9.18	10.24	11.37	12.58					
165	7.61	8.73	9.86	11.04	12.30						
170	8.12	9.34	10.59	11.90							
175	8.67	10.00	11.37								

TABLE 7. AIRCRAFT PERFORMANCE, TAKEOFF (BOEING 727-200 SERIES)
JT8D-7 ENGINE, 5° FLAPS

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 LBS)

TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	173.0	173.0	173.0	173.0	170.7	164.4	158.3	152.5	146.9
55	173.0	173.0	173.0	173.0	167.8	161.5	155.6	150.1	145.3
60	173.0	173.0	173.0	171.9	165.8	159.9	154.6	149.7	145.3
65	173.0	173.0	173.0	171.9	165.8	159.9	154.6	149.7	145.3
70	173.0	173.0	173.0	171.9	165.8	159.9	154.6	149.7	145.3
75	173.0	173.0	173.0	171.9	165.8	159.9	154.6	149.7	145.3
80	173.0	173.0	173.0	171.9	165.8	159.9	154.6	149.2	143.6
85	173.0	173.0	173.0	171.3	165.1	159.1	153.2	147.5	141.8
90	173.0	173.0	173.0	167.7	161.6	155.6	149.9	144.2	138.8
95	173.0	173.0	170.2	164.1	158.0	152.2	146.5	141.0	135.7
100	173.0	172.5	166.4	160.3	154.4	148.7	143.2	137.8	132.6
105	173.0	168.5	162.4	156.5	150.8	145.2	139.8	134.6	
110	170.3	164.4	158.5	152.7	147.1	141.7	136.4	131.3	

REFERENCE FACTOR "R"

TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	55.0	56.8	61.9	67.3	73.0	79.2	86.1	93.7	102.1
55	55.2	58.6	63.7	69.2	75.2	81.6	88.6	96.4	105.0
60	55.3	60.0	65.2	70.8	76.9	83.5	90.3	97.7	105.6
65	55.8	60.6	65.8	71.4	77.5	84.3	91.1	98.6	106.6
70	56.3	61.2	66.4	72.0	78.2	85.0	92.0	99.3	107.3
75	56.8	61.7	67.0	72.7	78.9	85.6	92.8	100.2	108.4
80	57.4	62.2	67.5	73.4	79.6	86.4	93.3	101.5	110.3
85	58.1	63.1	68.5	74.3	80.7	87.7	95.4	103.9	113.3
90	60.4	65.5	71.0	77.1	83.7	91.0	99.0	107.9	117.6
95	62.8	68.2	74.0	80.2	87.1	94.7	103.1	112.3	122.5
100	65.5	71.1	77.1	83.7	90.9	98.8	107.5	117.1	127.8
105	68.2	74.1	80.4	87.2	94.8	103.0	112.2	122.2	
110	71.0	77.0	83.6	90.7	98.6	107.3	116.9	127.5	

RUNWAY LENGTH (1000 FEET)

WEIGHT 1000 LBS	REFERENCE FACTOR "R"								
	50	60	70	80	90	100	110	120	130
110	5.50	5.50	5.50	5.50	5.71	6.35	6.99	7.62	8.24
115	5.50	5.50	5.50	5.61	6.31	7.01	7.70	8.39	9.07
120	5.50	5.50	5.50	6.16	6.93	7.70	8.46	9.21	9.96
125	5.50	5.50	5.90	6.75	7.59	8.43	9.26	10.09	10.91
130	5.50	5.51	6.43	7.36	8.28	9.19	10.11	11.02	11.92
135	5.50	5.98	6.99	8.00	9.00	10.00	11.01	12.01	13.00
140	5.50	6.48	7.58	8.67	9.76	10.86	11.96	13.05	14.16
145	5.81	7.00	8.19	9.37	10.56	11.76	12.96	14.17	15.39
150	6.26	7.54	8.82	10.11	11.40	12.71	14.02	15.35	
155	6.72	8.10	9.49	10.88	12.29	13.70	15.14		
160	7.20	8.69	10.19	11.69	13.21	14.76			
165	7.71	9.30	10.91	12.54	14.19	15.86			
170	8.23	9.94	11.67	13.42	15.21				
175	8.77	10.61	12.47	14.35					

TABLE 8. AIRCRAFT PERFORMANCE, LANDING (BOEING 727-200 SERIES)
JT8D-9 ENGINE, 40° FLAPS

MAXIMUM ALLOWABLE LANDING WEIGHT (1000 LBS)

TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	142.5	142.5	142.5	142.5	142.5	142.5	142.5	138.3	133.2
55	142.5	142.5	142.5	142.5	142.5	142.5	141.4	136.1	131.0
60	142.5	142.5	142.5	142.5	142.5	142.5	139.6	134.3	129.3
65	142.5	142.5	142.5	142.5	142.5	142.5	139.6	134.3	129.3
70	142.5	142.5	142.5	142.5	142.5	142.5	139.6	134.3	129.3
75	142.5	142.5	142.5	142.5	142.5	142.5	139.6	134.3	129.3
80	142.5	142.5	142.5	142.5	142.5	142.5	139.6	134.3	129.3
85	142.5	142.5	142.5	142.5	142.5	142.5	138.7	133.5	128.7
90	142.5	142.5	142.5	142.5	142.5	141.0	135.7	130.6	125.8
95	142.5	142.5	142.5	142.5	142.5	137.9	132.7	127.7	122.9
100	142.5	142.5	142.5	142.5	139.9	134.7	129.7	124.8	120.0
105	142.5	142.5	142.5	141.8	136.6	131.5	126.6	121.8	117.1
110	142.5	142.5	142.5	138.3	133.3	128.3	123.5	118.8	114.3

RUNWAY LENGTH (1000 FEET)

WEIGHT 1000 LBS	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
110	4.01	4.09	4.17	4.26	4.36	4.46	4.56	4.66	4.75
115	4.15	4.23	4.31	4.40	4.50	4.60	4.70	4.81	4.92
120	4.29	4.38	4.47	4.56	4.66	4.76	4.87	4.98	5.10
125	4.43	4.54	4.64	4.73	4.83	4.94	5.05	5.17	5.30
130	4.59	4.70	4.81	4.91	5.02	5.13	5.24	5.37	5.51
135	4.74	4.86	4.98	5.09	5.20	5.32	5.44	5.57	5.72
140	4.91	5.03	5.14	5.26	5.38	5.50	5.63	5.77	5.92
145	5.08	5.19	5.30	5.42	5.55	5.68	5.82	5.96	6.11
150	5.25	5.34	5.44	5.56	5.69	5.83	5.98	6.14	6.30

AIRPLANE CHARACTERISTICS	UNIT OF MEASURE	ADVANCED OPTION
TYPICAL OPERATING EMPTY WEIGHT PLUS RESERVE FUEL	LBS.	114,800
AVERAGE FUEL CONSUMPTION	LBS./MILE	19
TYPICAL MAXIMUM PASSENGER LOAD @200 LBS./PASSENGER	LBS.	26,800
MAXIMUM STRUCTURAL PAYLOAD	LBS.	40,300

TABLE 9. AIRCRAFT PERFORMANCE, LANDING (BOEING 727-200 SERIES)
JT8D-9 ENGINE, 30° FLAPS

MAXIMUM ALLOWABLE LANDING WEIGHT (1000 LBS)

TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	148.0	148.0	148.0	148.0	148.0	148.0	148.0	148.0	148.0
55	148.0	148.0	148.0	148.0	148.0	148.0	148.0	148.0	148.0
60	148.0	148.0	148.0	148.0	148.0	148.0	148.0	148.0	147.5
65	148.0	148.0	148.0	148.0	148.0	148.0	148.0	148.0	147.5
70	148.0	148.0	148.0	148.0	148.0	148.0	148.0	148.0	147.5
75	148.0	148.0	148.0	148.0	148.0	148.0	148.0	148.0	147.5
80	148.0	148.0	148.0	148.0	148.0	148.0	148.0	148.0	147.5
85	148.0	148.0	148.0	148.0	148.0	148.0	148.0	148.0	146.8
90	148.0	148.0	148.0	148.0	148.0	148.0	148.0	148.0	143.6
95	148.0	148.0	148.0	148.0	148.0	148.0	148.0	145.8	140.3
100	148.0	148.0	148.0	148.0	148.0	148.0	147.9	142.4	136.9
105	148.0	148.0	148.0	148.0	148.0	148.0	144.4	138.9	133.4
110	148.0	148.0	148.0	148.0	148.0	146.3	140.8	135.3	130.0

RUNWAY LENGTH (1000 FEET)

WEIGHT 1000 LBS	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
110	4.43	4.52	4.62	4.72	4.82	4.93	5.04	5.15	5.27
115	4.58	4.67	4.78	4.88	4.99	5.10	5.21	5.33	5.46
120	4.73	4.83	4.94	5.05	5.16	5.28	5.40	5.52	5.66
125	4.88	4.99	5.10	5.22	5.33	5.46	5.59	5.72	5.86
130	5.04	5.15	5.27	5.39	5.52	5.64	5.78	5.92	6.06
135	5.20	5.32	5.44	5.57	5.70	5.83	5.97	6.12	6.27
140	5.37	5.49	5.62	5.75	5.88	6.02	6.17	6.32	6.47
145	5.53	5.66	5.79	5.93	6.07	6.21	6.36	6.52	6.67
150	5.70	5.83	5.97	6.11	6.25	6.40	6.56	6.71	6.86

TABLE 10. AIRCRAFT PERFORMANCE, TAKEOFF (BOEING 727-200 SERIES)
JT8D-9 ENGINE, 25° FLAPS

TEMP °F	MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 LBS)								
	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	170.6	169.6	163.3	157.3	151.5	145.9	140.5	135.3	130.1
55	170.6	166.6	160.6	154.8	149.1	143.7	138.4	133.3	128.2
60	170.6	164.4	158.4	152.7	147.2	142.0	136.9	131.8	126.7
65	170.6	164.4	158.4	152.7	147.2	142.0	136.9	131.8	126.7
70	170.6	164.4	158.4	152.7	147.2	142.0	136.9	131.8	126.7
75	170.6	164.4	158.4	152.7	147.2	142.0	136.9	131.8	126.7
80	170.6	164.4	158.4	152.7	147.2	142.0	136.9	131.8	126.7
85	170.0	163.8	157.8	152.1	146.7	141.4	136.2	131.2	126.2
90	166.4	160.3	154.5	148.9	143.5	138.3	133.3	128.3	123.4
95	162.8	156.8	151.2	145.7	140.4	135.3	130.3	125.4	120.7
100	159.1	153.4	147.8	142.5	137.3	132.2	127.4	122.6	118.0
105	155.5	149.9	144.5	139.2	134.1	129.2	124.4	119.8	115.4
110	151.9	146.4	141.1	136.0	131.0	126.2	121.6	117.1	

TEMP °F	REFERENCE FACTOR "R"								
	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	35.0	35.2	37.7	40.6	43.9	47.5	51.6	56.1	61.2
55	35.0	35.9	38.6	41.6	44.9	48.6	52.7	57.4	62.7
60	35.0	36.7	39.6	42.7	46.1	49.9	54.2	59.0	64.4
65	35.0	37.0	39.9	43.0	46.5	50.4	54.7	59.6	65.0
70	35.0	37.4	40.2	43.4	46.9	50.9	55.3	60.2	65.6
75	35.1	37.7	40.6	43.8	47.3	51.3	55.8	60.7	66.2
80	35.5	38.0	40.9	44.1	47.7	51.8	56.3	61.3	66.8
85	36.0	38.5	41.4	44.7	48.4	52.6	57.2	62.2	67.7
90	37.1	39.7	42.8	46.3	50.2	54.6	59.4	64.6	70.4
95	38.3	41.1	44.3	48.0	52.0	56.6	61.6	67.0	73.0
100	39.6	42.6	45.9	49.7	54.0	58.7	63.9	69.5	75.6
105	41.0	44.1	47.6	51.6	56.0	60.9	66.2	72.1	78.4
110	42.3	45.7	49.4	53.6	58.2	63.2	68.8	74.7	

WEIGHT 1000 LBS	RUNWAY LENGTH (1000 FEET)									
	REFERENCE FACTOR "R"									
	35	40	45	50	55	60	65	70	75	80
110	3.50	3.50	3.77	4.16	4.55	4.95	5.36	5.77	6.20	6.63
115	3.50	3.68	4.13	4.57	5.01	5.46	5.91	6.36	6.82	7.28
120	3.50	4.00	4.51	5.01	5.50	6.00	6.50	7.00	7.50	8.02
125	3.76	4.35	4.91	5.47	6.02	6.57	7.12	7.67	8.23	8.81
130	4.06	4.71	5.35	5.96	6.57	7.16	7.76	8.37	8.99	
135	4.37	5.11	5.81	6.48	7.13	7.77	8.42	9.07		
140	4.70	5.53	6.29	7.02	7.71	8.39	9.07			
145	5.05	5.97	6.81	7.58	8.31	9.01				
150	5.43	6.44	7.34	8.15	8.91					
155	5.82	6.93	7.90	8.75						
160	6.23	7.45	8.48							
165	6.67	7.99	9.08							
170	7.12	8.56								
175	7.60	9.15								
180	8.09									

TABLE 13. AIRCRAFT PERFORMANCE, LANDING (DC-8-61)
JT3D-3B ENGINE, FULL FLAPS

MAXIMUM ALLOWABLE LANDING WEIGHT (1000 LBS)

TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	240.0	240.0	240.0	240.0	240.0	240.0	240.0	240.0	240.0
55	240.0	240.0	240.0	240.0	240.0	240.0	240.0	240.0	240.0
60	240.0	240.0	240.0	240.0	240.0	240.0	240.0	240.0	240.0
65	240.0	240.0	240.0	240.0	240.0	240.0	240.0	240.0	240.0
70	240.0	240.0	240.0	240.0	240.0	240.0	240.0	240.0	240.0
75	240.0	240.0	240.0	240.0	240.0	240.0	240.0	240.0	240.0
80	240.0	240.0	240.0	240.0	240.0	240.0	240.0	240.0	240.0
85	240.0	240.0	240.0	240.0	240.0	240.0	240.0	240.0	240.0
90	240.0	240.0	240.0	240.0	240.0	240.0	240.0	240.0	235.5
95	240.0	240.0	240.0	240.0	240.0	240.0	240.0	238.9	230.2
100	240.0	240.0	240.0	240.0	240.0	240.0	240.0	233.0	224.5
105	240.0	240.0	240.0	240.0	240.0	240.0	235.7	226.9	218.6
110	240.0	240.0	240.0	240.0	240.0	238.1	229.2	220.7	212.5

RUNWAY LENGTH (1000 FEET)

WEIGHT 1000 LBS	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
140	4.52	4.62	4.73	4.85	4.99	5.16	5.38	5.65	5.98
150	4.77	4.88	4.99	5.12	5.28	5.46	5.69	5.96	6.29
160	5.02	5.13	5.25	5.40	5.57	5.77	6.00	6.28	6.61
170	5.27	5.39	5.52	5.67	5.86	6.07	6.32	6.61	6.94
180	5.52	5.64	5.79	5.95	6.15	6.37	6.63	6.93	7.27
190	5.77	5.90	6.05	6.23	6.44	6.68	6.95	7.26	7.61
200	6.03	6.16	6.32	6.51	6.73	6.98	7.27	7.59	7.96
210	6.28	6.43	6.59	6.79	7.02	7.28	7.58	7.92	8.31
220	6.54	6.69	6.87	7.07	7.31	7.58	7.90	8.25	8.66
230	6.80	6.95	7.14	7.35	7.60	7.88	8.21	8.58	9.01
240	7.05	7.22	7.41	7.63	7.89	8.18	8.52	8.91	9.36
250	7.31	7.49	7.69	7.91	8.17	8.47	8.82	9.23	9.70
260	7.56	7.76	7.96	8.19	8.45	8.76	9.12	9.55	10.05

AIRPLANE CHARACTERISTICS

UNIT OF
MEASURETYPICAL OPERATING EMPTY
WEIGHT PLUS RESERVE FUEL

LBS. 174,100

AVERAGE FUEL CONSUMPTION

LBS./MILE 29

TYPICAL MAXIMUM PASSENGER
LOAD @200 LBS./PASSENGER

LBS. 51,800

MAXIMUM STRUCTURAL PAYLOAD

LBS. 71,877

TABLE 14. AIRCRAFT PERFORMANCE, TAKEOFF (DC-8-61)
JT3D-3B ENGINE, 25° FLAPS

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 LBS)

TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	325.0	322.5	311.1	299.9	289.1	278.6	268.3	258.3	248.5
55	325.0	317.2	306.1	295.2	284.6	274.2	264.1	254.3	244.8
60	325.0	313.5	302.2	291.3	280.7	270.5	260.6	250.9	241.5
65	325.0	313.5	302.2	291.3	280.7	270.5	260.6	250.9	241.5
70	325.0	313.5	302.2	291.3	280.7	270.5	260.6	250.9	241.3
75	325.0	313.5	302.2	291.3	280.7	270.5	260.6	250.9	241.5
80	325.0	313.5	302.2	291.3	280.7	270.5	260.6	250.9	241.5
85	323.5	311.9	300.7	290.0	279.5	269.4	259.6	249.9	240.5
90	316.5	305.5	294.8	284.4	274.2	264.3	254.6	245.0	235.5
95	310.1	299.4	289.0	278.9	268.9	259.2	249.6	240.2	230.9
100	303.5	293.0	282.8	272.9	263.1	253.6	244.3	235.2	226.2
105	295.9	285.6	275.7	265.9	256.4	247.1	238.1	229.3	220.6
110	286.5	276.6	266.9	257.5	248.3	239.3	230.5	221.9	213.5

REFERENCE FACTOR "R"

TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	47.2	49.5	52.2	55.6	59.4	63.6	68.3	73.2	78.5
55	47.7	50.3	53.3	56.8	60.7	65.1	69.9	75.0	80.6
60	47.9	50.9	54.3	58.0	62.1	66.5	71.4	76.7	82.4
65	48.3	51.4	54.8	58.5	62.6	67.1	72.0	77.3	83.0
70	48.8	51.8	55.3	59.1	63.2	67.7	72.7	78.0	83.8
75	49.2	52.3	55.7	59.5	63.7	68.3	73.2	78.6	84.5
80	49.6	52.8	56.2	60.0	64.1	68.7	73.8	79.3	85.2
85	50.2	53.4	56.9	60.8	65.0	69.6	74.6	80.2	86.2
90	51.2	54.7	58.4	62.4	66.8	71.5	76.7	82.5	88.8
95	52.6	56.2	60.1	64.2	68.7	73.7	79.1	85.1	91.7
100	54.3	58.0	61.9	66.2	70.9	76.1	81.7	88.0	95.0
105	56.0	59.8	63.9	68.3	73.2	78.6	84.6	91.2	98.5
110	57.7	61.6	65.9	70.5	75.7	81.4	87.7	94.6	102.3

RUNWAY LENGTH (1000 FEET)

WEIGHT 1000 LBS	REFERENCE FACTOR "R"							
	40	50	60	70	80	90	100	110
180	3.00	3.61	4.26	4.90	5.53	6.15	6.76	7.35
190	3.19	3.93	4.65	5.37	6.08	6.79	7.49	8.19
200	3.44	4.26	5.07	5.88	6.68	7.48	8.27	9.07
210	3.71	4.62	5.52	6.42	7.32	8.21	9.11	10.01
220	4.00	5.00	6.00	7.00	8.00	9.00	10.00	11.00
230	4.31	5.41	6.51	7.62	8.73	9.84	10.95	12.05
240	4.64	5.83	7.05	8.28	9.51	10.74	11.96	
250	4.99	6.29	7.62	8.98	10.34	11.70		
260	5.36	6.77	8.23	9.73	11.23			
270	5.75	7.27	8.87	10.52	12.18			
280	6.16	7.80	9.55	11.36				
290	6.59	8.36	10.27	12.25				
300	7.03	8.94	11.02					
310	7.50	9.56	11.82					
320	7.98	10.20						
330	8.48	10.86						

TABLE 15. AIRCRAFT PERFORMANCE, TAKEOFF (DC-8-61)
JT3D-3B ENGINE, 15° FLAPS

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 LBS)

TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	325.0	325.0	325.0	324.8	312.4	300.9	289.9	279.2	268.5
55	325.0	325.0	325.0	319.2	307.5	296.2	285.3	274.7	264.5
60	325.0	325.0	325.0	314.9	303.4	292.3	281.5	271.0	260.8
65	325.0	325.0	325.0	314.9	303.4	292.3	281.5	271.0	260.8
70	325.0	325.0	325.0	314.9	303.4	292.3	281.5	271.0	260.8
75	325.0	325.0	325.0	314.9	303.4	292.3	281.5	271.0	260.8
80	325.0	325.0	325.0	314.9	303.4	292.3	281.5	271.0	260.8
85	325.0	325.0	325.0	313.6	302.1	291.1	280.3	269.9	259.7
90	325.0	325.0	318.3	306.6	295.5	284.7	274.3	264.2	254.3
95	325.0	322.5	310.6	299.2	288.4	278.0	267.9	258.1	248.4
100	325.0	314.3	302.8	291.8	281.3	271.2	261.4	251.9	242.5
105	318.4	306.6	295.5	284.8	274.6	264.8	255.2	245.9	236.7
110	311.2	299.9	289.0	278.6	268.6	258.9	249.5	240.3	231.2

REFERENCE FACTOR "R"

TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	49.7	51.7	55.2	58.6	62.5	66.8	71.6	76.9	82.6
55	50.2	52.7	56.3	59.8	63.8	68.3	73.3	78.7	84.7
60	50.6	53.7	57.2	61.0	65.3	69.9	75.0	80.5	86.4
65	51.0	54.1	57.6	61.5	65.8	70.5	75.6	81.1	87.1
70	51.4	54.5	58.0	62.0	66.3	71.1	76.3	81.8	87.8
75	51.8	54.9	58.5	62.4	66.8	71.7	76.9	82.5	88.5
80	52.1	55.3	58.9	62.9	67.4	72.2	77.5	83.2	89.2
85	52.6	55.9	59.7	63.7	68.2	73.1	78.4	84.2	90.5
90	53.8	57.5	61.3	65.6	70.2	75.2	80.7	86.7	93.2
95	55.5	59.2	63.2	67.6	72.3	77.5	83.2	89.5	96.5
100	57.2	61.1	65.2	69.7	74.6	80.0	86.0	92.6	100.0
105	59.0	62.9	67.2	71.8	77.0	82.6	88.9	95.8	103.5
110	60.4	64.6	69.1	74.0	79.3	85.2	91.7	98.9	106.8

RUNWAY LENGTH (1000 FEET)

WEIGHT 1000 LBS	REFERENCE FACTOR "R"							
	40	50	60	70	80	90	100	110
180	4.00	4.00	4.27	4.91	5.55	6.18	6.81	7.42
190	4.00	4.00	4.67	5.38	6.10	6.80	7.51	8.22
200	4.00	4.28	5.09	5.89	6.68	7.48	8.28	9.08
210	4.00	4.63	5.53	6.43	7.32	8.21	9.11	10.02
220	4.00	5.00	6.00	7.00	7.99	8.99	10.00	11.02
230	4.29	5.39	6.50	7.61	8.72	9.83	10.95	12.08
240	4.61	5.81	7.03	8.26	9.49	10.73	11.96	13.19
250	4.95	6.25	7.58	8.94	10.31	11.68	13.03	
260	5.32	6.71	8.17	9.67	11.19	12.69	14.16	
270	5.70	7.20	8.80	10.45	12.11	13.75		
280	6.10	7.72	9.46	11.27	13.09			
290	6.52	8.26	10.15	12.13	14.12			
300	6.96	8.83	10.89	13.05				
310	7.41	9.43	11.67	14.01				
320	7.89	10.06	12.49					
330	8.38	10.72	13.35					

TABLE 16. AIRCRAFT PERFORMANCE, LANDING (DC-10-10)
CF6-6D ENGINE, 50° FLAPS

MAXIMUM ALLOWABLE LANDING WEIGHT (1000 LBS)

TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	363.5	363.5	363.5	363.5	363.5	363.5	363.5	363.5	363.5
55	363.5	363.5	363.5	363.5	363.5	363.5	363.5	363.5	363.5
60	363.5	363.5	363.5	363.5	363.5	363.5	363.5	363.5	363.5
65	363.5	363.5	363.5	363.5	363.5	363.5	363.5	363.5	363.5
70	363.5	363.5	363.5	363.5	363.5	363.5	363.5	363.5	359.8
75	363.5	363.5	363.5	363.5	363.5	363.5	363.5	363.5	350.9
80	363.5	363.5	363.5	363.5	363.5	363.5	363.5	355.6	342.3
85	363.5	363.5	363.5	363.5	363.5	363.5	359.8	346.6	333.9
90	363.5	363.5	363.5	363.5	363.5	363.5	350.6	337.8	325.5
95	363.5	363.5	363.5	363.5	363.5	354.6	341.7	329.2	317.0
100	363.5	363.5	363.5	363.5	358.4	345.5	332.8	320.5	308.5
105	363.5	363.5	363.5	362.1	349.1	336.4	324.0	312.0	
110	363.5	363.5	363.5	352.7	339.9	327.5			

RUNWAY LENGTH (1000 FEET)

WEIGHT 1000 LBS	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
240	4.81	4.93	5.04	5.16	5.29	5.42	5.56	5.70	5.85
250	4.97	5.09	5.21	5.34	5.47	5.61	5.75	5.89	6.04
260	5.13	5.25	5.38	5.51	5.65	5.79	5.94	6.09	6.24
270	5.28	5.41	5.54	5.68	5.82	5.97	6.12	6.28	6.43
280	5.44	5.57	5.71	5.85	6.00	6.15	6.31	6.47	6.63
290	5.59	5.73	5.87	6.02	6.17	6.33	6.49	6.66	6.83
300	5.75	5.89	6.04	6.19	6.35	6.51	6.68	6.85	7.03
310	5.90	6.05	6.20	6.36	6.52	6.69	6.86	7.04	7.22
320	6.06	6.21	6.37	6.53	6.70	6.87	7.05	7.23	7.42
330	6.21	6.37	6.54	6.70	6.87	7.05	7.23	7.42	7.62
340	6.37	6.53	6.69	6.86	7.03	7.21	7.40	7.59	7.79
350	6.51	6.66	6.83	7.00	7.19	7.37	7.57	7.78	7.99
360	6.64	6.81	6.98	7.16	7.35	7.54	7.75	7.96	8.18
370	6.77	6.96	7.14	7.33	7.52	7.71	7.92	8.13	8.37

AIRPLANE CHARACTERISTICS

UNIT OF
MEASURE

TYPICAL OPERATING EMPTY
WEIGHT PLUS RESERVE FUEL

LBS. 263,300

AVERAGE FUEL CONSUMPTION

LBS./MILE 30

TYPICAL MAXIMUM PASSENGER
LOAD @200 LBS./PASSENGER

LBS. 54,000

MAXIMUM STRUCTURAL PAYLOAD

LBS. 99,660

TABLE 17. AIRCRAFT PERFORMANCE, LANDING (DC-10-10)
CF6-6D ENGINE, 35° FLAPS

MAXIMUM ALLOWABLE LANDING WEIGHT (1000 LBS)

TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	363.5	363.5	363.5	363.5	363.5	363.5	363.5	363.5	363.5
55	363.5	363.5	363.5	363.5	363.5	363.5	363.5	363.5	363.5
60	363.5	363.5	363.5	363.5	363.5	363.5	363.5	363.5	363.5
65	363.5	363.5	363.5	363.5	363.5	363.5	363.5	363.5	363.5
70	363.5	363.5	363.5	363.5	363.5	363.5	363.5	363.5	363.5
75	363.5	363.5	363.5	363.5	363.5	363.5	363.5	363.5	363.5
80	363.5	363.5	363.5	363.5	363.5	363.5	363.5	363.5	358.0
85	363.5	363.5	363.5	363.5	363.5	363.5	363.5	362.4	348.8
90	363.5	363.5	363.5	363.5	363.5	363.5	363.5	353.0	339.9
95	363.5	363.5	363.5	363.5	363.5	363.5	357.0	343.9	331.3
100	363.5	363.5	363.5	363.5	363.5	361.0	347.8	335.2	323.0
105	363.5	363.5	363.5	363.5	363.5	351.7	339.0	326.8	
110	363.5	363.5	363.5	363.5	355.7	342.8			

RUNWAY LENGTH (1000 FEET)

WEIGHT 1000 LBS	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
240	5.44	5.56	5.69	5.82	5.96	6.10	6.25	6.40	6.56
250	5.61	5.73	5.86	6.00	6.14	6.29	6.45	6.61	6.78
260	5.78	5.90	6.04	6.18	6.33	6.49	6.65	6.82	7.00
270	5.95	6.08	6.22	6.37	6.52	6.69	6.86	7.04	7.22
280	6.12	6.26	6.40	6.55	6.72	6.89	7.06	7.25	7.43
290	6.30	6.43	6.58	6.74	6.91	7.09	7.27	7.46	7.65
300	6.47	6.61	6.76	6.93	7.10	7.28	7.47	7.66	7.86
310	6.64	6.78	6.94	7.11	7.29	7.48	7.68	7.87	8.07
320	6.81	6.96	7.12	7.30	7.49	7.68	7.88	8.08	8.28
330	6.97	7.13	7.30	7.48	7.67	7.87	8.08	8.29	8.49
340	7.11	7.30	7.48	7.67	7.86	8.05	8.26	8.47	8.70
350	7.29	7.47	7.65	7.83	8.02	8.22	8.44	8.67	8.92
360	7.45	7.62	7.80	7.99	8.19	8.40	8.63	8.86	9.11
370	7.57	7.76	7.96	8.17	8.38	8.60	8.82	9.05	9.29

TABLE 18. AIRCRAFT PERFORMANCE, TAKEOFF (DC-10-10)
CF6-6D ENGINE, 25° FLAPS

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 LBS)

TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	378.0	370.5	363.5	356.6	349.6	342.5	335.1	327.5	319.5
55	378.1	370.5	363.4	356.6	349.5	342.5	335.2	327.5	319.5
60	378.3	370.5	363.3	356.5	349.4	342.5	335.3	327.5	319.5
65	378.4	370.5	363.2	356.4	349.3	342.5	335.4	327.5	314.2
70	378.6	370.5	363.2	356.3	349.2	342.5	332.9	320.1	307.7
75	378.8	370.5	363.1	356.3	349.1	337.0	324.6	312.7	301.1
80	378.9	370.5	363.0	353.5	340.4	328.1	316.5	305.3	294.4
85	379.0	370.5	356.4	343.3	331.0	319.5	308.5	297.9	287.6
90	373.3	359.0	345.8	333.5	322.0	311.1	300.7	290.5	280.5
95	361.5	348.1	335.7	324.1	313.3	302.9	292.8	283.0	
100	350.6	337.9	326.1	315.2	304.8	294.8	285.0	275.2	
105	340.7	328.5	317.2	306.6	296.5	286.7	277.0		
110	332.0	320.0	308.9	298.5	288.5	278.7			

REFERENCE FACTOR "R"

TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	41.5	43.4	45.5	47.8	50.2	53.0	56.0	59.3	63.0
55	41.8	43.8	45.9	48.1	50.7	53.4	56.5	59.9	63.6
60	42.2	44.1	46.2	48.5	51.1	53.9	57.0	60.4	64.2
65	42.4	44.4	46.6	48.9	51.5	54.3	57.4	60.9	65.4
70	42.7	44.7	46.9	49.3	51.8	54.7	58.2	62.5	67.2
75	43.0	45.1	47.3	49.7	52.3	55.9	60.0	64.5	69.5
80	43.3	45.4	47.7	50.4	53.9	57.8	62.1	66.8	72.2
85	43.6	45.8	48.8	52.2	55.8	59.9	64.4	69.4	75.1
90	44.4	47.4	50.6	54.0	57.9	62.1	66.9	72.4	78.5
95	46.0	49.1	52.4	56.1	60.1	64.6	69.7	75.5	
100	47.6	50.9	54.4	58.2	62.4	67.3	72.8	79.0	
105	49.4	52.7	56.4	60.4	64.9	70.1	76.0		
110	51.1	54.7	58.5	62.7	67.6	73.1			

RUNWAY LENGTH (1000 FEET)

WEIGHT 1000 LBS	REFERENCE FACTOR "R"								
	40	45	50	55	60	65	70	75	80
280	4.00	4.00	4.19	4.59	4.98	5.36	5.74	6.11	6.46
290	4.00	4.02	4.45	4.88	5.31	5.73	6.14	6.55	6.96
300	4.00	4.26	4.72	5.18	5.65	6.11	6.56	7.02	7.48
310	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.51	8.03
320	4.21	4.75	5.29	5.83	6.36	6.91	7.46	8.02	8.61
330	4.43	5.01	5.59	6.16	6.74	7.33	7.93	8.55	
340	4.66	5.29	5.90	6.52	7.13	7.76	8.41		
350	4.89	5.57	6.23	6.88	7.53	8.21			
360	5.14	5.87	6.57	7.26	7.95	8.66			
370	5.41	6.19	6.93	7.65	8.38				
380	5.69	6.52	7.30	8.06	8.82				
390	5.98	6.87	7.69	8.48					
400	6.30	7.24	8.10	8.92					
410	6.63	7.63	8.53						
420	6.99	8.04	8.98						
430	7.36	8.47							

TABLE 19. AIRCRAFT PERFORMANCE, TAKEOFF (DC-10-10)
CF6-6D ENGINE, 20° FLAPS

TEMP °F	MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 LBS)								
	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	393.0	386.0	379.0	371.9	364.8	357.3	349.5	341.5	333.0
55	393.2	386.0	378.9	371.8	364.7	357.3	349.7	341.5	333.0
60	393.3	386.0	378.8	371.7	364.6	357.3	349.8	341.5	333.0
65	393.5	386.0	378.7	371.5	364.5	357.3	349.9	341.5	328.1
70	393.6	386.0	378.7	371.2	364.4	357.3	346.9	334.1	321.6
75	393.8	386.0	378.6	371.0	364.4	351.4	338.7	326.6	314.9
80	393.9	386.0	378.5	368.4	355.1	342.5	330.5	319.0	307.8
85	394.0	386.0	371.7	358.3	345.7	333.7	322.3	311.3	300.5
90	389.0	374.5	360.9	348.3	336.4	325.0	314.1	303.5	293.0
95	376.9	363.2	350.5	338.6	327.3	316.5	305.9	295.6	285.2
100	365.5	352.6	340.6	329.3	318.5	308.0	297.8	287.6	277.3
105	355.3	342.9	331.4	320.4	310.0	299.8	289.7	279.6	
110	346.5	334.4	323.0	312.2	301.8	291.7			

TEMP °F	REFERENCE FACTOR "R"								
	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	42.3	44.2	46.3	48.5	50.9	53.7	56.6	60.0	63.7
55	42.6	44.5	46.6	48.9	51.4	54.2	57.2	60.6	64.3
60	43.0	44.9	47.0	49.3	51.8	54.6	57.7	61.1	64.8
65	43.3	45.2	47.4	49.7	52.3	55.1	58.2	61.5	65.9
70	43.6	45.6	47.8	50.1	52.7	55.5	58.9	63.1	67.7
75	43.9	45.9	48.1	50.5	53.0	56.6	60.7	65.1	70.0
80	44.1	46.3	48.5	51.1	54.6	58.5	62.7	67.4	72.5
85	44.5	46.6	49.6	52.9	56.5	60.5	65.0	69.9	75.4
90	45.2	48.1	51.3	54.7	58.5	62.8	67.5	72.8	78.7
95	46.7	49.8	53.1	56.7	60.7	65.2	70.2	75.9	82.3
100	48.4	51.6	55.0	58.8	63.0	67.8	73.1	79.2	86.2
105	50.1	53.4	57.0	61.0	65.5	70.5	76.3	82.9	
110	51.8	55.4	59.2	63.4	68.1	73.5			

	RUNWAY LENGTH (1000 FEET)									
WEIGHT	REFERENCE FACTOR "R"									
1000 LBS	40	45	50	55	60	65	70	75	80	85
280	4.00	4.00	4.21	4.62	5.02	5.40	5.77	6.13	6.48	6.82
290	4.00	4.02	4.46	4.90	5.33	5.75	6.16	6.56	6.95	7.33
300	4.00	4.26	4.72	5.19	5.65	6.11	6.57	7.02	7.46	7.88
310	4.03	4.50	4.99	5.49	5.99	6.50	7.01	7.51	8.00	8.48
320	4.26	4.75	5.27	5.80	6.35	6.91	7.47	8.03	8.59	9.13
330	4.49	5.01	5.56	6.14	6.74	7.35	7.97	8.59	9.21	
340	4.72	5.27	5.87	6.49	7.15	7.82	8.50	9.19		
350	4.95	5.55	6.19	6.87	7.58	8.32	9.07			
360	5.18	5.83	6.53	7.27	8.05	8.85				
370	5.43	6.13	6.90	7.71	8.55	9.43				
380	5.67	6.45	7.29	8.17	9.09					
390	5.93	6.79	7.71	8.67	9.67					
400	6.19	7.14	8.15	9.21						
410	6.46	7.52	8.63	9.78						
420	6.74	7.92	9.15							
430	7.03	8.35	9.70							

TABLE 20. AIRCRAFT PERFORMANCE, TAKEOFF (DC-10-10)
CF6-6D ENGINE, 15° FLAPS

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 LBS)

TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	408.0	400.6	393.6	386.2	378.7	371.1	363.1	355.0	346.5
55	408.1	400.6	393.5	386.2	378.7	371.1	363.2	355.0	346.5
60	408.3	400.6	393.4	386.1	378.7	371.1	363.3	355.0	346.5
65	408.5	400.6	393.2	385.9	378.6	371.1	363.3	355.0	341.2
70	408.6	400.6	393.1	385.8	378.6	371.1	360.8	347.6	334.5
75	408.8	400.6	393.0	385.7	378.5	365.4	352.4	339.9	327.6
80	408.9	400.6	392.9	382.8	369.1	356.2	343.9	332.1	320.5
85	409.0	400.6	386.0	372.3	359.4	347.1	335.4	324.1	313.1
90	403.6	308.8	374.9	362.0	349.7	338.1	326.9	316.1	305.5
95	391.1	377.3	364.2	352.0	340.3	329.2	318.4	307.9	297.6
100	379.6	366.4	354.1	342.4	331.2	320.4	309.9	299.6	289.4
105	369.1	356.5	344.7	333.3	322.4	311.8	301.5	291.2	
110	360.0	347.7	336.1	324.9	314.1	303.5			

REFERENCE FACTOR "R"

TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	44.1	46.0	48.2	50.6	53.2	56.1	59.3	62.7	66.3
55	44.5	46.4	48.6	51.0	53.7	56.6	59.8	63.3	67.1
60	44.8	46.8	49.0	51.5	54.1	57.0	60.2	63.8	67.6
65	45.0	47.2	49.4	51.9	54.5	57.4	60.6	64.2	68.8
70	45.3	47.5	49.8	52.2	54.9	57.8	61.4	65.9	70.8
75	45.6	47.8	50.2	52.6	55.3	59.1	63.3	67.9	73.1
80	46.0	48.2	50.5	53.4	57.0	61.0	65.4	70.3	75.7
85	46.3	48.5	51.8	55.2	59.0	63.1	67.8	73.0	78.8
90	47.2	50.3	53.6	57.2	61.1	65.5	70.4	75.9	82.2
95	48.8	52.0	55.4	59.2	63.3	68.0	73.2	79.2	85.9
100	50.5	53.8	57.4	61.4	65.8	70.7	76.3	82.7	90.0
105	52.3	55.7	59.5	63.7	68.3	73.6	79.7	86.5	
110	54.1	57.8	61.7	66.1	71.1	76.8			

RUNWAY LENGTH (1000 FEET)

WEIGHT 1000 LBS	REFERENCE FACTOR "R"					
	40	50	60	70	80	90
280	4.00	4.22	4.99	5.76	6.54	7.35
290	4.00	4.47	5.32	6.17	7.02	7.87
300	4.00	4.72	5.66	6.60	7.52	8.41
310	4.02	5.00	6.02	7.04	8.04	8.96
320	4.23	5.28	6.39	7.50	8.56	9.51
330	4.44	5.58	6.78	7.98	9.09	10.05
340	4.67	5.89	7.18	8.46	9.63	10.59
350	4.90	6.21	7.60	8.95	10.16	
360	5.13	6.55	8.03	9.45	10.68	
370	5.38	6.89	8.46	9.94		
380	5.63	7.25	8.91	10.44		
390	5.89	7.63	9.36	10.92		
400	6.17	8.01	9.82			
410	6.45	8.40	10.29			
420	6.74	8.81	10.75			
430	7.04	9.23	11.23			

TABLE 21. AIRCRAFT PERFORMANCE, TAKEOFF (DC-10-10)
CF6-6D ENGINE, 10° FLAPS

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 LBS)									
TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	424.5	416.9	409.0	401.5	393.7	385.6	377.2	368.8	359.5
55	424.7	416.9	408.9	401.4	393.6	385.6	377.3	368.8	359.5
60	424.9	416.9	408.8	401.2	393.5	385.6	377.4	368.8	359.5
65	425.0	416.9	408.8	401.0	393.4	385.6	377.5	368.8	354.4
70	425.1	416.9	408.7	400.7	393.3	385.6	375.0	361.2	347.5
75	425.2	416.9	408.6	400.5	393.2	379.6	366.2	353.2	340.2
80	425.4	416.9	408.5	397.8	383.4	370.0	357.3	344.9	332.5
85	425.5	416.9	401.1	386.6	373.2	360.5	348.3	336.4	324.5
90	419.8	404.0	389.4	375.9	363.2	351.1	339.4	327.8	316.3
95	406.5	391.9	378.4	365.6	353.5	341.8	330.5	319.2	307.9
100	394.4	380.8	368.0	355.7	344.0	332.7	321.6	310.5	299.4
105	383.6	370.6	358.2	346.3	334.8	323.7	312.8	301.9	
110	374.0	361.2	349.0	337.2	325.9	314.8			

REFERENCE FACTOR "R"									
TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	46.4	48.6	51.0	53.6	56.4	59.5	62.9	66.6	70.7
55	46.8	49.0	51.3	54.0	56.8	60.0	63.4	67.3	71.5
60	47.1	49.4	51.8	54.4	57.3	60.4	63.9	67.8	72.1
65	47.5	49.8	52.3	54.9	57.8	60.9	64.4	68.2	73.3
70	47.9	50.2	52.7	55.4	58.3	61.4	65.3	70.2	75.4
75	48.3	50.7	53.2	55.8	58.8	62.8	67.4	72.4	77.8
80	48.6	51.0	53.5	56.6	60.5	64.9	69.7	74.9	80.7
85	49.0	51.3	54.8	58.6	62.7	67.2	72.2	77.7	83.9
90	49.7	53.2	56.8	60.7	65.0	69.7	75.0	80.9	87.5
95	51.6	55.1	58.9	62.9	67.4	72.4	78.0	84.4	91.5
100	53.5	57.1	61.1	65.3	70.0	75.3	81.3	88.2	95.9
105	55.4	59.2	63.3	67.8	72.8	78.5	84.9	92.3	
110	57.2	61.3	65.7	70.4	75.7	81.8			

RUNWAY LENGTH (1000 FEET)							
WEIGHT 1000 LBS	REFERENCE FACTOR "R"						
	40	50	60	70	80	90	100
280	4.00	4.21	4.99	5.78	6.56	7.32	8.05
290	4.00	4.46	5.31	6.17	7.02	7.85	8.63
300	4.00	4.73	5.65	6.58	7.51	8.41	9.25
310	4.07	5.00	6.00	7.02	8.03	9.00	9.90
320	4.29	5.29	6.36	7.47	8.57	9.62	10.58
330	4.51	5.59	6.75	7.94	9.13	10.26	11.30
340	4.75	5.90	7.15	8.43	9.71	10.94	12.05
350	4.99	6.22	7.56	8.94	10.32	11.64	
360	5.23	6.55	7.99	9.47	10.95	12.37	
370	5.49	6.90	8.43	10.02	11.61		
380	5.75	7.26	8.89	10.59	12.29		
390	6.03	7.62	9.37	11.18	12.99		
400	6.31	8.01	9.86	11.78			
410	6.60	8.40	10.36	12.41			
420	6.90	8.80	10.88	13.05			
430	7.22	9.22	11.42				

TABLE 22. AIRCRAFT PERFORMANCE, TAKEOFF (DC-10-10)
CF6-6D ENGINE, 5° FLAPS

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 LBS)									
TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	430.0	430.0	425.7	417.8	409.7	401.0	392.2	383.3	374.0
55	430.0	430.0	425.6	417.7	409.6	401.0	392.3	383.3	374.0
60	430.0	430.0	425.5	417.7	409.5	401.0	392.4	383.3	374.0
65	430.0	430.0	425.4	417.4	409.3	401.0	392.4	383.3	368.9
70	430.0	430.0	425.3	417.2	409.2	401.0	389.8	375.5	362.0
75	430.0	430.0	425.2	417.1	409.1	394.6	380.5	367.1	354.5
80	430.0	430.0	425.1	413.9	398.7	384.6	371.2	358.6	346.4
85	430.0	430.0	417.4	402.3	388.1	374.7	362.0	349.8	338.0
90	430.0	420.2	405.3	391.2	377.8	365.1	352.8	341.0	329.4
95	422.5	407.8	393.8	380.5	367.8	355.6	343.7	332.0	320.5
100	410.1	396.2	383.0	370.3	358.1	346.2	334.6	323.1	311.6
105	398.9	385.5	372.7	360.4	348.5	336.9	325.4	314.1	
110	389.0	375.6	362.9	350.7	339.0	327.5			

REFERENCE FACTOR "R"									
TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	50.4	52.7	55.4	58.2	61.4	64.9	68.7	72.9	77.3
55	50.8	53.2	55.9	58.8	61.9	65.4	69.2	73.4	78.0
60	51.2	53.7	56.4	59.3	62.5	66.0	69.9	74.1	78.9
65	51.6	54.2	56.9	59.9	63.1	66.7	70.5	74.8	80.3
70	52.0	54.6	57.4	60.4	63.7	67.1	71.4	76.8	82.5
75	52.4	55.0	57.9	60.9	64.0	68.6	73.7	79.3	85.3
80	52.7	55.4	58.2	61.6	66.1	71.0	76.3	82.1	88.5
85	53.1	55.7	59.7	63.9	68.5	73.6	79.1	85.3	92.1
90	54.1	57.9	61.9	66.3	71.1	76.4	82.2	88.8	96.2
95	56.2	60.1	64.2	68.8	73.8	79.3	85.6	92.7	100.6
100	58.2	62.3	66.6	71.4	76.6	82.6	89.3	96.8	105.3
105	60.3	64.6	69.1	74.1	79.7	86.0	93.2	101.3	
110	62.5	66.9	71.8	77.1	83.0	89.8			

RUNWAY LENGTH (1000 FEET)							
WEIGHT 1000 LBS	REFERENCE FACTOR "R"						
	50	60	70	80	90	100	110
280	4.21	5.00	5.79	6.57	7.34	8.11	8.89
290	4.46	5.33	6.18	7.03	7.87	8.72	9.58
300	4.72	5.66	6.59	7.51	8.43	9.36	10.31
310	4.99	6.01	7.02	8.02	9.02	10.04	11.07
320	5.26	6.37	7.46	8.55	9.64	10.74	11.86
330	5.55	6.74	7.92	9.10	10.29	11.48	12.69
340	5.85	7.13	8.40	9.68	10.96	12.25	13.55
350	6.16	7.53	8.90	10.28	11.66	13.05	14.44
360	6.48	7.94	9.42	10.90	12.39	13.88	15.37
370	6.82	8.37	9.95	11.54	13.14	14.74	16.33
380	7.18	8.82	10.50	12.21	13.92	15.64	17.33
390	7.55	9.28	11.07	12.89	14.73	16.56	
400	7.94	9.76	11.66	13.60	15.56	17.51	
410	8.35	10.25	12.26	14.33	16.42		
420	8.77	10.76	12.88	15.08	17.31		
430	9.23	11.29	13.52	15.85			

TABLE 23. AIRCRAFT PERFORMANCE, TAKEOFF (DC-10-10)
CF6-6D ENGINE, 0° FLAPS

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 LBS)

TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	430.0	430.0	430.0	430.0	429.5	420.3	411.0	401.5	391.9
55	430.0	430.0	430.0	430.0	429.4	420.3	411.2	401.5	391.9
60	430.0	430.0	430.0	430.0	429.3	420.3	411.3	401.5	391.9
65	430.0	430.0	430.0	430.0	429.2	420.3	411.5	401.5	386.5
70	430.0	430.0	430.0	430.0	429.1	420.3	408.6	393.5	379.1
75	430.0	430.0	430.0	430.0	429.0	413.9	399.1	384.9	371.1
80	430.0	430.0	430.0	430.0	418.1	403.4	389.4	375.9	362.7
85	430.0	430.0	430.0	421.6	406.9	393.0	379.7	366.7	353.9
90	430.0	430.0	424.6	409.9	396.0	382.8	369.9	357.3	344.7
95	430.0	427.5	412.7	398.8	385.4	372.6	360.1	347.7	335.3
100	430.0	415.6	401.5	388.0	375.1	362.6	350.3	338.0	325.7
105	418.7	404.3	390.7	377.6	365.0	352.7	340.5	328.3	
110	407.5	393.6	380.3	367.5	355.1	342.9			

REFERENCE FACTOR "R"

TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	58.1	61.0	64.1	67.5	71.3	75.4	79.8	84.8	90.1
55	58.7	61.5	64.7	68.1	71.8	76.0	80.5	85.5	91.1
60	59.1	62.1	65.3	68.7	72.5	76.7	81.2	86.3	91.9
65	59.6	62.6	65.9	69.4	73.2	77.3	81.9	87.0	93.5
70	60.0	63.2	66.5	70.0	73.8	77.9	83.0	89.4	96.2
75	60.4	63.7	67.0	70.6	74.3	79.7	85.7	92.3	99.5
80	60.9	64.1	67.5	71.5	76.8	82.5	88.8	95.7	103.3
85	61.3	64.6	69.2	74.1	79.6	85.5	92.1	99.4	107.5
90	62.5	67.0	71.8	77.0	82.6	88.8	95.8	103.6	112.3
95	64.9	69.6	74.5	79.9	85.8	92.4	99.8	108.1	117.5
100	67.4	72.2	77.4	83.1	89.3	96.3	104.1	113.1	123.2
105	69.9	75.0	80.4	86.3	92.9	100.3	108.8	118.4	
110	72.5	77.8	83.5	89.8	96.8	104.7			

RUNWAY LENGTH (1000 FEET)

WEIGHT 1000 LBS	REFERENCE FACTOR "R"								
	50	60	70	80	90	100	110	120	130
280	4.23	5.00	5.78	6.58	7.38	8.17	8.95	9.70	10.42
290	4.49	5.32	6.17	7.03	7.90	8.76	9.60	10.42	11.21
300	4.76	5.65	6.57	7.51	8.45	9.38	10.30	11.19	12.06
310	5.03	6.00	6.99	8.00	9.02	10.03	11.03	12.01	12.96
320	5.31	6.36	7.43	8.52	9.62	10.71	11.80	12.87	13.92
330	5.60	6.74	7.89	9.06	10.24	11.42	12.61	13.79	14.96
340	5.90	7.12	8.37	9.62	10.89	12.17	13.46	14.76	16.06
350	6.21	7.53	8.86	10.20	11.56	12.95	14.35	15.78	17.24
360	6.53	7.94	9.36	10.80	12.27	13.76	15.29	16.87	
370	6.86	8.37	9.89	11.42	12.99	14.60	16.28		
380	7.21	8.81	10.43	12.06	13.74	15.48	17.31		
390	7.57	9.27	10.98	12.72	14.52	16.40			
400	7.94	9.74	11.55	13.40	15.32	17.35			
410	8.33	10.23	12.14	14.09	16.15				
420	8.74	10.73	12.74	14.81	17.00				
430	9.16	11.24	13.35	15.54	17.87				

TABLE 24. AIRCRAFT PERFORMANCE, LANDING (L-1011-385-1)
RB.211-22B ENGINE, 42° FLAPS

MAXIMUM ALLOWABLE LANDING WEIGHT (1000 LBS)

TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	358.0	358.0	358.0	358.0	358.0	358.0	358.0	358.0	358.0
55	358.0	358.0	358.0	358.0	358.0	358.0	358.0	358.0	358.0
60	358.0	358.0	358.0	358.0	358.0	358.0	358.0	358.0	358.0
65	358.0	358.0	358.0	358.0	358.0	358.0	358.0	358.0	358.0
70	358.0	358.0	358.0	358.0	358.0	358.0	358.0	358.0	358.0
75	358.0	358.0	358.0	358.0	358.0	358.0	358.0	358.0	357.4
80	358.0	358.0	358.0	358.0	358.0	358.0	358.0	358.0	349.5
85	358.0	358.0	358.0	358.0	358.0	358.0	358.0	355.3	341.6
90	358.0	358.0	358.0	358.0	358.0	358.0	358.0	347.1	333.8
95	358.0	358.0	358.0	358.0	358.0	358.0	352.8	339.0	326.0
100	358.0	358.0	358.0	358.0	358.0	358.0	345.0	331.2	318.4
105	358.0	358.0	358.0	358.0	358.0	351.2	336.8	323.4	310.8
110	358.0	358.0	358.0	358.0	355.6	341.8	328.7	315.9	303.4

RUNWAY LENGTH (1000 FEET)

WEIGHT 1000 LBS	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
260	5.20	5.31	5.44	5.57	5.70	5.84	5.98	6.12	6.25
270	5.37	5.48	5.60	5.73	5.86	6.00	6.15	6.30	6.44
280	5.52	5.63	5.76	5.89	6.03	6.17	6.32	6.47	6.63
290	5.67	5.79	5.91	6.05	6.19	6.34	6.49	6.65	6.81
300	5.81	5.93	6.07	6.21	6.35	6.50	6.66	6.82	6.99
310	5.94	6.08	6.22	6.36	6.51	6.67	6.83	6.99	7.17
320	6.07	6.22	6.37	6.52	6.67	6.83	6.99	7.16	7.34
330	6.20	6.35	6.51	6.66	6.82	6.98	7.15	7.32	7.50
340	6.33	6.49	6.65	6.81	6.97	7.13	7.30	7.48	7.66
350	6.45	6.62	6.78	6.94	7.10	7.27	7.44	7.62	7.82
360	6.58	6.75	6.90	7.06	7.23	7.40	7.57	7.77	7.97

AIRPLANE CHARACTERISTICS

UNIT OF
MEASURE

TYPICAL OPERATING EMPTY
WEIGHT PLUS RESERVE FUEL

LBS. 270,300

AVERAGE FUEL CONSUMPTION

LBS./MILE 34

TYPICAL MAXIMUM PASSENGER
LOAD @200 LBS./PASSENGER

LBS. 51,200

MAXIMUM STRUCTURAL PAYLOAD

LBS. 86,183

TABLE 25. AIRCRAFT PERFORMANCE, TAKEOFF (L-1011-385-1)
RB.211-22B ENGINE, 27° FLAPS

TEMP °F	MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 LBS)								
	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	422.3	412.3	402.4	392.7	383.0	373.4	363.9	354.3	344.8
55	422.3	412.3	402.4	392.7	383.0	373.4	363.9	354.3	344.8
60	422.3	412.3	402.4	392.7	383.0	373.4	363.9	353.3	340.4
65	422.3	412.3	402.4	392.7	383.0	373.4	361.0	347.5	334.6
70	422.3	412.3	402.4	392.7	382.8	368.4	354.5	341.2	328.4
75	422.3	412.3	402.4	390.3	375.6	361.4	347.7	334.5	321.8
80	422.3	412.3	397.5	382.5	368.0	354.0	340.5	327.5	315.0
85	420.5	404.6	389.2	374.4	360.1	346.4	333.1	320.3	308.0
90	411.5	395.8	380.7	366.1	352.1	338.6	325.6	313.0	300.9
95	402.3	386.9	372.1	357.8	344.1	330.8	318.1	305.7	293.8
100	393.1	378.0	363.6	349.6	336.1	323.1	310.6	298.5	286.8
105	384.0	369.4	355.2	341.6	328.4	315.6	303.4	291.5	280.1
110	375.2	361.0	347.2	333.9	320.9	308.4	296.4	284.8	

TEMP °F	REFERENCE FACTOR "R"								
	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	49.3	52.2	55.5	59.1	63.0	67.2	71.9	77.1	82.7
55	49.8	52.8	56.1	59.7	63.6	67.9	72.7	77.9	83.6
60	50.1	53.2	56.6	60.2	64.2	68.6	73.3	78.3	85.3
65	50.5	53.6	56.9	60.6	64.7	69.1	74.4	81.0	88.2
70	50.8	53.9	57.3	61.1	64.9	70.7	77.0	83.9	91.3
75	51.1	54.3	57.7	61.8	67.1	73.1	79.7	86.9	94.7
80	51.6	54.8	58.9	63.9	69.6	75.8	82.7	90.1	98.2
85	52.5	56.4	61.0	66.2	72.1	78.6	85.8	93.6	101.9
90	54.3	58.4	63.3	68.7	74.8	81.6	89.1	97.2	106.0
95	56.2	60.6	65.6	71.3	77.7	84.8	92.6	101.0	110.2
100	58.2	62.9	68.2	74.1	80.8	88.2	96.3	105.1	114.8
105	60.4	65.3	70.9	77.1	84.0	91.7	100.2	109.5	119.6
110	62.7	67.9	73.7	80.2	87.4	95.4	104.3	114.0	

WEIGHT 1000 LBS	RUNWAY LENGTH (1000 FEET)								
	REFERENCE FACTOR "R"								
	40	50	60	70	80	90	100	110	120
260	4.00	4.00	4.00	4.00	4.27	4.74	5.22	5.70	6.16
270	4.00	4.00	4.00	4.11	4.61	5.14	5.66	6.18	6.69
280	4.00	4.00	4.00	4.41	4.97	5.55	6.12	6.69	7.25
290	4.00	4.00	4.12	4.72	5.35	5.98	6.61	7.23	7.83
300	4.00	4.00	4.39	5.06	5.74	6.43	7.11	7.78	8.44
310	4.00	4.00	4.68	5.41	6.15	6.90	7.64	8.37	9.09
320	4.00	4.19	4.98	5.78	6.58	7.39	8.19	8.98	9.76
330	4.00	4.45	5.31	6.17	7.04	7.90	8.76	9.62	10.47
340	4.00	4.72	5.65	6.58	7.51	8.44	9.36	10.29	11.21
350	4.00	5.00	6.00	7.00	8.00	9.00	9.99	10.99	11.99
360	4.21	5.30	6.38	7.45	8.51	9.58	10.65	11.73	12.82
370	4.44	5.61	6.77	7.91	9.05	10.19	11.34	12.50	13.68
380	4.68	5.93	7.17	8.39	9.61	10.83	12.06	13.31	14.59
390	4.92	6.27	7.59	8.89	10.19	11.49	12.81	14.16	
400	5.18	6.62	8.02	9.41	10.79	12.18	13.59		
410	5.44	6.98	8.47	9.95	11.42	12.90	14.41		
420	5.71	7.35	8.94	10.50	12.07	13.65			
430	5.98	7.73	9.42	11.08	12.74	14.43			

TABLE 26. AIRCRAFT PERFORMANCE, TAKEOFF (L-1011-385-1)
RB.211-22B ENGINE, 22° FLAPS

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 LBS)										
TEMP °F	AIRPORT ELEVATION (FEET)									
	0	1000	2000	3000	4000	5000	6000	7000	8000	
50	430.0	428.0	418.0	407.9	397.8	387.7	377.7	367.9	358.3	
55	430.0	428.0	418.0	407.9	397.8	387.7	377.7	367.9	358.3	
60	430.0	428.0	418.0	407.9	397.8	387.7	377.7	366.7	353.0	
65	430.0	428.0	418.0	407.9	397.8	387.7	374.6	360.5	346.8	
70	430.0	428.0	418.0	407.9	397.4	382.5	368.0	353.9	340.3	
75	430.0	428.0	418.0	405.2	389.9	375.2	360.9	347.0	333.6	
80	430.0	428.5	412.5	397.0	382.0	367.5	353.5	339.9	326.7	
85	430.0	419.5	403.8	388.5	373.8	359.6	345.8	332.6	319.8	
90	426.5	410.4	394.9	379.9	365.4	351.5	338.1	325.2	312.8	
95	417.1	401.2	385.9	371.2	357.0	343.4	330.4	317.8	305.7	
100	407.7	392.1	377.0	362.6	348.8	335.5	322.8	310.5	298.8	
105	398.5	383.1	368.3	354.2	340.7	327.8	315.3	303.4	291.8	
110	389.6	374.4	360.0	346.2	333.1	320.4	308.3	296.5	285.1	

REFERENCE FACTOR "R"										
TEMP °F	AIRPORT ELEVATION (FEET)									
	0	1000	2000	3000	4000	5000	6000	7000	8000	
50	50.7	53.7	57.0	60.6	64.5	68.8	73.6	78.7	84.4	
55	51.0	54.1	57.5	61.2	65.1	69.5	74.2	79.4	85.0	
60	51.5	54.6	58.0	61.7	65.7	70.1	74.9	80.2	87.4	
65	51.9	55.0	58.4	62.1	66.2	70.7	76.2	82.9	90.4	
70	52.2	55.4	58.8	62.6	66.7	72.4	78.8	85.8	93.6	
75	52.6	55.8	59.2	63.6	69.0	74.9	81.6	88.9	96.9	
80	53.0	56.2	60.8	65.8	71.4	77.6	84.5	92.1	100.5	
85	54.1	58.3	62.9	68.2	74.0	80.5	87.7	95.6	104.3	
90	56.0	60.3	65.2	70.7	76.8	83.5	91.0	99.2	108.3	
95	57.9	62.5	67.7	73.4	79.7	86.8	94.5	103.1	112.5	
100	60.0	64.9	70.2	76.2	82.8	90.2	98.2	107.2	117.0	
105	62.2	67.3	73.0	79.2	86.1	93.7	102.2	111.5	121.7	
110	64.5	69.9	75.9	82.4	89.6	97.5	106.3	116.0	126.7	

RUNWAY LENGTH (1000 FEET)										
WEIGHT 1000 LBS	REFERENCE FACTOR "R"									
	50	60	70	80	90	100	110	120	130	
260	4.50	4.50	4.50	4.50	4.85	5.31	5.78	6.24	6.71	
270	4.50	4.50	4.50	4.70	5.21	5.73	6.24	6.75	7.27	
280	4.50	4.50	4.50	5.04	5.60	6.17	6.73	7.30	7.87	
290	4.50	4.50	4.78	5.40	6.01	6.63	7.25	7.88	8.50	
300	4.50	4.50	5.10	5.78	6.45	7.13	7.81	8.49	9.17	
310	4.50	4.71	5.45	6.18	6.92	7.65	8.39	9.13	9.87	
320	4.50	5.01	5.81	6.60	7.40	8.20	9.00	9.80	10.60	
330	4.50	5.32	6.19	7.05	7.91	8.78	9.64	10.51	11.37	
340	4.72	5.65	6.59	7.52	8.45	9.38	10.31	11.24	12.17	
350	5.00	6.00	7.00	8.01	9.01	10.01	11.01	12.01	13.00	
360	5.29	6.36	7.44	8.52	9.59	10.66	11.73	12.80	13.86	
370	5.59	6.74	7.89	9.05	10.20	11.34	12.49	13.62	14.75	
380	5.90	7.13	8.37	9.60	10.82	12.05	13.27	14.48		
390	6.23	7.55	8.86	10.17	11.48	12.78	14.07			
400	6.57	7.97	9.37	10.76	12.15	13.53	14.90			
410	6.93	8.41	9.89	11.37	12.84	14.31				
420	7.30	8.87	10.44	12.00	13.56					
430	7.68	9.34	11.00	12.66	14.30					

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TABLE 70. AIRCRAFT PERFORMANCE, TAKEOFF (BOEING 737-300 SERIES)
JT8D-15 ENGINE, 5° FLAPS

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 KG)

TEMP °C	AIRPORT ELEVATION (FEET)					
	0	500	1000	1500	2000	2500
10	52.4	52.4	49.4	46.4	43.5	41.0
12	52.4	52.4	49.4	46.4	43.5	41.0
14	52.4	52.4	49.4	46.4	43.5	41.0
16	52.4	52.4	49.4	46.4	43.5	41.0
18	52.4	52.4	49.4	46.4	43.5	41.0
20	52.4	52.1	49.3	46.3	43.3	40.7
22	52.4	51.9	48.9	45.9	43.0	40.4
24	52.4	51.2	48.3	45.4	42.5	39.9
26	52.4	50.5	47.7	44.8	42.0	39.4
28	52.4	49.9	47.1	44.2	41.5	39.0
30	51.9	49.3	46.5	43.7	40.9	38.5
32	51.3	48.7	45.9	43.1	40.4	38.0
34	50.8	48.0	45.3	42.5	39.9	37.6
36	50.2	47.4	44.7	42.0	39.4	37.1
38	49.6	46.8	44.0	41.4	38.9	36.6
40	49.0	46.2	43.4	40.8	38.4	36.2
42	48.5	45.5	42.8	40.3	37.9	35.7
44	47.9	44.9	42.2	39.7	37.4	35.2

REFERENCE FACTOR "R"

TEMP °C	AIRPORT ELEVATION (FEET)					
	0	500	1000	1500	2000	2500
10	48.0	50.5	58.8	66.7	75.5	85.9
12	48.1	50.9	59.0	66.9	75.7	86.0
14	48.2	51.4	59.2	67.2	76.1	86.4
16	48.3	51.8	59.6	67.6	76.6	87.0
18	48.6	52.3	60.1	68.1	77.2	87.7
20	48.5	53.5	60.8	68.8	78.0	88.6
22	48.6	54.3	61.5	69.7	79.0	89.6
24	48.7	55.1	62.4	70.7	80.1	90.9
26	49.6	56.0	63.3	71.8	81.4	92.3
28	50.6	57.0	64.4	73.0	82.8	93.9
30	51.7	58.1	65.6	74.4	84.3	95.6
32	52.9	59.3	67.0	75.9	86.0	97.5
34	54.1	60.6	68.4	77.5	87.9	99.6
36	55.3	62.0	70.0	79.3	89.9	101.9
38	56.6	63.5	71.7	81.2	92.1	104.3
40	58.0	65.0	73.5	83.3	94.4	106.9
42	59.4	66.7	75.4	85.4	96.9	109.7
44	60.9	68.5	77.4	87.8	99.5	112.7

WING LOADING (PSF)

WEIGHT 1000 KG	REFERENCE FACTOR "R"					
	50	60	70	80	90	100
12	905	1060	1170	1325	1350	1435
14	910	1060	1220	1370	1525	1600
16	985	1170	1350	1525	1710	2145
18	1035	1205	1405	1605	1905	2400
20	1120	1425	1650	1820	2125	2650
22	1305	1555	1720	2075	2335	2900
24	1430	1720	2000	2280	2565	3150
26	1550	1885	2105	2505	2805	3400
28	1675	2055	2405	2740	3055	3635
30	1740	2240	2625	2925	3320	3775
32	1905	2425	2855	3245	3595	4110

TABLE 69. AIRCRAFT PERFORMANCE, TAKEOFF (BOEING 737-200 SERIES)
JT8D-15 ENGINE, 15° FLAPS

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 KG)

TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	49.9	46.9	44.3	41.5	39.0	36.7
12	49.8	46.7	44.3	41.5	39.0	36.7
14	49.7	46.5	44.3	41.5	39.0	36.7
16	49.6	46.3	44.3	41.5	39.0	36.7
18	49.5	46.1	44.3	41.5	39.0	36.7
20	48.3	46.6	44.3	41.5	38.9	36.4
22	48.3	46.4	43.9	41.2	38.5	36.1
24	48.2	46.0	43.6	40.9	38.3	35.9
26	48.0	45.7	43.1	40.5	38.0	35.6
28	47.8	45.3	42.7	40.1	37.6	35.2
30	47.4	44.8	42.2	39.7	37.2	34.9
32	47.0	44.3	41.7	39.2	36.8	34.5
34	46.5	43.7	41.1	38.7	36.4	34.1
36	45.9	43.1	40.5	38.1	35.8	33.6
38	45.3	42.4	39.9	37.5	35.3	33.1
40	44.5	41.7	39.2	36.9	34.7	32.6
42	43.7	40.9	38.4	36.2	34.1	32.1
44	42.9	40.1	37.7	35.4	33.4	31.6

REFERENCE FACTOR "R"

TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	46.0	48.5	56.2	63.6	71.8	81.2
12	46.3	48.9	56.3	63.7	71.9	81.4
14	46.6	49.4	56.6	64.0	72.2	81.9
16	46.9	49.8	56.9	64.3	72.7	82.3
18	47.2	50.3	57.4	64.8	73.3	83.0
20	47.5	51.0	57.9	65.5	74.0	83.9
22	47.8	51.7	58.6	66.2	74.9	84.9
24	48.1	52.5	59.4	67.1	75.9	86.1
26	48.4	53.3	60.3	68.1	77.1	87.4
28	48.7	54.3	61.3	69.3	78.4	88.9
30	49.1	55.3	62.4	70.5	79.9	90.5
32	50.2	56.4	63.7	72.0	81.5	92.3
34	51.4	57.7	65.0	73.5	83.2	94.3
36	52.6	58.9	66.5	75.2	85.1	96.4
38	53.8	60.3	68.0	77.0	87.2	98.7
40	55.1	61.8	69.7	78.9	89.4	101.2
42	56.5	63.4	71.5	80.9	91.7	103.8
44	57.9	65.0	73.4	83.1	94.2	106.5

RUNWAY LENGTH (METERS)

WEIGHT 1000 KG	REFERENCE FACTOR "R"					
	45	55	65	75	85	105
32	735	895	1035	1155	1295	1425
34	815	935	1145	1300	1460	1630
36	895	1085	1265	1465	1635	1840
38	985	1190	1395	1600	1820	2050
40	1080	1310	1540	1770	2010	2270
42	1180	1440	1695	1950	2215	2490
44	1285	1575	1860	2145	2425	2715
46	1395	1725	2040	2350	2650	2945
48	1510	1885	2235	2565	2880	3190
50	1630	2050	2435	2795	3120	3415
52	1760	2230	2655	3035	3370	3660

TABLE 68. AIRCRAFT PERFORMANCE, TAKEOFF (BOEING 737-200 SERIES)
JT8D-15 ENGINE, 25° FLAPS

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 KG)

TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	47.4	44.4	42.0	39.3	36.9	35.0
12	47.3	44.2	42.0	39.3	36.9	35.0
14	47.2	44.0	42.0	39.3	36.9	35.0
16	47.1	43.8	42.0	39.3	36.9	35.0
18	47.0	43.6	42.0	39.3	36.9	35.0
20	45.8	44.2	42.1	39.5	36.9	34.5
22	45.8	44.0	41.7	39.2	36.6	34.3
24	45.8	43.8	41.4	38.8	36.3	34.1
26	45.6	43.4	41.0	38.4	36.0	33.9
28	45.4	43.1	40.5	38.0	35.6	33.6
30	45.1	42.6	40.1	37.6	35.3	33.3
32	44.7	42.1	39.5	37.1	34.8	32.9
34	44.2	41.6	39.0	36.6	34.4	32.6
36	43.7	41.0	38.4	36.0	33.9	32.2
38	43.0	40.3	37.8	35.5	33.5	31.7
40	42.3	39.6	37.1	34.9	33.1	31.3
42	41.4	38.8	36.4	34.3	32.4	30.8
44	40.5	37.9	35.7	33.7	31.9	30.3

REFERENCE FACTOR "R"

TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	43.5	46.0	53.1	60.3	68.2	77.2
12	43.7	46.3	53.2	60.3	68.3	77.4
14	43.9	46.6	53.4	60.5	68.6	77.8
16	44.1	47.0	53.7	60.8	69.0	78.4
18	44.3	47.3	54.1	61.3	69.5	79.1
20	44.5	48.4	54.7	61.9	70.2	79.9
22	44.7	49.0	55.3	62.6	71.0	80.9
24	44.9	49.7	56.1	63.4	72.0	82.0
26	45.3	50.5	57.0	64.4	73.1	83.2
28	45.7	51.4	57.9	65.5	74.4	84.6
30	46.6	52.4	59.0	66.8	75.7	86.1
32	47.6	53.5	60.3	68.1	77.3	87.8
34	48.6	54.6	61.6	69.7	79.0	89.6
36	49.7	55.9	63.0	71.3	80.8	91.6
38	50.9	57.2	64.6	73.1	82.7	93.6
40	52.1	58.6	66.2	75.0	84.8	95.9
42	53.4	60.2	68.0	77.0	87.1	98.3
44	54.8	61.8	69.9	79.1	89.4	100.9

RUNWAY LENGTH (METERS)

WEIGHT 1000 KG	REFERENCE FACTOR "R"					
	40	50	60	70	80	100
32	700	835	960	1090	1205	1345
34	750	910	1060	1205	1360	1535
36	810	995	1170	1340	1535	1730
38	880	1090	1290	1490	1700	1930
40	955	1195	1420	1650	1885	2140
42	1045	1310	1565	1820	2075	2350
44	1140	1435	1720	2000	2280	2570
46	1245	1570	1885	2195	2495	2790
48	1360	1710	2060	2395	2720	3020
50	1480	1865	2245	2615	2955	3255
52	1615	2030	2445	2840	3195	3495

TABLE 67. AIRCRAFT PERFORMANCE, LANDING (BOEING 737-200 SERIES)
JT8D-15 ENGINE, 30° FLAPS

MAXIMUM ALLOWABLE LANDING WEIGHT (1000 KG)

TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	46.8	46.8	46.8	46.8	45.6	42.7
12	46.8	46.8	46.8	46.8	45.6	42.7
14	46.8	46.8	46.8	46.8	45.6	42.7
16	46.8	46.8	46.8	46.8	45.6	42.7
18	46.8	46.8	46.8	46.8	45.6	42.7
20	46.8	46.8	46.8	46.8	45.4	42.4
22	46.8	46.8	46.8	46.8	45.1	42.2
24	46.8	46.8	46.8	46.8	44.8	41.9
26	46.8	46.8	46.8	46.8	44.4	41.6
28	46.8	46.8	46.8	46.7	43.9	41.2
30	46.8	46.8	46.8	46.2	43.5	40.8
32	46.8	46.8	46.8	45.6	42.9	40.4
34	46.8	46.8	46.8	45.0	42.4	39.8
36	46.8	46.8	46.8	44.4	41.7	39.3
38	46.8	46.8	46.4	43.7	41.1	38.6
40	46.8	46.8	45.6	42.9	40.4	37.9
42	46.8	46.8	44.8	42.2	39.6	37.2
44	46.8	46.6	43.9	41.3	38.8	36.4

RUNWAY LENGTH (METERS)

WEIGHT 1000 KG	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
32	1305	1355	1405	1455	1510	1570
34	1365	1420	1475	1525	1585	1650
36	1425	1485	1545	1600	1660	1730
38	1485	1555	1610	1670	1730	1805
40	1550	1620	1680	1740	1805	1885
42	1615	1685	1750	1810	1880	1960
44	1680	1750	1815	1885	1955	2040
46	1745	1815	1885	1955	2030	2115
48	1810	1880	1950	2025	2105	2195
50	1880	1945	2020	2100	2185	2270

TABLE 66. AIRCRAFT PERFORMANCE, LANDING (BOEING 737-200 SERIES)
JT8D-15 ENGINE, 40° FLAPS

MAXIMUM ALLOWABLE LANDING WEIGHT (1000 KG)

TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	46.8	46.8	46.8	46.3	45.6	42.7
12	46.8	46.8	46.8	46.3	45.6	42.7
14	46.8	46.3	46.3	46.3	45.6	42.7
16	46.8	46.8	46.3	46.3	45.6	42.7
18	46.8	46.8	46.8	45.8	45.6	42.7
20	46.3	46.3	46.3	46.8	45.4	42.4
22	46.3	46.3	46.3	46.3	45.1	42.2
24	46.3	46.3	46.3	46.3	44.3	41.9
26	46.8	46.3	46.3	46.3	44.4	41.6
28	46.3	46.3	46.3	46.7	43.9	41.2
30	46.8	46.3	46.8	46.2	43.5	40.3
32	46.3	46.3	46.3	45.6	42.9	40.4
34	46.3	46.3	46.3	45.0	42.4	39.7
36	46.3	46.8	46.8	44.4	41.7	39.3
38	46.8	46.3	46.4	43.7	41.1	38.6
40	46.3	46.3	45.6	42.9	40.4	37.9
42	46.3	46.3	44.8	42.2	39.6	37.2
44	46.8	46.6	43.9	41.3	38.8	36.4

RUNWAY LENGTH (METERS)

WEIGHT 1000 KG	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
32	1210	1260	1305	1350	1395	1450
34	1265	1315	1360	1410	1465	1525
36	1320	1370	1420	1475	1535	1600
38	1375	1430	1485	1540	1605	1675
40	1430	1485	1545	1610	1675	1745
42	1485	1545	1610	1675	1745	1820
44	1545	1610	1675	1745	1815	1895
46	1605	1670	1740	1810	1885	1965
48	1665	1735	1805	1880	1955	2035
50	1725	1800	1875	1950	2025	2110

AIRPLANE CHARACTERISTICS	UNIT OF MEASURE	ADVANCED 200	OPTIONS 200C
MAXIMUM TAKEOFF WEIGHT	KG	49 480	52 440
MAXIMUM LANDING WEIGHT			
FLAPS 30°	KG	44 490	46 760
FLAPS 40°	KG	40 690	46 760
TYPICAL OPERATING EMPTY WEIGHT PLUS RESERVE FUEL	KG	30 499	31 815 ^{1/}
	KG	32 423	33 740 ^{2/}
AVERAGE FUEL CONSUMPTION	KG/KM	4.23	4.23
TYPICAL MAXIMUM PASSENGER LOAD AT 90.7 KG./PASSENGER	KG	11 791	11 791
MAXIMUM STRUCTURAL PAYLOAD	KG	15 810	14 500

^{1/} Based on 1.25 hours of reserve fuel.

^{2/} Based on 2.00 hours of reserve fuel.

TABLE 65. AIRCRAFT PERFORMANCE, TAKEOFF (BOEING 727-200 SERIES)
JT8D-15 ENGINE, 5° FLAPS

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 KG)							
TEMP °C	AIRPORT ELEVATION (METERS)						
	0	500	1000	1500	2000	2500	
10	89.4	89.4	89.4	85.1	80.0	75.2	
12	89.4	89.4	89.4	85.1	80.0	75.2	
14	89.4	89.4	89.4	85.1	80.0	75.2	
16	89.4	89.4	89.4	85.1	80.0	75.2	
18	89.4	89.4	89.4	85.1	80.0	75.2	
20	89.4	89.4	89.4	85.1	80.0	75.2	
22	89.4	89.4	89.4	85.1	80.0	75.2	
24	89.4	89.4	89.4	85.1	80.0	75.2	
26	89.4	89.4	88.5	83.5	78.7	73.6	
28	89.4	89.4	87.3	82.4	77.5	72.6	
30	89.4	89.4	86.1	81.2	76.4	71.6	
32	89.4	89.4	84.9	80.0	75.2	70.5	
34	89.4	88.9	83.7	78.8	74.1	69.5	
36	89.4	87.6	82.5	77.6	73.0	68.4	
38	89.4	86.2	81.2	76.4	71.8	67.4	
40	89.4	84.9	80.0	75.2	70.7	66.3	
42	88.7	83.6	78.7	74.0	69.6	65.3	
44	87.3	82.3	77.5	72.8	68.4	64.2	

REFERENCE FACTOR "R"							
TEMP °C	AIRPORT ELEVATION (METERS)						
	0	500	1000	1500	2000	2500	
10	65.2	72.3	82.3	94.2	108.1	122.9	
12	65.2	72.3	82.3	94.3	108.2	123.3	
14	65.2	72.3	82.4	94.3	108.3	123.6	
16	65.2	72.4	82.9	94.7	108.7	125.0	
18	65.3	74.0	83.6	95.3	109.5	125.3	
20	65.7	74.5	84.5	96.2	110.5	127.8	
22	67.4	75.7	85.5	97.3	111.3	129.5	
24	69.1	76.3	86.7	98.7	113.3	131.6	
26	70.1	77.2	88.1	100.3	115.2	133.9	
28	70.3	78.4	89.7	102.1	117.4	135.4	
30	71.6	80.9	91.5	104.2	119.3	139.2	
32	72.3	82.5	93.5	106.5	122.5	142.3	
34	74.3	84.3	95.6	109.1	125.5	145.7	
36	76.2	86.3	97.9	111.9	128.3	149.3	
38	78.1	88.3	100.4	114.9	132.3	153.2	
40	80.3	90.6	103.1	118.2	136.2	157.3	
42	82.4	92.9	106.0	121.9	140.3	161.7	
44	84.3	95.4	109.1	125.6	144.7	166.4	

RUNWAY LENGTH (METERS)									
WEIGHT 1000 KG	REFERENCE FACTOR "R"								
	70	80	90	100	110	120	130	140	150
58	1380	1575	1760	1940	2115	2285	2450	2610	2770
60	1470	1675	1870	2065	2250	2435	2615	2795	2970
62	1565	1730	1990	2195	2395	2595	2795	2990	3195
64	1660	1890	2115	2335	2535	2735	2935	3190	3415
66	1765	2010	2250	2495	2720	2955	3190	3425	3650
68	1870	2130	2390	2645	2900	3155	3410	3645	3920
70	1970	2260	2540	2815	3090	3365	3645	3920	4195
72	2100	2405	2695	2995	3295	3590	3890	4190	
74	2220	2540	2840	3135	3505	3790	4130		
76	2345	2690	3035	3330	3730	4030			
78	2475	2840	3215	3590	3965	4340			
80	2610	3005	3405	3805	4210				
82	2745	3170	3600	4035					
84	2890	3340	3805	4270					
86	3040	3510	4015						
88	3190	3705	4235						

TABLE 64. AIRCRAFT PERFORMANCE, TAKEOFF (BOEING 727-200 SERIES)
JT8D-15 ENGINE, 15° FLAPS

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 KG)							
TEMP °C	AIRPORT ELEVATION (METERS)						
	0	500	1000	1500	2000	2500	
10	89.4	89.4	86.9	82.0	77.0	72.2	
12	89.4	89.4	86.9	82.0	77.0	72.2	
14	89.4	89.4	86.9	82.0	77.0	72.2	
16	89.4	89.4	86.9	82.0	77.0	72.2	
18	89.4	89.4	86.9	82.0	77.0	72.2	
20	89.4	89.4	86.9	82.0	77.0	72.2	
22	89.4	89.4	86.9	82.0	77.0	72.2	
24	89.4	89.4	86.9	82.0	77.0	72.2	
26	89.4	89.4	85.2	80.3	75.7	71.1	
28	89.4	89.4	84.1	79.2	74.6	70.1	
30	89.4	88.1	83.0	78.1	73.5	69.1	
32	89.4	86.9	81.8	77.0	72.5	68.0	
34	89.4	85.6	80.6	75.9	71.4	67.0	
36	89.4	84.3	79.4	74.7	70.3	66.0	
38	88.1	83.0	78.2	73.6	69.2	64.9	
40	86.7	81.8	77.0	72.4	68.0	63.9	
42	85.4	80.5	75.7	71.2	66.9	62.8	
44	84.2	79.2	74.4	70.0	65.8	61.7	

REFERENCE FACTOR "R"							
TEMP °C	AIRPORT ELEVATION (METERS)						
	0	500	1000	1500	2000	2500	
10	58.4	64.1	72.3	82.4	94.4	107.0	
12	58.4	64.2	72.3	82.5	94.5	107.0	
14	58.5	64.4	72.5	82.6	94.5	108.2	
16	58.6	64.8	73.0	83.0	94.9	108.9	
18	58.7	65.3	73.5	83.6	95.6	109.7	
20	59.1	65.9	74.3	84.3	96.4	110.7	
22	59.6	66.7	75.1	85.3	97.5	112.1	
24	60.3	67.6	76.2	86.5	98.9	113.7	
26	61.1	68.6	77.4	87.9	100.5	115.4	
28	62.1	69.9	78.9	89.4	102.3	117.0	
30	63.2	71.1	80.3	91.2	104.4	120.2	
32	64.4	72.5	82.0	93.2	106.7	122.9	
34	65.7	74.1	83.8	95.4	109.2	125.9	
36	67.1	75.7	85.9	97.8	112.0	129.0	
38	68.9	77.7	88.0	100.4	115.0	132.4	
40	70.7	79.6	90.3	103.1	118.3	136.1	
42	72.6	81.7	92.0	106.1	121.8	140.1	
44	74.7	84.0	95.5	109.3	125.6	144.3	

RUNWAY LENGTH (METERS)									
WEIGHT 1000 KG	REFERENCE FACTOR "R"								
	58	68	78	88	98	108	118	128	138
59	1210	1385	1590	1800	2015	2220	2405	2560	2670
61	1280	1490	1690	1905	2120	2325	2510	2675	2905
63	1355	1575	1800	2020	2235	2445	2640	2820	2980
65	1435	1675	1910	2140	2365	2585	2795	2995	3190
67	1520	1790	2030	2275	2510	2740	2970	3205	3435
69	1605	1890	2155	2415	2665	2920	3175	3440	3720
71	1700	2000	2285	2560	2835	3110	3400	3710	4040
73	1795	2115	2425	2720	3020	3325	3650	4005	4400
75	1895	2235	2565	2905	3215	3555	3925	4335	
77	1995	2360	2710	3060	3420	3805	4225		
79	2105	2490	2865	3245	3645	4075			
81	2215	2620	3025	3435	3890	4360			
83	2330	2755	3175	3640	4125				
85	2450	2905	3355	3880	4395				
87	2575	3040	3530	4065					
89	2705	3190	3715	4295					

TABLE 63. AIRCRAFT PERFORMANCE, TAKEOFF (BOEING 727-200 SERIES)
JT8D-15 ENGINE, 20° FLAPS

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 KG)

TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	89.4	86.8	81.8	77.4	72.8	68.1
12	89.4	86.8	81.8	77.4	72.8	68.1
14	89.4	86.8	81.8	77.4	72.8	68.1
16	89.4	86.8	81.8	77.4	72.8	68.1
18	89.4	86.8	81.8	77.4	72.8	68.1
20	89.4	86.8	81.8	77.4	72.8	68.1
22	89.4	86.8	81.8	77.4	72.8	68.1
24	89.4	86.8	81.8	77.4	72.8	68.1
26	89.4	85.4	80.9	75.7	71.4	66.9
28	89.4	84.2	79.2	74.7	70.4	66.0
30	83.5	83.0	78.1	73.7	69.4	65.1
32	37.1	81.9	77.1	72.6	68.3	64.1
34	35.7	80.7	76.0	71.5	67.3	63.2
36	34.4	79.5	74.8	70.4	66.3	62.3
38	33.1	78.3	73.7	69.4	65.2	61.4
40	31.8	77.1	72.6	68.2	64.2	60.5
42	30.6	75.9	71.4	67.1	63.2	59.6
44	29.4	74.7	70.2	66.0	62.1	58.7

REFERENCE FACTOR "R"

TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	55.4	60.7	68.6	78.5	89.8	101.9
12	55.4	60.3	68.7	78.6	89.9	102.0
14	55.5	61.1	68.9	78.6	89.9	102.3
16	55.6	61.4	69.3	79.0	90.2	102.7
18	55.6	61.9	69.9	79.5	90.8	103.7
20	56.0	62.6	70.6	80.2	91.6	104.8
22	56.4	63.3	71.5	81.1	92.6	106.2
24	57.1	64.2	72.5	82.2	93.9	107.8
26	57.8	65.2	73.6	83.6	95.4	109.6
28	58.7	66.3	74.9	85.1	97.2	111.8
30	59.7	67.6	76.4	86.8	99.2	114.1
32	60.9	68.9	78.0	88.7	101.4	116.7
34	62.2	70.4	79.8	90.8	103.9	119.6
36	63.6	72.0	81.7	93.1	106.6	122.7
38	65.2	73.8	83.8	95.6	109.5	126.1
40	66.8	75.6	86.0	98.2	112.7	129.7
42	68.7	77.6	88.4	101.1	116.1	133.6
44	70.7	79.7	90.9	104.2	119.8	137.7

RUNWAY LENGTH (METERS)

WEIGHT 1000 KG	REFERENCE FACTOR "R"								
	55	65	75	85	95	105	115	125	135
58	1100	1300	1485	1665	1830	1995	2155	2315	2475
60	1165	1380	1575	1770	1950	2130	2305	2430	2660
62	1240	1460	1675	1880	2080	2275	2470	2660	2855
64	1315	1550	1775	2000	2215	2430	2645	2855	3065
66	1395	1640	1935	2125	2360	2595	2825	3060	3290
68	1475	1740	2000	2260	2515	2770	3020	3275	3525
70	1560	1840	2120	2400	2675	2950	3225	3500	3775
72	1650	1950	2250	2545	2845	3145	3440	3740	4035
74	1740	2060	2380	2700	3025	3345	3655	3990	
76	1835	2190	2520	2855	3210	3555	3900		
78	1935	2300	2665	3035	3405	3775	4150		
80	2035	2425	2815	3210	3605	4005			
82	2140	2555	2975	3395	3820				
84	2250	2690	3160	3575	4040				
86	2360	2835	3310	3785					
88	2475	2990	3485	3990					
90	2595	3130	3665	4205					

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TABLE 62. AIRCRAFT PERFORMANCE, TAKEOFF (BOEING 727-200 SERIES)
JT8D-15 ENGINE, 25° FLAPS

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 KG)							
TEMP °C	0	AIRPORT ELEVATION (FEET)					2500
		500	1000	1500	2000		
10	36.2	31.0	76.5	72.2	67.3		63.7
12	33.7	31.0	76.5	72.2	67.3		63.7
14	33.7	31.0	76.5	72.2	67.3		63.7
16	33.7	31.0	76.5	72.2	67.3		63.7
18	33.7	31.0	76.5	72.2	67.3		63.7
20	33.7	31.0	76.5	72.2	67.3		63.7
22	33.7	31.0	76.5	72.2	67.3		63.7
24	33.7	31.0	76.5	72.2	67.3		63.7
26	33.7	70.0	75.0	70.7	66.8		62.6
28	33.3	73.9	74.0	69.9	65.0		61.7
30	32.0	77.6	73.0	69.9	64.9		60.3
32	31.5	76.5	72.0	67.9	63.9		60.0
34	30.2	75.4	71.0	66.9	62.9		59.1
36	28.9	74.3	69.9	65.9	62.0		58.2
38	27.7	73.1	68.9	64.9	61.0		57.3
40	26.5	72.0	67.8	63.9	60.1		56.4
42	25.3	70.9	66.7	62.8	59.1		55.5
44	24.3	69.8	65.7	61.8	58.2		54.6

REFERENCE FACTOR "R"							
TEMP °C	0	AIRPORT ELEVATION (FEET)					2500
		500	1000	1500	2000		
10	53.6	58.2	65.5	75.3	86.5		98.2
12	53.7	58.3	65.7	75.4	86.6		98.3
14	53.7	58.6	66.0	75.5	86.6		98.7
16	53.8	59.0	66.5	75.9	86.9		99.4
18	53.9	59.5	67.0	76.4	87.5		100.2
20	54.2	60.1	67.8	77.1	88.2		101.3
22	54.3	60.3	68.6	78.0	89.3		102.6
24	54.8	61.7	69.6	79.1	90.5		104.2
26	55.5	62.6	70.8	80.4	92.0		105.9
28	56.3	63.7	72.0	81.9	93.7		108.0
30	57.3	64.9	73.5	83.5	95.6		110.2
32	58.4	66.2	75.0	85.4	97.7		112.7
34	59.7	67.6	76.7	87.4	100.1		115.4
36	61.1	69.2	78.5	89.6	102.7		118.3
38	62.6	70.8	80.5	92.0	105.5		121.5
40	64.3	72.6	82.6	94.6	108.6		124.9
42	66.2	74.5	84.9	97.3	111.9		128.6
44	68.2	76.5	87.3	100.3	115.4		132.5

RUNWAY LENGTH (FEET)								
WEIGHT 1000 KG	REFERENCE FACTOR "R"							
	55	65	75	85	95	105	115	125
50	1065	1275	1465	1640	1810	1975	2135	2300
60	1140	1355	1560	1750	1935	2115	2290	2475
62	1215	1445	1660	1865	2065	2260	2460	2660
64	1295	1535	1765	1985	2205	2420	2635	2855
66	1380	1630	1875	2115	2350	2585	2820	3065
68	1465	1735	1995	2250	2505	2760	3020	3280
70	1555	1840	2120	2395	2670	2945	3225	3505
72	1645	1950	2250	2545	2845	3140	3440	3740
74	1740	2065	2385	2705	3025	3345	3665	3985
76	1840	2180	2525	2870	3215	3560	3900	
78	1940	2305	2675	3045	3415	3780		
80	2045	2435	2825	3225	3620	4010		
92	2150	2565	2985	3410	3835			
94	2260	2700	3150	3605	4055			
96	2370	2845	3320	3805				
98	2490	2990	3500	4015				
99	2605	3140	3680					

TABLE 61. AIRCRAFT PERFORMANCE, LANDING (BOEING 727-200 SERIES)
JT8D-15 ENGINE, 30° FLAPS

MAXIMUM ALLOWABLE LANDING WEIGHT (1000 KG)						
TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	72.5	72.5	72.5	72.5	72.5	72.5
12	72.5	72.5	72.5	72.5	72.5	72.5
14	72.5	72.5	72.5	72.5	72.5	72.5
16	72.5	72.5	72.5	72.5	72.5	72.5
18	72.5	72.5	72.5	72.5	72.5	72.5
20	72.5	72.5	72.5	72.5	72.5	72.5
22	72.5	72.5	72.5	72.5	72.5	72.5
24	72.5	72.5	72.5	72.5	72.5	72.5
26	72.5	72.5	72.5	72.5	72.5	72.5
28	72.5	72.5	72.5	72.5	72.5	72.5
30	72.5	72.5	72.5	72.5	72.5	72.4
32	72.5	72.5	72.5	72.5	72.5	71.5
34	72.5	72.5	72.5	72.5	72.5	70.5
36	72.5	72.5	72.5	72.5	72.5	69.4
38	72.5	72.5	72.5	72.5	72.5	68.2
40	72.5	72.5	72.5	72.5	71.3	66.9
42	72.5	72.5	72.5	72.5	69.8	65.6
44	72.5	72.5	72.5	72.5	68.2	64.1

RUNWAY LENGTH (METERS)						
WEIGHT 1000 KG	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
50	1265	1295	1330	1375	1420	1470
52	1290	1325	1365	1410	1455	1505
54	1320	1355	1395	1445	1490	1540
56	1350	1390	1430	1480	1530	1580
58	1380	1425	1470	1515	1570	1620
60	1415	1460	1505	1555	1610	1665
62	1450	1495	1545	1595	1650	1710
64	1485	1535	1585	1640	1695	1755
66	1520	1575	1630	1680	1740	1805
68	1560	1620	1675	1725	1785	1855
70	1600	1665	1720	1775	1830	1905
72	1640	1710	1765	1820	1880	1960
74	1680	1755	1815	1870	1930	2015

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TABLE 60. AIRCRAFT PERFORMANCE, LANDING (BOEING 727-200 SERIES)
JT8D-15 ENGINE, 40° FLAPS

MAXIMUM ALLOWABLE LANDING WEIGHT (1000 KG)

TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	64.6	64.6	64.6	64.6	64.6	64.6
12	64.6	64.6	64.6	64.6	64.6	64.6
14	64.6	64.6	64.6	64.6	64.6	64.6
16	64.6	64.6	64.6	64.6	64.6	64.6
18	64.6	64.6	64.6	64.6	64.6	64.6
20	64.6	64.6	64.6	64.6	64.6	64.6
22	64.6	64.6	64.6	64.6	64.6	64.6
24	64.6	64.6	64.6	64.6	64.6	64.6
26	64.6	64.6	64.6	64.6	64.6	64.6
28	64.6	64.6	64.6	64.6	64.6	64.3
30	64.6	64.6	64.6	64.6	64.6	63.6
32	64.6	64.6	64.6	64.6	64.6	62.8
34	64.6	64.6	64.6	64.6	64.6	62.0
36	64.6	64.6	64.6	64.6	64.6	61.0
38	64.6	64.6	64.6	64.6	63.8	60.0
40	64.6	64.6	64.6	64.6	62.6	58.8
42	64.6	64.6	64.6	64.6	61.3	57.6
44	64.6	64.6	64.6	63.8	59.9	56.2

RUNWAY LENGTH (METERS)

WEIGHT 1000 KG	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
50	1220	1270	1310	1355	1400	1465
52	1260	1310	1350	1400	1450	1510
54	1300	1350	1395	1445	1500	1560
56	1345	1390	1440	1490	1545	1610
58	1385	1435	1485	1540	1595	1660
60	1425	1475	1530	1590	1650	1715
62	1470	1525	1580	1640	1700	1765
64	1510	1570	1630	1690	1755	1820
66	1555	1615	1680	1740	1805	1875

AIRPLANE CHARACTERISTICS	UNIT OF MEASURE	ADVANCED OPTIONS		
MAXIMUM TAKEOFF WEIGHT	KG	82 328	86 411	89 359
MAXIMUM LANDING WEIGHT	KG			
FLAPS 30°		70 081	72 576	72 576
FLAPS 40°		64 638	64 638	64 638
TYPICAL OPERATING EMPTY WEIGHT PLUS RESERVE FUEL	KG	49 538 52 682	49 784 52 927	51 182 ^{1/} 54 325 ^{2/}
AVERAGE FUEL CONSUMPTION	KG/KM	6.20	6.20	6.20
TYPICAL MAXIMUM PASSENGER LOAD AT 90.7 KG/PASSENGER	KG	14 697	15 876	17 146
MAXIMUM STRUCTURAL PAYLOAD	KG	18 298	18 959	19 376

^{1/} Based on 1.25 hours of reserve fuel.

^{2/} Based on 2.00 hours of reserve fuel.

TABLE 59. AIRCRAFT PERFORMANCE, TAKEOFF (BOEING 727-100 SERIES)
JT8D-7 ENGINE, 5° FLAPS

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 KG)						
TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	76.7	76.7	76.7	75.0	70.2	66.2
12	76.7	76.7	76.7	74.5	70.0	66.1
14	76.7	76.7	76.7	72.9	68.7	65.3
16	76.7	76.7	76.7	72.9	68.7	65.3
18	76.7	76.7	76.7	72.9	68.7	65.3
20	76.7	76.7	76.7	72.9	68.7	65.3
22	76.7	76.7	76.7	72.9	68.7	65.3
24	76.7	76.7	76.7	72.9	68.7	65.3
26	76.7	76.7	76.7	72.9	68.7	65.3
28	76.7	76.7	76.7	72.9	68.7	64.6
30	75.6	76.7	75.6	72.1	67.7	63.6
32	76.7	76.7	74.8	71.0	66.7	62.6
34	76.7	76.7	74.0	69.9	65.7	61.6
36	76.7	76.7	73.1	68.8	64.6	60.6
38	76.7	76.5	72.0	67.7	63.6	59.6
40	76.7	75.5	70.9	66.6	62.5	58.6
42	76.7	74.1	69.7	65.5	61.5	57.7
44	76.5	72.5	68.4	64.4	60.4	56.7

REFERENCE FACTOR "R"						
TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	56.3	61.8	69.8	79.9	91.7	104.6
12	56.5	62.8	71.2	81.4	93.3	106.7
14	56.8	63.8	72.6	83.0	95.0	108.7
16	57.1	64.9	73.9	84.5	96.7	110.8
18	57.1	64.9	73.9	84.5	96.7	110.8
20	57.1	64.9	73.9	84.5	96.7	110.8
22	57.1	64.9	73.9	84.5	96.7	110.8
24	57.5	65.2	74.1	84.5	96.9	111.5
26	58.4	66.1	75.2	85.8	98.4	113.3
28	59.5	67.3	76.5	87.4	100.2	115.4
30	60.7	68.7	78.1	89.2	102.4	117.8
32	62.1	70.2	79.9	91.3	104.8	120.5
34	63.6	72.0	82.0	93.7	107.5	123.6
36	65.3	74.0	84.3	96.4	110.5	126.9
38	67.2	76.2	86.8	99.3	113.8	130.6
40	69.2	78.6	89.6	102.5	117.4	134.5
42	71.5	81.2	92.7	106.0	121.3	138.8
44	73.8	84.0	96.0	109.8	125.5	143.3

RUNWAY LENGTH (METERS)								
WEIGHT 1000 KG	REFERENCE FACTOR "R"							
	60	70	80	90	100	110	120	130
46	975	1160	1335	1495	1655	1805	1960	2120
48	1070	1270	1455	1635	1805	1980	2150	2325
50	1175	1330	1585	1780	1970	2160	2350	2545
52	1280	1500	1720	1930	2140	2350	2560	2770
54	1390	1630	1860	2090	2320	2550	2780	3010
56	1505	1760	2010	2260	2510	2760	3010	3260
58	1625	1900	2170	2440	2710	2980	3250	3520
60	1750	2045	2335	2625	2915	3205	3500	3790
62	1880	2195	2505	2820	3130	3445	3760	4070
64	2015	2350	2685	3020	3355	3695	4030	4365
66	2155	2515	2875	3235	3590	3950	4310	
68	2300	2685	3070	3450	3835	4215		
70	2450	2860	3270	3600	4085	4495		
72	2605	3045	3480	3915	4345			
74	2765	3235	3695	4155				
76	2930	3430	3920	4410				
78	3100	3630	4150					

TABLE 58. AIRCRAFT PERFORMANCE, TAKEOFF (BOEING 727-100 SERIES)
JT8D-7 ENGINE, 15° FLAPS

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 KG)						
TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	76.7	76.7	74.6	70.1	65.7	61.8
12	76.7	76.7	73.9	69.6	65.4	61.3
14	76.7	76.7	72.3	68.3	64.6	61.1
16	76.7	76.7	72.3	68.3	64.6	61.1
18	76.7	76.7	72.3	68.3	64.6	61.1
20	76.7	76.7	72.3	68.3	64.6	61.1
22	76.7	76.7	72.3	68.3	64.6	61.1
24	76.7	76.7	72.3	68.3	64.6	61.1
26	76.7	76.7	72.3	68.3	64.6	61.1
28	76.7	76.7	72.3	68.3	64.3	60.3
30	76.7	76.2	71.6	67.3	63.2	59.3
32	76.7	75.0	70.5	66.3	62.2	58.4
34	76.7	73.8	69.4	65.2	61.2	57.4
36	76.7	72.6	68.3	64.2	60.2	56.5
38	75.8	71.4	67.2	63.1	59.2	55.6
40	74.6	70.3	66.1	62.1	58.2	54.6
42	73.4	69.1	65.0	61.0	57.3	53.7
44	72.2	67.9	63.8	60.0	56.3	52.8

REFERENCE FACTOR "R"						
TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	43.7	47.5	52.9	59.7	67.9	77.4
12	44.0	48.4	54.1	61.1	69.4	79.2
14	44.3	49.3	55.3	62.4	70.9	81.0
16	44.6	50.2	56.5	63.7	72.3	82.8
18	44.6	50.2	56.5	63.7	72.3	82.8
20	44.6	50.2	56.5	63.7	72.3	82.8
22	44.6	50.2	56.5	63.7	72.3	82.8
24	44.7	50.3	56.6	63.9	72.6	82.9
26	45.4	50.9	57.3	64.8	73.6	84.0
28	46.2	51.6	58.1	65.8	74.9	85.4
30	47.1	52.5	59.1	67.0	76.3	87.0
32	48.1	53.5	60.3	68.4	78.0	88.9
34	49.1	54.7	61.7	70.0	79.8	91.0
36	50.2	56.0	63.2	71.8	81.9	93.4
38	51.4	57.5	64.9	73.8	84.1	96.1
40	52.7	59.1	66.8	75.9	86.6	99.0
42	54.1	60.8	68.8	78.2	89.3	102.2
44	55.5	62.7	71.0	80.7	92.1	105.6

RUNWAY LENGTH (METERS)								
WEIGHT 1000 KG	REFERENCE FACTOR "R"							
	42	52	62	72	82	92	102	112
44	845	995	1160	1335	1505	1670	1820	1950
46	900	1075	1260	1450	1635	1820	1990	2135
48	960	1155	1360	1570	1780	1980	2170	2340
50	1025	1245	1470	1700	1930	2150	2360	2560
52	1095	1340	1590	1840	2085	2330	2570	2795
54	1170	1440	1715	1985	2255	2525	2790	3045
56	1250	1545	1845	2140	2435	2730	3020	3310
58	1330	1655	1980	2300	2625	2945	3265	3595
60	1420	1775	2125	2470	2820	3170	3525	
62	1510	1895	2275	2650	3025	3410		
64	1610	2025	2430	2835	3245			
66	1710	2155	2595	3030	3470			
68	1815	2295	2765	3230				
70	1925	2440	2945	3445				
72	2040	2590	3125					
74	2160	2745	3315					
76	2285	2905	3515					
78	2410	3075						

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Appendix 6TABLE 57. AIRCRAFT PERFORMANCE, TAKEOFF (BOEING 727-100 SERIES)
JT8D-7 ENGINE. 25° FLAPS

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 KG)

TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	74.2	70.0	65.9	61.9	58.2	54.5
12	73.7	69.5	65.4	61.5	57.7	54.2
14	72.6	68.1	64.1	60.4	57.1	54.0
16	72.6	68.1	64.1	60.4	57.1	54.0
18	72.6	68.1	64.1	60.4	57.1	54.0
20	72.6	68.1	64.1	60.4	57.1	54.0
22	72.6	68.1	64.1	60.4	57.1	54.0
24	72.6	68.1	64.1	60.4	57.1	54.0
26	72.6	68.1	64.1	60.4	57.1	54.0
28	72.6	68.1	64.1	60.4	57.1	53.4
30	71.9	67.5	63.5	59.0	56.2	52.6
32	70.7	66.5	62.5	58.8	55.3	51.8
34	69.6	65.4	61.6	57.9	54.4	51.0
36	68.4	64.4	60.6	56.9	53.5	50.2
38	67.2	63.3	59.6	56.0	52.6	49.3
40	66.1	62.3	58.6	55.1	51.7	48.5
42	64.9	61.2	57.6	54.1	50.8	47.6
44	63.8	60.2	56.6	53.2	49.9	46.7

REFERENCE FACTOR "R"

TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	36.5	39.7	44.1	49.8	57.0	65.6
12	36.5	40.2	44.8	50.7	57.9	66.8
14	36.5	40.7	45.6	51.5	58.9	67.9
16	36.5	41.1	46.3	52.4	59.3	69.0
18	36.5	41.1	46.3	52.4	59.3	69.0
20	36.5	41.1	46.3	52.4	59.3	69.0
22	36.6	41.2	46.3	52.4	59.3	69.2
24	36.7	41.3	46.3	52.4	60.1	69.9
26	37.3	41.8	47.0	53.2	61.1	70.9
28	37.9	42.5	47.8	54.2	62.3	72.2
30	38.6	43.2	48.7	55.4	63.7	74.0
32	39.4	44.1	49.8	56.8	65.4	76.0
34	40.3	45.1	51.0	58.3	67.3	78.5
36	41.3	46.2	52.3	60.0	69.5	81.3
38	42.3	47.4	53.8	61.8	71.9	84.4
40	43.4	48.8	55.4	63.9	74.5	87.9
42	44.7	50.2	57.2	66.1	77.4	91.8
44	46.0	51.8	59.1	68.4	80.5	96.0

RUNWAY LENGTH (METERS)

WEIGHT 1000 KG	REFERENCE FACTOR "R"						
	36	46	56	66	76	86	96
44	820	995	1155	1305	1445	1575	1700
46	860	1050	1235	1405	1565	1715	1850
48	910	1120	1325	1520	1710	1880	2040
50	960	1195	1430	1655	1875	2080	2270
52	1020	1280	1545	1805	2060	2310	2540
54	1085	1375	1675	1975	2275	2565	2850
56	1155	1480	1820	2160	2510	2855	
58	1230	1595	1975	2365	2765		
60	1310	1720	2145	2585			
62	1400	1855	2330	2825			
64	1490	1995	2525				
66	1590	2150	2735				
68	1695	2310	2955				
70	1805	2485					
72	1920	2665					
74	2040	2855					
76	2170						

TABLE 56. AIRCRAFT PERFORMANCE, LANDING (BOEING 727-100 SERIES)
JT8D-7 ENGINE, 30° FLAPS

MAXIMUM ALLOWABLE LANDING WEIGHT (1000 KG)

TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	64.6	64.6	64.6	64.6	64.6	64.6
12	64.6	64.6	64.6	64.6	64.6	64.6
14	64.6	64.6	64.6	64.6	64.6	64.6
16	64.6	64.6	64.6	64.6	64.6	64.6
18	64.6	64.6	64.6	64.6	64.6	64.6
20	64.6	64.6	64.6	64.6	64.6	64.6
22	64.6	64.6	64.6	64.6	64.6	64.6
24	64.6	64.6	64.6	64.6	64.6	64.6
26	64.6	64.6	64.6	64.6	64.6	64.6
28	64.6	64.6	64.6	64.6	64.6	63.7
30	64.6	64.6	64.6	64.6	64.6	62.6
32	64.6	64.6	64.6	64.6	64.5	61.5
34	64.6	64.6	64.6	64.6	63.9	60.4
36	64.6	64.6	64.6	64.6	63.2	59.4
38	64.6	64.6	64.6	64.6	62.4	58.4
40	64.6	64.6	64.6	64.6	61.6	57.4
42	64.6	64.6	64.6	64.6	60.7	56.5
44	64.6	64.6	64.6	63.8	59.7	55.7

RUNWAY LENGTH (METERS)

WEIGHT 1000 KG	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
46	1310	1365	1405	1440	1480	1535
48	1345	1395	1440	1485	1535	1585
50	1385	1430	1480	1530	1585	1640
52	1425	1465	1520	1580	1640	1695
54	1465	1505	1560	1625	1690	1745
56	1510	1550	1605	1675	1740	1800
58	1550	1590	1655	1720	1795	1855
60	1590	1640	1700	1770	1845	1910
62	1635	1685	1750	1820	1895	1960
64	1675	1735	1805	1875	1945	2015
66	1720	1790	1855	1925	1995	2028

TABLE 55. AIRCRAFT PERFORMANCE, LANDING (BOEING 727-100 SERIES)
JT8D-7 ENGINE, 40° FLAPS

MAXIMUM ALLOWABLE LANDING WEIGHT (1000 KG)

TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	62.4	62.4	62.4	62.4	60.6	56.9
12	62.4	62.4	62.4	62.4	60.5	56.8
14	62.4	62.4	62.4	62.4	60.4	56.7
16	62.4	62.4	62.4	62.4	60.3	56.7
18	62.4	62.4	62.4	62.4	60.2	56.6
20	62.4	62.4	62.4	62.4	60.1	56.5
22	62.4	62.4	62.4	62.4	59.8	56.2
24	62.4	62.4	62.4	62.4	59.4	55.9
26	62.4	62.4	62.4	62.4	58.9	55.5
28	62.4	62.4	62.4	62.2	58.4	55.0
30	62.4	62.4	62.4	61.5	57.8	54.4
32	62.4	62.4	62.4	60.7	57.1	53.7
34	62.4	62.4	62.4	59.9	56.3	53.0
36	62.4	62.4	62.3	59.0	55.4	52.2
38	62.4	62.4	61.3	57.9	54.4	51.3
40	62.4	62.4	60.3	56.8	53.4	50.3
42	62.4	62.4	59.1	55.6	52.2	49.2
44	62.4	61.8	57.9	54.3	51.0	48.0

RUNWAY LENGTH (METERS)

WEIGHT 1000 KG	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
46	1190	1225	1270	1320	1370	1415
48	1225	1265	1310	1360	1415	1460
50	1265	1305	1350	1400	1455	1510
52	1305	1345	1395	1445	1500	1555
54	1340	1385	1435	1490	1545	1605
56	1380	1430	1480	1535	1595	1655
58	1425	1475	1530	1585	1645	1705
60	1465	1520	1575	1635	1695	1760
62	1505	1565	1625	1685	1750	1810
64	1550	1610	1675	1740	1805	1865

AIRPLANE CHARACTERISTICS	UNIT OF MEASURE	ADVANCED PASSENGERS	OPTIONS QUICK CHANGE
MAXIMUM TAKEOFF WEIGHT	KG	72 600	76 700
MAXIMUM LANDING WEIGHT			
FLAPS 30°	KG	64 637	64 637
FLAPS 40°	KG	62 369	62 369
TYPICAL OPERATING EMPTY WEIGHT PLUS RESERVE FUEL	KG	45 964 48 748	45 964 ^{1/} 48 748 ^{2/}
AVERAGE FUEL CONSUMPTION	KG/KM	5.35	5.35
TYPICAL MAXIMUM PASSENGER LOAD AT 90.7 KG/PASSENGER	KG	11 338	8 526
MAXIMUM STRUCTURAL PAYLOAD	KG	14 700	18 600

^{1/} Based on 1.25 hours of reserve fuel.^{2/} Based on 2.00 hours of reserve fuel.

TABLE 69. AIRCRAFT PERFORMANCE, TAKEOFF (BOEING 737-200 SERIES)
JT8D-15 ENGINE, 15° FLAPS

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 LBS)									
TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	110.0	106.0	102.5	98.7	95.0	91.3	87.8	84.5	81.5
55	109.7	105.5	102.5	98.7	95.0	91.3	87.8	84.5	81.5
60	109.3	105.0	102.5	98.7	95.0	91.3	87.8	84.5	81.5
65	109.0	104.5	102.5	98.7	95.0	91.3	87.8	84.5	81.5
70	106.5	104.3	101.4	98.1	94.6	90.9	87.2	83.7	80.5
75	106.3	103.5	100.4	97.0	93.5	89.9	86.4	82.9	79.7
80	105.7	102.5	99.2	95.8	92.3	88.8	85.4	82.0	78.8
85	104.8	101.3	97.8	94.3	90.9	87.5	84.2	80.9	77.7
90	103.5	99.8	96.2	92.7	89.3	86.1	82.8	79.7	76.5
95	101.9	98.0	94.4	90.9	87.6	84.4	81.3	78.3	75.2
100	100.0	96.0	92.4	89.0	85.7	82.6	79.6	76.7	73.8
105	97.6	93.8	90.2	86.8	83.6	80.6	77.7	74.9	72.2
110	95.0	91.3	87.8	84.5	81.4	78.4	75.7	73.0	70.5

REFERENCE FACTOR "R"									
TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	46.0	47.5	50.5	55.0	59.4	64.0	68.9	74.1	80.0
55	46.4	48.1	50.8	55.2	59.6	64.2	69.1	74.4	80.3
60	46.8	48.8	51.3	55.6	60.0	64.6	69.6	75.0	80.9
65	47.2	49.4	52.0	56.2	60.6	65.3	70.4	75.8	81.9
70	47.6	49.6	52.9	57.1	61.5	66.3	71.4	77.0	83.1
75	48.0	49.9	53.9	58.1	62.6	67.5	72.7	78.4	84.7
80	48.4	51.1	55.1	59.4	63.9	68.9	74.3	80.1	86.5
85	48.8	52.5	56.5	60.8	65.5	70.6	76.1	82.1	88.7
90	50.3	54.0	58.1	62.5	67.3	72.6	78.3	84.4	91.1
95	51.9	55.7	59.8	64.4	69.3	74.8	80.6	87.0	93.9
100	53.7	57.5	61.8	66.5	71.6	77.2	83.3	89.9	97.0
105	55.5	59.5	63.9	68.7	74.1	79.9	86.2	93.0	100.3
110	57.4	61.6	66.2	71.2	76.8	82.9	89.4	96.5	104.0

RUNWAY LENGTH (1000 FEET)							
WEIGHT 1000 LBS	REFERENCE FACTOR "R"						
	45	55	65	75	85	95	105
70	2.39	2.90	3.36	3.77	4.18	4.59	5.04
75	2.67	3.23	3.75	4.27	4.79	5.35	5.97
80	2.98	3.60	4.20	4.81	5.45	6.13	6.88
85	3.32	4.01	4.70	5.40	6.14	6.92	7.78
90	3.67	4.47	5.25	6.05	6.87	7.74	8.66
95	4.05	4.96	5.85	6.74	7.64	8.57	9.53
100	4.46	5.50	6.50	7.49	8.45	9.42	10.39
105	4.88	6.08	7.21	8.28	9.30	10.28	11.23
110	5.33	6.70	7.96	9.12	10.19	11.17	12.06
115	5.81	7.36	8.76	10.02	11.12	12.07	

TABLE 70. AIRCRAFT PERFORMANCE, TAKEOFF (BOEING 737-200 SERIES)
JT8D-15 ENGINE, 5° FLAPS

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 LBS)

TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	115.5	115.5	114.1	110.1	106.0	102.0	98.1	94.4	91.0
55	115.5	115.5	114.1	110.1	106.0	102.0	98.1	94.4	91.0
60	115.5	115.5	114.1	110.1	106.0	102.0	98.1	94.4	91.0
65	115.5	115.5	114.1	110.1	106.0	102.0	98.1	94.4	91.0
70	115.5	115.5	113.5	109.6	105.6	101.5	97.4	93.6	90.0
75	115.5	115.1	111.6	107.7	103.8	99.8	95.8	92.1	88.6
80	115.5	113.3	109.7	105.8	101.9	98.0	94.2	90.6	87.2
85	114.8	111.4	107.7	104.0	100.1	96.3	92.6	89.1	85.8
90	113.1	109.5	105.8	102.1	98.3	94.6	91.0	87.5	84.3
95	111.3	107.6	103.9	100.2	96.5	92.9	89.4	86.0	82.9
100	109.5	105.7	102.0	98.3	94.7	91.1	87.8	84.5	81.5
105	107.8	103.9	100.1	96.4	92.8	89.4	86.1	83.0	80.0
110	106.0	102.0	98.1	94.5	91.0	87.7	84.5	81.5	78.6

REFERENCE FACTOR "R"

TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	48.0	49.5	53.0	57.5	62.2	67.1	72.4	78.1	84.5
55	48.1	50.1	53.3	57.8	62.4	67.4	72.7	78.5	84.8
60	48.2	50.8	53.8	58.3	62.9	67.9	73.2	79.1	85.5
65	48.3	51.4	54.5	59.0	63.6	68.7	74.1	80.0	86.5
70	48.5	51.3	55.5	59.9	64.6	69.7	75.2	81.3	87.8
75	48.6	52.4	56.6	61.0	65.8	71.0	76.7	82.8	89.4
80	50.0	53.7	57.9	62.4	67.3	72.6	78.4	84.6	91.4
85	51.4	55.2	59.4	63.9	69.0	74.4	80.4	86.8	93.7
90	53.0	56.8	61.0	65.7	70.9	76.5	82.6	89.2	96.3
95	54.7	58.6	62.9	67.7	73.1	78.9	85.2	91.9	99.2
100	56.5	60.5	65.0	70.0	75.5	81.5	88.0	95.0	102.5
105	58.4	62.6	67.2	72.4	78.1	84.4	91.1	98.3	106.1
110	60.4	64.8	69.7	75.1	81.0	87.5	94.5	102.0	110.0

RUNWAY LENGTH (1000 FEET)

WEIGHT 1000 LBS	REFERENCE FACTOR "R"						
	50	60	70	80	90	100	110
70	2.61	3.12	3.56	3.96	4.36	4.78	5.25
75	2.93	3.49	4.00	4.50	5.01	5.57	6.21
80	3.28	3.90	4.49	5.09	5.70	6.39	7.16
85	3.65	4.36	5.04	5.72	6.44	7.23	8.10
90	4.06	4.86	5.64	6.42	7.23	8.09	9.04
95	4.51	5.41	6.29	7.17	8.06	9.09	10.06
100	4.98	6.00	7.00	7.98	8.94	9.91	10.97
105	5.48	6.64	7.76	8.84	9.87	10.85	11.78
110	6.02	7.32	8.57	9.75	10.84	11.82	12.67
115	6.59	8.05	9.44	10.72	11.86	12.82	

TABLE 68. AIRCRAFT PERFORMANCE, TAKEOFF (BOEING 737-200 SERIES)
JT8D-15 ENGINE, 25° FLAPS

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 LBS)									
TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	104.5	100.5	97.5	93.7	90.0	86.4	83.0	80.0	77.5
55	104.2	100.0	97.5	93.7	90.0	86.4	83.0	80.0	77.5
60	103.8	99.5	97.5	93.7	90.0	86.4	83.0	80.0	77.5
65	103.5	99.0	97.5	93.7	90.0	86.4	83.0	80.0	77.5
70	101.0	98.9	96.3	93.3	89.9	86.5	83.0	79.6	76.5
75	100.9	98.4	95.4	92.2	88.8	85.4	82.0	78.7	75.8
80	100.5	97.5	94.3	91.0	87.5	84.1	80.9	77.8	75.0
85	99.7	96.4	93.0	89.6	86.1	82.8	79.6	76.7	74.1
90	98.5	95.0	91.5	88.0	84.6	81.4	78.3	75.5	73.0
95	96.9	93.3	89.7	86.3	83.0	79.8	76.9	74.2	71.8
100	95.0	91.3	87.8	84.4	81.2	78.2	75.4	72.8	70.5
105	92.7	89.0	85.5	82.3	79.2	76.4	73.7	71.3	69.1
110	90.0	86.4	83.1	80.0	77.2	74.5	72.0	69.7	67.5

REFERENCE FACTOR "R"									
TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	43.5	45.0	48.0	52.0	56.2	60.6	65.4	70.5	76.0
55	43.7	45.5	48.2	52.2	56.3	60.7	65.5	70.7	76.4
60	43.9	45.6	48.6	52.5	56.7	61.1	66.0	71.3	77.0
65	44.1	45.9	49.2	53.1	57.2	61.8	66.7	72.1	78.0
70	44.3	46.4	50.0	53.9	58.1	62.6	67.6	73.1	79.1
75	44.5	47.4	51.0	54.9	59.1	63.8	68.9	74.5	80.6
80	45.1	48.5	52.1	56.1	60.4	65.2	70.4	76.1	82.3
85	46.4	49.8	53.5	57.5	62.0	66.8	72.2	78.0	84.3
90	47.7	51.2	55.0	59.2	63.7	68.7	74.2	80.1	86.6
95	49.2	52.8	56.7	61.0	65.7	70.9	76.5	82.6	89.2
100	50.8	54.5	58.6	63.1	68.0	73.3	79.1	85.3	92.0
105	52.5	56.4	60.7	65.3	70.4	76.0	81.9	88.3	95.1
110	54.3	58.4	62.9	67.8	73.1	78.9	85.0	91.5	98.5

RUNWAY LENGTH (1000 FEET)							
WEIGHT 1000 LBS	REFERENCE FACTOR "R"						
	40	50	60	70	80	90	100
70	2.28	2.71	3.11	3.50	3.90	4.33	4.83
75	2.46	2.99	3.47	3.96	4.47	5.04	5.70
80	2.69	3.31	3.89	4.47	5.08	5.77	6.57
85	2.95	3.67	4.35	5.03	5.74	6.52	7.42
90	3.25	4.07	4.85	5.63	6.44	7.30	8.26
95	3.59	4.51	5.40	6.23	7.18	8.10	9.03
100	3.97	5.00	6.00	6.99	7.96	8.92	9.90
105	4.38	5.53	6.65	7.74	8.78	9.77	10.68
110	4.84	6.09	7.34	8.53	9.65	10.64	11.47
115	5.33	6.70	8.07	9.38	10.55	11.53	

TABLE 67. AIRCRAFT PERFORMANCE, LANDING (BOEING 737-200 SERIES)
JT8D-15 ENGINE, 30° FLAPS

MAXIMUM ALLOWABLE LANDING WEIGHT (1000 LBS)

TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	103.0	103.0	103.0	103.0	103.0	103.0	102.7	98.8	95.0
55	103.0	103.0	103.0	103.0	103.0	103.0	102.7	98.8	95.0
60	103.0	103.0	103.0	103.0	103.0	103.0	102.7	98.8	95.0
65	103.0	103.0	103.0	103.0	103.0	103.0	102.7	98.8	95.0
70	103.0	103.0	103.0	103.0	103.0	103.0	101.9	98.0	94.0
75	103.0	103.0	103.0	103.0	103.0	103.0	100.8	97.1	93.2
80	103.0	103.0	103.0	103.0	103.0	103.0	99.6	95.9	92.2
85	103.0	103.0	103.0	103.0	103.0	101.8	98.1	94.5	91.0
90	103.0	103.0	103.0	103.0	103.0	100.1	96.5	93.0	89.5
95	103.0	103.0	103.0	103.0	101.9	98.2	94.7	91.2	87.8
100	103.0	103.0	103.0	103.0	99.8	96.2	92.7	89.2	85.9
105	103.0	103.0	103.0	101.1	97.5	93.9	90.5	87.1	83.8
110	103.0	103.0	102.1	98.5	94.9	91.5	88.1	84.7	81.5

RUNWAY LENGTH (1000 FEET)

WEIGHT 1000 LBS	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
70	4.25	4.35	4.45	4.55	4.65	4.76	4.87	4.98	5.10
75	4.48	4.59	4.70	4.81	4.91	5.02	5.13	5.26	5.39
80	4.70	4.83	4.95	5.06	5.17	5.29	5.40	5.53	5.68
85	4.94	5.08	5.20	5.32	5.43	5.55	5.68	5.81	5.97
90	5.17	5.32	5.45	5.57	5.69	5.82	5.95	6.09	6.25
95	5.41	5.56	5.70	5.83	5.95	6.08	6.22	6.37	6.54
100	5.65	5.80	5.94	6.08	6.21	6.35	6.50	6.66	6.83
105	5.90	6.04	6.18	6.32	6.47	6.62	6.78	6.94	7.11

TABLE 66. AIRCRAFT PERFORMANCE, LANDING (BOEING 737-200 SERIES)
JT8D-15 ENGINE, 40° FLAPS

MAXIMUM ALLOWABLE LANDING WEIGHT (1000 LBS)									
TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	103.0	103.0	103.0	103.0	103.0	103.0	102.7	98.8	95.0
55	103.0	103.0	103.0	103.0	103.0	103.0	102.7	98.8	95.0
60	103.0	103.0	103.0	103.0	103.0	103.0	102.7	98.8	95.0
65	103.0	103.0	103.0	103.0	103.0	103.0	102.7	98.8	95.0
70	103.0	103.0	103.0	103.0	103.0	103.0	101.9	98.0	94.0
75	103.0	103.0	103.0	103.0	103.0	103.0	100.8	97.1	93.2
80	103.0	103.0	103.0	103.0	103.0	103.0	99.6	95.9	92.2
85	103.0	103.0	103.0	103.0	103.0	101.8	98.1	94.5	91.0
90	103.0	103.0	103.0	103.0	103.0	100.1	96.5	93.0	89.5
95	103.0	103.0	103.0	103.0	101.9	98.2	94.7	91.2	87.8
100	103.0	103.0	103.0	103.0	99.8	96.2	92.7	89.2	85.9
105	103.0	103.0	103.0	101.1	97.5	93.9	90.5	87.1	83.8
110	103.0	103.0	102.1	98.5	94.9	91.5	88.1	84.7	81.5

RUNWAY LENGTH (1000 FEET)									
WEIGHT 1000 LBS	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
70	3.95	4.05	4.14	4.23	4.31	4.40	4.50	4.59	4.70
75	4.15	4.25	4.35	4.44	4.54	4.64	4.75	4.86	4.98
80	4.35	4.46	4.56	4.66	4.77	4.88	5.00	5.12	5.25
85	4.56	4.67	4.78	4.89	5.01	5.13	5.25	5.39	5.53
90	4.77	4.88	5.00	5.12	5.25	5.38	5.51	5.65	5.80
95	4.98	5.11	5.23	5.36	5.49	5.63	5.77	5.92	6.07
100	5.20	5.33	5.47	5.60	5.74	5.88	6.03	6.18	6.34
105	5.42	5.57	5.71	5.85	5.99	6.14	6.29	6.44	6.61

AIRPLANE CHARACTERISTICS	UNIT OF MEASURE	ADVANCED 200	OPTIONS 200C
MAXIMUM TAKEOFF WEIGHT	LBS.	109,000	115,500
MAXIMUM LANDING WEIGHT			
FLAPS 30°	LBS.	98,000	103,000
FLAPS 40°	LBS.	89,700	103,000
TYPICAL OPERATING EMPTY WEIGHT PLUS RESERVE FUEL	LBS.	67,238	70,138 ^{1/}
	LBS.	71,480	74,380 ^{2/}
AVERAGE FUEL CONSUMPTION	LBS./MILE	15	15
TYPICAL MAXIMUM PASSENGER LOAD AT 200 LBS/PASSENGER	LBS.	26,000	26,000
MAXIMUM STRUCTURAL PAYLOAD	LBS.	34,830	31,930

^{1/} Based on 1.25 hours of reserve fuel.
^{2/} Based on 2.00 hours of reserve fuel.

TABLE 65. AIRCRAFT PERFORMANCE, TAKEOFF (BOEING 727-200 SERIES)
JT8D-15 ENGINE, 5° FLAPS

TEMP °F	MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 LBS)								
	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	197.0	197.0	197.0	197.0	193.9	187.0	180.2	173.5	167.0
55	197.0	197.0	197.0	197.0	193.9	187.0	180.2	173.5	167.0
60	197.0	197.0	197.0	197.0	193.9	187.0	180.2	173.5	167.0
65	197.0	197.0	197.0	197.0	193.9	187.0	180.2	173.5	167.0
70	197.0	197.0	197.0	197.0	193.9	187.0	180.2	173.5	167.0
75	197.0	197.0	197.0	197.0	193.9	187.0	180.2	173.5	167.0
80	197.0	197.0	197.0	196.3	189.4	182.8	176.3	169.8	163.0
85	197.0	197.0	197.0	192.6	185.8	179.2	172.7	166.3	159.8
90	197.0	197.0	195.9	188.8	182.1	175.6	169.2	162.8	156.5
95	197.0	197.0	191.9	185.1	178.4	171.9	165.6	159.4	153.3
100	197.0	194.9	188.0	181.2	174.7	168.3	162.0	156.0	150.0
105	197.0	190.8	184.0	177.4	170.9	164.6	158.5	152.5	146.7
110	193.5	186.6	180.0	173.5	167.1	161.0	155.0	149.1	143.5

TEMP °F	REFERENCE FACTOR "B"								
	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	65.0	69.4	74.1	79.1	87.1	94.8	103.2	112.1	121.1
55	66.0	69.6	74.5	80.4	87.2	94.9	103.3	112.2	121.6
60	66.2	70.1	75.1	81.0	87.7	95.2	103.6	112.7	122.7
65	66.4	70.9	76.1	81.9	88.6	96.1	104.5	113.9	124.3
70	67.1	71.9	77.3	83.2	89.9	97.4	105.9	115.5	126.4
75	68.1	73.3	78.9	84.8	91.6	99.2	107.9	117.8	129.0
80	69.4	74.8	80.6	86.8	93.7	101.5	110.4	120.5	132.2
85	71.0	76.7	82.6	89.1	96.2	104.3	113.4	123.9	135.8
90	73.0	78.3	85.0	91.7	99.1	107.5	117.0	127.7	140.0
95	75.3	81.2	87.5	94.7	102.5	111.2	121.0	132.2	144.7
100	77.9	83.9	90.6	97.9	106.2	115.4	125.7	137.1	150.0
105	80.8	86.9	93.8	101.6	110.3	120.0	130.3	142.7	155.7
110	84.0	90.1	97.3	105.5	114.8	125.1	136.5	148.8	162.0

WEIGHT 1000 LBS	RUNWAY LENGTH (1000 FEET)								
	REFERENCE FACTOR "R"								
	70	80	90	100	110	120	130	140	150
130	4.57	5.32	5.95	6.56	7.15	7.73	8.30	8.85	9.40
135	5.01	5.70	6.37	7.03	7.67	8.31	8.93	9.56	10.18
140	5.37	6.11	6.83	7.54	8.25	8.94	9.63	10.32	11.02
145	5.75	6.54	7.32	8.10	8.86	9.63	10.39	11.15	11.92
150	6.14	7.00	7.85	8.69	9.53	10.36	11.20	12.04	12.83
155	6.56	7.49	8.41	9.33	10.24	11.16	12.07	12.99	13.91
160	7.00	8.00	9.00	10.00	11.00	12.00	13.00	14.00	
165	7.45	8.53	9.62	10.71	11.81	12.90	13.99		
170	7.93	9.10	10.28	11.47	12.66	13.86			
175	8.42	9.69	10.97	12.27	13.57				
180	8.93	10.30	11.69	13.10					
185	9.46	10.94	12.45	13.93					
190	10.01	11.61	13.24						
195	10.58	12.30	14.06						

TABLE 64. AIRCRAFT PERFORMANCE, TAKEOFF (BOEING 727-200 SERIES)
JT8D-15 ENGINE, 15° FLAPS

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 LBS)									
TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	197.0	197.0	197.0	193.4	186.9	180.2	173.5	166.9	160.5
55	197.0	197.0	197.0	193.4	186.9	180.2	173.5	166.9	160.5
60	197.0	197.0	197.0	193.4	186.9	180.2	173.5	166.9	160.5
65	197.0	197.0	197.0	193.4	186.9	180.2	173.5	166.9	160.5
70	197.0	197.0	197.0	193.4	186.9	180.2	173.5	166.9	160.5
75	197.0	197.0	197.0	193.4	186.9	180.2	173.5	166.9	160.5
80	197.0	197.0	196.2	189.0	182.2	175.3	169.5	163.4	157.2
85	197.0	197.0	192.5	185.5	178.8	172.4	166.2	160.1	154.1
90	197.0	195.9	188.7	181.9	175.4	169.0	162.9	156.3	150.9
95	197.0	191.7	184.9	178.2	171.8	165.5	159.5	153.5	147.7
100	194.5	187.7	181.0	174.5	168.2	162.0	156.0	150.2	144.5
105	190.4	183.7	177.1	170.7	164.5	158.4	152.5	146.3	141.3
110	186.5	179.7	173.1	166.3	160.7	154.3	149.0	143.4	138.0

REFERENCE FACTOR "R"									
TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	53.6	61.6	65.7	70.7	76.5	83.0	90.2	97.9	106.2
55	53.4	61.7	65.9	70.8	76.6	83.0	90.2	98.0	106.3
60	53.4	62.0	66.3	71.3	77.0	83.4	90.5	98.4	106.9
65	53.3	62.6	67.1	72.1	77.9	84.2	91.4	99.3	108.0
70	53.4	63.5	68.1	73.2	78.9	85.4	92.6	100.6	109.6
75	60.3	64.6	69.3	74.6	80.4	87.0	94.3	102.5	111.7
80	61.4	65.9	70.3	76.2	82.2	88.9	96.4	104.9	114.3
85	62.3	67.5	72.5	78.2	84.4	91.3	99.0	107.7	117.4
90	64.5	69.4	74.7	80.5	86.9	94.0	102.0	111.0	121.0
95	66.5	71.5	77.0	83.0	89.7	97.2	105.5	114.3	125.1
100	68.7	73.9	79.6	85.9	92.9	100.7	109.4	119.0	129.7
105	71.2	76.5	82.4	89.0	96.4	104.6	113.7	123.8	134.9
110	74.0	79.4	85.5	92.5	100.3	109.0	118.5	129.0	140.5

RUNWAY LENGTH (1000 FEET)									
WEIGHT 1000 LBS	REFERENCE FACTOR "R"								
	58	68	78	88	98	108	118	128	138
130	3.96	4.55	5.20	5.90	6.61	7.28	7.88	8.39	8.75
135	4.23	4.89	5.59	6.30	7.00	7.66	8.28	8.82	9.27
140	4.51	5.25	5.99	6.73	7.44	8.13	8.78	9.39	9.94
145	4.81	5.63	6.42	7.19	7.94	8.67	9.38	10.08	10.76
150	5.13	6.02	6.87	7.69	8.49	9.29	10.09	10.90	11.74
155	5.46	6.44	7.35	8.23	9.10	9.98	10.89	11.85	12.88
160	5.82	6.96	7.85	8.81	9.77	10.76	11.80	12.93	14.17
165	6.18	7.31	8.38	9.42	10.49	11.61	12.81	14.13	
170	6.57	7.77	8.92	10.08	11.26	12.53	13.92		
175	6.97	8.25	9.49	10.76	12.10	13.54			
180	7.39	8.74	10.09	11.49	12.98				
185	7.83	9.25	10.71	12.25	13.92				
190	8.28	9.78	11.35	13.05					
195	8.75	10.32	12.02	13.98					

TABLE 63. AIRCRAFT PERFORMANCE, TAKEOFF (BOEING 727-200 SERIES)
JT8D-15 ENGINE, 20° FLAPS

TEMP °F	MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 LBS)								
	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	197.0	196.0	190.0	182.0	176.0	170.1	164.0	157.9	151.5
55	197.0	193.5	190.0	182.0	176.0	170.1	164.0	157.9	151.5
60	197.0	193.5	190.0	182.0	176.0	170.1	164.0	157.9	151.5
65	197.0	193.5	190.0	182.0	176.0	170.1	164.0	157.9	151.5
70	197.0	193.5	188.1	182.0	176.0	170.1	164.0	157.9	151.5
75	197.0	193.5	183.1	182.0	176.0	170.1	164.0	157.9	151.5
80	197.0	192.3	184.3	173.0	171.7	165.7	159.9	154.1	143.1
85	196.1	180.4	181.3	174.7	163.5	162.5	156.8	151.0	145.2
90	191.7	184.5	177.8	171.4	165.2	159.3	153.6	147.9	142.3
95	187.5	180.7	174.2	168.0	161.9	156.0	150.4	144.8	139.5
100	183.5	177.0	170.6	164.5	158.5	152.7	147.1	141.8	136.6
105	179.7	173.3	167.0	160.9	155.0	149.3	143.9	138.7	133.8
110	176.0	169.6	163.4	157.3	151.4	145.8	140.5	135.6	131.0

TEMP °F	REFERENCE FACTOR "R"								
	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	55.4	58.3	62.2	67.0	72.7	79.0	85.3	93.0	100.4
55	55.5	58.4	62.4	67.3	72.8	79.1	85.9	93.1	100.5
60	55.6	58.8	62.9	67.7	73.2	79.4	86.1	93.4	101.1
65	55.7	59.4	63.6	68.5	74.0	80.1	86.8	94.2	102.2
70	56.2	60.2	64.6	69.6	75.1	81.2	88.0	95.5	103.3
75	57.0	61.2	65.8	70.9	76.5	82.7	89.6	97.3	105.9
80	58.1	62.5	67.3	72.5	78.2	84.6	91.7	99.6	108.4
85	59.4	64.1	69.0	74.4	80.3	86.8	94.1	102.3	111.5
90	61.0	65.8	71.0	76.6	82.7	89.5	97.0	105.5	115.0
95	62.9	67.3	73.2	79.0	85.4	92.5	100.4	109.2	119.0
100	65.0	70.1	75.6	81.7	88.4	95.9	104.2	113.3	123.5
105	67.4	72.6	78.3	84.7	91.3	99.7	108.4	118.0	128.5
110	70.0	75.3	81.3	88.0	95.5	103.9	113.0	123.1	134.0

WEIGHT 1000 LBS	RUNWAY LENGTH (1000 FEET)								
	REFERENCE FACTOR "R"								
	55	65	75	85	95	105	115	125	135
130	3.71	4.39	5.02	5.62	6.20	6.75	7.30	7.85	8.41
135	3.97	4.69	5.37	6.02	6.66	7.28	7.89	8.50	9.12
140	4.25	5.01	5.74	6.46	7.16	7.85	8.53	9.20	9.89
145	4.54	5.35	6.14	6.92	7.69	8.45	9.20	9.95	10.71
150	4.84	5.71	6.57	7.42	8.26	9.09	9.92	10.75	11.58
155	5.16	6.10	7.02	7.94	8.86	9.78	10.69	11.60	12.51
160	5.50	6.50	7.50	8.50	9.50	10.50	11.50	12.50	13.40
165	5.84	6.92	8.00	9.09	10.17	11.26	12.35	13.44	
170	6.20	7.36	8.53	9.70	10.88	12.06	13.25		
175	6.58	7.83	9.09	10.35	11.63	12.90			
180	6.97	8.31	9.67	11.03	12.40	13.79			
185	7.37	8.81	10.27	11.74	13.22				
190	7.78	9.34	10.90	12.48					
195	8.21	9.83	11.56	13.25					

TABLE 62. AIRCRAFT PERFORMANCE, TAKEOFF (BOEING 727-200 SERIES)
JT8D-15 ENGINE, 25° FLAPS

TEMP °F	MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 LBS)									
	AIRPORT ELEVATION (FEET)									
	0	1000	2000	3000	4000	5000	6000	7000	8000	
50	190.0	183.5	177.5	170.4	164.5	158.6	152.7	147.0	141.5	
55	184.5	181.0	177.5	170.4	164.5	158.6	152.7	147.0	141.5	
60	184.5	181.0	177.5	170.4	164.5	158.6	152.7	147.0	141.5	
65	184.5	181.0	177.5	170.4	164.5	158.6	152.7	147.0	141.5	
70	184.5	181.0	176.0	170.4	164.5	158.6	152.7	147.0	141.5	
75	184.5	181.0	176.0	170.4	164.5	158.6	152.7	147.0	141.5	
80	184.5	180.0	172.9	166.4	160.5	154.9	149.5	144.1	138.5	
85	183.6	176.3	169.5	163.3	157.5	151.9	146.5	141.2	135.8	
90	179.4	172.5	166.2	160.1	154.4	148.9	143.5	138.3	133.0	
95	175.3	168.9	162.8	156.9	151.3	145.8	140.6	135.4	130.3	
100	171.5	165.3	159.4	153.7	148.1	142.8	137.6	132.5	127.3	
105	167.9	161.8	156.0	150.4	145.0	139.7	134.6	129.7	124.7	
110	164.5	158.4	152.5	147.0	141.8	136.7	131.7	126.8	122.0	

TEMP °F	REFERENCE FACTOR "R"									
	AIRPORT ELEVATION (FEET)									
	0	1000	2000	3000	4000	5000	6000	7000	8000	
50	53.6	56.2	59.5	64.1	69.6	75.9	82.6	89.6	96.8	
55	53.7	56.2	59.8	64.4	69.8	75.9	82.7	89.7	97.0	
60	53.8	56.5	60.3	64.9	70.3	76.3	82.9	90.0	97.6	
65	54.1	57.1	61.1	65.7	71.0	77.0	83.6	90.8	98.7	
70	54.2	57.8	62.0	66.8	72.1	78.1	84.7	92.1	100.3	
75	54.8	58.8	63.2	68.1	73.5	79.6	86.3	93.8	102.3	
80	55.8	60.1	64.7	69.7	75.2	81.4	88.3	96.0	104.7	
85	57.0	61.5	66.3	71.5	77.2	83.6	90.7	98.7	107.6	
90	58.5	63.2	68.2	73.6	79.5	86.1	93.5	101.7	111.0	
95	60.3	65.1	70.3	75.9	82.1	89.0	96.7	105.3	114.8	
100	62.4	67.3	72.6	78.5	85.1	92.3	100.4	109.2	119.1	
105	64.8	69.7	75.2	81.4	88.3	96.0	104.4	113.7	123.8	
110	67.5	72.3	78.0	84.5	91.8	100.0	108.9	118.6	129.0	

WEIGHT 1000 LBS	RUNWAY LENGTH (1000 FEET)									
	REFERENCE FACTOR "R"									
	55	65	75	85	95	105	115	125	135	
130	3.61	4.31	4.95	5.55	6.13	6.69	7.25	7.82	8.40	
135	3.90	4.62	5.31	5.97	6.60	7.23	7.86	8.49	9.15	
140	4.19	4.96	5.70	6.41	7.11	7.81	8.50	9.21	9.94	
145	4.50	5.32	6.11	6.89	7.66	8.42	9.19	9.97	10.77	
150	4.82	5.69	6.55	7.40	8.24	9.07	9.92	10.77	11.64	
155	5.15	6.09	7.01	7.93	8.85	9.77	10.69	11.61	12.55	
160	5.49	6.50	7.50	8.50	9.50	10.50	11.49	12.49		
165	5.85	6.93	8.01	9.10	10.18	11.27	12.35			
170	6.22	7.38	8.55	9.73	10.90	12.08	13.24			
175	6.60	7.85	9.12	10.39	11.65	12.92				
180	6.99	8.34	9.70	11.03	12.45					
185	7.40	8.84	10.31	11.80	13.28					
190	7.82	9.37	10.95	12.55						
195	8.25	9.91	11.61	13.33						

TABLE 61. AIRCRAFT PERFORMANCE, LANDING (BOEING 727-200 SERIES)
JT8D-15 ENGINE, 30° FLAPS

MAXIMUM ALLOWABLE LANDING WEIGHT (1000 LBS)

TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	160.0	160.0	160.0	160.0	160.0	160.0	160.0	160.0	160.0
55	160.0	160.0	160.0	160.0	160.0	160.0	160.0	160.0	160.0
60	160.0	160.0	160.0	160.0	160.0	160.0	160.0	160.0	160.0
65	160.0	160.0	160.0	160.0	160.0	160.0	160.0	160.0	160.0
70	160.0	160.0	160.0	160.0	160.0	160.0	160.0	160.0	160.0
75	160.0	160.0	160.0	160.0	160.0	160.0	160.0	160.0	160.0
80	160.0	160.0	160.0	160.0	160.0	160.0	160.0	160.0	160.0
85	160.0	160.0	160.0	160.0	160.0	160.0	160.0	160.0	160.0
90	160.0	160.0	160.0	160.0	160.0	160.0	160.0	160.0	158.6
95	160.0	160.0	160.0	160.0	160.0	160.0	160.0	160.0	155.5
100	160.0	160.0	160.0	160.0	160.0	160.0	160.0	157.9	151.9
105	160.0	160.0	160.0	160.0	160.0	160.0	159.7	153.7	147.9
110	160.0	160.0	160.0	160.0	160.0	160.0	154.9	149.1	143.5

RUNWAY LENGTH (1000 FEET)

WEIGHT 1000 LBS	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
110	4.14	4.20	4.27	4.34	4.42	4.51	4.60	4.70	4.80
115	4.24	4.31	4.38	4.46	4.54	4.64	4.73	4.83	4.93
120	4.35	4.42	4.50	4.58	4.67	4.77	4.86	4.96	5.06
125	4.46	4.54	4.63	4.71	4.81	4.90	5.00	5.10	5.21
130	4.58	4.67	4.76	4.85	4.95	5.05	5.15	5.25	5.36
135	4.71	4.80	4.90	4.99	5.09	5.19	5.30	5.41	5.52
140	4.84	4.94	5.04	5.14	5.25	5.35	5.46	5.57	5.69
145	4.97	5.09	5.20	5.30	5.40	5.51	5.62	5.74	5.87
150	5.12	5.24	5.36	5.46	5.57	5.68	5.79	5.91	6.05
155	5.26	5.40	5.52	5.63	5.74	5.85	5.96	6.09	6.25
160	5.42	5.57	5.70	5.81	5.92	6.03	6.15	6.28	6.45

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TABLE 60. AIRCRAFT PERFORMANCE, LANDING (BOEING 727-200 SERIES)
JT8D-15 ENGINE, 40° FLAPS

TEMP °F	MAXIMUM ALLOWABLE LANDING WEIGHT (1000 LBS)									
	AIRPORT ELEVATION (FEET)									
	0	1000	2000	3000	4000	5000	6000	7000	8000	
50	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5
55	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5
60	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5
65	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5
70	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5
75	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5
80	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5
85	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5
90	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5	141.6
95	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5	141.7	139.3
100	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5	141.7	138.6
105	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5	133.5	133.5
110	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5	134.0	129.9
115	142.5	142.5	142.5	142.5	142.5	141.3	136.1	130.0	126.0	

WEIGHT 1000 LBS	RUNWAY LENGTH (1000 FEET)									
	AIRPORT ELEVATION (FEET)									
	0	1000	2000	3000	4000	5000	6000	7000	8000	
110	4.00	4.10	4.19	4.27	4.35	4.44	4.53	4.64	4.77	
115	4.15	4.24	4.33	4.42	4.51	4.61	4.71	4.82	4.95	
120	4.30	4.39	4.49	4.58	4.68	4.78	4.88	5.00	5.13	
125	4.45	4.55	4.64	4.74	4.85	4.95	5.07	5.19	5.32	
130	4.61	4.71	4.81	4.91	5.02	5.13	5.25	5.38	5.51	
135	4.76	4.87	4.93	5.09	5.20	5.32	5.44	5.57	5.70	
140	4.92	5.04	5.15	5.27	5.39	5.51	5.64	5.76	5.90	
145	5.03	5.21	5.33	5.46	5.59	5.71	5.83	5.96	6.10	

AIRPLANE CHARACTERISTICS	UNIT OF MEASURE	ADVANCED OPTIONS		
MAXIMUM TAKEOFF WEIGHT	LBS.	181,500	190,500	197,000
MAXIMUM LANDING WEIGHT				
FLAPS 30°	LBS.	154,500	160,000	160,000
FLAPS 40°	LBS.	142,500	142,500	142,500
TYPICAL OPERATING EMPTY WEIGHT PLUS RESERVE FUEL	LBS.	109,211 116,141	109,753 116,683	112,835 ^{1/} 119,765 ^{2/}
AVERAGE FUEL CONSUMPTION	LBS./MILE	22	22	22
TYPICAL MAXIMUM PASSENGER LOAD AT 200 LBS./PASSENGER	LBS.	32,400	35,000	37,800
MAXIMUM STRUCTURAL PAYLOAD	LBS.	40,339	41,797	42,715

- ^{1/} Based on 1.25 hours of reserve fuel.
^{2/} Based on 2.00 hours of reserve fuel.

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Appendix 6

TABLE 59. AIRCRAFT PERFORMANCE, TAKEOFF (BOEING 727-100 SERIES)
JT8D-7 ENGINE, 5° FLAPS

TEMP °F	MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 LBS)								
	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	169.0	169.0	169.0	169.0	169.0	164.9	158.2	152.1	146.8
55	169.0	169.0	169.0	169.0	169.0	162.8	156.7	150.7	145.0
60	169.0	169.0	169.0	169.0	166.4	160.3	154.5	149.3	144.8
65	169.0	169.0	169.0	169.0	166.4	160.3	154.5	149.3	144.8
70	169.0	169.0	169.0	169.0	166.4	160.3	154.5	149.3	144.8
75	169.0	169.0	169.0	169.0	166.4	160.3	154.5	149.3	144.8
80	169.0	169.0	169.0	169.0	166.4	160.3	154.5	149.3	144.8
85	169.0	169.0	169.0	169.0	166.4	160.3	153.3	147.4	141.9
90	169.0	169.0	169.0	166.1	161.3	155.8	150.1	144.3	138.8
95	169.0	169.0	168.8	163.7	158.2	152.5	146.8	141.1	135.7
100	169.0	169.0	166.7	160.7	154.9	149.1	143.5	138.0	132.7
105	169.0	169.0	163.4	157.3	151.4	145.7	140.2	134.9	129.7
110	169.0	164.7	159.0	153.3	147.8	142.3	136.9	131.7	126.7

TEMP °F	REFERENCE FACTOR "R"								
	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	56.3	59.3	63.4	68.3	74.0	80.5	87.5	95.0	103.0
55	56.6	60.4	64.9	70.1	76.0	82.6	89.7	97.5	105.7
60	57.0	61.5	66.5	72.0	78.0	84.7	92.0	99.9	108.5
65	57.0	61.5	66.5	72.0	78.0	84.7	92.0	99.9	108.5
70	57.0	61.5	66.5	72.0	78.0	84.7	92.0	99.9	108.5
75	57.5	62.0	67.0	72.4	78.4	85.0	92.4	100.5	109.5
80	58.7	63.3	68.4	73.9	80.1	86.9	94.4	102.8	112.0
85	60.3	65.0	70.2	75.9	82.2	89.3	97.0	105.6	115.1
90	62.2	67.1	72.4	78.3	84.9	92.2	100.2	109.1	118.8
95	64.4	69.5	75.1	81.2	88.1	95.6	104.0	113.1	123.1
100	67.0	72.3	78.1	84.6	91.8	99.6	108.2	117.7	128.0
105	69.8	75.4	81.6	88.4	95.9	104.1	113.1	122.9	133.4
110	73.0	79.0	85.5	92.7	100.6	109.2	118.5	128.6	139.5

WEIGHT 1000 LBS	RUNWAY LENGTH (1000 FEET)								
	REFERENCE FACTOR "R"								
	60	70	80	90	100	110	120	130	140
100	3.10	3.70	4.25	4.77	5.27	5.75	6.24	6.75	7.23
105	3.46	4.10	4.70	5.27	5.83	6.33	6.94	7.50	8.09
110	3.83	4.51	5.17	5.81	6.43	7.05	7.67	8.30	8.95
115	4.23	4.96	5.68	6.38	7.07	7.76	8.45	9.15	9.86
120	4.64	5.43	6.21	6.98	7.75	8.51	9.28	10.04	10.82
125	5.08	5.93	6.78	7.62	8.46	9.30	10.14	10.98	11.83
130	5.53	6.46	7.38	8.30	9.21	10.13	11.05	11.97	12.89
135	6.01	7.01	8.01	9.00	10.00	11.00	12.00	13.00	14.00
140	6.51	7.59	8.67	9.75	10.83	11.91	12.99	14.08	
145	7.02	8.19	9.36	10.53	11.69	12.86	14.03		
150	7.56	8.82	10.08	11.34	12.60	13.85			
155	8.12	9.48	10.83	12.19	13.53	14.88			
160	8.70	10.16	11.62	13.07	14.51				
165	9.30	10.87	12.43	13.93					
170	9.92	11.61	13.28	14.94					

TABLE 58. AIRCRAFT PERFORMANCE, TAKEOFF (BOEING 727-100 SERIES)
JT8D-7, ENGINE, 15° FLAPS

TEMP °F	MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 LBS)								
	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	169.0	169.0	169.0	166.1	160.1	154.0	148.0	142.3	137.2
55	169.0	169.0	169.0	163.9	158.0	152.1	146.3	140.8	135.7
60	169.0	169.0	167.0	161.0	155.4	150.1	145.1	140.2	135.5
65	169.0	169.0	167.0	161.0	155.4	150.1	145.1	140.2	135.5
70	169.0	169.0	167.0	161.0	155.4	150.1	145.1	140.2	135.5
75	169.0	169.0	167.0	161.0	155.4	150.1	145.1	140.2	135.5
80	169.0	169.0	167.0	161.0	155.4	150.1	145.1	140.2	135.5
85	169.0	169.0	167.0	161.0	155.4	148.6	143.1	137.7	132.4
90	169.0	168.9	162.8	156.9	151.1	145.4	140.0	134.6	129.5
95	169.0	165.2	159.3	153.5	147.8	142.2	136.8	131.6	126.6
100	167.4	161.5	155.7	150.0	144.4	139.0	133.7	128.6	123.7
105	163.6	157.9	152.2	146.6	141.1	135.8	130.6	125.6	120.8
110	160.0	154.2	148.6	143.1	137.7	132.5	127.5	122.7	118.0

TEMP °F	REFERENCE FACTOR "R"								
	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	43.7	45.8	48.6	51.9	55.7	60.1	65.0	70.3	76.2
55	44.1	46.8	49.9	53.5	57.5	61.9	66.9	72.5	78.6
60	44.5	47.8	51.3	55.1	59.2	63.8	68.9	74.6	81.0
65	44.5	47.8	51.3	55.1	59.2	63.8	68.9	74.6	81.0
70	44.5	47.8	51.3	55.1	59.2	63.8	68.9	74.6	81.0
75	44.7	48.0	51.6	55.4	59.6	64.3	69.4	75.1	81.5
80	45.7	48.9	52.4	56.4	60.7	65.5	70.8	76.7	83.1
85	46.8	50.0	53.6	57.6	62.1	67.1	72.6	78.6	85.1
90	48.2	51.3	55.0	59.2	63.9	69.1	74.7	81.0	87.7
95	49.6	52.9	56.8	61.1	66.0	71.3	77.3	83.7	90.7
100	51.3	54.8	58.8	63.3	68.4	74.0	80.2	86.9	94.3
105	53.1	56.9	61.1	65.9	71.2	77.0	83.4	90.5	98.2
110	55.0	59.2	63.8	68.8	74.3	80.4	87.1	94.5	102.7

WEIGHT 1000 LBS	RUNWAY LENGTH (1000 FEET)							
	REFERENCE FACTOR "R"							
	42	52	62	72	82	92	102	112
100	2.89	3.44	4.02	4.63	5.23	5.81	6.34	6.81
105	3.11	3.74	4.40	5.08	5.75	6.39	7.00	7.55
110	3.35	4.07	4.81	5.56	6.30	7.02	7.72	8.37
115	3.61	4.42	5.25	6.07	6.89	7.70	8.49	9.24
120	3.89	4.80	5.71	6.62	7.53	8.42	9.31	10.18
125	4.19	5.20	6.20	7.20	8.20	9.20	10.19	11.18
130	4.51	5.62	6.72	7.82	8.91	10.01	11.12	
135	4.84	6.07	7.27	8.47	9.67	10.88		
140	5.20	6.53	7.85	9.15	10.46	11.79		
145	5.57	7.03	8.45	9.87	11.29			
150	5.96	7.54	9.09	10.62				
155	6.37	8.08	9.75	11.40				
160	6.81	8.64	10.44					
165	7.26	9.23	11.15					
170	7.72	9.84	11.90					

TABLE 57. AIRCRAFT PERFORMANCE, TAKEOFF (BOEING 727-100 SERIES)
JT8D-7 ENGINE, 25° FLAPS

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 LBS)									
TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	163.6	157.9	152.3	146.8	141.4	136.2	131.0	126.0	121.2
55	162.0	156.3	150.7	145.2	139.9	134.7	129.7	124.8	120.0
60	160.0	153.9	148.2	142.8	137.7	133.0	128.4	124.1	120.0
65	160.0	153.9	148.2	142.8	137.7	133.0	128.4	124.1	120.0
70	160.0	153.9	148.2	142.8	137.7	133.0	128.4	124.1	120.0
75	160.0	153.9	148.2	142.8	137.7	133.0	128.4	124.1	120.0
80	160.0	153.9	148.2	142.8	137.7	133.0	128.4	124.1	120.0
85	160.0	153.9	148.2	142.8	136.9	131.9	127.0	122.3	117.5
90	155.6	149.9	144.4	139.1	134.0	129.0	124.2	119.6	115.0
95	152.1	146.5	141.2	136.0	131.0	126.2	121.4	116.9	112.4
100	148.5	143.2	138.0	133.0	128.1	123.3	118.7	114.2	109.8
105	145.0	139.9	134.8	129.9	125.1	120.4	115.9	111.5	107.2
110	141.5	136.5	131.6	126.9	122.2	117.6	113.1	108.7	104.5

REFERENCE FACTOR "R"									
TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	36.5	38.3	40.6	43.3	46.5	50.1	54.4	59.1	64.5
55	36.5	38.3	41.3	44.2	47.6	51.3	55.6	60.5	66.0
60	36.5	38.4	41.3	44.2	47.6	51.3	55.6	60.8	67.0
65	36.5	38.5	41.4	44.3	47.6	51.3	55.7	61.0	67.5
70	36.6	38.9	41.7	44.7	48.0	51.8	56.2	61.5	67.7
75	36.7	39.4	42.3	45.4	48.8	52.7	57.2	62.4	68.5
80	37.5	40.2	43.1	46.3	49.8	53.9	58.5	63.9	70.0
85	38.4	41.1	44.1	47.4	51.2	55.4	60.3	65.8	72.1
90	39.5	42.3	45.4	48.9	52.8	57.3	62.4	68.3	74.9
95	40.8	43.6	46.9	50.5	54.7	59.5	65.0	71.2	78.3
100	42.2	45.2	48.6	52.5	56.9	62.1	68.0	74.7	82.4
105	43.8	46.9	50.5	54.7	59.4	64.9	71.3	78.7	87.1
110	45.5	48.9	52.7	57.1	62.2	68.2	75.1	83.2	92.5

RUNWAY LENGTH (1000 FEET)							
WEIGHT 1000 LBS	REFERENCE FACTOR "R"						
	36	46	56	66	76	86	96
100	2.78	3.39	3.96	4.50	5.00	5.47	5.90
105	2.95	3.63	4.28	4.91	5.51	6.06	6.57
110	3.14	3.91	4.67	5.41	6.12	6.79	7.41
115	3.36	4.23	5.10	5.97	6.82	7.64	8.41
120	3.60	4.59	5.60	6.61	7.62	8.62	9.59
125	3.87	4.99	6.14	7.32	8.52		
130	4.16	5.43	6.75	8.11	9.51		
135	4.48	5.91	7.41	8.97			
140	4.82	6.43	8.12				
145	5.18	6.99	8.89				
150	5.57	7.60					
155	5.98	8.24					
160	6.41	8.92					
165	6.87						
170	7.35						

TABLE 56. AIRCRAFT PERFORMANCE, LANDING (BOEING 727-100 SERIES)
JT8D-7 ENGINE, 30° FLAPS

MAXIMUM ALLOWABLE LANDING WEIGHT (1000 LBS)									
TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	142.5	142.5	142.5	142.5	142.5	142.5	142.5	141.0	142.5
55	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5
60	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5
65	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5
70	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5
75	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5
80	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5
85	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.2	140.4
90	142.5	142.5	142.5	142.5	142.5	142.5	142.5	140.7	137.3
95	142.5	142.5	142.5	142.5	142.5	142.5	142.5	138.6	134.2
100	142.5	142.5	142.5	142.5	142.5	142.5	141.5	136.2	131.0
105	142.5	142.5	142.5	142.5	142.5	142.5	138.4	133.3	127.8
110	142.5	142.5	142.5	142.5	142.5	140.3	135.2	130.0	124.5

RUNWAY LENGTH (1000 FEET)									
WEIGHT 000 LBS	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
105	4.39	4.50	4.59	4.68	4.77	4.85	4.94	5.04	5.15
110	4.54	4.63	4.72	4.82	4.92	5.02	5.13	5.24	5.35
115	4.69	4.77	4.86	4.97	5.08	5.20	5.32	5.44	5.55
120	4.84	4.91	5.01	5.12	5.25	5.38	5.51	5.64	5.75
125	4.99	5.07	5.17	5.29	5.42	5.56	5.70	5.83	5.95
130	5.15	5.23	5.34	5.46	5.60	5.74	5.88	6.02	6.15
135	5.30	5.40	5.51	5.64	5.78	5.93	6.07	6.21	6.34
140	5.46	5.58	5.70	5.84	5.97	6.11	6.26	6.40	6.54
145	5.62	5.76	5.90	6.04	6.17	6.30	6.44	6.59	6.65

TABLE 55. AIRCRAFT PERFORMANCE, LANDING (BOEING 727-100 SERIES)
JT8D-7 ENGINE, 40° FLAPS

MAXIMUM ALLOWABLE LANDING WEIGHT (1000 LBS)									
TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	137.5	137.5	137.5	137.5	137.5	137.5	136.0	131.5	126.4
55	137.5	137.5	137.5	137.5	137.5	137.5	135.9	130.9	126.3
60	137.5	137.5	137.5	137.5	137.5	137.5	135.7	130.7	126.0
65	137.5	137.5	137.5	137.5	137.5	137.5	135.6	130.5	125.7
70	137.5	137.5	137.5	137.5	137.5	137.5	134.9	129.8	125.1
75	137.5	137.5	137.5	137.5	137.5	137.5	133.9	128.8	124.1
80	137.5	137.5	137.5	137.5	137.5	137.5	132.4	127.4	122.8
85	137.5	137.5	137.5	137.5	137.5	135.6	130.6	125.6	121.1
90	137.5	137.5	137.5	137.5	137.5	133.3	128.4	123.5	119.1
95	137.5	137.5	137.5	137.5	135.3	130.7	125.8	121.0	116.7
100	137.5	137.5	137.5	136.6	132.3	127.6	122.8	118.2	114.0
105	137.5	137.5	137.5	133.5	128.9	124.2	119.5	115.0	110.9
110	137.5	137.5	135.0	130.0	125.1	120.3	115.8	111.5	107.5

RUNWAY LENGTH (1000 FEET)									
WEIGHT 1000 LBS	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
105	4.00	4.07	4.15	4.25	4.34	4.45	4.55	4.65	4.75
110	4.14	4.22	4.30	4.40	4.50	4.60	4.71	4.82	4.92
115	4.29	4.37	4.46	4.55	4.65	4.76	4.87	4.98	5.10
120	4.43	4.52	4.61	4.71	4.82	4.93	5.04	5.16	5.28
125	4.58	4.68	4.78	4.88	4.99	5.10	5.22	5.34	5.46
130	4.73	4.84	4.94	5.06	5.17	5.29	5.41	5.53	5.65
135	4.89	5.00	5.12	5.23	5.35	5.48	5.60	5.72	5.85
140	5.05	5.17	5.29	5.42	5.55	5.67	5.80	5.93	6.05

AIRPLANE CHARACTERISTICS	UNIT OF MEASURE	ADVANCED PASSENGERS	OPTIONS QUICK CHANGE
MAXIMUM TAKEOFF WEIGHT	LBS.	160,000	169,000
MAXIMUM LANDING WEIGHT			
FLAPS 30°	LBS.	142,500	142,500
FLAPS 40°	LBS.	137,500	137,500
TYPICAL OPERATING EMPTY WEIGHT PLUS RESERVE FUEL	LBS.	101,330 107,468	101,330 ^{1/} 107,468 ^{2/}
AVERAGE FUEL CONSUMPTION	LBS./MILE	19	19
TYPICAL MAXIMUM PASSENGER LOAD AT 200 LBS./PASSENGER	LBS.	25,000	18,800
MAXIMUM STRUCTURAL PAYLOAD	LBS.	32,400	40,900

^{1/} Based on 1.25 hours of reserve fuel.

^{2/} Based on 2.00 hours of reserve fuel.

LIST OF AIRCRAFT (CONTINUED)

BRITISH AIRCRAFT CORP.

BAC 1-11 203 AE; Appendix 3, Pages 14-2 and 15

BAC 1-11 204 AF; Appendix 3, Pages 14-2 and 15

CARAVELLE

SE 210-1 ; Appendix 3, Pages 16 and 17

SE 210-6R; Appendix 3, Pages 18 and 19

CESSNA

140A; Appendix 5, Page 14

150 ; Appendix 5, Page 14

170 ; Appendix 5, Page 7

170A; Appendix 5, Page 7

170B; Appendix 5, Page 7

172 ; Appendix 5, Page 16

175 ; Appendix 5, Page 16

180 ; Appendix 5, Page 14

182 ; Appendix 5, Page 16

185 ; Appendix 5, Page 15

190 ; Appendix 5, Page 15

195A; Appendix 5, Page 15

210 ; Appendix 5, Page 15

310C; Appendix 5, Page 15

310D; Appendix 5, Page 15

CONVAIR

240; Appendix 1, Pages 2 and 3

340; Appendix 1, Pages 4 and 5

340/440; Appendix 2, Pages 2 thru 8-1

440; Appendix 1, Pages 4 and 5

580; (See Convair 340/440 with Allison Engines) Appendix 2, Pages 2 thru 5

640; (340D or 440D) Appendix 2, Pages 8 and 8-1

880; Appendix 3, Pages 20 and 21

880M; Appendix 3, Pages 22 and 23

990A; Appendix 4, Pages 10 and 11

Dart 640; (See Convair 640 (340D or 440D)) Appendix 2, Pages 8 and 8-1

deHAVILLAND

104 Dove; Appendix 5, Page 16

DOUGLAS

DC-3 ; Appendix 1, Pages 6 and 7

DC-4 ; Appendix 1, Pages 8 and 9

DC-6A; Appendix 1, Pages 10 and 11

DC-6B; Appendix 1, Pages 10 and 11

DC-7 ; Appendix 1, Pages 12 and 13

DC-7B; Appendix 1, Pages 14 and 15

LIST OF AIRCRAFT

AERO

500A; Appendix 5, Page 10
 500B; Appendix 5, Page 10
 560A; Appendix 5, Page 2
 560E; Appendix 5, Page 3
 680E; Appendix 5, Page 10
 680F; Appendix 5, Page 11

AERONCA

15AC; Appendix 5, Page 11

AIR PRODUCTS (See ERCOUBE)

415D; (See ERCOUBE 415D) Appendix 5, Page 11
 415E; (See ERCOUBE 415E) Appendix 5, Page 11
 415G; (See ERCOUBE 415G) Appendix 5, Page 11

BEECH

C18S; Appendix 5, Page 4
 D18S; Appendix 5, Page 5
 E18S; Appendix 5, Page 6
 35-A33; Appendix 5, Page 12
 A-35; Appendix 5, Page 12
 A-35B; Appendix 5, Page 12
 A-35R; Appendix 5, Page 12
 N-35; Appendix 5, Page 12
 C-45G; Appendix 5, Page 11
 C-45H; Appendix 5, Page 11
 G-50; Appendix 5, Page 13
 A-55; Appendix 5, Page 13
 65; Appendix 5, Page 13
 B-95A; Appendix 5, Page 13

BOEING

707-100	Series; Appendix 3, Pages 2 and 3	
707-100B	Series; Appendix 4, Pages 2 and 3	
707-200	Series; Appendix 3, Pages 4 and 5	
707-300	Series; Appendix 3, Pages 6 thru 9	
707-300B	Series; Appendix 4, Pages 4 and 5	
707-300C	Series; Appendix 6, Pages 7 and 8	
707-400	Series; Appendix 3, Pages 10 and 11	
720-000	Series; Appendix 3, Pages 12 thru 14-1	
720-000B	Series; Appendix 4, Pages 6-2 and 7	
727-00	Series; Appendix 4, Pages 8 and 9	
* 727-100	Series; JT8D-7 Engine; Appendix 6, Pages 61 thru 65	*
727-200	Series; JT8D-7 Engine; Appendix 6, Pages 9 thru 18	
* 727-200	Series; JT8D-15 Engine; Appendix 6, Pages 66 thru 71	*
737-200	Series; JT8D-9 Engine; Appendix 6, Pages 35 thru 42	
* 737-200	Series; JT8D-15 Engine; Appendix 6, Pages 72 thru 76	*
747	Series; Appendix 6, Pages 56 thru 60	

M-494.6

AC 150/5325-4

CHANGE 14

DATE 9/27/78

ADVISORY CIRCULAR

CHANGE



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

Washington, D.C.

Subject: Change 14 to RUNWAY LENGTH REQUIREMENTS FOR AIRPORT DESIGN--Adds New Performance Tables

1. **PURPOSE.** This Change adds aircraft performance tables for the Boeing 727-100 series with the JT8D-7 engine, the Boeing 727-200 series with the JT8D-15 engine, and the Boeing 737-200 series with the JT8D-15 engine.

The Change number and date of the new tables are indicated at the top of each page in Appendix 6. The Change number and date are also shown at the top of the Contents page which lists the aircraft (indicated by asterisks in the margins.)

PAGE CONTROL CHART

Remove Pages	Dated	Insert Pages	Dated
iii	7/27/77	iii	9/27/78
iv	11/15/76	iv	11/15/76
		Appendix 6	
		61 thru 76	9/27/78
		61-M thru 76-M	9/27/78

William V. Vitale
 WILLIAM V. VITALE
 Acting Assistant Administrator
 Office of Airports Programs

Suggest filing this transmittal at the back of the AC. It will provide a reference authority for changes, a method of determining that all Changes have been received, and a check for determining if the AC contains the proper pages.

Initiated by: AAP-560

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AC 150/5325-4 CHG 12
Appendix 7

WITHDRAWN - - CHG 12

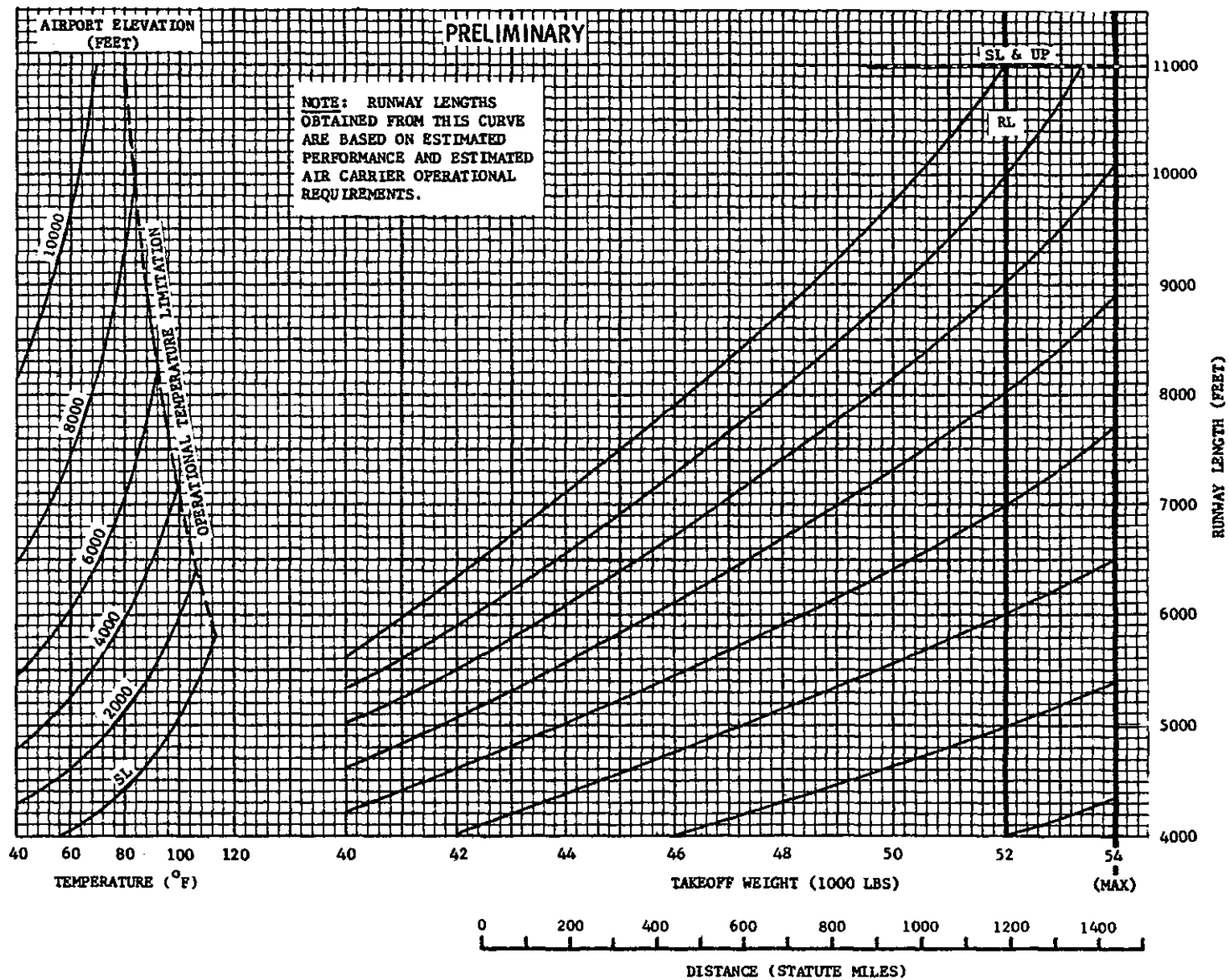


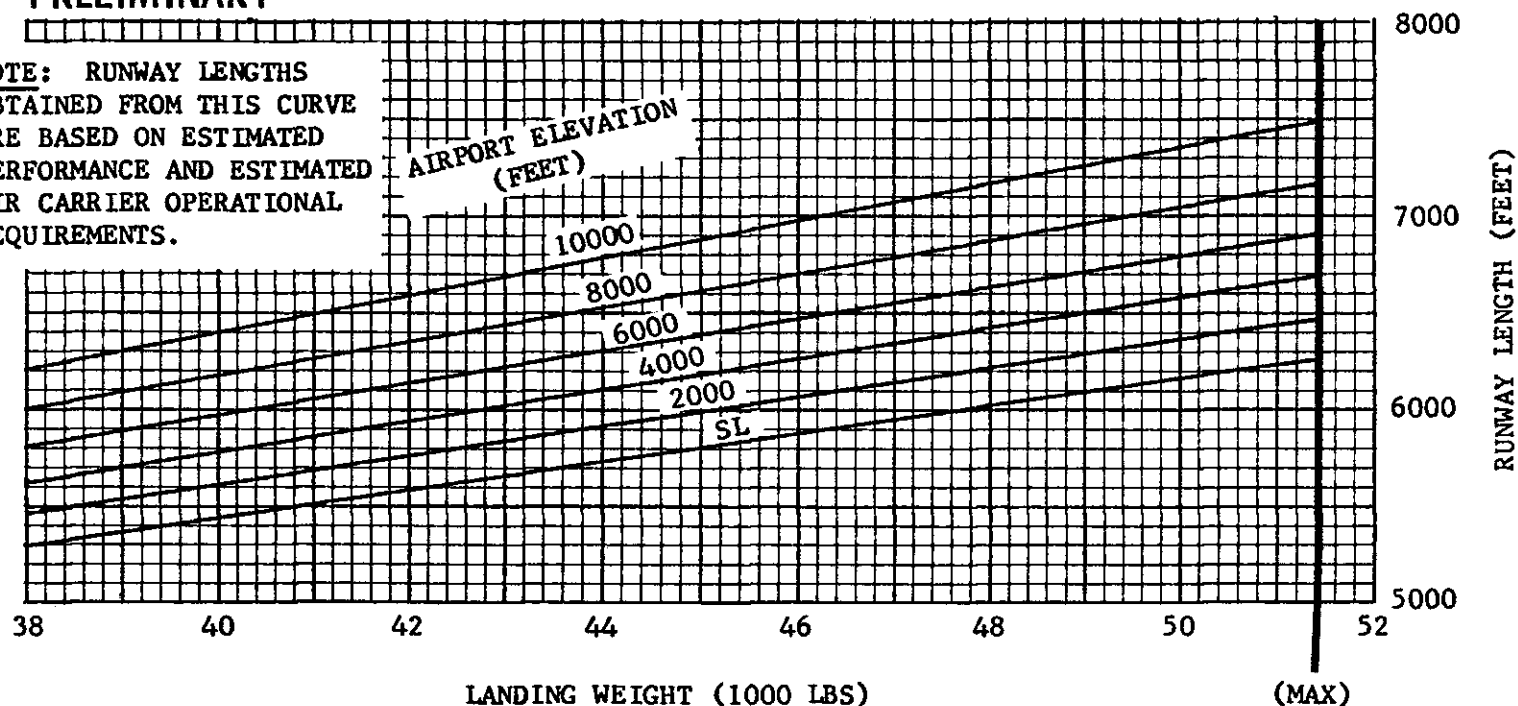
FIGURE 11. GRUMMAN GULFSTREAM II; TAKEOFF, PRELIMINARY

GRUMMAN GULFSTREAM II

ROLLS ROYCE RB 163-25 SPEY TURBO FAN ENGINE

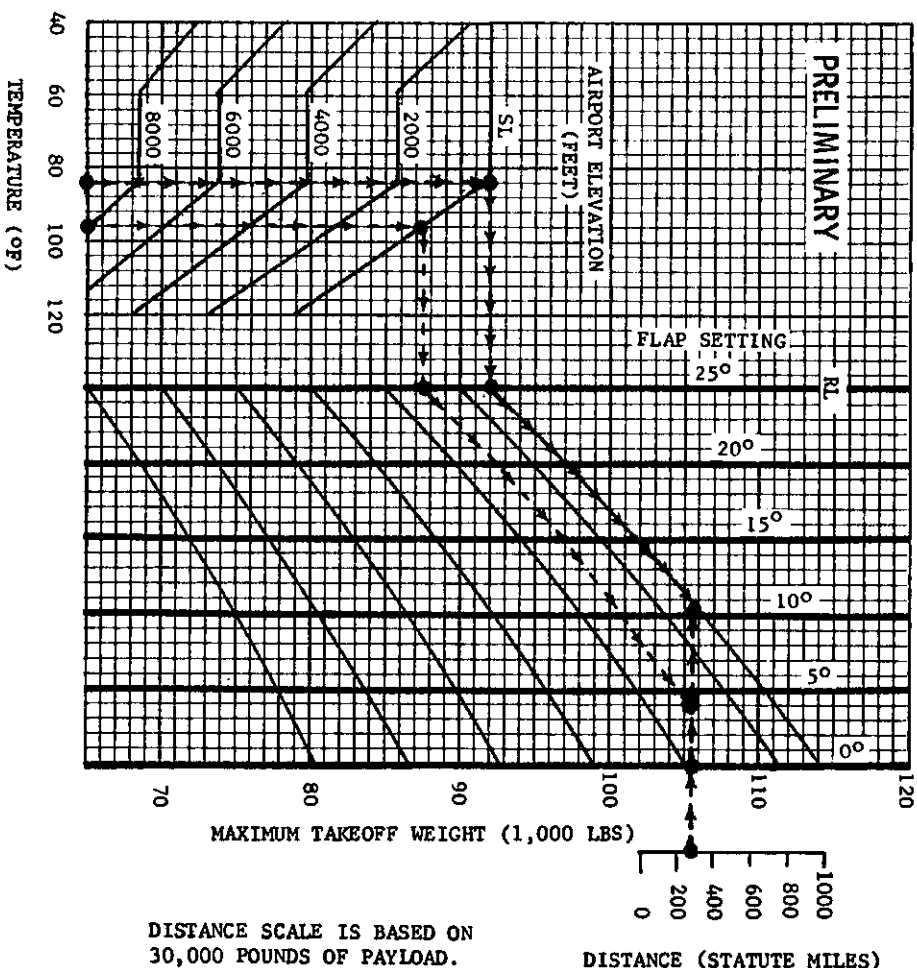
PRELIMINARY

NOTE: RUNWAY LENGTHS OBTAINED FROM THIS CURVE ARE BASED ON ESTIMATED PERFORMANCE AND ESTIMATED AIR CARRIER OPERATIONAL REQUIREMENTS.



To determine the design landing length where wet or slippery conditions prevail to a degree that should be recognized in design of runway lengths, increase the results obtained from using this curve by 7.0 percent.

FIGURE 10. GRUMMAN GULFSTREAM II; LANDING, PRELIMINARY



NOTE

1. For Airport Design, use the largest flap setting that will accommodate the required takeoff weight.
2. This airplane's takeoff flap settings are fixed in multiples of 5° increments.
3. Where intersection of slant line and horizontal line from distance scale falls between 50 increment lines, use next smaller flap setting increment (i.e., if intersection is at 70 point, use 50 flap setting).

EXAMPLE 1: → → → →

Takeoff of this airplane at an airport with a SL elevation, a mean maximum temperature of 84° Fahrenheit, and a 300-mile haul (105,750 pounds) required a maximum flap setting of 10° on 7,300 feet of runway (See Figure 8).

EXAMPLE 2: → → → →

Takeoff of this airplane at an airport with a SL elevation, a mean maximum temperature of 96° Fahrenheit, and a 300-mile haul (105,750 pounds) requires a maximum flap setting of 0° on 9,000 feet of runway (See Figure 8).

FIGURE 9. DOUGLAS DC-9-41; DETERMINATION OF FLAP SETTING, PRELIMINARY

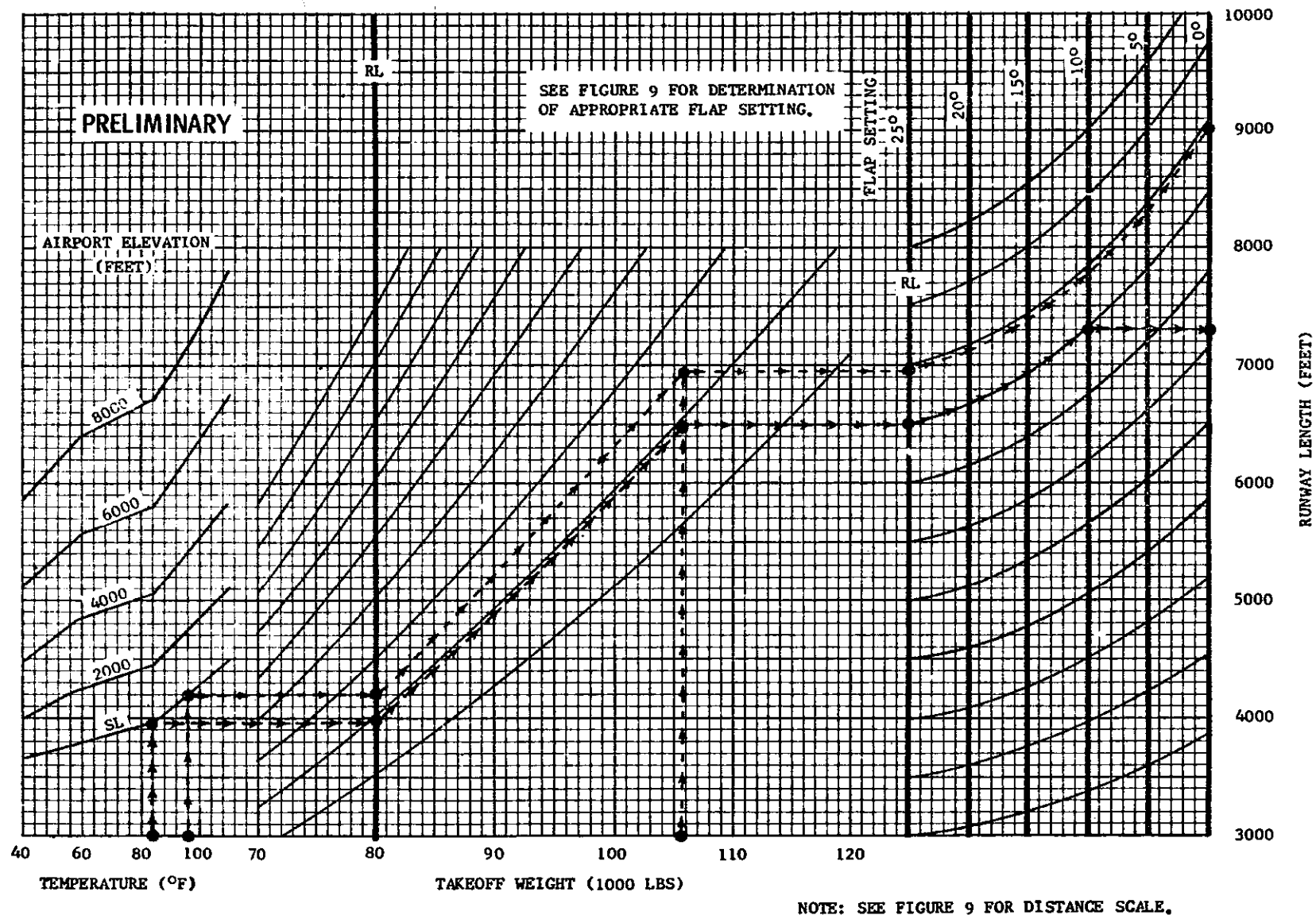
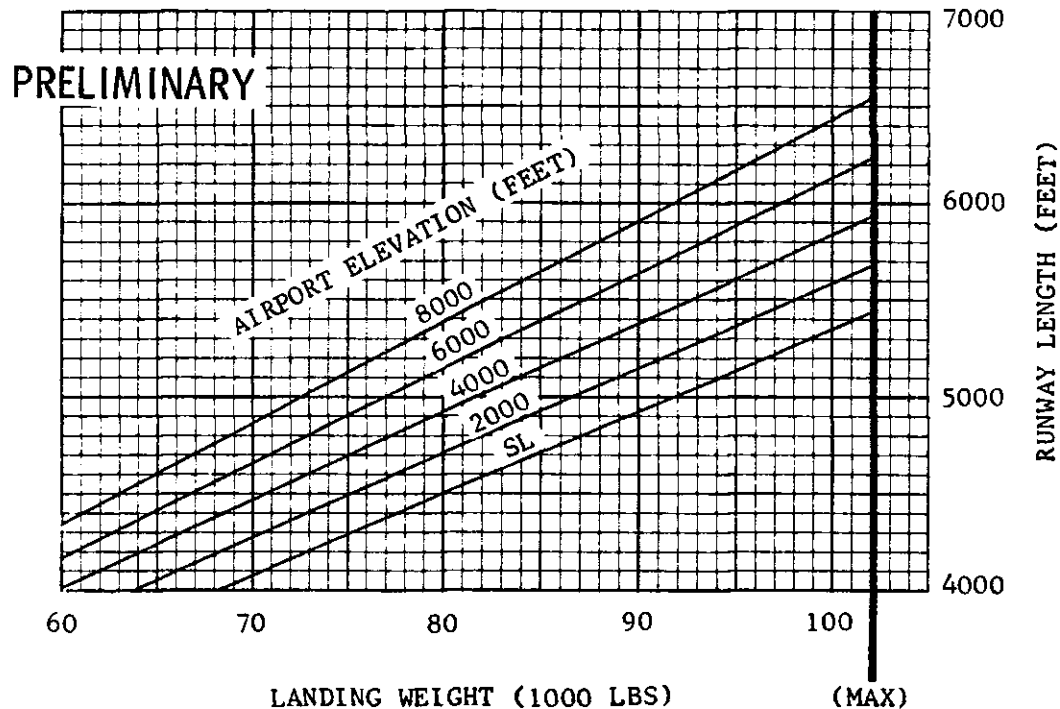


FIGURE 8. DOUGLAS DC-9-41; TAKEOFF, PRELIMINARY

DOUGLAS DC-9-41

PRATT & WHITNEY JT8D-9 ENGINE



To determine the design landing length where wet or slippery conditions prevail to a degree that should be recognized in design of runway lengths, increase the results obtained from using this curve by 8.0 percent.

FIGURE 7. DOUGLAS DC-9-41; LANDING, PRELIMINARY

5/18/76

AC 150/5325-4 CHG 10
Appendix 7

W I T H D R A W N -- CHG 10

TABLE 27. AIRCRAFT PERFORMANCE, TAKEOFF (L-1011-385-1)
RB.211-22B ENGINE, 18° FLAPS

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 LBS)

TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	430.0	430.0	427.3	417.0	406.7	396.4	386.2	376.0	366.0
55	430.0	430.0	427.3	417.0	406.7	396.4	386.2	376.0	366.0
60	430.0	430.0	427.3	417.0	406.7	396.4	386.2	375.0	360.6
65	430.0	430.0	427.3	417.0	406.7	396.4	383.3	368.5	354.4
70	430.0	430.0	427.3	417.0	406.7	391.1	376.1	361.7	347.7
75	430.0	430.0	427.3	414.4	398.7	383.4	368.7	354.5	340.8
80	430.0	430.0	421.8	405.9	390.4	375.5	361.0	347.0	333.6
85	430.0	429.0	412.9	397.2	382.0	367.3	353.1	339.4	326.2
90	430.0	419.7	403.8	388.4	373.5	359.1	345.2	331.7	318.7
95	426.4	410.2	394.6	379.5	365.0	350.9	337.3	324.0	311.2
100	416.7	400.8	385.5	370.8	356.5	342.8	329.4	316.4	303.8
105	407.1	391.5	376.6	362.2	348.3	334.8	321.7	309.0	296.5
110	397.7	382.5	367.9	353.9	340.3	327.1	314.3	301.8	

REFERENCE FACTOR "R"

TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	49.2	52.2	55.3	58.8	62.6	66.7	71.3	76.2	81.6
55	49.6	52.6	55.8	59.4	63.2	67.4	72.0	77.0	82.5
60	50.0	53.0	56.3	59.9	63.7	68.0	72.6	77.8	84.9
65	50.4	53.4	56.7	60.3	64.3	68.6	73.9	80.4	87.7
70	50.7	53.8	57.2	60.8	65.0	70.5	76.5	83.2	90.8
75	51.2	54.3	57.7	62.1	67.2	72.9	79.1	86.1	94.0
80	51.7	54.9	59.2	64.1	69.5	75.4	81.9	89.2	97.3
85	52.4	56.6	61.2	66.3	71.8	78.0	84.8	92.4	100.8
90	54.2	58.5	63.3	68.5	74.3	80.7	87.9	95.8	104.5
95	56.1	60.5	65.4	70.9	76.9	83.6	91.1	99.3	108.4
100	58.0	62.6	67.7	73.4	79.7	86.7	94.5	103.0	112.5
105	60.0	64.8	70.1	76.0	82.6	89.9	98.0	107.0	116.8
110	62.0	67.1	72.7	78.9	85.7	93.4	101.8	111.1	

RUNWAY LENGTH (1000 FEET)

WEIGHT 1000 LBS	REFERENCE FACTOR "R"								
	40	50	60	70	80	90	100	110	120
260	4.50	4.50	4.50	4.50	4.65	5.16	5.65	6.13	6.63
270	4.50	4.50	4.50	4.50	4.98	5.53	6.07	6.62	7.18
280	4.50	4.50	4.50	4.72	5.34	5.94	6.54	7.14	7.77
290	4.50	4.50	4.50	5.05	5.72	6.38	7.03	7.70	8.40
300	4.50	4.50	4.66	5.40	6.13	6.85	7.57	8.31	9.07
310	4.50	4.50	4.97	5.77	6.56	7.34	8.13	8.94	9.78
320	4.50	4.50	5.30	6.16	7.01	7.87	8.73	9.61	10.51
330	4.50	4.70	5.64	6.57	7.49	8.42	9.35	10.30	11.28
340	4.50	4.99	5.99	6.99	7.99	8.99	10.01	11.03	12.06
350	4.50	5.29	6.36	7.43	8.51	9.60	10.68	11.77	12.86
360	4.50	5.60	6.74	7.90	9.06	10.22	11.39	12.54	13.68
370	4.73	5.92	7.14	8.38	9.63	10.87	12.11	13.33	14.51
380	4.99	6.26	7.56	8.89	10.22	11.55	12.86	14.13	
390	5.26	6.61	8.00	9.41	10.83	12.24	13.62	14.94	
400	5.54	6.97	8.45	9.96	11.47	12.96	14.40		
410	5.84	7.35	8.92	10.53	12.13	13.70			
420	6.14	7.74	9.41	11.11	12.81	14.45			
430	6.46	8.16	9.93	11.73	13.51				

TABLE 28. AIRCRAFT PERFORMANCE, TAKEOFF (L-1011-385-1)
RB.211-22B ENGINE, 10° FLAPS

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 LBS)									
TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	430.0	430.0	430.0	430.0	423.7	413.2	402.5	392.0	381.8
55	430.0	430.0	430.0	430.0	423.7	413.2	402.5	392.0	381.8
60	430.0	430.0	430.0	430.0	423.7	413.2	402.5	390.6	375.8
65	430.0	430.0	430.0	430.0	423.7	413.2	399.2	384.0	369.3
70	430.0	430.0	430.0	430.0	423.7	407.6	392.1	376.9	362.3
75	430.0	430.0	430.0	430.0	415.6	399.9	384.4	369.4	355.0
80	430.0	430.0	430.0	423.3	407.3	391.6	376.4	361.6	347.4
85	430.0	430.0	430.0	414.3	398.4	383.0	368.1	353.6	339.7
90	430.0	430.0	421.0	404.9	389.3	374.2	359.6	345.5	332.0
95	430.0	427.6	411.3	395.5	380.2	365.4	351.2	337.5	324.2
100	430.0	417.6	401.6	386.1	371.2	356.8	342.9	329.5	316.6
105	424.2	407.9	392.2	377.1	362.5	348.5	334.9	321.9	309.2
110	414.8	398.8	383.4	368.6	354.4	340.6	327.4	314.6	

REFERENCE FACTOR "R"									
TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	53.2	56.3	59.8	63.5	67.6	72.2	77.2	82.7	88.7
55	53.7	56.9	60.4	64.2	68.3	72.9	77.9	83.4	89.5
60	54.1	57.4	60.9	64.7	68.9	73.6	78.6	84.2	91.6
65	54.5	57.8	61.4	65.2	69.5	74.2	79.7	86.7	94.6
70	54.9	58.2	61.8	65.8	69.7	75.7	82.3	89.6	97.8
75	55.3	58.7	62.3	66.5	72.1	78.2	85.1	92.7	101.2
80	55.7	59.2	63.6	68.8	74.6	81.0	88.2	96.1	104.9
85	56.7	61.0	65.9	71.3	77.3	84.1	91.5	99.8	108.9
90	58.6	63.2	68.2	73.9	80.3	87.3	95.1	103.7	113.1
95	60.6	65.4	70.8	76.7	83.4	90.7	98.8	107.8	117.6
100	62.8	67.8	73.5	79.7	86.7	94.3	102.8	112.1	122.4
105	65.1	70.5	76.4	82.9	90.1	98.1	106.9	116.7	127.4
110	67.6	73.3	79.5	86.3	93.7	102.0	111.2	121.4	

RUNWAY LENGTH (1000 FEET)									
WEIGHT 1000 LBS	REFERENCE FACTOR "R"								
	50	60	70	80	90	100	110	120	130
260	4.50	4.50	4.50	4.66	5.17	5.67	6.17	6.67	7.16
270	4.50	4.50	4.50	5.00	5.56	6.11	6.67	7.21	7.76
280	4.50	4.50	4.75	5.37	5.98	6.59	7.19	7.80	8.39
290	4.50	4.50	5.08	5.75	6.42	7.09	7.75	8.41	9.07
300	4.50	4.69	5.42	6.16	6.89	7.61	8.34	9.06	9.78
310	4.50	4.99	5.79	6.58	7.38	8.17	8.96	9.75	10.53
320	4.50	5.31	6.17	7.03	7.89	8.75	9.61	10.47	11.32
330	4.71	5.64	6.58	7.51	8.44	9.37	10.30	11.23	12.16
340	4.99	5.99	7.00	8.00	9.00	10.01	11.01	12.02	13.03
350	5.28	6.36	7.44	8.52	9.60	10.68	11.76	12.85	13.94
360	5.58	6.75	7.90	9.06	10.22	11.38	12.54	13.71	14.89
370	5.90	7.15	8.39	9.62	10.86	12.10	13.35	14.61	15.89
380	6.23	7.56	8.89	10.21	11.53	12.86	14.20	15.55	16.93
390	6.57	8.00	9.41	10.82	12.23	13.65	15.08	16.53	
400	6.93	8.45	9.95	11.45	12.96	14.47	16.00		
410	7.30	8.91	10.52	12.11	13.71	15.32	16.95		
420	7.68	9.40	11.10	12.79	14.49	16.20			
430	8.07	9.90	11.70	13.50	15.30	17.11			

TABLE 29. AIRCRAFT PERFORMANCE, LANDING (BOEING 737-200 SERIES)
JT8D-9 ENGINE, 40° FLAPS

MAXIMUM ALLOWABLE LANDING WEIGHT (1000 LBS)									
TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	103.0	103.0	100.8	97.2	93.7	90.2	86.9	83.6	80.4
55	103.0	102.9	99.2	95.6	92.1	88.8	85.5	82.3	79.3
60	103.0	101.5	97.9	94.3	90.9	87.6	84.4	81.3	78.2
65	103.0	101.5	97.9	94.3	90.9	87.6	84.4	81.3	78.2
70	103.0	101.5	97.9	94.3	90.9	87.6	84.4	81.3	78.2
75	103.0	101.5	97.9	94.3	90.9	87.6	84.4	81.3	78.2
80	103.0	101.5	97.9	94.3	90.9	87.6	84.4	81.3	78.2
85	103.0	101.1	97.5	94.0	90.6	87.3	84.1	81.0	77.9
90	102.8	99.1	95.5	92.0	88.6	85.4	82.2	79.2	76.3
95	100.5	97.0	93.5	90.0	86.7	83.5	80.4	77.4	74.5
100	98.2	94.7	91.3	88.0	84.8	81.6	78.5	75.6	72.7
105	95.9	92.5	89.1	85.9	82.8	79.7	76.7	73.8	70.9
110	93.6	90.2	86.9	83.7	80.7	77.7	74.9	72.0	

RUNWAY LENGTH (1000 FEET)									
WEIGHT 1000 LBS	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
70	3.92	4.02	4.11	4.20	4.30	4.40	4.50	4.61	4.72
75	4.15	4.24	4.34	4.44	4.54	4.64	4.75	4.86	4.98
80	4.37	4.46	4.56	4.67	4.78	4.89	5.00	5.13	5.25
85	4.58	4.69	4.79	4.90	5.02	5.14	5.26	5.39	5.52
90	4.80	4.91	5.02	5.13	5.26	5.38	5.51	5.65	5.79
95	5.01	5.13	5.25	5.37	5.50	5.63	5.77	5.91	6.06
100	5.23	5.35	5.47	5.60	5.74	5.88	6.02	6.17	6.33
105	5.44	5.57	5.70	5.84	5.98	6.12	6.27	6.43	6.60

AIRPLANE CHARACTERISTICS	UNIT OF MEASURE	-200C			
		-200	-200	PASSENGER	CARGO
MAXIMUM TAKEOFF WEIGHT	LBS.	109,000	115,500	115,500	115,500
MAXIMUM LANDING WEIGHT	LBS.	98,000	103,000	103,000	103,000
TYPICAL OPERATING EMPTY WEIGHT PLUS RESERVE FUEL	LBS.	66,620 ^{1/} 71,040 ^{2/}	67,530 ^{1/} 71,950 ^{2/}	70,430 ^{1/} 74,850 ^{2/}	66,960 ^{1/} 71,370 ^{2/}
AVERAGE FUEL CONSUMPTION	LBS./MILE	16	16	16	16
TYPICAL MAXIMUM PASSENGER LOAD @ 200 LBS./PASSENGER	LBS.	26,000	26,000	26,000	0
MAXIMUM STRUCTURAL PAYLOAD	LBS.	28,740	34,830	31,930	35,400

^{1/} Based on 1.25 hours of reserve fuel.^{2/} Based on 2.00 hours of reserve fuel.

TABLE 30. AIRCRAFT PERFORMANCE, LANDING (BOEING 737-200 SERIES)
JT8D-9 ENGINE, 30° FLAPS

MAXIMUM ALLOWABLE LANDING WEIGHT (1000 LBS)									
TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	103.0	103.0	103.0	102.4	98.6	95.0	91.5	88.1	84.9
55	103.0	103.0	103.0	100.8	97.2	93.7	90.3	87.0	83.7
60	103.0	103.0	103.0	99.6	95.9	92.4	89.0	85.7	82.7
65	103.0	103.0	103.0	99.6	95.9	92.4	89.0	85.7	82.7
70	103.0	103.0	103.0	99.6	95.9	92.4	89.0	85.7	82.7
75	103.0	103.0	103.0	99.6	95.9	92.4	89.0	85.7	82.7
80	103.0	103.0	103.0	99.6	95.9	92.4	89.0	85.7	82.7
85	103.0	103.0	102.9	99.2	95.5	92.0	88.6	85.4	82.3
90	103.0	103.0	100.8	97.1	93.6	90.1	86.8	83.5	80.3
95	103.0	102.1	98.5	94.9	91.5	88.1	84.8	81.6	78.5
100	103.0	99.8	96.2	92.7	89.3	86.1	82.9	79.8	76.8
105	101.0	97.4	93.9	90.5	87.2	84.0	80.9	77.9	75.0
110	98.7	95.1	91.7	88.4	85.1	82.0	79.0	76.0	73.2

RUNWAY LENGTH (1000 FEET)									
WEIGHT 1000 LBS	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
70	4.23	4.33	4.44	4.54	4.65	4.76	4.87	4.98	5.09
75	4.47	4.57	4.68	4.79	4.90	5.02	5.14	5.26	5.38
80	4.70	4.81	4.93	5.04	5.16	5.28	5.41	5.54	5.67
85	4.94	5.06	5.18	5.30	5.42	5.55	5.68	5.82	5.96
90	5.18	5.30	5.43	5.55	5.69	5.82	5.96	6.10	6.25
95	5.41	5.54	5.68	5.81	5.95	6.09	6.24	6.39	6.54
100	5.65	5.79	5.92	6.07	6.21	6.36	6.52	6.67	6.84
105	5.89	6.03	6.17	6.32	6.48	6.63	6.80	6.96	7.13

TABLE 31. AIRCRAFT PERFORMANCE, LANDING (BOEING 737-200 SERIES)
JT8D-9 ENGINE, 25° FLAPS

MAXIMUM ALLOWABLE LANDING WEIGHT (1000 LBS)									
TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	103.0	103.0	103.0	103.0	103.0	103.0	103.0	103.0	99.4
55	103.0	103.0	103.0	103.0	103.0	103.0	103.0	101.7	97.8
60	103.0	103.0	103.0	103.0	103.0	103.0	103.0	100.4	96.6
65	103.0	103.0	103.0	103.0	103.0	103.0	103.0	100.4	96.6
70	103.0	103.0	103.0	103.0	103.0	103.0	103.0	100.4	96.6
75	103.0	103.0	103.0	103.0	103.0	103.0	103.0	100.4	96.6
80	103.0	103.0	103.0	103.0	103.0	103.0	103.0	100.4	96.6
85	103.0	103.0	103.0	103.0	103.0	103.0	103.0	99.9	96.2
90	103.0	103.0	103.0	103.0	103.0	103.0	101.4	97.7	94.0
95	103.0	103.0	103.0	103.0	103.0	102.9	99.1	95.5	91.9
100	103.0	103.0	103.0	103.0	103.0	100.5	96.9	93.3	89.9
105	103.0	103.0	103.0	103.0	101.9	98.2	94.6	91.1	87.7
110	103.0	103.0	103.0	103.0	99.5	95.8	92.2	88.8	85.5

RUNWAY LENGTH (1000 FEET)									
WEIGHT 1000 LBS	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
70	4.62	4.72	4.84	4.95	5.06	5.18	5.31	5.44	5.57
75	4.87	4.99	5.10	5.22	5.34	5.47	5.60	5.74	5.89
80	5.14	5.26	5.38	5.50	5.63	5.77	5.91	6.06	6.21
85	5.41	5.54	5.67	5.80	5.94	6.08	6.23	6.39	6.55
90	5.69	5.82	5.96	6.10	6.25	6.41	6.56	6.73	6.90
95	5.98	6.12	6.26	6.41	6.57	6.73	6.90	7.08	7.25
100	6.27	6.41	6.57	6.73	6.89	7.06	7.24	7.42	7.61
105	6.56	6.71	6.87	7.04	7.21	7.39	7.58	7.77	7.97

TABLE 32. AIRCRAFT PERFORMANCE, TAKEOFF (BOEING 737-200 SERIES)
JT8D-9 ENGINE, 15° FLAPS

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 LBS)

TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	100.0	99.3	95.5	91.9	88.4	84.9	81.6	78.4	75.4
55	100.0	97.7	94.0	90.4	86.9	83.6	80.3	77.2	74.2
60	100.0	96.4	92.7	89.2	85.8	82.5	79.3	76.2	73.3
65	100.0	96.4	92.7	89.2	85.8	82.5	79.3	76.2	73.3
70	100.0	96.4	92.7	89.2	85.8	82.5	79.3	76.2	73.3
75	100.0	96.4	92.7	89.2	85.8	82.5	79.3	76.2	73.3
80	100.0	96.4	92.7	89.2	85.8	82.5	79.3	76.2	73.3
85	99.7	95.9	92.3	88.8	85.4	82.1	78.9	75.9	72.9
90	97.3	93.7	90.1	86.7	83.4	80.1	77.1	74.1	71.3
95	95.1	91.5	88.1	84.7	81.4	78.3	75.3	72.4	
100	92.9	89.4	86.0	82.7	79.5	76.5	73.5	70.8	
105	90.7	87.3	83.9	80.7	77.6	74.7	71.8		
110	88.4	85.1	81.8	78.7	75.8	72.9	70.1		

REFERENCE FACTOR "R"

TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	38.8	40.4	43.5	46.9	50.6	54.6	59.1	64.1	69.6
55	39.2	41.5	44.7	48.2	52.0	56.2	60.9	66.1	71.9
60	39.4	42.5	45.8	49.4	53.2	57.5	62.3	67.7	73.8
65	39.7	42.9	46.2	49.8	53.7	58.0	62.8	68.3	74.4
70	40.0	43.2	46.6	50.2	54.1	58.5	63.4	68.9	75.1
75	40.3	43.5	46.9	50.6	54.5	58.9	63.9	69.4	75.7
80	40.6	43.9	47.3	51.0	54.9	59.4	64.4	70.0	76.4
85	41.1	44.5	47.9	51.6	55.7	60.1	65.2	70.9	77.4
90	42.6	46.0	49.6	53.4	57.6	62.3	67.5	73.4	80.1
95	44.1	47.6	51.3	55.3	59.7	64.6	70.1	76.3	83.3
100	45.6	49.3	53.1	57.3	61.9	67.1	72.9	79.4	86.9
105	47.3	51.0	55.0	59.4	64.3	69.7	75.8	82.7	
110	48.8	52.7	56.9	61.6	66.7	72.4	78.9		

RUNWAY LENGTH (1000 FEET)

WEIGHT 1000 LBS	REFERENCE FACTOR "R"										
	35	40	45	50	55	60	65	70	75	80	85
70	2.50	2.78	3.11	3.44	3.78	4.11	4.44	4.76	5.07	5.36	5.63
75	2.81	3.18	3.57	3.95	4.34	4.72	5.10	5.48	5.85	6.20	6.54
80	3.18	3.62	4.07	4.51	4.96	5.41	5.85	6.29	6.73	7.15	7.57
85	3.59	4.10	4.61	5.13	5.65	6.16	6.68	7.20	7.71	8.22	8.73
90	4.03	4.62	5.21	5.81	6.40	7.00	7.60	8.20	8.80	9.40	
95	4.51	5.19	5.87	6.55	7.23	7.92	8.61	9.30			
100	5.04	5.82	6.59	7.36	8.14	8.92					

TABLE 33. AIRCRAFT PERFORMANCE, TAKEOFF (BOEING 737-200 SERIES)
JT8D-9 ENGINE, 5° FLAPS

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 LBS)									
TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	107.7	106.9	102.7	98.6	94.8	91.0	87.4	83.9	80.6
55	107.7	105.1	100.9	97.0	93.1	89.5	85.9	82.5	79.3
60	107.7	103.5	99.5	95.6	91.8	88.2	84.7	81.4	78.2
65	107.7	103.5	99.5	95.6	91.8	88.2	84.7	81.4	78.2
70	107.7	103.5	99.5	95.6	91.8	88.2	84.7	81.4	78.2
75	107.7	103.5	99.5	95.6	91.8	88.2	84.7	81.4	78.2
80	107.7	103.5	99.5	95.6	91.8	88.2	84.7	81.4	78.2
85	107.2	103.1	99.0	95.2	91.4	87.8	84.3	81.0	77.9
90	104.7	100.6	96.7	92.9	89.3	85.8	82.4	79.3	76.3
95	102.2	98.2	94.4	90.7	87.2	83.8	80.5	77.4	74.5
100	99.7	95.8	92.1	88.5	85.1	81.8	78.6	75.6	72.7
105	97.1	93.5	89.9	86.4	83.0	79.8	76.7	73.8	71.0
110	94.6	91.1	87.7	84.3	81.1	77.9	75.0	72.2	69.6

REFERENCE FACTOR "R"									
TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	44.6	46.6	50.2	54.0	58.2	62.8	67.9	73.5	79.7
55	45.1	47.9	51.5	55.4	59.7	64.5	69.7	75.5	82.0
60	45.4	48.9	52.6	56.7	61.1	66.0	71.4	77.3	83.9
65	45.8	49.3	53.1	57.2	61.6	66.6	72.0	78.0	84.7
70	46.2	49.7	53.5	57.7	62.2	67.2	72.7	78.8	85.5
75	46.6	50.2	54.0	58.2	62.7	67.7	73.3	79.5	86.3
80	46.9	50.6	54.5	58.7	63.3	68.3	73.9	80.2	87.1
85	47.6	51.3	55.2	59.5	64.1	69.3	75.0	81.4	88.4
90	49.2	53.1	57.2	61.6	66.5	71.8	77.8	84.4	91.8
95	50.9	54.9	59.1	63.7	68.8	74.4	80.7	87.5	95.2
100	52.6	56.7	61.1	66.0	71.3	77.1	83.6	90.8	98.8
105	54.4	58.6	63.2	68.3	73.9	80.0	86.8	94.3	
110	56.4	60.7	65.5	70.8	76.6	83.1	90.3		

RUNWAY LENGTH (1000 FEET)							
WEIGHT 1000 LBS	REFERENCE FACTOR "R"						
	40	50	60	70	80	90	100
75	3.00	3.63	4.33	5.02	5.71	6.38	7.03
80	3.30	4.12	4.93	5.73	6.52	7.29	8.06
85	3.71	4.65	5.58	6.50	7.42	8.32	9.22
90	4.17	5.24	6.31	7.37	8.43	9.49	10.54
95	4.68	5.89	7.11	8.33	9.56	10.80	12.05
100	5.23	6.61	8.00	9.41	10.84	12.29	
105	5.83	7.40	8.99	10.61	12.26		
110	6.48	8.26	10.07	11.94			

5/18/76

TABLE 34. AIRCRAFT PERFORMANCE, TAKEOFF (BOEING 737-200 SERIES)
JT8D-9 ENGINE, 1° FLAPS

TEMP °F	MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 LBS)								
	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	114.9	114.1	109.4	104.9	100.6	96.5	92.5	88.8	85.2
55	114.9	112.0	107.4	103.0	98.8	94.8	90.9	87.2	83.7
60	114.9	110.4	105.8	101.5	97.4	93.4	89.6	86.0	82.5
65	114.9	110.4	105.8	101.5	97.4	93.4	89.6	86.0	82.5
70	114.9	110.4	105.8	101.5	97.4	93.4	89.6	86.0	82.5
75	114.9	110.4	105.8	101.5	97.4	93.4	89.6	86.0	82.5
80	114.9	110.4	105.8	101.5	97.4	93.4	89.6	86.0	82.5
85	114.5	109.8	105.3	101.0	96.9	93.0	89.2	85.6	82.2
90	111.8	107.1	102.7	98.5	94.5	90.7	87.0	83.6	80.3
95	108.9	104.4	100.1	96.0	92.1	88.4	84.9	81.5	78.4
100	105.9	101.6	97.5	93.6	89.8	86.2	82.8	79.6	76.6
105	103.0	98.9	94.9	91.1	87.5	84.1	80.8	77.7	74.8
110	100.3	96.3	92.4	88.7	85.2	82.0	78.9	76.0	

TEMP °F	REFERENCE FACTOR "R"								
	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	52.2	54.4	58.5	63.1	68.3	73.9	80.2	87.0	94.4
55	52.6	55.9	60.1	64.8	70.1	75.9	82.3	89.4	97.1
60	53.2	57.1	61.5	66.3	71.6	77.6	84.2	91.5	99.5
65	53.7	57.6	62.0	66.9	72.3	78.3	85.0	92.4	100.5
70	54.1	58.1	62.6	67.5	73.0	79.1	85.8	93.3	101.5
75	54.5	58.6	63.1	68.1	73.7	79.9	86.7	94.2	102.5
80	54.9	59.1	63.7	68.8	74.4	80.6	87.5	95.1	103.6
85	55.7	59.9	64.6	69.8	75.5	81.9	88.9	96.6	105.1
90	57.6	62.1	67.0	72.4	78.4	85.0	92.3	100.1	108.7
95	59.6	64.1	69.2	74.9	81.2	88.2	95.7	103.9	112.7
100	61.7	66.3	71.6	77.6	84.1	91.4	99.2	107.8	116.9
105	63.8	68.7	74.3	80.5	87.3	94.9	103.0	111.8	
110	66.1	71.5	77.4	83.9	91.0	98.8	107.1		

WEIGHT 1000 LBS	RUNWAY LENGTH (1000 FEET)							
	REFERENCE FACTOR "R"							
	50	60	70	80	90	100	110	120
75	4.00	4.04	4.62	5.18	5.76	6.34	6.94	7.57
80	4.00	4.53	5.21	5.88	6.56	7.25	7.98	8.74
85	4.26	5.09	5.90	6.69	7.48	8.30	9.16	10.08
90	4.75	5.73	6.67	7.59	8.53	9.49	10.50	11.58
95	5.31	6.45	7.54	8.61	9.69	10.80	11.98	13.24
100	5.95	7.26	8.51	9.74	10.98	12.25	13.60	15.06
105	6.66	8.16	9.59	10.98	12.39	13.83	15.37	
110	7.46	9.16	10.77	12.34	13.92	15.55		
115	8.35	10.26	12.07	13.83	15.58			

TABLE 35. AIRCRAFT PERFORMANCE, TAKEOFF (BOEING 737-200 SERIES)
JT8D-9 ENGINE, 1° FLAPS, 2% SPEED INCREASE

TEMP °F	MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 LBS)								
	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	115.5	115.5	111.8	107.1	102.7	98.5	94.5	90.7	87.1
55	115.5	114.5	109.8	105.3	101.0	96.9	92.9	89.2	85.6
60	115.5	112.7	108.2	103.8	99.5	95.5	91.6	88.0	84.4
65	115.5	112.7	108.2	103.8	99.5	95.5	91.6	88.0	84.4
70	115.5	112.7	108.2	103.8	99.5	95.5	91.6	88.0	84.4
75	115.5	112.7	108.2	103.8	99.5	95.5	91.6	88.0	84.4
80	115.5	112.7	108.2	103.8	99.5	95.5	91.6	88.0	84.4
85	115.5	112.2	107.6	103.2	99.0	95.0	91.2	87.5	84.0
90	114.2	109.5	105.0	100.7	96.6	92.7	89.0	85.4	82.0
95	111.3	106.7	102.3	98.2	94.2	90.4	86.8	83.3	80.1
100	108.3	103.9	99.7	95.7	91.9	88.2	84.7	81.3	78.1
105	105.4	101.1	97.1	93.2	89.5	86.0	82.6	79.4	76.2
110	102.5	98.4	94.5	90.8	87.2	83.8	80.6	77.4	

TEMP °F	REFERENCE FACTOR "R"								
	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	52.2	54.4	58.5	63.1	68.3	73.9	80.2	87.0	94.4
55	52.6	55.9	60.1	64.8	70.1	75.9	82.3	89.4	97.1
60	53.2	57.1	61.5	66.3	71.6	77.6	84.2	91.5	99.5
65	53.7	57.6	62.0	66.9	72.3	78.3	85.0	92.4	100.5
70	54.1	58.1	62.6	67.5	73.0	79.1	85.8	93.3	101.5
75	54.5	58.6	63.1	68.1	73.7	79.9	86.7	94.2	102.5
80	54.9	59.1	63.7	68.8	74.4	80.6	87.5	95.1	103.6
85	55.7	59.9	64.6	69.8	75.5	81.9	88.9	96.6	105.1
90	57.6	62.1	67.0	72.4	78.4	85.0	92.3	100.1	108.7
95	59.6	64.1	69.2	74.9	81.2	88.2	95.7	103.9	112.7
100	61.7	66.3	71.6	77.6	84.1	91.4	99.2	107.8	116.9
105	63.8	68.7	74.3	80.5	87.3	94.9	103.0	111.8	
110	66.1	71.5	77.4	83.9	91.0	98.8	107.1		

WEIGHT 1000 LBS	RUNWAY LENGTH (1000 FEET)							
	REFERENCE FACTOR "R"							
	50	60	70	80	90	100	110	120
75	4.00	4.04	4.62	5.18	5.76	6.34	6.94	7.57
80	4.00	4.53	5.21	5.88	6.56	7.25	7.98	8.74
85	4.26	5.09	5.90	6.69	7.48	8.30	9.16	10.08
90	4.75	5.73	6.67	7.59	8.53	9.49	10.50	11.58
95	5.31	6.45	7.54	8.61	9.69	10.80	11.98	13.24
100	5.95	7.26	8.51	9.74	10.98	12.25	13.60	15.06
105	6.66	8.16	9.59	10.98	12.39	13.83	15.37	
110	7.46	9.16	10.77	12.34	13.92	15.55		
115	8.35	10.26	12.07	13.83	15.58			
120	9.35	11.47	13.48	15.43				

TABLE 36. AIRCRAFT PERFORMANCE, TAKEOFF (BOEING 737-200 SERIES)
JT8D-9 ENGINE, 1° FLAPS, 5% SPEED INCREASE

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 LBS)									
TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	115.5	115.5	114.4	109.6	105.2	101.0	97.0	93.2	89.5
55	115.5	115.5	112.4	107.9	103.6	99.5	95.5	91.7	87.9
60	115.5	115.5	110.8	106.4	102.2	98.1	94.2	90.4	86.8
65	115.5	115.5	110.8	106.4	102.2	98.1	94.2	90.4	86.8
70	115.5	115.5	110.8	106.4	102.2	98.1	94.2	90.4	86.8
75	115.5	115.5	110.8	106.4	102.2	98.1	94.2	90.4	86.8
80	115.5	115.5	110.8	106.4	102.2	98.1	94.2	90.4	86.8
85	115.5	115.0	110.3	105.9	101.7	97.6	93.7	90.0	86.4
90	115.5	112.2	107.7	103.3	99.2	95.2	91.4	87.8	84.3
95	114.1	109.4	105.0	100.7	96.7	92.9	89.2	85.7	82.2
100	111.0	106.5	102.3	98.2	94.4	90.6	87.1	83.6	80.1
105	108.0	103.7	99.6	95.7	92.0	88.4	84.9	81.5	78.1
110	105.2	101.0	97.0	93.3	89.7	86.2	82.8	79.5	

REFERENCE FACTOR "R"									
TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	52.2	54.4	58.5	63.1	68.3	73.9	80.2	87.0	94.4
55	52.6	55.9	60.1	64.8	70.1	75.9	82.3	89.4	97.1
60	53.2	57.1	61.5	66.3	71.6	77.6	84.2	91.5	99.5
65	53.7	57.6	62.0	66.9	72.3	78.3	85.0	92.4	100.5
70	54.1	58.1	62.6	67.5	73.0	79.1	85.8	93.3	101.5
75	54.5	58.6	63.1	68.1	73.7	79.9	86.7	94.2	102.5
80	54.9	59.1	63.7	68.8	74.4	80.6	87.5	95.1	103.6
85	55.7	59.9	64.6	69.8	75.5	81.9	88.9	96.6	105.1
90	57.6	62.1	67.0	72.4	78.4	85.0	92.3	100.1	108.7
95	59.6	64.1	69.2	74.9	81.2	88.2	95.7	103.9	112.7
100	61.7	66.3	71.6	77.6	84.1	91.4	99.2	107.8	116.9
105	63.8	68.7	74.3	80.5	87.3	94.9	103.0	111.8	
110	66.1	71.5	77.4	83.9	91.0	98.8	107.1		

RUNWAY LENGTH (1000 FEET)								
WEIGHT 1000 LBS	REFERENCE FACTOR "R"							
	50	60	70	80	90	100	110	120
75	4.00	4.04	4.62	5.18	5.76	6.34	6.94	7.57
80	4.00	4.53	5.21	5.88	6.56	7.25	7.98	8.74
85	4.26	5.09	5.90	6.69	7.48	8.30	9.16	10.08
90	4.75	5.73	6.67	7.59	8.53	9.49	10.50	11.58
95	5.31	6.45	7.54	8.61	9.69	10.80	11.98	13.24
100	5.95	7.26	8.51	9.74	10.98	12.25	13.60	15.06
105	6.66	8.16	9.59	10.98	12.39	13.83	15.37	
110	7.46	9.16	10.77	12.34	13.92	15.55		
115	8.35	10.26	12.07	13.83	15.58			
120	9.35	11.47	13.48	15.43				

TABLE 37. AIRCRAFT PERFORMANCE, LANDING (DOUGLAS DC-9-30 SERIES)
JT8D-9 ENGINE, FULL FLAPS

MAXIMUM ALLOWABLE LANDING WEIGHT (1000 LBS)									
TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	99.0	99.0	99.0	99.0	99.0	95.5	91.9	88.5	85.2
55	99.0	99.0	99.0	99.0	97.3	93.7	90.3	86.9	83.7
60	99.0	99.0	99.0	99.0	96.6	93.0	89.6	86.3	83.1
65	99.0	99.0	99.0	99.0	96.6	93.0	89.6	86.3	83.1
70	99.0	99.0	99.0	99.0	96.6	93.0	89.6	86.3	83.1
75	99.0	99.0	99.0	99.0	96.6	93.0	89.6	86.3	83.1
80	99.0	99.0	99.0	99.0	96.6	93.0	89.6	86.3	83.1
85	99.0	99.0	99.0	98.9	95.3	91.8	88.5	85.2	82.0
90	99.0	99.0	99.0	96.8	93.3	89.9	86.6	83.3	80.2
95	99.0	99.0	98.2	94.7	91.2	87.9	84.6	81.5	78.4
100	99.0	99.0	96.0	92.6	89.2	85.9	82.7	79.6	76.6
105	99.0	97.4	93.9	90.5	87.2	84.0	80.8	77.8	74.9
110	98.6	95.1	91.7	88.4	85.1	82.0	78.9	76.0	73.2

RUNWAY LENGTH (1000 FEET)									
WEIGHT 1000 LBS	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
60	3.59	3.66	3.74	3.82	3.92	4.01	4.11	4.21	4.31
65	3.80	3.88	3.98	4.07	4.17	4.28	4.38	4.49	4.60
70	4.02	4.12	4.22	4.32	4.43	4.54	4.65	4.77	4.89
75	4.24	4.35	4.46	4.58	4.69	4.81	4.93	5.05	5.18
80	4.47	4.59	4.71	4.83	4.95	5.07	5.20	5.33	5.47
85	4.71	4.83	4.96	5.08	5.21	5.34	5.47	5.61	5.76
90	4.94	5.07	5.20	5.33	5.46	5.60	5.74	5.89	6.05
95	5.17	5.31	5.45	5.58	5.72	5.86	6.01	6.17	6.34
100	5.40	5.54	5.68	5.83	5.97	6.13	6.29	6.45	6.63

AIRPLANE CHARACTERISTICS	UNIT OF MEASURE	
MAXIMUM TAKEOFF WEIGHT	LBS.	108,000
MAXIMUM LANDING WEIGHT	LBS.	99,000
TYPICAL OPERATING EMPTY WEIGHT PLUS RESERVE FUEL	LBS.	64,845 ^{1/} 69,640 ^{2/}
AVERAGE FUEL CONSUMPTION	LBS./MILE	17
TYPICAL MAXIMUM PASSENGER LOAD @ 200 LBS./PASSENGER	LBS.	23,000
MAXIMUM STRUCTURAL PAYLOAD	LBS.	30,145

^{1/} Based on 1.25 hours of reserve fuel.^{2/} Based on 2.00 hours of reserve fuel.

TABLE 38. AIRCRAFT PERFORMANCE, TAKEOFF (DOUGLAS DC-9-30 SERIES)
JT8D-9 ENGINE. 15° FLAPS

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 LBS)									
TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	103.8	102.8	99.3	95.8	92.2	88.8	85.5	82.3	79.3
55	103.8	101.4	97.8	94.3	90.8	87.4	84.2	81.0	78.1
60	103.8	100.2	96.6	93.1	89.7	86.4	83.1	80.0	77.1
65	103.8	100.2	96.6	93.1	89.7	86.4	83.1	80.0	77.1
70	103.8	100.2	96.6	93.1	89.7	86.4	83.1	80.0	77.1
75	103.8	100.2	96.6	93.1	89.7	86.4	83.1	80.0	77.1
80	103.8	100.2	96.6	93.1	89.7	86.4	83.1	80.0	77.1
85	103.3	99.8	96.2	92.7	89.3	86.0	82.8	79.7	76.8
90	101.1	97.7	94.2	90.8	87.4	84.1	81.0	78.0	75.1
95	99.0	95.6	92.2	88.8	85.5	82.3	79.2	76.3	73.5
100	96.9	93.5	90.2	86.9	83.7	80.5	77.5	74.6	71.9
105	94.8	91.5	88.2	85.0	81.8	78.8	75.9	73.0	70.3
110	92.7	89.4	86.2	83.1	80.1	77.1	74.2	71.4	68.8

REFERENCE FACTOR "R"									
TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	30.1	31.5	33.1	35.1	37.4	40.0	42.9	46.0	49.2
55	30.3	32.0	33.8	36.0	38.4	41.0	43.9	47.0	50.4
60	30.6	32.4	34.5	36.7	39.2	41.8	44.8	47.9	51.3
65	30.9	32.7	34.7	37.0	39.6	42.3	45.2	48.3	51.5
70	31.2	32.9	35.0	37.3	39.9	42.7	45.7	48.8	51.9
75	31.5	33.2	35.3	37.6	40.3	43.1	46.1	49.2	52.4
80	31.7	33.5	35.6	38.0	40.6	43.4	46.4	49.6	53.0
85	31.9	33.9	36.1	38.5	41.2	44.0	47.1	50.4	53.9
90	32.6	34.7	37.0	39.5	42.2	45.1	48.2	51.6	55.2
95	33.4	35.6	37.9	40.5	43.3	46.3	49.5	53.0	56.8
100	34.3	36.5	39.0	41.6	44.4	47.5	50.8	54.4	58.4
105	35.2	37.5	40.0	42.7	45.6	48.8	52.2	56.0	60.2
110	36.0	38.5	41.1	43.8	46.8	50.1	53.7	57.7	62.2

RUNWAY LENGTH (1000 FEET)								
WEIGHT 1000 LBS	REFERENCE FACTOR "R"							
	30	35	40	45	50	55	60	65
70	2.87	3.33	3.80	4.27	4.74	5.21	5.68	6.15
75	3.20	3.76	4.31	4.87	5.42	5.98	6.53	7.09
80	3.57	4.22	4.86	5.51	6.16	6.82	7.50	
85	3.97	4.72	5.46	6.20	6.96	7.75		
90	4.41	5.25	6.09	6.94	7.82			
95	4.87	5.81	6.75	7.71				
100	5.36	6.41	7.44					
105	5.88	7.02	8.16					

TABLE 39. AIRCRAFT PERFORMANCE, TAKEOFF (DOUGLAS DC-9-30 SERIES)
JT8D-9 ENGINE, 15° FLAPS, 2% SPEED INCREASE

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 LBS)

TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	104.4	103.2	99.8	96.2	92.7	89.3	85.9	82.7	79.7
55	104.4	101.9	98.3	94.8	91.3	87.9	84.6	81.4	78.4
60	104.4	100.7	97.1	93.6	90.2	86.8	83.6	80.4	77.5
65	104.4	100.7	97.1	93.6	90.2	86.8	83.6	80.4	77.5
70	104.4	100.7	97.1	93.6	90.2	86.8	83.6	80.4	77.5
75	104.4	100.7	97.1	93.6	90.2	86.8	83.6	80.4	77.5
80	104.4	100.7	97.1	93.6	90.2	86.8	83.6	80.4	77.5
85	103.6	100.0	96.4	92.9	89.5	86.1	82.9	79.8	76.8
90	101.7	98.0	94.5	91.1	87.7	84.5	81.3	78.3	75.3
95	99.6	96.1	92.6	89.2	86.0	82.8	79.7	76.7	73.7
100	97.6	94.1	90.7	87.4	84.2	81.1	78.1	75.1	72.2
105	95.4	92.0	88.7	85.5	82.4	79.3	76.4	73.5	70.7
110	93.2	90.0	86.8	83.6	80.6	77.6	74.7	71.9	69.2

REFERENCE FACTOR "R"

TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	32.0	33.2	35.4	37.7	40.1	42.8	45.9	49.3	53.1
55	32.4	33.9	36.1	38.5	41.0	43.9	47.0	50.5	54.3
60	32.5	34.5	36.7	39.1	41.8	44.8	48.0	51.5	55.4
65	32.7	34.7	37.0	39.4	42.2	45.1	48.4	52.0	55.9
70	32.9	35.0	37.3	39.8	42.5	45.5	48.8	52.4	56.3
75	33.2	35.3	37.6	40.1	42.9	45.9	49.2	52.9	56.8
80	33.5	35.6	38.0	40.5	43.3	46.3	49.7	53.3	57.3
85	33.9	36.1	38.5	41.0	43.9	47.0	50.3	54.0	58.1
90	34.9	37.1	39.5	42.1	45.0	48.2	51.7	55.6	59.8
95	35.7	38.0	40.5	43.2	46.2	49.5	53.2	57.1	61.5
100	36.6	39.0	41.6	44.4	47.5	50.9	54.7	58.8	63.3
105	37.5	40.0	42.7	45.7	48.9	52.4	56.3	60.6	65.3
110	38.6	41.2	44.0	47.0	50.3	54.0	58.0	62.6	67.6

RUNWAY LENGTH (1000 FEET)

WEIGHT 1000 LBS	REFERENCE FACTOR "R"								
	30	35	40	45	50	55	60	65	70
70	2.81	3.26	3.71	4.16	4.61	5.05	5.49	5.93	6.35
75	3.13	3.67	4.21	4.75	5.28	5.81	6.34	6.87	7.38
80	3.49	4.12	4.74	5.36	5.98	6.61	7.23	7.85	8.48
85	3.88	4.60	5.31	6.02	6.73	7.44	8.17		
90	4.31	5.11	5.91	6.71	7.52	8.34			
95	4.76	5.66	6.56	7.46	8.38				
100	5.24	6.25	7.25	8.26					
105	5.76	6.87	8.00						

TABLE 40. AIRCRAFT PERFORMANCE, TAKEOFF (DOUGLAS DC-9-30 SERIES)
JT8D-9 ENGINES, 5° FLAPS

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 LBS)

TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	108.0	108.0	106.5	102.6	98.9	95.3	91.7	88.3	84.9
55	108.0	108.0	104.8	101.1	97.4	93.8	90.3	86.9	83.6
60	108.0	107.4	103.6	99.8	96.2	92.7	89.2	85.8	82.5
65	108.0	107.4	103.5	99.8	96.2	92.6	89.2	85.8	82.5
70	108.0	107.4	103.5	99.8	96.1	92.6	89.2	85.8	82.5
75	108.0	107.4	103.5	99.8	96.1	92.6	89.1	85.8	82.5
80	108.0	107.4	103.5	99.7	96.1	92.5	89.1	85.8	82.5
85	108.0	106.6	102.7	99.0	95.4	91.8	88.4	85.1	81.9
90	108.0	104.5	100.8	97.1	93.5	90.1	86.7	83.4	80.3
95	106.2	102.5	98.8	95.1	91.6	88.2	84.9	81.7	78.6
100	104.1	100.3	96.7	93.2	89.7	86.4	83.2	80.0	77.0
105	101.8	98.2	94.6	91.2	87.8	84.5	81.4	78.3	75.3
110	99.5	96.0	92.5	89.1	85.8	82.6	79.6	76.6	73.7

REFERENCE FACTOR "R"

TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	37.5	39.1	41.2	43.7	46.6	49.9	53.5	57.3	61.3
55	37.9	39.8	42.1	44.7	47.7	51.0	54.6	58.5	62.7
60	38.2	40.4	42.8	45.6	48.6	52.0	55.6	59.6	63.9
65	38.4	40.6	43.1	46.0	49.1	52.5	56.2	60.2	64.5
70	38.6	40.9	43.5	46.4	49.5	52.9	56.7	60.7	65.1
75	38.8	41.3	43.9	46.8	50.0	53.4	57.2	61.3	65.7
80	39.0	41.6	44.4	47.3	50.5	53.9	57.7	61.8	66.3
85	39.6	42.2	45.0	48.0	51.2	54.7	58.6	62.8	67.4
90	40.6	43.2	46.0	49.1	52.4	56.1	60.1	64.5	69.3
95	41.7	44.3	47.1	50.3	53.8	57.6	61.8	66.3	71.2
100	42.7	45.3	48.3	51.6	55.3	59.2	63.5	68.2	73.3
105	43.7	46.5	49.6	53.1	56.8	60.9	65.4	70.3	75.5
110	44.9	47.8	51.0	54.5	58.5	62.7	67.4	72.4	77.8

RUNWAY LENGTH (1000 FEET)

WEIGHT 1000 LBS	REFERENCE FACTOR "R"									
	35	40	45	50	55	60	65	70	75	80
70	2.99	3.39	3.79	4.19	4.60	5.02	5.43	5.83	6.24	6.63
75	3.35	3.81	4.28	4.75	5.23	5.70	6.18	6.65	7.12	7.58
80	3.74	4.27	4.82	5.37	5.92	6.47	7.03	7.58	8.12	8.66
85	4.16	4.77	5.39	6.03	6.67	7.32	7.96	8.61	9.24	
90	4.60	5.29	6.01	6.74	7.48	8.23	8.98	9.73		
95	5.06	5.85	6.66	7.49	8.35	9.21				
100	5.55	6.43	7.34	8.29	9.26					
105	6.07	7.03	8.05	9.11						
110	6.61	7.66	8.78							

TABLE 41. AIRCRAFT PERFORMANCE, TAKEOFF (DOUGLAS DC-9-30 SERIES)
JT8D-9 ENGINE, 5° FLAPS, 5% SPEED INCREASE

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 LBS)

TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	108.0	108.0	108.0	104.5	100.7	97.0	93.4	90.0	86.7
55	108.0	108.0	106.8	103.0	99.2	95.5	92.0	88.6	85.3
60	108.0	108.0	105.5	101.7	97.9	94.3	90.8	87.5	84.2
65	108.0	108.0	105.5	101.6	97.9	94.3	90.8	87.5	84.2
70	108.0	108.0	105.5	101.6	97.9	94.3	90.8	87.5	84.2
75	108.0	108.0	105.4	101.6	97.9	94.3	90.8	87.5	84.2
80	108.0	108.0	105.4	101.5	97.8	94.2	90.8	87.4	84.2
85	108.0	108.0	104.5	100.8	97.1	93.5	90.1	86.7	83.6
90	108.0	106.1	102.4	98.8	95.2	91.7	88.3	85.0	81.9
95	107.9	104.1	100.4	96.8	93.3	89.9	86.5	83.3	80.2
100	105.7	101.9	98.3	94.7	91.3	88.0	84.7	81.6	78.5
105	103.5	99.8	96.2	92.7	89.3	86.1	82.9	79.8	76.7
110	101.2	97.6	94.0	90.6	87.3	84.1	81.0	78.0	75.0

REFERENCE FACTOR "R"

TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	44.1	45.6	48.6	51.8	55.3	59.2	63.5	68.3	73.6
55	44.5	46.6	49.6	52.9	56.5	60.6	65.1	70.1	75.6
60	44.8	47.5	50.5	53.8	57.6	61.8	66.5	71.6	77.3
65	45.1	47.9	51.0	54.4	58.2	62.4	67.1	72.2	77.9
70	45.5	48.3	51.4	54.9	58.7	63.0	67.7	72.9	78.6
75	45.9	48.7	51.9	55.4	59.3	63.6	68.3	73.6	79.3
80	46.3	49.1	52.3	55.9	59.8	64.2	69.0	74.3	80.0
85	46.8	49.7	52.9	56.5	60.6	65.0	69.9	75.3	81.1
90	47.7	50.8	54.2	58.0	62.2	66.8	71.9	77.4	83.5
95	48.8	52.1	55.7	59.6	64.0	68.8	74.0	79.8	86.0
100	50.1	53.5	57.3	61.4	65.9	70.9	76.3	82.2	88.7
105	51.6	55.1	59.0	63.2	67.9	73.1	78.7	84.8	91.5
110	53.1	56.7	60.8	65.2	70.1	75.4	81.2	87.6	94.4

RUNWAY LENGTH (1000 FEET)

WEIGHT 1000 LBS	REFERENCE FACTOR "R"						
	40	50	60	70	80	90	100
70	3.18	3.94	4.69	5.43	6.16	6.87	7.58
75	3.60	4.46	5.32	6.17	7.03	7.88	8.73
80	4.01	5.00	6.00	7.00	8.00	9.00	10.02
85	4.43	5.59	6.74	7.89	9.04	10.21	11.40
90	4.87	6.21	7.53	8.84	10.16	11.49	
95	5.33	6.89	8.39	9.85	11.32		
100	5.84	7.61	9.29	10.91			
105	6.39	8.40	10.26	12.01			
110	6.99	9.25	11.28				

TABLE 42. AIRCRAFT PERFORMANCE, TAKEOFF (DOUGLAS DC-9-30 SERIES)
JT8D-9 ENGINE. 0° FLAPS. 6% SPEED INCREASE

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 LBS)

TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	108.0	108.0	108.0	106.3	102.5	98.8	95.2	91.7	88.1
55	108.0	108.0	108.0	104.8	101.0	97.3	93.7	90.2	86.8
60	108.0	108.0	107.3	103.5	99.7	96.0	92.5	89.0	85.7
65	108.0	108.0	107.3	103.5	99.7	96.0	92.4	89.0	85.7
70	108.0	108.0	107.3	103.4	99.7	96.0	92.4	89.0	85.6
75	108.0	108.0	107.3	103.4	99.6	96.0	92.4	88.9	85.6
80	108.0	108.0	107.2	103.4	99.6	95.9	92.4	88.9	85.5
85	108.0	108.0	106.4	102.5	98.8	95.2	91.6	88.2	84.8
90	108.0	108.0	104.3	100.5	96.8	93.3	89.8	86.5	83.2
95	107.8	106.0	102.2	98.4	94.9	91.4	88.0	84.7	81.5
100	105.8	103.8	100.0	96.4	92.9	89.5	86.2	82.9	79.8
105	104.3	101.5	97.8	94.3	90.9	87.5	84.3	81.1	78.1
110	102.0	99.2	95.7	92.2	88.8	85.6	82.4	79.3	76.3

REFERENCE FACTOR "R"

TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	47.8	50.0	52.9	56.4	60.5	65.0	70.0	75.4	81.0
55	48.3	50.9	54.1	57.7	61.9	66.6	71.6	77.1	83.0
60	48.7	51.7	55.1	58.9	63.2	67.9	73.1	78.7	84.8
65	49.0	52.1	55.5	59.4	63.7	68.5	73.8	79.5	85.7
70	49.4	52.5	56.0	59.9	64.3	69.2	74.5	80.2	86.5
75	49.8	53.0	56.5	60.5	64.9	69.8	75.2	81.0	87.3
80	50.3	53.5	57.1	61.1	65.6	70.5	75.9	81.7	88.1
85	51.0	54.2	57.8	61.9	66.4	71.4	76.9	82.8	89.3
90	52.2	55.6	59.3	63.6	68.3	73.5	79.2	85.4	92.1
95	53.5	57.0	61.0	65.4	70.3	75.7	81.6	87.9	94.9
100	54.8	58.6	62.7	67.4	72.4	78.0	84.1	90.6	97.7
105	56.3	60.2	64.6	69.4	74.7	80.5	86.7	93.5	100.8
110	57.9	62.0	66.6	71.6	77.1	83.1	89.6	96.6	104.2

RUNWAY LENGTH (1000 FEET)

WEIGHT 1000 LBS	REFERENCE FACTOR "R"							
	40	50	60	70	80	90	100	110
70	3.17	3.93	4.68	5.42	6.15	6.86	7.56	8.24
75	3.58	4.46	5.32	6.18	7.03	7.88	8.74	9.61
80	4.01	5.01	6.00	6.99	7.98	8.97	9.97	10.98
85	4.48	5.60	6.73	7.86	9.00	10.13	11.27	12.41
90	4.97	6.23	7.51	8.81	10.11	11.40	12.69	
95	5.50	6.90	8.35	9.83	11.32	12.80		
100	6.06	7.61	9.25	10.95	12.66			
105	6.66	8.36	10.21	12.16				
110	7.28	9.15	11.24					

TABLE 43. AIRCRAFT PERFORMANCE, LANDING (DOUGLAS DC-9-50 SERIES
JT8D-17 ENGINE, FULL FLAPS)

MAXIMUM ALLOWABLE LANDING WEIGHT (1000 LBS)									
TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	110.0	110.0	110.0	110.0	110.0	107.0	103.0	99.1	95.5
55	110.0	110.0	110.0	110.0	110.0	107.0	103.0	99.1	95.5
60	110.0	110.0	110.0	110.0	110.0	106.4	102.4	98.5	94.9
65	110.0	110.0	110.0	110.0	109.5	105.4	101.4	97.5	94.0
70	110.0	110.0	110.0	110.0	108.5	104.4	100.4	96.5	93.1
75	110.0	110.0	110.0	110.0	107.4	103.3	99.3	95.6	92.1
80	110.0	110.0	110.0	110.0	106.2	102.2	98.3	94.6	91.1
85	110.0	110.0	110.0	108.4	104.4	100.5	96.8	93.2	89.8
90	110.0	110.0	109.7	105.8	102.0	98.2	94.6	91.1	87.7
95	110.0	110.0	107.2	103.4	99.7	96.0	92.5	89.0	85.5
100	110.0	108.8	104.9	101.2	97.5	93.9	90.3	86.8	83.2
105	110.0	106.7	102.8	99.1	95.5	91.9	88.2	84.5	80.7
110	108.5	104.7	100.9	97.3	93.6	89.9	86.1	82.1	78.0

RUNWAY LENGTH (1000 FEET)									
WEIGHT 1000 LBS	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
70	3.85	3.96	4.06	4.17	4.27	4.37	4.48	4.60	4.72
75	4.07	4.18	4.29	4.39	4.51	4.62	4.74	4.87	5.00
80	4.29	4.40	4.51	4.62	4.75	4.87	5.00	5.14	5.27
85	4.51	4.62	4.73	4.86	4.99	5.12	5.26	5.40	5.55
90	4.73	4.84	4.96	5.09	5.23	5.37	5.52	5.67	5.82
95	4.96	5.07	5.20	5.33	5.47	5.62	5.77	5.93	6.09
100	5.18	5.30	5.43	5.57	5.72	5.87	6.03	6.19	6.36
105	5.41	5.54	5.67	5.81	5.96	6.12	6.28	6.45	6.63
110	5.64	5.77	5.91	6.06	6.21	6.36	6.53	6.71	6.89

AIRPLANE CHARACTERISTICS	UNIT OF MEASURE	
MAXIMUM TAKEOFF WEIGHT	LBS.	121,000
MAXIMUM LANDING WEIGHT	LBS.	110,000
TYPICAL OPERATING EMPTY WEIGHT PLUS RESERVE FUEL	LBS.	73,109 ^{1/} 78,170 ^{2/}
AVERAGE FUEL CONSUMPTION	LBS./MILE	19
TYPICAL MAXIMUM PASSENGER LOAD @ 200 LBS./PASSENGER	LBS.	27,000
MAXIMUM STRUCTURAL PAYLOAD	LBS.	33,825

- ^{1/} Based on 1.25 hours of reserve fuel.
^{2/} Based on 2.00 hours of reserve fuel.

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TABLE 44. AIRCRAFT PERFORMANCE, TAKEOFF (DOUGLAS DC-9-50 SERIES)
JT8D-17 ENGINE, 15° FLAPS

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 LBS)									
TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	114.0	112.7	109.5	105.5	101.7	98.0	94.5	91.0	87.5
55	114.0	117.7	109.5	105.5	101.7	98.0	94.5	91.0	87.5
60	114.0	111.7	109.5	105.5	101.7	98.0	94.5	91.0	87.5
65	114.0	111.7	109.5	105.5	101.7	98.0	94.5	91.0	87.5
70	114.0	111.7	108.6	104.6	100.9	97.3	93.7	90.3	86.8
75	114.0	111.7	107.5	103.6	99.9	96.3	92.8	89.4	86.0
80	114.0	110.0	106.5	102.7	99.1	95.5	92.0	88.5	85.2
85	112.4	108.9	105.3	101.7	98.0	94.5	90.9	87.5	84.2
90	110.4	106.9	103.3	99.7	96.1	92.6	89.2	85.8	82.6
95	108.5	104.9	101.3	97.7	94.2	90.7	87.4	84.1	81.0
100	106.6	102.9	99.3	95.7	92.2	88.9	85.6	82.5	79.4
105	104.7	100.9	97.2	93.7	90.3	87.0	83.9	80.8	77.8
110	102.7	98.9	95.2	91.7	88.4	85.2	82.1	79.1	76.2

REFERENCE FACTOR "R"									
TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	40.5	42.6	45.0	47.8	50.9	54.5	58.5	63.2	68.5
55	40.8	43.0	45.4	48.2	51.5	55.1	59.2	63.9	69.1
60	41.1	43.3	45.8	48.7	52.0	55.7	59.9	64.6	69.7
65	41.4	43.6	46.2	49.2	52.6	56.4	60.6	65.3	70.4
70	41.8	44.1	46.8	49.9	53.4	57.3	61.7	66.4	71.6
75	42.3	44.6	47.4	50.6	54.3	58.3	62.8	67.7	73.0
80	42.7	45.1	48.0	51.3	55.1	59.4	64.0	69.0	74.4
85	43.2	45.7	48.7	52.2	56.2	60.6	65.4	70.5	76.1
90	44.3	47.0	50.2	53.8	57.9	62.5	67.4	72.9	78.7
95	45.4	48.3	51.6	55.4	59.6	64.3	69.5	75.2	81.4
100	46.5	49.6	53.1	57.0	61.4	66.2	71.6	77.6	84.1
105	47.5	50.9	54.6	58.6	63.1	68.1	73.7	79.9	86.8
110	48.6	52.2	56.0	60.2	64.9	70.0	75.8	82.3	89.5

RUNWAY LENGTH (1000 FEET)							
WEIGHT 1000 LBS	REFERENCE FACTOR "R"						
	40	50	60	70	80	90	100
70	2.68	3.27	3.82	4.35	4.87	5.39	5.91
75	2.98	3.66	4.29	4.92	5.54	6.19	6.88
80	3.30	4.07	4.81	5.54	6.28	7.05	7.87
85	3.64	4.52	5.37	6.23	7.09	7.98	8.90
90	4.00	5.00	6.00	7.00	8.00	9.00	9.99
95	4.39	5.52	6.68	7.85	9.00	10.12	11.17
100	4.81	6.08	7.43	8.79	10.12	11.36	12.46
105	5.26	6.69	8.25	9.83	11.36		
110	5.75	7.36	9.15	10.99			
115	6.28	8.08	10.13	12.25			
120	6.86	8.86	11.20				
125	7.49	9.71	12.37				

TABLE 45. AIRCRAFT PERFORMANCE, TAKEOFF (DOUGLAS DC-9-50 SERIES)
JT8D-17 ENGINE, 15° FLAPS, 2% SPEED INCREASE

TEMP °F	MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 LBS)								
	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	115.0	113.7	110.5	106.5	102.7	99.0	95.5	92.0	88.4
55	115.0	112.7	110.5	106.5	102.7	99.0	95.5	92.0	88.4
60	115.0	112.7	110.5	106.5	102.7	99.0	95.5	92.0	88.4
65	115.0	112.7	110.5	106.5	102.7	99.0	95.5	92.0	88.4
70	115.0	112.7	109.6	105.6	101.9	98.3	94.7	91.2	87.7
75	115.0	112.7	108.5	104.6	100.9	97.3	93.8	90.3	86.8
80	115.0	111.0	107.5	103.7	100.1	96.5	92.9	89.4	85.9
85	114.6	110.5	106.5	102.7	99.0	95.4	91.9	88.4	84.9
90	112.4	108.4	104.4	100.7	97.0	93.5	90.1	86.7	83.3
95	110.3	106.2	102.4	98.7	95.1	91.6	88.2	84.9	81.7
100	108.1	104.1	100.3	96.7	93.1	89.7	86.4	83.2	80.1
105	105.9	102.0	98.3	94.7	91.2	87.8	84.6	81.5	78.4
110	103.7	99.9	96.2	92.7	89.3	86.0	82.8	79.7	76.8

TEMP °F	REFERENCE FACTOR "R"								
	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	42.0	44.3	46.8	49.7	53.0	56.8	61.2	66.4	72.5
55	42.3	44.8	47.4	50.3	53.6	57.4	61.8	66.9	72.8
60	42.6	45.2	48.0	51.0	54.3	58.1	62.4	67.4	73.1
65	42.9	45.7	48.6	51.6	55.0	58.8	63.0	67.9	73.4
70	43.3	46.1	49.1	52.3	55.8	59.7	64.1	69.0	74.5
75	43.7	46.5	49.6	53.0	56.7	60.8	65.3	70.3	75.8
80	44.2	47.0	50.1	53.7	57.6	61.9	66.5	71.6	77.0
85	44.7	47.6	50.8	54.5	58.6	63.1	67.9	73.1	78.6
90	45.9	49.0	52.4	56.2	60.4	65.0	70.1	75.6	81.7
95	47.1	50.3	53.9	57.8	62.1	66.9	72.2	78.2	84.8
100	48.3	51.7	55.4	59.4	63.9	68.8	74.4	80.7	87.9
105	49.4	53.1	56.9	61.1	65.6	70.7	76.5	83.2	90.9
110	50.6	54.5	58.5	62.7	67.3	72.6	78.7	85.8	94.0

WEIGHT 1000 LBS	RUNWAY LENGTH (1000 FEET)						
	REFERENCE FACTOR "R"						
	40	50	60	70	80	90	100
70	2.80	3.26	3.81	4.40	4.96	5.44	5.78
75	3.04	3.65	4.29	4.95	5.58	6.14	6.61
80	3.33	4.06	4.81	5.57	6.30	6.99	7.61
85	3.66	4.51	5.38	6.26	7.12	7.96	8.74
90	4.02	4.99	6.00	7.02	8.04	9.03	9.95
95	4.43	5.51	6.67	7.86	9.04	10.17	11.21
100	4.87	6.08	7.41	8.78	10.12	11.38	12.47
105	5.34	6.69	8.20	9.77	11.27		
110	5.84	7.36	9.07	10.83	12.48		
115	6.36	8.08	10.02	11.98			
120	6.91	8.86	11.05				
125	7.49	9.70	12.16				

TABLE 46. AIRCRAFT PERFORMANCE, TAKEOFF (DOUGLAS DC-9-50 SERIES)
JT8D-17 ENGINE, 5° FLAPS

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 LBS)

TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	121.0	120.2	117.0	112.8	108.8	104.8	100.9	97.2	93.5
55	121.0	119.5	117.0	112.8	108.8	104.8	100.9	97.2	93.5
60	121.0	119.5	117.0	112.8	108.8	104.8	100.9	97.2	93.5
65	121.0	119.5	117.0	112.8	108.8	104.8	100.9	97.2	93.5
70	121.0	119.5	116.2	112.0	108.0	104.0	100.2	96.4	92.8
75	121.0	119.5	115.2	111.0	106.9	103.0	99.2	95.5	92.0
80	121.0	118.3	114.0	109.9	105.9	102.0	98.3	94.6	91.1
85	121.0	116.9	112.7	108.6	104.7	100.9	97.2	93.6	90.1
90	119.0	114.7	110.6	106.7	102.8	99.1	95.4	91.8	88.3
95	116.5	112.4	108.4	104.6	100.3	97.2	93.6	90.0	86.5
100	114.0	110.0	106.1	102.3	98.7	95.1	91.6	88.1	84.6
105	111.3	107.4	103.6	100.0	96.4	92.9	89.5	86.1	82.7
110	108.6	104.7	101.0	97.4	94.0	90.6	87.2	84.0	80.7

REFERENCE FACTOR "R"

TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	45.5	48.1	51.0	54.3	58.0	62.0	66.5	71.5	77.0
55	46.1	48.6	51.4	54.7	58.4	62.6	67.2	72.2	77.8
60	46.7	49.1	51.9	55.1	58.9	63.1	67.8	72.9	78.6
65	47.4	49.5	52.3	55.6	59.4	63.7	68.4	73.7	79.3
70	47.7	50.1	53.0	56.4	60.3	64.7	69.6	74.9	80.6
75	48.0	50.6	53.7	57.3	61.3	65.8	70.8	76.2	82.0
80	48.3	50.4	53.7	57.5	61.7	66.3	71.3	76.6	82.2
85	48.8	51.8	55.3	59.2	63.6	68.3	73.5	79.1	85.1
90	50.1	53.3	56.9	61.0	65.4	70.4	75.8	81.6	87.9
95	51.5	54.8	58.5	62.7	67.3	72.4	78.0	84.1	90.8
100	52.8	56.2	60.1	64.4	69.1	74.4	80.2	86.6	93.6
105	54.1	57.7	61.7	66.1	71.0	76.5	82.5	89.1	96.4
110	55.5	59.1	63.2	67.8	72.9	78.5	84.7	91.6	99.3

RUNWAY LENGTH (1000 FEET)

WEIGHT 1000 LBS	REFERENCE FACTOR "R"						
	40	50	60	70	80	90	100
70	2.64	3.27	3.87	4.44	5.00	5.54	6.08
75	2.93	3.65	4.34	5.00	5.65	6.29	6.93
80	3.26	4.07	4.85	5.62	6.36	7.11	7.85
85	3.61	4.52	5.41	6.28	7.15	8.01	8.87
90	3.99	5.00	6.00	7.00	8.00	9.00	10.00
95	4.40	5.51	6.64	7.78	8.93	10.09	11.26
100	4.84	6.06	7.32	8.62	9.95	11.30	
105	5.32	6.63	8.04	9.52	11.06		
110	5.82	7.24	8.81	10.49	12.26		
115	6.36	7.88	9.62	11.53			
120	6.92	8.55	10.43				
125	7.52	9.26	11.38				

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Appendix 6TABLE 47. AIRCRAFT PERFORMANCE, TAKEOFF (DOUGLAS DC-9-50 SERIES)
JT8D-17 ENGINE, 5° FLAPS, 5% SPEED INCREASE

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 LBS)

TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	121.0	121.0	119.5	115.3	111.3	107.3	103.4	99.5	95.8
55	121.0	121.0	119.5	115.3	111.3	107.3	103.4	99.5	95.8
60	121.0	121.0	119.5	115.3	111.3	107.3	103.4	99.5	95.8
65	121.0	121.0	119.5	115.3	111.3	107.3	103.4	99.5	95.8
70	121.0	121.0	118.7	114.5	110.4	106.4	102.5	98.7	95.1
75	121.0	121.0	117.6	113.5	109.4	105.4	101.5	97.8	94.1
80	121.0	120.8	116.5	112.4	108.3	104.4	100.5	96.8	93.2
85	121.0	119.5	115.2	111.1	107.1	103.2	99.4	95.7	92.0
90	121.0	117.3	113.1	109.1	105.2	101.4	97.7	94.0	90.3
95	119.1	114.9	110.9	107.0	103.2	99.4	95.8	92.1	88.5
100	116.5	112.5	108.6	104.7	101.0	97.3	93.7	90.1	86.6
105	113.8	109.9	106.1	102.3	98.7	95.1	91.5	88.0	84.6
110	111.0	107.1	103.4	99.7	96.2	92.7	89.2	85.8	82.5

REFERENCE FACTOR "R"

TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	50.0	52.9	56.1	59.9	64.1	68.8	73.9	79.5	85.5
55	50.6	53.3	56.5	60.3	64.5	69.3	74.5	80.3	86.4
60	51.3	53.7	56.9	60.6	64.9	69.8	75.2	81.1	87.4
65	51.9	54.2	57.2	61.0	65.4	70.4	75.9	81.9	88.3
70	52.3	54.9	58.1	62.0	66.5	71.6	77.2	83.3	89.8
75	52.7	55.7	59.2	63.2	67.8	73.0	78.7	84.8	91.5
80	53.2	56.4	60.2	64.4	69.1	74.4	80.1	86.4	93.2
85	53.8	57.4	61.4	65.8	70.6	76.0	81.8	88.2	95.1
90	55.3	59.0	63.1	67.7	72.7	78.3	84.3	91.0	98.2
95	56.9	60.7	64.9	69.6	74.8	80.6	86.9	93.8	101.3
100	58.4	62.3	66.7	71.5	76.9	82.9	89.4	96.6	104.3
105	60.0	63.9	68.4	73.5	79.1	85.2	92.0	99.4	107.4
110	61.5	65.6	70.2	75.4	81.2	87.5	94.5	102.2	110.5

RUNWAY LENGTH (1000 FEET)

WEIGHT 1000 LBS	REFERENCE FACTOR "R"							
	50	60	70	80	90	100	110	120
70	3.29	3.89	4.46	5.01	5.56	6.11	6.67	7.25
75	3.65	4.35	5.02	5.66	6.30	6.95	7.62	8.32
80	4.06	4.86	5.63	6.38	7.12	7.88	8.66	9.47
85	4.51	5.41	6.29	7.15	8.02	8.89	9.78	10.69
90	5.00	6.00	7.00	8.00	8.99	9.99	10.99	12.00
95	5.52	6.64	7.77	8.91	10.05	11.18	12.29	
100	6.08	7.31	8.59	9.90	11.19	12.46		
105	6.67	8.04	9.48	10.96	12.42			
110	7.30	8.80	10.43	12.09				
115	7.96	9.62	11.44					
120	8.64	10.48						

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TABLE 48. AIRCRAFT PERFORMANCE, TAKEOFF (DOUGLAS DC-9-50 SERIES)
JT8D-17 ENGINE, 0° FLAPS

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 LBS)									
TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	121.0	121.0	121.0	117.0	112.7	108.5	104.5	100.7	97.0
55	121.0	121.0	121.0	117.0	112.7	108.5	104.5	100.7	97.0
60	121.0	121.0	121.0	117.0	112.7	108.5	104.5	100.7	97.0
65	121.0	121.0	121.0	117.0	112.7	108.5	104.5	100.7	97.0
70	121.0	121.0	120.1	116.0	111.8	107.6	103.6	99.8	96.2
75	121.0	121.0	119.0	114.8	110.7	106.6	102.6	98.8	95.2
80	121.0	121.0	118.0	113.8	109.7	105.7	101.8	98.0	94.3
85	121.0	121.0	116.7	112.6	108.5	104.6	100.7	96.9	93.1
90	121.0	118.5	114.2	110.2	106.4	102.5	98.6	94.6	90.2
95	120.6	116.0	111.9	108.0	104.2	100.4	96.6	92.4	87.9
100	118.2	113.7	109.6	105.7	102.0	98.4	94.6	90.5	86.2
105	115.7	111.4	107.4	103.5	99.9	96.2	92.6	88.8	84.9
110	113.2	109.2	105.2	101.4	97.7	94.1	90.7	87.4	84.2

REFERENCE FACTOR "R"									
TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	51.0	53.1	56.0	59.7	64.0	68.8	74.2	79.9	86.0
55	51.3	53.7	56.7	60.4	64.7	69.5	74.9	80.7	86.9
60	51.6	54.2	57.4	61.1	65.4	70.3	75.6	81.5	87.9
65	51.9	54.8	58.1	61.9	66.2	71.0	76.4	82.3	88.8
70	52.5	55.5	58.9	62.8	67.2	72.1	77.6	83.7	90.3
75	53.0	56.2	59.8	63.8	68.3	73.4	79.0	85.2	92.0
80	53.6	56.9	60.6	64.8	69.5	74.7	80.4	86.7	93.7
85	54.3	57.8	61.7	66.0	70.8	76.1	82.0	88.5	95.6
90	55.9	59.4	63.4	67.9	72.9	78.5	84.6	91.4	98.9
95	57.4	61.1	65.2	69.8	75.0	80.8	87.2	94.3	102.2
100	58.9	62.7	67.0	71.8	77.1	83.1	89.8	97.2	105.4
105	60.5	64.4	68.8	73.7	79.2	85.5	92.4	100.1	108.7
110	62.0	66.0	70.5	75.6	81.4	87.8	95.0	103.0	112.0

RUNWAY LENGTH (1000 FEET)								
WEIGHT 1000 LBS	REFERENCE FACTOR "R"							
	50	60	70	80	90	100	110	120
70	3.23	3.85	4.45	5.02	5.57	6.11	6.65	7.18
75	3.65	4.32	4.99	5.65	6.31	6.95	7.58	8.19
80	4.08	4.83	5.60	6.36	7.12	7.87	8.60	9.30
85	4.53	5.39	6.27	7.15	8.02	8.89	9.73	10.56
90	5.00	6.00	7.00	8.00	9.00	10.01	11.00	12.00
95	5.50	6.65	7.78	8.92	10.07	11.24	12.43	13.65
100	6.03	7.33	8.62	9.91	11.22	12.59	14.02	
105	6.60	8.06	9.50	10.95	12.46	14.07		
110	7.21	8.82	10.41	12.04	13.78			
115	7.87	9.62	11.37	13.19				
120	8.58	10.46	12.36	14.39				
125	9.34	11.33	13.37					

TABLE 49. AIRCRAFT PERFORMANCE, TAKEOFF (DOUGLAS DC-9-50 SERIES)
JT8D-17 ENGINE, 0° FLAPS, 6% SPEED INCREASE

TEMP °F	MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 LBS)								
	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	121.0	121.0	121.0	119.4	115.0	110.7	106.7	102.8	99.0
55	121.0	121.0	121.0	119.4	115.0	110.7	106.7	102.8	99.0
60	121.0	121.0	121.0	119.4	115.0	110.7	106.7	102.8	99.0
65	121.0	121.0	121.0	119.4	115.0	110.7	106.7	102.8	99.0
70	121.0	121.0	121.0	118.4	114.1	109.8	105.7	101.8	98.2
75	121.0	121.0	121.0	117.2	113.0	108.8	104.7	100.8	97.2
80	121.0	121.0	120.4	116.2	112.0	107.9	103.8	100.0	96.3
85	121.0	121.0	119.1	114.9	110.8	106.8	102.8	98.9	95.0
90	121.0	120.9	116.6	112.5	108.6	104.7	100.7	96.6	92.2
95	121.0	118.5	114.2	110.2	106.4	102.6	98.6	94.4	89.8
100	120.6	116.0	111.9	107.9	104.2	100.4	96.6	92.5	88.0
105	118.1	113.7	109.6	105.7	102.0	98.3	94.6	90.7	86.7
110	115.6	111.4	107.4	103.5	99.8	96.2	92.6	89.2	85.9

TEMP °F	REFERENCE FACTOR "R"								
	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	57.5	60.0	63.4	67.5	72.4	77.9	84.2	91.0	98.5
55	57.8	60.5	64.0	68.3	73.2	78.8	85.1	91.9	99.4
60	58.1	61.1	64.7	69.0	74.0	79.7	86.0	92.9	100.4
65	58.4	61.6	65.4	69.8	74.8	80.5	86.8	93.8	101.3
70	59.0	62.3	66.3	70.9	76.1	81.9	88.3	95.4	103.1
75	59.5	63.2	67.4	72.2	77.5	83.4	90.0	97.2	105.0
80	60.1	64.0	68.5	73.4	78.9	85.0	91.7	99.0	107.0
85	60.9	65.1	69.7	74.9	80.5	86.8	93.6	101.1	109.3
90	62.7	67.1	71.9	77.2	83.1	89.5	96.6	104.4	113.0
95	64.5	69.1	74.0	79.5	85.6	92.3	99.7	107.8	116.8
100	66.3	71.0	76.2	81.9	88.1	95.1	102.7	111.2	120.5
105	68.2	73.0	78.3	84.2	90.7	97.8	105.8	114.5	124.2
110	70.0	75.0	80.5	86.5	93.2	100.6	108.8	117.9	128.0

WEIGHT 1000 LBS	RUNWAY LENGTH (1000 FEET)								
	REFERENCE FACTOR "R"								
	50	60	70	80	90	100	110	120	130
70	3.31	3.90	4.47	5.03	5.58	6.13	6.67	7.22	7.77
75	3.71	4.37	5.01	5.66	6.30	6.94	7.59	8.24	8.90
80	4.12	4.87	5.62	6.36	7.11	7.86	8.62	9.38	10.15
85	4.55	5.41	6.28	7.14	8.01	8.88	9.76	10.64	11.52
90	5.00	6.00	7.00	8.00	9.00	10.00	11.00	12.01	13.01
95	5.48	6.63	7.78	8.92	10.07	11.21	12.35	13.49	14.63
100	5.99	7.30	8.61	9.91	11.21	12.51	13.81		
105	6.55	8.02	9.50	10.97	12.43	13.89			
110	7.15	8.79	10.44	12.08	13.72				
115	7.80	9.61	11.43	13.24					
120	8.52	10.49	12.46	14.46					
125	9.30	11.41	13.55						

TABLE 50. GENERAL CHARACTERISTICS (BOEING 747 SERIES) JT9D-7A ENGINE

AIRPLANE CHARACTERISTICS	UNIT OF MEASURE	-100 BASIC	-100 MODIFIED	-200B	-200C PASS.	-200C CARGO	-200F
MAXIMUM TAKEOFF WEIGHT	LBS.	712,000	735,000	785,000	785,000	785,000	785,000
MAXIMUM LANDING WEIGHT	LBS.	564,000	564,000	564,000	630,000	630,000	630,000
TYPICAL OPERATING EMPTY WEIGHT PLUS RESERVE FUEL ^{1/}	LBS.	385,700 402,600	385,900 402,800	395,900 414,000	407,900 426,000	386,100 404,700	369,700 389,400
AVERAGE FUEL CONSUMPTION	LBS./MILE	45	45	47	47	49	51
TYPICAL MAXIMUM PASSENGER LOAD @ 200 LBS./PASSENGER	LBS.	77,000 83,200 100,000	77,000 83,200 100,000	77,000 83,200 100,000	77,000 83,200 100,000	-- -- --	-- -- --
MAXIMUM STRUCTURAL PAYLOAD	LBS.	168,600	168,400	160,700	212,200	235,100	253,000
ENGINE INJECTION WATER	LBS.	5,010	5,010	5,850	5,850	5,850	5,850

^{1/} All values on the top line are based on 1.25 hours of reserve fuel. All values on the bottom line are based on 2.00 hours of reserve fuel. The 2.00 hour value should be used for operations, outside the 48 contiguous States, to an airport for which an alternate is not specified.

NOTE: This series of performance tables was developed around the wet thrust capability of the JT9D-7A engine; and for that reason, the weight of engine injection water should be added to the weight no payload prior to adding the value for payload, par 2a(3)(e).

TABLE 51. AIRCRAFT PERFORMANCE, LANDING (BOEING 747 SERIES)
JT9D-7A ENGINE, 30° FLAPS

MAXIMUM ALLOWABLE LANDING WEIGHT (1000 LBS)

TEMP °F	AIRPORT ELEVATION (FEET)									
	0	1000	2000	3000	4000	5000	5000	6000	7000	8000
50	630.0	630.0	630.0	630.0	630.0	630.0	630.0	630.0	630.0	625.0
55	630.0	630.0	630.0	630.0	630.0	630.0	630.0	630.0	630.0	620.5
60	630.0	630.0	630.0	630.0	630.0	630.0	630.0	630.0	630.0	611.5
65	630.0	630.0	630.0	630.0	630.0	630.0	630.0	630.0	626.0	603.3
70	630.0	630.0	630.0	630.0	630.0	630.0	630.0	630.0	617.4	595.0
75	630.0	630.0	630.0	630.0	630.0	630.0	630.0	630.0	608.7	586.6
80	630.0	630.0	630.0	630.0	630.0	630.0	630.0	622.3	599.8	578.0
85	630.0	630.0	630.0	630.0	630.0	630.0	630.0	612.9	590.6	569.3
90	630.0	630.0	630.0	630.0	630.0	622.5	625.7	603.2	581.2	560.2
95	630.0	630.0	630.0	630.0	630.0	611.2	615.5	593.2	571.6	550.8
100	630.0	630.0	630.0	630.0	622.3	599.8	605.0	582.9	561.6	541.0
105	630.0	630.0	630.0	630.0	610.6	588.5	594.0	572.2	551.2	530.8
110	630.0	630.0	630.0	622.0	599.5	577.5	582.5	561.1	540.5	520.0

RUNWAY LENGTH (1000 FEET)

WEIGHT 1000 LBS	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
460	6.37	6.53	6.69	6.85	7.03	7.20	7.38	7.57	7.76
470	6.48	6.65	6.81	6.98	7.16	7.34	7.52	7.71	7.90
480	6.60	6.77	6.94	7.11	7.29	7.47	7.66	7.85	8.04
490	6.71	6.88	7.06	7.24	7.42	7.61	7.79	7.98	8.18
500	6.82	7.00	7.19	7.37	7.55	7.74	7.93	8.12	8.33
510	6.94	7.12	7.31	7.50	7.68	7.87	8.06	8.27	8.48
520	7.05	7.24	7.43	7.62	7.81	7.99	8.20	8.41	8.63
530	7.17	7.36	7.56	7.74	7.93	8.13	8.34	8.56	8.77
540	7.28	7.48	7.68	7.87	8.05	8.26	8.48	8.70	8.92
550	7.40	7.60	7.80	7.99	8.19	8.40	8.62	8.84	9.07
560	7.52	7.72	7.92	8.11	8.32	8.54	8.76	8.99	9.22
570	7.64	7.84	8.03	8.24	8.46	8.67	8.90	9.13	9.36
580	7.76	7.96	8.16	8.37	8.59	8.81	9.04	9.27	9.51
590	7.88	8.08	8.29	8.50	8.72	8.94	9.17	9.41	9.66
600	8.00	8.21	8.42	8.63	8.85	9.08	9.31	9.55	9.80
610	8.13	8.33	8.54	8.76	8.98	9.21	9.45	9.70	9.95
620	8.25	8.46	8.67	8.89	9.12	9.35	9.59	9.84	10.10
630	8.37	8.58	8.80	9.02	9.25	9.48	9.73	9.98	10.25

TABLE 52. AIRCRAFT PERFORMANCE, LANDING (BOEING 747 SERIES)
JT9D-7A ENGINE, 25° FLAPS

MAXIMUM ALLOWABLE LANDING WEIGHT (1000 LBS)

TEMP °F	AIRPORT ELEVATION (FEET)									
	0	1000	2000	3000	4000	5000	5000	6000	7000	8000
50	630.0	630.0	630.0	630.0	630.0	630.0	630.0	630.0	630.0	630.0
55	630.0	630.0	630.0	630.0	630.0	630.0	630.0	630.0	630.0	630.0
60	630.0	630.0	630.0	630.0	630.0	630.0	630.0	630.0	630.0	621.6
65	630.0	630.0	630.0	630.0	630.0	630.0	630.0	630.0	630.0	612.4
70	630.0	630.0	630.0	630.0	630.0	630.0	630.0	630.0	626.4	603.3
75	630.0	630.0	630.0	630.0	630.0	630.0	630.0	630.0	617.1	594.3
80	630.0	630.0	630.0	630.0	630.0	630.0	630.0	630.0	607.6	585.2
85	630.0	630.0	630.0	630.0	630.0	630.0	630.0	621.0	597.9	575.9
90	630.0	630.0	630.0	630.0	630.0	628.0	630.0	610.7	588.1	566.4
95	630.0	630.0	630.0	630.0	630.0	616.6	623.0	600.2	577.9	556.7
100	630.0	630.0	630.0	630.0	629.0	605.0	611.6	589.3	567.3	546.6
105	630.0	630.0	630.0	630.0	617.0	593.4	599.7	578.1	556.4	536.0
110	630.0	630.0	630.0	627.5	605.0	582.0	587.5	566.5	545.0	525.0

RUNWAY LENGTH (1000 FEET)

WEIGHT 1000 LBS	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
460	6.77	6.93	7.10	7.27	7.44	7.63	7.81	8.01	8.22
470	6.90	7.06	7.24	7.41	7.59	7.78	7.96	8.17	8.39
480	7.03	7.20	7.38	7.56	7.74	7.93	8.13	8.34	8.56
490	7.17	7.34	7.52	7.70	7.89	8.08	8.29	8.51	8.73
500	7.30	7.47	7.66	7.85	8.04	8.24	8.46	8.68	8.90
510	7.43	7.61	7.80	7.99	8.18	8.40	8.62	8.85	9.07
520	7.57	7.75	7.94	8.13	8.33	8.55	8.78	9.01	9.24
530	7.70	7.88	8.07	8.27	8.48	8.71	8.94	9.18	9.41
540	7.84	8.02	8.21	8.42	8.64	8.87	9.10	9.34	9.59
550	7.97	8.15	8.35	8.57	8.79	9.02	9.26	9.51	9.76
560	8.10	8.30	8.50	8.72	8.94	9.18	9.42	9.67	9.93
570	8.24	8.44	8.65	8.87	9.10	9.34	9.58	9.84	10.10
580	8.39	8.60	8.81	9.03	9.26	9.49	9.74	10.00	10.28
590	8.54	8.75	8.97	9.18	9.41	9.65	9.90	10.17	10.45
600	8.69	8.91	9.12	9.34	9.57	9.81	10.06	10.33	10.62
610	8.84	9.06	9.27	9.50	9.73	9.97	10.23	10.50	10.79
620	8.98	9.20	9.42	9.65	9.88	10.13	10.39	10.67	10.96
630	9.11	9.34	9.57	9.80	10.04	10.29	10.56	10.84	11.13

TABLE 53. AIRCRAFT PERFORMANCE, TAKEOFF (BOEING 747 SERIES)
JT9D-7A ENGINE, 20° FLAPS

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 LBS)									
TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	785.0	771.0	751.0	730.0	710.0	689.5	669.0	647.0	626.5
55	785.0	771.0	751.0	730.0	710.0	689.5	669.0	647.0	626.5
60	785.0	771.0	751.0	730.0	710.0	689.5	669.0	647.0	622.0
65	785.0	771.0	751.0	730.0	710.0	689.5	666.9	640.2	614.7
70	785.0	771.0	751.0	730.0	710.0	684.9	657.6	631.6	606.4
75	785.0	771.0	751.0	730.0	701.8	674.2	647.7	622.2	597.5
80	785.0	771.0	747.0	717.9	690.0	663.1	637.2	612.2	588.0
85	785.0	763.0	733.7	705.5	678.2	651.9	626.5	601.9	578.2
90	779.1	749.6	721.0	693.3	666.6	640.7	615.6	591.5	568.1
95	765.9	736.8	708.7	681.4	655.0	629.5	604.8	581.0	558.1
100	753.1	724.4	696.7	669.8	643.7	618.6	594.3	570.8	548.3
105	740.3	712.0	684.7	658.3	632.8	608.0	584.2	561.1	538.8
110	727.0	699.4	672.8	647.0	622.1	598.0	574.6	551.9	529.8

REFERENCE FACTOR "R"									
TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	60.5	64.5	68.6	73.0	77.8	83.1	89.0	95.5	102.8
55	61.2	65.1	69.3	73.8	78.7	84.0	89.9	96.5	103.8
60	61.8	65.8	70.0	74.6	79.5	84.9	90.9	97.6	104.2
65	62.4	66.5	70.7	75.3	80.3	85.8	90.9	98.7	107.8
70	63.1	67.2	71.5	76.1	81.1	86.4	93.6	101.7	111.1
75	63.7	67.9	72.2	76.8	82.2	88.8	96.2	104.6	114.3
80	64.4	68.6	72.6	78.2	84.3	91.1	98.8	107.5	117.4
85	65.0	69.2	74.5	80.2	86.5	93.6	101.5	110.4	120.5
90	66.0	71.0	76.4	82.3	88.8	96.1	104.3	113.5	123.8
95	67.8	72.8	78.4	84.5	91.3	98.8	107.3	116.7	127.2
100	69.6	74.8	80.5	86.8	93.9	101.7	110.5	120.2	131.0
105	71.5	76.8	82.7	89.3	96.7	104.9	114.0	124.1	
110	73.5	79.0	85.2	92.1	99.8	108.4	117.9		

RUNWAY LENGTH (1000 FEET)									
WEIGHT 1000 LBS	REFERENCE FACTOR "R"								
	60	70	80	90	100	110	120	130	140
530	4.34	4.93	5.53	6.15	6.77	7.40	8.01	8.61	9.18
550	4.58	5.27	5.96	6.65	7.34	8.02	8.69	9.36	10.01
570	4.86	5.65	6.43	7.19	7.94	8.69	9.43	10.17	10.91
590	5.18	6.06	6.92	7.76	8.59	9.41	10.23	11.05	11.88
610	5.55	6.51	7.44	8.36	9.27	10.17	11.08	11.98	12.90
630	5.95	6.98	8.00	9.01	10.00	10.99	11.98	12.98	13.98
650	6.39	7.49	8.59	9.69	10.78	11.87	12.95	14.03	15.10
670	6.86	8.03	9.22	10.41	11.61	12.80	13.97	15.13	
690	7.35	8.60	9.89	11.19	12.49	13.79	15.06		
710	7.88	9.21	10.59	12.01	13.43	14.84			
730	8.42	9.84	11.34	12.88	14.43	15.95			
750	8.99	10.51	12.13	13.81	15.49				
770	9.57	11.20	12.96	14.79					
790	10.17	11.93	13.85	15.84					

TABLE 54. AIRCRAFT PERFORMANCE, TAKEOFF (BOEING 747 SERIES)
JT9D-7A ENGINE, 10° FLAPS

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 LBS)									
TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	785.0	785.0	785.0	763.0	742.5	720.0	697.5	675.5	653.5
55	785.0	785.0	785.0	763.0	742.5	720.0	697.5	675.5	653.5
60	785.0	785.0	785.0	763.0	742.5	720.0	697.5	675.5	649.0
65	785.0	785.0	785.0	763.0	742.5	720.0	696.1	668.5	641.5
70	785.0	785.0	785.0	763.0	742.5	714.8	686.6	659.3	632.9
75	785.0	785.0	785.0	763.0	732.9	704.0	676.2	649.3	623.3
80	785.0	785.0	781.1	750.5	721.0	692.5	665.0	638.6	613.1
85	785.0	785.0	767.7	737.7	708.6	680.5	653.5	627.4	602.4
90	785.0	784.5	754.2	724.7	696.0	668.4	641.7	616.1	591.6
95	785.0	770.5	740.7	711.6	683.5	656.3	630.1	604.9	580.9
100	785.0	756.7	727.4	698.8	671.2	644.4	618.7	594.0	570.4
105	772.9	743.3	714.4	686.4	659.3	633.1	607.9	583.7	560.6
110	759.5	730.3	702.0	674.6	648.1	622.5	597.9	574.2	551.5

REFERENCE FACTOR "R"									
TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	68.3	72.4	76.7	81.6	86.9	92.9	99.5	106.9	115.2
55	69.0	73.0	77.4	82.3	87.8	93.9	100.6	108.1	116.3
60	69.7	73.7	78.1	83.0	88.5	94.6	101.4	109.0	117.5
65	70.2	74.3	78.7	83.7	89.2	95.4	101.9	110.7	120.8
70	70.8	74.9	79.4	84.3	89.9	96.4	104.5	113.7	124.3
75	71.3	75.6	80.1	85.0	91.5	98.9	107.3	116.9	127.9
80	71.9	76.2	81.0	87.1	94.0	101.6	110.3	120.3	131.6
85	72.5	77.3	83.2	89.5	96.6	104.6	113.6	123.9	135.5
90	73.8	79.4	85.4	92.0	99.4	107.7	117.1	127.6	139.6
95	75.7	81.4	87.7	94.6	102.3	110.9	120.7	131.6	143.9
100	77.7	83.5	90.0	97.2	105.3	114.3	124.4	135.7	148.3
105	79.9	85.8	92.5	100.0	108.4	117.3	128.4	140.0	
110	82.3	88.2	95.0	102.8	111.6	121.4	132.4		

RUNWAY LENGTH (1000 FEET)										
WEIGHT 1000 LBS	REFERENCE FACTOR "R"									
	60	70	80	90	100	110	120	130	140	150
550	4.43	5.15	5.85	6.52	7.18	7.82	8.46	9.09	9.72	10.36
570	4.73	5.51	6.27	7.02	7.74	8.46	9.17	9.87	10.58	11.29
590	5.04	5.90	6.73	7.55	8.35	9.14	9.92	10.70	11.48	12.27
610	5.39	6.31	7.22	8.11	8.99	9.86	10.72	11.58	12.45	13.31
630	5.76	6.76	7.74	8.71	9.67	10.62	11.57	12.52	13.47	14.43
650	6.15	7.23	8.29	9.34	10.39	11.44	12.48	13.52	14.57	15.61
670	6.57	7.73	8.87	10.02	11.17	12.31	13.45	14.60	15.74	
690	7.01	8.25	9.50	10.74	11.99	13.24	14.49	15.75		
710	7.47	8.81	10.16	11.51	12.87	14.24	15.61			
730	7.96	9.40	10.86	12.33	13.81	15.30				
750	8.46	10.01	11.59	13.20	14.81	16.44				
770	8.98	10.66	12.37	14.12	15.88					
790	9.52	11.34	13.20	15.09						

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TABLE 55. AIRCRAFT PERFORMANCE, LANDING (BOEING 727-100 SERIES)
JT8D-7 ENGINE, 40° FLAPS

MAXIMUM ALLOWABLE LANDING WEIGHT (1000 LBS)									
TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	137.5	137.5	137.5	137.5	137.5	137.5	136.0	131.5	126.4
55	137.5	137.5	137.5	137.5	137.5	137.5	135.9	130.9	126.3
60	137.5	137.5	137.5	137.5	137.5	137.5	135.7	130.7	126.0
65	137.5	137.5	137.5	137.5	137.5	137.5	135.6	130.5	125.7
70	137.5	137.5	137.5	137.5	137.5	137.5	134.9	129.8	125.1
75	137.5	137.5	137.5	137.5	137.5	137.5	133.9	128.8	124.1
80	137.5	137.5	137.5	137.5	137.5	137.5	132.4	127.4	122.8
85	137.5	137.5	137.5	137.5	137.5	135.6	130.6	125.6	121.1
90	137.5	137.5	137.5	137.5	137.5	133.3	128.4	123.5	119.1
95	137.5	137.5	137.5	137.5	135.3	130.7	125.8	121.0	116.7
100	137.5	137.5	137.5	136.6	132.3	127.6	122.8	118.2	114.0
105	137.5	137.5	137.5	133.5	128.9	124.2	119.5	115.0	110.9
110	137.5	137.5	135.0	130.0	125.1	120.3	115.8	111.5	107.5

RUNWAY LENGTH (1000 FEET)									
WEIGHT 1000 LBS	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
105	4.00	4.07	4.15	4.25	4.34	4.45	4.55	4.65	4.75
110	4.14	4.22	4.30	4.40	4.50	4.60	4.71	4.82	4.92
115	4.29	4.37	4.46	4.55	4.65	4.76	4.87	4.98	5.10
120	4.43	4.52	4.61	4.71	4.82	4.93	5.04	5.16	5.28
125	4.58	4.68	4.78	4.88	4.99	5.10	5.22	5.34	5.46
130	4.73	4.84	4.94	5.06	5.17	5.29	5.41	5.53	5.65
135	4.89	5.00	5.12	5.23	5.35	5.48	5.60	5.72	5.85
140	5.05	5.17	5.29	5.42	5.55	5.67	5.80	5.93	5.95

AIRPLANE CHARACTERISTICS	UNIT OF MEASURE	ADVANCED PASSENGERS	OPTIONS QUICK CHANGE
MAXIMUM TAKEOFF WEIGHT	LBS.	160,000	169,000
MAXIMUM LANDING WEIGHT			
FLAPS 30°	LBS.	142,500	142,500
FLAPS 40°	LBS.	137,500	137,500
TYPICAL OPERATING EMPTY WEIGHT PLUS RESERVE FUEL	LBS.	101,330 107,468	101,330 ^{1/} 107,468 ^{2/}
AVERAGE FUEL CONSUMPTION	LBS./MILE	19	19
TYPICAL MAXIMUM PASSENGER LOAD AT 200 LBS./PASSENGER	LBS.	25,000	18,800
MAXIMUM STRUCTURAL PAYLOAD	LBS.	32,400	40,900

^{1/} Based on 1.25 hours of reserve fuel.^{2/} Based on 2.00 hours of reserve fuel.

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TABLE 56. AIRCRAFT PERFORMANCE, LANDING (BOEING 727-100 SERIES)
JT8D-7 ENGINE, 30° FLAPS

MAXIMUM ALLOWABLE LANDING WEIGHT (1000 LBS)

TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	142.5	142.5	142.5	142.5	142.5	142.5	142.5	141.0	142.5
55	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5
60	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5
65	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5
70	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5
75	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5
80	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5
85	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.2	140.4
90	142.5	142.5	142.5	142.5	142.5	142.5	142.5	140.7	137.3
95	142.5	142.5	142.5	142.5	142.5	142.5	142.5	138.6	134.2
100	142.5	142.5	142.5	142.5	142.5	142.5	141.5	136.2	131.0
105	142.5	142.5	142.5	142.5	142.5	142.5	138.4	133.3	127.8
110	142.5	142.5	142.5	142.5	142.5	140.3	135.2	130.0	124.5

RUNWAY LENGTH (1000 FEET)

WEIGHT 000 LBS	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
105	4.39	4.50	4.59	4.68	4.77	4.85	4.94	5.04	5.15
110	4.54	4.63	4.72	4.82	4.92	5.02	5.13	5.24	5.35
115	4.69	4.77	4.86	4.97	5.08	5.20	5.32	5.44	5.55
120	4.84	4.91	5.01	5.12	5.25	5.38	5.51	5.64	5.75
125	4.99	5.07	5.17	5.29	5.42	5.56	5.70	5.83	5.95
130	5.15	5.23	5.34	5.46	5.60	5.74	5.88	6.02	6.15
135	5.30	5.40	5.51	5.64	5.78	5.93	6.07	6.21	6.34
140	5.46	5.58	5.70	5.84	5.97	6.11	6.26	6.40	6.54
145	5.62	5.76	5.90	6.04	6.17	6.30	6.44	6.59	6.65

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Appendix 6TABLE 57. AIRCRAFT PERFORMANCE, TAKEOFF (BOEING 727-100 SERIES)
JT8D-7 ENGINE, 25° FLAPS

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 LBS)									
TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	163.6	157.9	152.3	146.8	141.4	136.2	131.0	126.0	121.2
55	162.0	156.3	150.7	145.2	139.9	134.7	129.7	124.8	120.0
60	160.0	153.9	148.2	142.8	137.7	133.0	128.4	124.1	120.0
65	160.0	153.9	148.2	142.8	137.7	133.0	128.4	124.1	120.0
70	160.0	153.9	148.2	142.8	137.7	133.0	128.4	124.1	120.0
75	160.0	153.9	148.2	142.8	137.7	133.0	128.4	124.1	120.0
80	160.0	153.9	148.2	142.8	137.7	133.0	128.4	124.1	120.0
85	160.0	153.9	148.2	142.8	136.9	131.9	127.0	122.3	117.5
90	155.6	149.9	144.4	139.1	134.0	129.0	124.2	119.6	115.0
95	152.1	146.5	141.2	136.0	131.0	126.2	121.4	116.9	112.4
100	148.5	143.2	138.0	133.0	128.1	123.3	118.7	114.2	109.8
105	145.0	139.9	134.8	129.9	125.1	120.4	115.9	111.5	107.2
110	141.5	136.5	131.6	126.9	122.2	117.6	113.1	108.7	104.5

REFERENCE FACTOR "R"									
TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	36.5	38.3	40.6	43.3	46.5	50.1	54.4	59.1	64.5
55	36.5	38.3	41.3	44.2	47.6	51.3	55.6	60.5	66.0
60	36.5	38.4	41.3	44.2	47.6	51.3	55.6	60.8	67.0
65	36.5	38.5	41.4	44.3	47.6	51.3	55.7	61.0	67.5
70	36.6	38.9	41.7	44.7	48.0	51.8	56.2	61.5	67.7
75	36.7	39.4	42.3	45.4	48.8	52.7	57.2	62.4	68.5
80	37.5	40.2	43.1	46.3	49.8	53.9	58.5	63.9	70.0
85	38.4	41.1	44.1	47.4	51.2	55.4	60.3	65.8	72.1
90	39.5	42.3	45.4	48.9	52.8	57.3	62.4	68.3	74.9
95	40.8	43.6	46.9	50.5	54.7	59.5	65.0	71.2	78.3
100	42.2	45.2	48.6	52.5	56.9	62.1	68.0	74.7	82.4
105	43.8	46.9	50.5	54.7	59.4	64.9	71.3	78.7	87.1
110	45.5	48.9	52.7	57.1	62.2	68.2	75.1	83.2	92.5

RUNWAY LENGTH (1000 FEET)							
WEIGHT 1000 LBS	REFERENCE FACTOR "R"						
	36	46	56	66	76	86	96
100	2.78	3.39	3.96	4.50	5.00	5.47	5.90
105	2.95	3.63	4.28	4.91	5.51	6.06	6.57
110	3.14	3.91	4.67	5.41	6.12	6.79	7.41
115	3.36	4.23	5.10	5.97	6.82	7.64	8.41
120	3.60	4.59	5.60	6.61	7.62	8.62	9.59
125	3.87	4.99	6.14	7.32	8.52		
130	4.16	5.43	6.75	8.11	9.51		
135	4.48	5.91	7.41	8.97			
140	4.82	6.43	8.12				
145	5.18	6.99	8.89				
150	5.57	7.60					
155	5.98	8.24					
160	6.41	8.92					
165	6.87						
170	7.35						

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TABLE 58. AIRCRAFT PERFORMANCE, TAKEOFF (BOEING 727-100 SERIES)
JT8D-7, ENGINE, 15° FLAPS

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 LBS)

TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	169.0	169.0	169.0	166.1	160.1	154.0	148.0	142.3	137.2
55	169.0	169.0	169.0	163.9	158.0	152.1	146.3	140.8	135.7
60	169.0	169.0	167.0	161.0	155.4	150.1	145.1	140.2	135.5
65	169.0	169.0	167.0	161.0	155.4	150.1	145.1	140.2	135.5
70	169.0	169.0	167.0	161.0	155.4	150.1	145.1	140.2	135.5
75	169.0	169.0	167.0	161.0	155.4	150.1	145.1	140.2	135.5
80	169.0	169.0	167.0	161.0	155.4	150.1	145.1	140.2	135.5
85	169.0	169.0	167.0	161.0	155.4	148.6	143.1	137.7	132.4
90	169.0	168.9	162.8	156.9	151.1	145.4	140.0	134.6	129.5
95	169.0	165.2	159.3	153.5	147.8	142.2	136.8	131.6	126.6
100	167.4	161.5	155.7	150.0	144.4	139.0	133.7	128.6	123.7
105	163.6	157.9	152.2	146.6	141.1	135.8	130.6	125.6	120.8
110	160.0	154.2	148.6	143.1	137.7	132.5	127.5	122.7	118.0

REFERENCE FACTOR "R"

TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	43.7	45.8	48.6	51.9	55.7	60.1	65.0	70.3	76.2
55	44.1	46.8	49.9	53.5	57.5	61.9	66.9	72.5	78.6
60	44.5	47.8	51.3	55.1	59.2	63.8	68.9	74.6	81.0
65	44.5	47.8	51.3	55.1	59.2	63.8	68.9	74.6	81.0
70	44.5	47.8	51.3	55.1	59.2	63.8	68.9	74.6	81.0
75	44.7	48.0	51.6	55.4	59.6	64.3	69.4	75.1	81.5
80	45.7	48.9	52.4	56.4	60.7	65.5	70.8	76.7	83.1
85	46.8	50.0	53.6	57.6	62.1	67.1	72.6	78.6	85.1
90	48.2	51.3	55.0	59.2	63.9	69.1	74.7	81.0	87.7
95	49.6	52.9	56.8	61.1	66.0	71.3	77.3	83.7	90.7
100	51.3	54.8	58.8	63.3	68.4	74.0	80.2	86.9	94.3
105	53.1	56.9	61.1	65.9	71.2	77.0	83.4	90.5	98.2
110	55.0	59.2	63.8	68.8	74.3	80.4	87.1	94.5	102.7

RUNWAY LENGTH (1000 FEET)

WEIGHT 1000 LBS	REFERENCE FACTOR "R"							
	42	52	62	72	82	92	102	112
100	2.89	3.44	4.02	4.63	5.23	5.81	6.34	6.81
105	3.11	3.74	4.40	5.08	5.75	6.39	7.00	7.55
110	3.35	4.07	4.81	5.56	6.30	7.02	7.72	8.37
115	3.61	4.42	5.25	6.07	6.89	7.70	8.49	9.24
120	3.89	4.80	5.71	6.62	7.53	8.42	9.31	10.18
125	4.19	5.20	6.20	7.20	8.20	9.20	10.19	11.13
130	4.51	5.62	6.72	7.82	8.91	10.01	11.12	
135	4.84	6.07	7.27	8.47	9.67	10.88		
140	5.20	6.53	7.85	9.15	10.46	11.79		
145	5.57	7.03	8.45	9.87	11.29			
150	5.96	7.54	9.09	10.62				
155	6.37	8.08	9.75	11.40				
160	6.81	8.64	10.44					
165	7.26	9.23	11.15					
170	7.72	9.84	11.90					

TABLE 59. AIRCRAFT PERFORMANCE, TAKEOFF (BOEING 727-100 SERIES)
JT8D-7 ENGINE, 5° FLAPS

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 LBS)									
TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	169.0	169.0	169.0	169.0	169.0	164.9	158.2	152.1	146.8
55	169.0	169.0	169.0	169.0	169.0	162.8	156.7	150.7	145.0
60	169.0	169.0	169.0	169.0	166.4	160.3	154.5	149.3	144.8
65	169.0	169.0	169.0	169.0	166.4	160.3	154.5	149.3	144.8
70	169.0	169.0	169.0	169.0	166.4	160.3	154.5	149.3	144.8
75	169.0	169.0	169.0	169.0	166.4	160.3	154.5	149.3	144.8
80	169.0	169.0	169.0	169.0	166.4	160.3	154.5	149.3	144.8
85	169.0	169.0	169.0	169.0	166.4	160.3	153.3	147.4	141.9
90	169.0	169.0	169.0	166.1	161.3	155.8	150.1	144.3	138.8
95	169.0	169.0	168.8	163.7	158.2	152.5	146.8	141.1	135.7
100	169.0	169.0	166.7	160.7	154.9	149.1	143.5	138.0	132.7
105	169.0	169.0	163.4	157.3	151.4	145.7	140.2	134.9	129.7
110	169.0	164.7	159.0	153.3	147.8	142.3	136.9	131.7	126.7

REFERENCE FACTOR "R"									
TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	56.3	59.3	63.4	68.3	74.0	80.5	87.5	95.0	103.0
55	56.6	60.4	64.9	70.1	76.0	82.6	89.7	97.5	105.7
60	57.0	61.5	66.5	72.0	78.0	84.7	92.0	99.9	108.5
65	57.0	61.5	66.5	72.0	78.0	84.7	92.0	99.9	108.5
70	57.0	61.5	66.5	72.0	78.0	84.7	92.0	99.9	108.5
75	57.5	62.0	67.0	72.4	78.4	85.0	92.4	100.5	109.5
80	58.7	63.3	68.4	73.9	80.1	86.9	94.4	102.8	112.0
85	60.3	65.0	70.2	75.9	82.2	89.3	97.0	105.6	115.1
90	62.2	67.1	72.4	78.3	84.9	92.2	100.2	109.1	118.8
95	64.4	69.5	75.1	81.2	88.1	95.6	104.0	113.1	123.1
100	67.0	72.3	78.1	84.6	91.8	99.6	108.2	117.7	128.0
105	69.8	75.4	81.6	88.4	95.9	104.1	113.1	122.9	133.4
110	73.0	79.0	85.5	92.7	100.6	109.2	118.5	128.6	139.5

RUNWAY LENGTH (1000 FEET)									
WEIGHT 1000 LBS	REFERENCE FACTOR "R"								
	60	70	80	90	100	110	120	130	140
100	3.10	3.70	4.25	4.77	5.27	5.75	6.24	6.75	7.23
105	3.46	4.10	4.70	5.27	5.83	6.38	6.94	7.50	8.09
110	3.83	4.51	5.17	5.81	6.43	7.05	7.67	8.30	8.95
115	4.23	4.96	5.68	6.38	7.07	7.76	8.45	9.15	9.86
120	4.64	5.43	6.21	6.98	7.75	8.51	9.28	10.04	10.82
125	5.08	5.93	6.78	7.62	8.46	9.30	10.14	10.98	11.83
130	5.53	6.46	7.38	8.30	9.21	10.13	11.05	11.97	12.89
135	6.01	7.01	8.01	9.00	10.00	11.00	12.00	13.00	14.00
140	6.51	7.59	8.67	9.75	10.83	11.91	12.99	14.08	
145	7.02	8.19	9.36	10.53	11.69	12.86	14.03		
150	7.56	8.82	10.08	11.34	12.60	13.85			
155	8.12	9.48	10.83	12.19	13.53	14.83			
160	8.70	10.16	11.62	13.07	14.51				
165	9.30	10.87	12.43	13.98					
170	9.92	11.61	13.28	14.94					

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TABLE 60. AIRCRAFT PERFORMANCE, LANDING (BOEING 727-200 SERIES)
JT8D-15 ENGINE, 40° FLAPS

MAXIMUM ALLOWABLE LANDING WEIGHT (1000 LBS)									
TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5
55	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5
60	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5
65	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5
70	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5
75	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5
80	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5
85	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5	141.6
90	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5	139.3
95	142.5	142.5	142.5	142.5	142.5	142.5	142.5	141.7	136.6
100	142.5	142.5	142.5	142.5	142.5	142.5	142.5	133.5	133.5
105	142.5	142.5	142.5	142.5	142.5	142.5	140.2	134.0	129.9
110	142.5	142.5	142.5	142.5	142.5	141.3	136.1	130.9	126.0

RUNWAY LENGTH (1000 FEET)									
WEIGHT 1000 LBS	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
110	4.00	4.10	4.10	4.27	4.35	4.44	4.53	4.64	4.77
115	4.15	4.24	4.33	4.42	4.51	4.61	4.71	4.82	4.95
120	4.30	4.39	4.49	4.58	4.68	4.78	4.88	5.00	5.13
125	4.45	4.55	4.64	4.74	4.85	4.95	5.07	5.10	5.32
130	4.61	4.71	4.81	4.91	5.02	5.13	5.25	5.38	5.51
135	4.76	4.87	4.93	5.09	5.20	5.32	5.44	5.57	5.70
140	4.92	5.04	5.15	5.27	5.39	5.51	5.64	5.76	5.90
145	5.03	5.21	5.33	5.46	5.59	5.71	5.83	5.96	6.10

AIRPLANE CHARACTERISTICS	UNIT OF MEASURE	ADVANCED OPTIONS		
MAXIMUM TAKEOFF WEIGHT	LBS.	181,500	190,500	197,000
MAXIMUM LANDING WEIGHT				
FLAPS 30°	LBS.	154,500	160,000	160,000
FLAPS 40°	LBS.	142,500	142,500	142,500
TYPICAL OPERATING EMPTY WEIGHT PLUS RESERVE FUEL	LBS.	109,211 116,141	109,753 116,683	112,835 ^{1/} 119,765 ^{2/}
AVERAGE FUEL CONSUMPTION	LBS./MILE	22	22	22
TYPICAL MAXIMUM PASSENGER LOAD AT 200 LBS./PASSENGER	LBS.	32,400	35,000	37,800
MAXIMUM STRUCTURAL PAYLOAD	LBS.	40,339	41,797	42,715

^{1/} Based on 1.25 hours of reserve fuel.
^{2/} Based on 2.00 hours of reserve fuel.

TABLE 61. AIRCRAFT PERFORMANCE, LANDING (BOEING 727-200 SERIES)
JT8D-15 ENGINE, 30° FLAPS

MAXIMUM ALLOWABLE LANDING WEIGHT (1000 LBS)

TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	160.0	160.0	160.0	160.0	160.0	160.0	160.0	160.0	160.0
55	160.0	160.0	160.0	160.0	160.0	160.0	160.0	160.0	160.0
60	160.0	160.0	160.0	160.0	160.0	160.0	160.0	160.0	160.0
65	160.0	160.0	160.0	160.0	160.0	160.0	160.0	160.0	160.0
70	160.0	160.0	160.0	160.0	160.0	160.0	160.0	160.0	160.0
75	160.0	160.0	160.0	160.0	160.0	160.0	160.0	160.0	160.0
80	160.0	160.0	160.0	160.0	160.0	160.0	160.0	160.0	160.0
85	160.0	160.0	160.0	160.0	160.0	160.0	160.0	160.0	160.0
90	160.0	160.0	160.0	160.0	160.0	160.0	160.0	160.0	158.6
95	160.0	160.0	160.0	160.0	160.0	160.0	160.0	160.0	155.5
100	160.0	160.0	160.0	160.0	160.0	160.0	160.0	157.9	151.9
105	160.0	160.0	160.0	160.0	160.0	160.0	159.7	153.7	147.9
110	160.0	160.0	160.0	160.0	160.0	160.0	154.9	149.1	143.5

RUNWAY LENGTH (1000 FEET)

WEIGHT 1000 LBS	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
110	4.14	4.20	4.27	4.34	4.42	4.51	4.60	4.70	4.80
115	4.24	4.31	4.38	4.46	4.54	4.64	4.73	4.83	4.93
120	4.35	4.42	4.50	4.58	4.67	4.77	4.86	4.96	5.06
125	4.46	4.54	4.63	4.71	4.81	4.90	5.00	5.10	5.21
130	4.58	4.67	4.76	4.85	4.95	5.05	5.15	5.25	5.36
135	4.71	4.80	4.90	4.99	5.09	5.19	5.30	5.41	5.52
140	4.84	4.94	5.04	5.14	5.25	5.35	5.46	5.57	5.69
145	4.97	5.09	5.20	5.30	5.40	5.51	5.62	5.74	5.87
150	5.12	5.24	5.36	5.46	5.57	5.68	5.79	5.91	6.05
155	5.26	5.40	5.52	5.63	5.74	5.85	5.96	6.09	6.25
160	5.42	5.57	5.70	5.81	5.92	6.03	6.15	6.28	6.45

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TABLE 62. AIRCRAFT PERFORMANCE, TAKEOFF (BOEING 727-200 SERIES)
JT8D-15 ENGINE, 25° FLAPS

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 LBS)

TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	190.0	183.5	177.5	170.4	164.5	158.6	152.7	147.0	141.5
55	184.5	181.0	177.5	170.4	164.5	158.6	152.7	147.0	141.5
60	184.5	181.0	177.5	170.4	164.5	158.6	152.7	147.0	141.5
65	184.5	181.0	177.5	170.4	164.5	158.6	152.7	147.0	141.5
70	184.5	181.0	176.0	170.4	164.5	158.6	152.7	147.0	141.5
75	184.5	181.0	176.0	170.4	164.5	158.6	152.7	147.0	141.5
80	184.5	180.0	172.9	166.4	160.5	154.9	149.5	144.1	138.5
85	183.6	176.3	169.5	163.3	157.5	151.9	146.5	141.2	135.8
90	179.4	172.5	166.2	160.1	154.4	148.9	143.5	138.3	133.0
95	175.3	168.9	162.8	156.9	151.3	145.3	140.6	135.4	130.3
100	171.5	165.3	159.4	153.7	148.1	142.8	137.6	132.5	127.5
105	167.9	161.8	156.0	150.4	145.0	139.7	134.6	129.7	124.7
110	164.5	158.4	152.5	147.0	141.8	136.7	131.7	126.8	122.0

REFERENCE FACTOR "R"

TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	53.6	56.2	59.5	64.1	69.6	75.9	82.6	89.6	96.8
55	53.7	56.2	59.8	64.4	69.8	75.9	82.7	89.7	97.0
60	53.8	56.5	60.3	64.9	70.3	76.3	82.9	90.0	97.6
65	54.1	57.1	61.1	65.7	71.0	77.0	83.6	90.8	98.7
70	54.2	57.8	62.0	66.8	72.1	78.1	84.7	92.1	100.3
75	54.8	58.8	63.2	68.1	73.5	79.6	86.3	93.8	102.3
80	55.8	60.1	64.7	69.7	75.2	81.4	88.3	96.0	104.7
85	57.0	61.5	66.3	71.5	77.2	83.6	90.7	98.7	107.6
90	58.5	63.2	68.2	73.6	79.5	86.1	93.5	101.7	111.0
95	60.3	65.1	70.3	75.9	82.1	89.0	96.7	105.3	114.8
100	62.4	67.3	72.6	78.5	85.1	92.3	100.4	109.2	119.1
105	64.8	69.7	75.2	81.4	88.3	96.0	104.4	113.7	123.8
110	67.5	72.3	78.0	84.5	91.8	100.0	108.9	118.6	129.0

RUNWAY LENGTH (1000 FEET)

WEIGHT 1000 LBS	REFERENCE FACTOR "R"								
	55	65	75	85	95	105	115	125	135
130	3.61	4.31	4.95	5.55	6.13	6.69	7.25	7.82	8.40
135	3.90	4.62	5.31	5.97	6.60	7.23	7.86	8.49	9.15
140	4.19	4.96	5.70	6.41	7.11	7.81	8.50	9.21	9.94
145	4.50	5.32	6.11	6.89	7.66	8.42	9.19	9.97	10.77
150	4.82	5.69	6.55	7.40	8.24	9.07	9.92	10.77	11.64
155	5.15	6.09	7.01	7.93	8.85	9.77	10.69	11.61	12.55
160	5.49	6.50	7.50	8.50	9.50	10.50	11.49	12.49	
165	5.85	6.93	8.01	9.10	10.18	11.27	12.35		
170	6.22	7.38	8.55	9.73	10.90	12.08	13.24		
175	6.60	7.85	9.12	10.39	11.66	12.92			
180	6.99	8.34	9.70	11.03	12.45				
185	7.40	8.84	10.31	11.80	13.28				
190	7.82	9.37	10.95	12.55					
195	8.25	9.91	11.61	13.33					

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Appendix 6TABLE 63. AIRCRAFT PERFORMANCE, TAKEOFF (BOEING 727-200 SERIES)
JT8D-15 ENGINE, 20° FLAPS

TEMP °F	MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 LBS)								
	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	197.0	196.0	190.0	182.0	176.0	170.1	164.0	157.9	151.5
55	197.0	193.5	190.0	182.0	176.0	170.1	164.0	157.9	151.5
60	197.0	193.5	190.0	182.0	176.0	170.1	164.0	157.9	151.5
65	197.0	193.5	190.0	182.0	176.0	170.1	164.0	157.9	151.5
70	197.0	193.5	188.1	182.0	176.0	170.1	164.0	157.9	151.5
75	197.0	193.5	183.1	182.0	176.0	170.1	164.0	157.9	151.5
80	197.0	192.3	184.3	173.0	171.7	165.7	159.9	154.1	143.1
85	196.1	188.4	181.3	174.7	168.5	162.5	156.8	151.0	145.2
90	191.7	184.5	177.8	171.4	165.2	159.3	153.6	147.9	142.3
95	187.5	180.7	174.2	168.0	161.9	156.0	150.4	144.8	139.5
100	183.5	177.0	170.6	164.5	158.5	152.7	147.1	141.8	136.6
105	179.7	173.3	167.0	160.9	155.0	149.3	143.8	138.7	133.8
110	176.0	169.6	163.4	157.3	151.4	145.8	140.5	135.6	131.0

TEMP °F	REFERENCE FACTOR "R"								
	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	55.4	58.3	62.2	67.0	72.7	79.0	85.3	93.0	100.4
55	55.5	58.4	62.4	67.3	72.8	79.1	85.9	93.1	100.5
60	55.6	58.8	62.9	67.7	73.2	79.4	86.1	93.4	101.1
65	55.7	59.4	63.6	68.5	74.0	80.1	86.8	94.2	102.2
70	56.2	60.2	64.6	69.6	75.1	81.2	88.0	95.5	103.3
75	57.0	61.2	65.8	70.9	76.5	82.7	89.6	97.3	105.9
80	58.1	62.5	67.3	72.5	78.2	84.6	91.7	99.6	108.4
85	59.4	64.1	69.0	74.4	80.3	86.3	94.1	102.3	111.5
90	61.0	65.3	71.0	76.6	82.7	89.5	97.0	105.5	115.0
95	62.9	67.3	73.2	79.0	85.4	92.5	100.4	109.2	119.0
100	65.0	70.1	75.6	81.7	88.4	95.9	104.2	113.3	123.5
105	67.4	72.6	78.3	84.7	91.8	99.7	108.4	118.0	128.5
110	70.0	75.3	81.3	88.0	95.5	103.9	113.0	123.1	134.0

WEIGHT 1000 LBS	RUNWAY LENGTH (1000 FEET)								
	REFERENCE FACTOR "R"								
	55	65	75	85	95	105	115	125	135
130	3.71	4.39	5.02	5.62	6.20	6.75	7.30	7.85	8.41
135	3.97	4.69	5.37	6.02	6.66	7.28	7.89	8.50	9.12
140	4.25	5.01	5.74	6.46	7.16	7.85	8.53	9.20	9.89
145	4.54	5.35	6.14	6.92	7.69	8.45	9.20	9.95	10.71
150	4.84	5.71	6.57	7.42	8.26	9.09	9.92	10.75	11.53
155	5.16	6.10	7.02	7.94	8.86	9.78	10.69	11.60	12.51
160	5.50	6.50	7.50	8.50	9.50	10.50	11.50	12.50	13.49
165	5.84	6.92	8.00	9.09	10.17	11.26	12.35	13.44	
170	6.20	7.36	8.53	9.70	10.88	12.06	13.25		
175	6.58	7.83	9.09	10.35	11.63	12.90			
180	6.97	8.31	9.67	11.03	12.40	13.79			
185	7.37	8.81	10.27	11.74	13.22				
190	7.78	9.34	10.90	12.48					
195	8.21	9.83	11.56	13.25					

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TABLE 64. AIRCRAFT PERFORMANCE, TAKEOFF (BOEING 727-200 SERIES)
JT8D-15 ENGINE, 15° FLAPS

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 LBS)

TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	197.0	197.0	197.0	193.4	186.9	180.2	173.5	166.9	160.5
55	197.0	197.0	197.0	193.4	186.9	180.2	173.5	166.9	160.5
60	197.0	197.0	197.0	193.4	186.9	180.2	173.5	166.9	160.5
65	197.0	197.0	197.0	193.4	186.9	180.2	173.5	166.9	160.5
70	197.0	197.0	197.0	193.4	186.9	180.2	173.5	166.9	160.5
75	197.0	197.0	197.0	193.4	186.9	180.2	173.5	166.9	160.5
80	197.0	197.0	196.2	189.0	182.2	175.3	168.5	163.4	157.2
85	197.0	197.0	192.5	185.5	178.8	172.4	166.2	160.1	154.1
90	197.0	195.9	188.7	181.0	175.4	169.0	162.9	156.0	150.9
95	197.0	191.7	184.9	178.2	171.8	165.5	159.5	153.5	147.7
100	194.5	187.7	181.0	174.5	168.2	162.0	156.0	150.2	144.5
105	190.4	183.7	177.1	170.7	164.5	158.4	152.5	146.8	141.3
110	186.5	179.7	173.1	166.8	160.7	154.8	149.0	143.4	138.0

REFERENCE FACTOR "R"

TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	59.6	61.6	65.7	70.7	76.5	83.0	90.2	97.9	106.2
55	59.4	61.7	65.9	70.8	76.6	83.0	90.2	98.0	106.3
60	59.4	62.0	66.3	71.3	77.0	83.4	90.5	98.4	106.9
65	58.0	62.6	67.1	72.1	77.9	84.2	91.4	99.3	108.0
70	59.4	63.5	68.1	73.2	78.9	85.4	92.6	100.6	109.6
75	60.3	64.6	69.3	74.6	80.4	87.0	94.3	102.5	111.7
80	61.6	65.9	70.3	75.2	82.2	88.9	96.4	104.9	114.3
85	62.3	67.3	72.5	78.2	84.4	91.3	99.0	107.7	117.4
90	64.5	69.4	74.7	80.5	86.9	94.0	102.0	111.0	121.0
95	66.5	71.5	77.0	83.0	89.7	97.2	105.5	114.3	125.1
100	68.7	73.9	79.6	85.9	92.9	100.7	109.4	119.0	129.7
105	71.2	76.5	82.4	89.0	96.4	104.6	113.7	123.8	134.9
110	74.0	79.4	85.5	92.5	100.3	109.0	118.5	129.0	140.5

RUNWAY LENGTH (1000 FEET)

WEIGHT 1000 LBS	REFERENCE FACTOR "R"								
	58	68	78	88	98	108	118	128	138
130	3.96	4.55	5.20	5.90	6.61	7.28	7.88	8.39	8.75
135	4.23	4.89	5.59	6.30	7.00	7.66	8.28	8.82	9.27
140	4.51	5.25	5.99	6.73	7.44	8.13	8.78	9.39	9.94
145	4.81	5.63	6.42	7.19	7.94	8.67	9.38	10.08	10.76
150	5.13	6.02	6.87	7.69	8.49	9.29	10.09	10.90	11.74
155	5.46	6.44	7.35	8.23	9.10	9.98	10.89	11.85	12.88
160	5.82	6.86	7.85	8.81	9.77	10.76	11.80	12.93	14.17
165	6.18	7.31	8.38	9.42	10.49	11.61	12.81	14.13	
170	6.57	7.77	8.92	10.08	11.26	12.53	13.92		
175	6.97	8.25	9.49	10.76	12.10	13.54			
180	7.39	8.74	10.09	11.49	12.98				
185	7.83	9.25	10.71	12.25	13.92				
190	8.28	9.78	11.35	13.05					
195	8.75	10.32	12.02	13.88					

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Appendix 6TABLE 65. AIRCRAFT PERFORMANCE, TAKEOFF (BOEING 727-200 SERIES)
JT8D-15 ENGINE, 5° FLAPS

TEMP °F	MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 LBS)									
	AIRPORT ELEVATION (FEET)									
	0	1000	2000	3000	4000	5000	6000	7000	8000	
50	197.0	197.0	197.0	197.0	193.9	187.0	180.2	173.5	167.0	
55	197.0	197.0	197.0	197.0	193.9	187.0	180.2	173.5	167.0	
60	197.0	197.0	197.0	197.0	193.9	187.0	180.2	173.5	167.0	
65	197.0	197.0	197.0	197.0	193.9	187.0	180.2	173.5	167.0	
70	197.0	197.0	197.0	197.0	193.9	187.0	180.2	173.5	167.0	
75	197.0	197.0	197.0	197.0	193.9	187.0	180.2	173.5	167.0	
80	197.0	197.0	197.0	196.3	189.4	182.8	176.3	169.8	163.0	
85	197.0	197.0	197.0	192.6	185.8	179.2	172.7	166.3	159.8	
90	197.0	197.0	195.9	188.8	182.1	175.6	169.2	162.8	156.5	
95	197.0	197.0	191.9	185.1	178.4	171.9	165.6	159.4	153.3	
100	197.0	194.9	188.0	181.2	174.7	168.3	162.0	156.0	150.0	
105	197.0	190.8	184.0	177.4	170.9	164.6	158.5	152.5	146.7	
110	193.5	186.6	180.0	173.5	167.1	161.0	155.0	149.1	143.5	

TEMP °F	REFERENCE FACTOR "R"									
	AIRPORT ELEVATION (FEET)									
	0	1000	2000	3000	4000	5000	6000	7000	8000	
50	65.0	60.4	74.1	80.1	87.1	94.8	103.2	112.1	121.1	
55	66.0	60.6	74.5	80.4	87.2	94.9	103.3	112.2	121.6	
60	66.2	70.1	75.1	81.0	87.7	95.3	103.6	112.7	122.7	
65	66.4	70.9	76.1	81.0	88.6	96.1	104.5	113.9	124.3	
70	67.1	71.0	77.3	83.2	89.0	97.4	105.9	115.5	126.4	
75	68.1	73.3	79.9	84.0	91.6	99.2	107.9	117.8	129.0	
80	69.4	74.8	80.6	86.8	93.7	101.5	110.4	120.5	132.2	
85	71.0	76.7	82.6	89.1	96.2	104.3	113.4	123.9	135.8	
90	73.0	78.3	85.0	91.7	99.1	107.5	117.0	127.7	140.0	
95	75.3	81.2	87.6	94.7	102.5	111.2	121.0	132.2	144.7	
100	77.9	83.9	90.6	97.0	106.2	115.4	125.7	137.1	150.0	
105	81.3	86.9	93.8	101.6	110.3	120.0	130.3	142.7	155.7	
110	84.0	89.1	97.3	105.5	114.8	125.1	136.5	149.3	162.0	

WEIGHT 1000 LBS	RUNWAY LENGTH (1000 FEET)								
	REFERENCE FACTOR "R"								
	70	80	90	100	110	120	130	140	150
130	4.57	5.32	5.95	6.56	7.15	7.73	8.30	8.85	9.40
135	5.01	5.70	6.37	7.03	7.67	8.31	8.93	9.56	10.18
140	5.37	6.11	6.83	7.54	8.25	8.94	9.63	10.32	11.02
145	5.75	6.54	7.32	8.10	8.86	9.63	10.39	11.15	11.92
150	6.14	7.00	7.85	8.69	9.53	10.36	11.20	12.04	12.88
155	6.56	7.49	8.41	9.33	10.24	11.16	12.07	12.99	13.91
160	7.00	8.00	9.00	10.00	11.00	12.00	13.00	14.00	
165	7.45	8.53	9.62	10.71	11.81	12.90	13.99		
170	7.93	9.10	10.28	11.47	12.66	13.86			
175	8.42	9.69	10.97	12.27	13.57				
180	8.93	10.30	11.69	13.10					
185	9.46	10.94	12.45	13.98					
190	10.01	11.61	13.24						
195	10.58	12.30	14.06						

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TABLE 66. AIRCRAFT PERFORMANCE, LANDING (BOEING 737-200 SERIES)
JT8D-15 ENGINE, 40° FLAPS

MAXIMUM ALLOWABLE LANDING WEIGHT (1000 LBS)									
TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	103.0	103.0	103.0	103.0	103.0	103.0	102.7	98.8	95.0
55	103.0	103.0	103.0	103.0	103.0	103.0	102.7	98.8	95.0
60	103.0	103.0	103.0	103.0	103.0	103.0	102.7	98.8	95.0
65	103.0	103.0	103.0	103.0	103.0	103.0	102.7	98.8	95.0
70	103.0	103.0	103.0	103.0	103.0	103.0	101.9	98.0	94.0
75	103.0	103.0	103.0	103.0	103.0	103.0	100.8	97.1	93.2
80	103.0	103.0	103.0	103.0	103.0	103.0	99.6	95.9	92.2
85	103.0	103.0	103.0	103.0	103.0	101.8	98.1	94.5	91.0
90	103.0	103.0	103.0	103.0	103.0	100.1	96.5	93.0	89.5
95	103.0	103.0	103.0	103.0	101.9	98.2	94.7	91.2	87.3
100	103.0	103.0	103.0	103.0	99.8	96.2	92.7	89.2	85.9
105	103.0	103.0	103.0	101.1	97.5	93.9	90.5	87.1	83.8
110	103.0	103.0	102.1	98.5	94.9	91.5	88.1	84.7	81.5

RUNWAY LENGTH (1000 FEET)									
WEIGHT 1000 LBS	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
70	3.95	4.05	4.14	4.23	4.31	4.40	4.50	4.59	4.70
75	4.15	4.25	4.35	4.44	4.54	4.64	4.75	4.86	4.98
80	4.35	4.46	4.56	4.66	4.77	4.88	5.00	5.12	5.25
85	4.56	4.67	4.78	4.89	5.01	5.13	5.25	5.39	5.53
90	4.77	4.88	5.00	5.12	5.25	5.38	5.51	5.65	5.80
95	4.98	5.11	5.23	5.36	5.49	5.63	5.77	5.92	6.07
100	5.20	5.33	5.47	5.60	5.74	5.88	6.03	6.18	6.34
105	5.42	5.57	5.71	5.85	5.99	6.14	6.29	6.44	6.61

AIRPLANE CHARACTERISTICS	UNIT OF MEASURE	ADVANCED 200	OPTIONS 200C
MAXIMUM TAKEOFF WEIGHT	LBS.	109,000	115,500
MAXIMUM LANDING WEIGHT			
FLAPS 30°	LBS.	98,000	103,000
FLAPS 40°	LBS.	89,700	103,000
TYPICAL OPERATING EMPTY	LBS.	67,238	70,138 ^{1/}
WEIGHT PLUS RESERVE FUEL	LBS.	71,480	74,380 ^{2/}
AVERAGE FUEL CONSUMPTION	LBS./MILE	15	15
TYPICAL MAXIMUM PASSENGER LOAD AT 200 LBS/PASSENGER	LBS.	26,000	26,000
MAXIMUM STRUCTURAL PAYLOAD	LBS.	34,830	31,930

- ^{1/} Based on 1.25 hours of reserve fuel.
^{2/} Based on 2.00 hours of reserve fuel.

TABLE 67. AIRCRAFT PERFORMANCE, LANDING (BOEING 737-200 SERIES)
JT8D-15 ENGINE, 30° FLAPS

MAXIMUM ALLOWABLE LANDING WEIGHT (1000 LBS)

TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	103.0	103.0	103.0	103.0	103.0	103.0	102.7	98.8	95.0
55	103.0	103.0	103.0	103.0	103.0	103.0	102.7	98.8	95.0
60	103.0	103.0	103.0	103.0	103.0	103.0	102.7	98.8	95.0
65	103.0	103.0	103.0	103.0	103.0	103.0	102.7	98.8	95.0
70	103.0	103.0	103.0	103.0	103.0	103.0	101.9	98.0	94.0
75	103.0	103.0	103.0	103.0	103.0	103.0	100.8	97.1	93.2
80	103.0	103.0	103.0	103.0	103.0	103.0	99.6	95.9	92.2
85	103.0	103.0	103.0	103.0	103.0	101.8	98.1	94.5	91.0
90	103.0	103.0	103.0	103.0	103.0	100.1	96.5	93.0	89.5
95	103.0	103.0	103.0	103.0	101.9	98.2	94.7	91.2	87.8
100	103.0	103.0	103.0	103.0	99.8	96.2	92.7	89.2	85.9
105	103.0	103.0	103.0	101.1	97.5	93.9	90.5	87.1	83.8
110	103.0	103.0	102.1	98.5	94.9	91.5	88.1	84.7	81.5

RUNWAY LENGTH (1000 FEET)

WEIGHT 1000 LBS	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
70	4.25	4.35	4.45	4.55	4.65	4.76	4.87	4.98	5.10
75	4.48	4.59	4.70	4.81	4.91	5.02	5.13	5.26	5.39
80	4.70	4.83	4.95	5.06	5.17	5.29	5.40	5.53	5.68
85	4.94	5.08	5.20	5.32	5.43	5.55	5.63	5.81	5.97
90	5.17	5.32	5.45	5.57	5.69	5.82	5.95	6.09	6.25
95	5.41	5.56	5.70	5.83	5.95	6.08	6.22	6.37	6.54
100	5.65	5.80	5.94	6.08	6.21	6.35	6.50	6.66	6.83
105	5.90	6.04	6.18	6.32	6.47	6.62	6.78	6.94	7.11

TABLE 68. AIRCRAFT PERFORMANCE, TAKEOFF (BOEING 737-200 SERIES)
JT8D-15 ENGINE, 25° FLAPS

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 LBS)									
TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	104.5	100.5	97.5	93.7	90.0	86.4	83.0	80.0	77.5
55	104.2	100.0	97.5	93.7	90.0	86.4	83.0	80.0	77.5
60	103.8	99.5	97.5	93.7	90.0	86.4	83.0	80.0	77.5
65	103.5	99.0	97.5	93.7	90.0	86.4	83.0	80.0	77.5
70	101.0	98.9	96.3	93.3	89.9	86.5	83.0	79.6	76.5
75	100.9	98.4	95.4	92.2	88.8	85.4	82.0	78.7	75.8
80	100.5	97.5	94.3	91.0	87.5	84.1	80.9	77.8	75.0
85	99.7	96.4	93.0	89.6	86.1	82.8	79.6	76.7	74.1
90	98.5	95.0	91.5	88.0	84.6	81.4	78.3	75.5	73.0
95	96.9	93.3	89.7	86.3	83.0	79.8	76.9	74.2	71.8
100	95.0	91.3	87.8	84.4	81.2	78.2	75.4	72.8	70.5
105	92.7	89.0	85.5	82.3	79.2	76.4	73.7	71.3	69.1
110	90.0	86.4	83.1	80.0	77.2	74.5	72.0	69.7	67.5

REFERENCE FACTOR "R"									
TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	43.5	45.0	48.0	52.0	56.2	60.6	65.4	70.5	76.0
55	43.7	45.5	48.2	52.2	56.3	60.7	65.5	70.7	76.4
60	43.9	45.6	48.6	52.5	56.7	61.1	66.0	71.3	77.0
65	44.1	45.9	49.2	53.1	57.2	61.8	66.7	72.1	78.0
70	44.3	46.4	50.0	53.9	58.1	62.6	67.6	73.1	79.1
75	44.5	47.4	51.0	54.9	59.1	63.8	68.9	74.5	80.6
80	45.1	48.5	52.1	56.1	60.4	65.2	70.4	76.1	82.3
85	46.4	49.8	53.5	57.5	62.0	66.8	72.2	78.0	84.3
90	47.7	51.2	55.0	59.2	63.7	68.7	74.2	80.1	86.6
95	49.2	52.8	56.7	61.0	65.7	70.9	76.5	82.6	89.2
100	50.8	54.5	58.6	63.1	68.0	73.3	79.1	85.3	92.0
105	52.5	56.4	60.7	65.3	70.4	76.0	81.9	88.3	95.1
110	54.3	58.4	62.9	67.8	73.1	78.9	85.0	91.5	98.5

RUNWAY LENGTH (1000 FEET)							
WEIGHT 1000 LBS	REFERENCE FACTOR "R"						
	40	50	60	70	80	90	100
70	2.28	2.71	3.11	3.50	3.90	4.33	4.83
75	2.46	2.99	3.47	3.96	4.47	5.04	5.70
80	2.69	3.31	3.89	4.47	5.08	5.77	6.57
85	2.95	3.67	4.35	5.03	5.74	6.52	7.42
90	3.25	4.07	4.85	5.63	6.44	7.30	8.26
95	3.59	4.51	5.40	6.23	7.18	8.10	9.03
100	3.97	5.00	6.00	6.90	7.96	9.02	9.90
105	4.38	5.53	6.65	7.74	8.79	9.77	10.69
110	4.84	6.09	7.34	8.53	9.65	10.64	11.47
115	5.33	6.70	8.07	9.33	10.55	11.53	

TABLE 69. AIRCRAFT PERFORMANCE, TAKEOFF (BOEING 737-200 SERIES)
JT8D-15 ENGINE, 15° FLAPS

TEMP °F	MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 LBS)								
	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	110.0	106.0	102.5	98.7	95.0	91.3	87.8	84.5	81.5
55	109.7	105.5	102.5	98.7	95.0	91.3	87.8	84.5	81.5
60	109.3	105.0	102.5	98.7	95.0	91.3	87.8	84.5	81.5
65	109.0	104.5	102.5	98.7	95.0	91.3	87.8	84.5	81.5
70	106.5	104.3	101.4	98.1	94.6	90.9	87.2	83.7	80.5
75	106.3	103.5	100.4	97.0	93.5	89.9	86.4	82.9	79.7
80	105.7	102.5	99.2	95.8	92.3	88.8	85.4	82.0	78.8
85	104.8	101.3	97.8	94.3	90.9	87.5	84.2	80.9	77.7
90	103.5	99.8	96.2	92.7	89.3	86.1	82.8	79.7	76.5
95	101.9	98.0	94.4	90.9	87.6	84.4	81.3	78.3	75.2
100	100.0	96.0	92.4	89.0	85.7	82.6	79.6	76.7	73.8
105	97.6	93.8	90.2	86.8	83.6	80.6	77.7	74.9	72.2
110	95.0	91.3	87.8	84.5	81.4	78.4	75.7	73.0	70.5

TEMP °F	REFERENCE FACTOR "R"								
	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	46.0	47.5	50.5	55.0	59.4	64.0	68.9	74.1	80.0
55	46.4	48.1	50.8	55.2	59.6	64.2	69.1	74.4	80.3
60	46.8	48.8	51.3	55.6	60.0	64.6	69.6	75.0	80.9
65	47.2	49.4	52.0	56.2	60.6	65.3	70.4	75.8	81.9
70	47.6	49.6	52.9	57.1	61.5	66.3	71.4	77.0	83.1
75	48.0	49.9	53.9	58.1	62.6	67.5	72.7	78.4	84.7
80	48.4	51.1	55.1	59.4	63.9	68.9	74.3	80.1	86.5
85	48.8	52.5	56.5	60.8	65.5	70.6	76.1	82.1	88.7
90	50.3	54.0	58.1	62.5	67.3	72.6	78.3	84.4	91.1
95	51.9	55.7	59.8	64.4	69.3	74.8	80.6	87.0	93.9
100	53.7	57.5	61.8	66.5	71.6	77.2	83.3	89.9	97.0
105	55.5	59.5	63.9	68.7	74.1	79.9	86.2	93.0	100.3
110	57.4	61.6	66.2	71.2	76.8	82.9	89.4	96.5	104.0

WEIGHT 1000 LBS	RUNWAY LENGTH (1000 FEET)						
	REFERENCE FACTOR "R"						
	45	55	65	75	85	95	105
70	2.39	2.90	3.36	3.77	4.18	4.59	5.04
75	2.67	3.23	3.75	4.27	4.79	5.35	5.97
80	2.98	3.60	4.20	4.81	5.45	6.13	6.88
85	3.32	4.01	4.70	5.40	6.14	6.92	7.78
90	3.67	4.47	5.25	6.05	6.87	7.74	8.66
95	4.05	4.96	5.85	6.74	7.64	8.57	9.53
100	4.46	5.50	6.50	7.49	8.45	9.42	10.39
105	4.88	6.08	7.21	8.28	9.30	10.28	11.23
110	5.33	6.70	7.96	9.12	10.19	11.17	12.06
115	5.81	7.36	8.76	10.02	11.12	12.07	

TABLE 70. AIRCRAFT PERFORMANCE, TAKEOFF (BOEING 737-200 SERIES)
JT8D-15 ENGINE, 5° FLAPS

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 LBS)									
TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	115.5	115.5	114.1	110.1	106.0	102.0	98.1	94.4	91.0
55	115.5	115.5	114.1	110.1	106.0	102.0	98.1	94.4	91.0
60	115.5	115.5	114.1	110.1	106.0	102.0	98.1	94.4	91.0
65	115.5	115.5	114.1	110.1	106.0	102.0	98.1	94.4	91.0
70	115.5	115.5	113.5	109.6	105.6	101.5	97.4	93.6	90.0
75	115.5	115.1	111.6	107.7	103.8	99.8	95.8	92.1	88.6
80	115.5	113.3	109.7	105.8	101.9	98.0	94.2	90.6	87.2
85	114.8	111.4	107.7	104.0	100.1	96.3	92.6	89.1	85.8
90	113.1	109.5	105.8	102.1	98.3	94.6	91.0	87.5	84.3
95	111.3	107.6	103.9	100.2	96.5	92.9	89.4	86.0	82.9
100	109.5	105.7	102.0	98.3	94.7	91.1	87.8	84.5	81.5
105	107.8	103.9	100.1	96.4	92.8	89.4	86.1	83.0	80.0
110	106.0	102.0	98.1	94.5	91.0	87.7	84.5	81.5	78.6

REFERENCE FACTOR "R"									
TEMP °F	AIRPORT ELEVATION (FEET)								
	0	1000	2000	3000	4000	5000	6000	7000	8000
50	48.0	49.5	53.0	57.5	62.2	67.1	72.4	78.1	84.5
55	48.1	50.1	53.3	57.8	62.4	67.4	72.7	78.5	84.8
60	48.2	50.8	53.8	58.3	62.9	67.9	73.2	79.1	85.5
65	48.3	51.4	54.5	59.0	63.6	68.7	74.1	80.0	86.5
70	48.5	51.3	55.5	59.9	64.6	69.7	75.2	81.3	87.8
75	48.6	52.4	56.6	61.0	65.8	71.0	76.7	82.8	89.4
80	50.0	53.7	57.9	62.4	67.3	72.6	78.4	84.6	91.4
85	51.4	55.2	59.4	63.9	69.0	74.4	80.4	86.8	93.7
90	53.0	56.8	61.0	65.7	70.9	76.5	82.6	89.2	96.3
95	54.7	58.6	62.9	67.7	73.1	78.9	85.2	91.9	99.2
100	56.5	60.5	65.0	70.0	75.5	81.5	88.0	95.0	102.5
105	58.4	62.6	67.2	72.4	78.1	84.4	91.1	98.3	106.1
110	60.4	64.8	69.7	75.1	81.0	87.5	94.5	102.0	110.0

RUNWAY LENGTH (1000 FEET)							
WEIGHT 1000 LBS	REFERENCE FACTOR "R"						
	50	60	70	80	90	100	110
70	2.61	3.12	3.56	3.96	4.36	4.78	5.25
75	2.93	3.49	4.00	4.50	5.01	5.57	6.21
80	3.28	3.90	4.49	5.08	5.70	6.39	7.16
85	3.65	4.36	5.04	5.72	6.44	7.23	8.10
90	4.06	4.86	5.64	6.42	7.23	8.09	9.04
95	4.51	5.41	6.29	7.17	8.06	9.09	9.96
100	4.98	6.00	7.00	7.98	8.94	9.91	10.87
105	5.48	6.64	7.76	8.84	9.87	10.85	11.78
110	6.02	7.32	8.57	9.75	10.84	11.82	12.67
115	6.59	8.05	9.44	10.72	11.86	12.82	

SECTION 2. METRIC TABLES

1. GENERAL NOTES. The aircraft performance tables contained in this section are expressed in metric units in support of the growing trend in the United States toward metrication. The ultimate goal of this metrication activity is the unification of measurements used in domestic and international aviation. These tables are presented in the same format as previous tables; however, they have been developed in terms of degrees Celsius ($^{\circ}\text{C}$), kilograms (kg), and meters (m) instead of degrees Fahrenheit, pounds, and feet. This section will be expanded as aircraft performance tables are developed and will eventually contain a complete set of metric tables.
2. EXPLANATORY INSTRUCTIONS. The procedure outlined in the explanatory instructions of Section 1 applies to metric tables as well as to English tables, and will not be repeated. Corresponding tables in each system have been given the same page number in order to facilitate general table use and flexibility between systems. The user will be required to convert data elements of length, temperature, and weight in order to be consistent with specific table units. For this reason, basic conversion factors are listed below:

Kilometers: 1.6093 X Statute miles

Kilograms: 0.4536 X Pounds

Meters: 0.3048 X Feet

Degrees Fahrenheit to Degrees Celsius:

FAHREN- HEIT	CELSIUS									
	0	1	2	3	4	5	6	7	8	9
50	10.0	10.6	11.1	11.7	12.2	12.8	13.3	13.9	14.4	15.0
60	15.6	16.1	16.7	17.2	17.8	18.3	18.9	19.4	20.0	20.6
70	21.1	21.7	22.2	22.8	23.3	23.9	24.4	25.0	25.6	26.1
80	26.7	27.2	27.8	28.3	28.9	29.4	30.0	30.6	31.1	31.7
90	32.2	32.8	33.3	33.9	34.4	35.0	35.6	36.1	36.7	37.2
100	37.8	38.3	38.9	39.4	40.0	40.6	41.1	41.7	42.2	42.8
110	43.3	43.9	44.4	45.0	45.6	46.1	46.7	47.2	47.8	48.3 *

RESERVED

TABLE 37. AIRCRAFT PERFORMANCE, LANDING (DOUGLAS DC-9-30 SERIES)
JT8D-9 ENGINE, FULL FLAPS

TEMP °C	MAXIMUM ALLOWABLE LANDING WEIGHT (1000 KG)					
	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	44.9	44.9	44.9	43.4	40.8	38.4
12	44.9	44.9	44.9	42.9	40.3	37.9
14	44.9	44.9	44.9	42.3	39.8	37.4
16	44.9	44.9	44.9	42.3	39.3	37.4
18	44.9	44.9	44.9	42.3	39.8	37.4
20	44.9	44.9	44.9	42.3	39.8	37.4
22	44.9	44.9	44.9	42.3	39.8	37.4
24	44.9	44.9	44.9	42.3	39.8	37.4
26	44.9	44.9	44.9	42.3	39.8	37.4
28	44.9	44.9	44.9	42.3	39.8	37.4
30	44.9	44.9	44.2	41.6	39.1	36.7
32	44.9	44.9	43.5	41.0	38.5	36.2
34	44.9	44.9	42.9	40.3	37.9	35.6
36	44.9	44.8	42.2	39.7	37.3	35.0
38	44.9	44.1	41.5	39.0	36.7	34.4
40	44.9	43.3	40.8	38.4	36.1	33.9
42	44.9	42.6	40.1	37.7	35.5	33.3
44	44.5	41.9	39.4	37.1	34.9	32.8

WEIGHT 1000 KG	RUNWAY LENGTH (METERS)					
	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
28	1115	1155	1200	1250	1300	1350
30	1175	1220	1265	1320	1375	1430
32	1235	1285	1335	1390	1450	1510
34	1295	1350	1405	1460	1520	1585
36	1355	1415	1470	1530	1595	1665
38	1415	1480	1540	1605	1670	1745
40	1480	1545	1610	1675	1745	1820
42	1540	1610	1675	1745	1820	1900
44	1605	1675	1745	1815	1895	1980
46	1665	1735	1810	1885	1970	2060

AIRPLANE CHARACTERISTICS	UNIT OF MEASURE	
MAXIMUM TAKEOFF WEIGHT	KG	48,989
MAXIMUM LANDING WEIGHT	KG	44,906
TYPICAL OPERATING EMPTY WEIGHT PLUS RESERVE FUEL	KG	29,414 ^{1/} 31,589 ^{2/}
AVERAGE FUEL CONSUMPTION	KG/KM	4.79
TYPICAL MAXIMUM PASSENGER LOAD @ 90.7 KG/PASSENGER	KG	10,433
MAXIMUM STRUCTURAL PAYLOAD	KG	13,674

^{1/} Based on 1.25 hours of reserve fuel.^{2/} Based on 2.00 hours of reserve fuel.

TABLE 38. AIRCRAFT PERFORMANCE, TAKEOFF (DOUGLAS DC-9-30 SERIES)
JT8D-9 ENGINE, 15° FLAPS

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 KG)

TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	47.1	45.6	43.0	40.4	37.9	35.7
12	47.1	45.1	42.5	40.0	37.5	35.3
14	47.1	44.7	42.0	39.5	37.1	34.9
16	47.1	44.4	41.8	39.3	36.9	34.7
18	47.1	44.4	41.8	39.3	36.9	34.7
20	47.1	44.4	41.8	39.3	36.9	34.7
22	47.1	44.4	41.8	39.3	36.9	34.7
24	47.1	44.4	41.8	39.3	36.9	34.7
26	47.1	44.4	41.8	39.3	36.9	34.7
28	47.1	44.4	41.8	39.3	36.9	34.7
30	46.7	44.0	41.4	38.9	36.6	34.4
32	46.0	43.4	40.8	38.3	36.0	33.9
34	45.3	42.7	40.2	37.7	35.5	33.4
36	44.6	42.0	39.5	37.2	34.9	32.8
38	43.9	41.4	38.9	36.6	34.4	32.3
40	43.2	40.7	38.3	36.0	33.8	31.8
42	42.5	40.1	37.7	35.4	33.3	31.3
44	41.8	39.4	37.1	34.9	32.8	30.8

REFERENCE FACTOR "R"

TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	30.1	32.5	35.7	39.8	44.6	49.9
12	30.3	33.0	36.4	40.5	45.3	50.7
14	30.4	33.4	37.0	41.2	46.0	51.6
16	30.6	33.7	37.4	41.7	46.6	52.0
18	30.9	33.9	37.7	42.0	46.9	52.2
20	31.1	34.1	37.9	42.3	47.2	52.4
22	31.3	34.3	38.1	42.6	47.5	52.7
24	31.5	34.5	38.4	42.9	47.8	53.0
26	31.6	34.7	38.6	43.1	48.1	53.5
28	31.7	35.0	38.8	43.3	48.4	54.0
30	32.0	35.4	39.4	44.0	49.1	54.9
32	32.5	36.1	40.1	44.8	50.0	55.9
34	33.1	36.7	40.9	45.6	50.9	57.0
36	33.7	37.4	41.6	46.4	51.9	58.1
38	34.3	38.2	42.4	47.3	52.9	59.4
40	35.0	38.9	43.3	48.2	54.0	60.7
42	35.6	39.6	44.1	49.2	55.1	62.1
44	36.2	40.4	44.9	50.2	56.3	63.6

RUNWAY LENGTH (METERS)

WEIGHT 1000 KG	REFERENCE FACTOR "R"							
	30	35	40	45	50	55	60	65
32	885	1030	1175	1320	1470	1615	1760	1905
34	975	1145	1315	1480	1650	1820	1990	2160
36	1075	1265	1460	1655	1850	2045	2245	
38	1180	1400	1620	1840	2060	2290		
40	1295	1540	1785	2030	2285			
42	1415	1690	1960	2235				
44	1545	1845	2140	2445				
46	1680	2005	2330					
48	1820	2170						

TABLE 39. AIRCRAFT PERFORMANCE, TAKEOFF (DOUGLAS DC-9-30 SERIES)
JT8D-9 ENGINE, 15° FLAPS, 2% SPEED INCREASE

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 KG)

TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	47.4	45.8	43.2	40.6	38.1	35.9
12	47.4	45.4	42.7	40.2	37.7	35.5
14	47.4	44.9	42.3	39.7	37.3	35.1
16	47.4	44.6	42.0	39.5	37.1	34.9
18	47.4	44.6	42.0	39.5	37.1	34.9
20	47.4	44.6	42.0	39.5	37.1	34.9
22	47.4	44.6	42.0	39.5	37.1	34.9
24	47.4	44.6	42.0	39.5	37.1	34.9
26	47.4	44.6	42.0	39.5	37.1	34.9
28	47.4	44.6	42.0	39.5	37.1	34.9
30	46.8	44.1	41.5	39.0	36.7	34.4
32	46.2	43.5	40.9	38.5	36.2	33.9
34	45.5	42.9	40.4	37.9	35.6	33.4
36	44.9	42.2	39.8	37.4	35.1	32.9
38	44.2	41.6	39.2	36.8	34.6	32.4
40	43.5	41.0	38.6	36.3	34.1	31.9
42	42.8	40.3	38.0	35.7	33.5	31.5
44	42.1	39.7	37.3	35.1	33.0	31.0

REFERENCE FACTOR "R"

TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	32.0	34.6	38.3	42.6	47.7	53.9
12	32.2	35.1	38.9	43.3	48.6	54.8
14	32.5	35.6	39.5	44.1	49.4	55.7
16	32.6	35.9	39.9	44.6	50.0	56.3
18	32.7	36.1	40.1	44.8	50.3	56.6
20	32.8	36.3	40.4	45.1	50.6	57.0
22	33.0	36.5	40.6	45.4	50.9	57.3
24	33.2	36.8	40.9	45.7	51.2	57.7
26	33.4	37.0	41.2	46.0	51.6	58.1
28	33.6	37.3	41.5	46.3	51.9	58.4
30	34.1	37.8	42.0	47.0	52.7	59.3
32	34.8	38.5	42.8	47.9	53.7	60.5
34	35.4	39.2	43.6	48.8	54.8	61.8
36	36.1	40.0	44.5	49.8	55.9	63.1
38	36.7	40.7	45.4	50.7	57.1	64.4
40	37.4	41.5	46.3	51.8	58.3	65.9
42	38.1	42.4	47.2	52.9	59.6	67.5
44	38.8	43.3	48.3	54.1	61.0	69.3

RUNWAY LENGTH (METERS)

WEIGHT 1000 KG	REFERENCE FACTOR "R"								
	30	35	40	45	50	55	60	65	70
32	865	1005	1145	1285	1425	1565	1700	1835	1970
34	955	1120	1280	1445	1610	1770	1930	2090	2250
36	1050	1235	1425	1610	1795	1980	2170	2355	2540
38	1155	1365	1575	1785	1995	2205	2420		
40	1265	1500	1735	1965	2200	2440			
42	1385	1645	1900	2160	2425				
44	1510	1795	2080	2370					
46	1640	1955	2270	2590					
48	1780	2130	2475						

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TABLE 40. AIRCRAFT PERFORMANCE, TAKEOFF (DOUGLAS DC-9-30 SERIES)
JT8D-9 ENGINE, 5° FLAPS

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 KG)

TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	49.0	48.9	46.1	43.3	40.7	38.2
12	49.0	48.4	45.6	42.9	40.3	37.8
14	49.0	47.9	45.1	42.4	39.8	37.3
16	49.0	47.6	44.8	42.2	39.6	37.1
18	49.0	47.6	44.8	42.1	39.6	37.1
20	49.0	47.6	44.8	42.1	39.6	37.1
22	49.0	47.6	44.8	42.1	39.6	37.1
24	49.0	47.6	44.8	42.1	39.6	37.1
26	49.0	47.6	44.8	42.1	39.6	37.1
28	49.0	47.6	44.8	42.1	39.6	37.1
30	49.0	47.0	44.3	41.6	39.1	36.7
32	49.0	46.4	43.6	41.0	38.5	36.2
34	48.5	45.7	43.0	40.4	38.0	35.7
36	47.8	45.1	42.4	39.9	37.4	35.1
38	47.1	44.4	41.8	39.2	36.9	34.6
40	46.4	43.7	41.1	38.6	36.3	34.1
42	45.6	43.0	40.4	38.0	35.7	33.5
44	44.9	42.3	39.8	37.4	35.1	33.0

REFERENCE FACTOR "R"

TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	37.5	40.4	44.5	49.6	55.6	62.2
12	37.8	41.0	45.2	50.4	56.4	63.2
14	38.0	41.6	46.0	51.2	57.3	64.2
16	38.2	42.0	46.5	51.8	57.9	64.9
18	38.4	42.2	46.7	52.1	58.3	65.3
20	38.6	42.4	47.0	52.5	58.7	65.8
22	38.7	42.7	47.4	52.8	59.1	66.2
24	38.9	42.9	47.7	53.2	59.5	66.6
26	39.0	43.2	48.0	53.5	59.8	67.1
28	39.1	43.6	48.4	53.9	60.2	67.5
30	39.8	44.2	49.1	54.7	61.2	68.8
32	40.6	44.9	49.9	55.7	62.4	70.1
34	41.3	45.7	50.8	56.7	63.6	71.6
36	42.0	46.5	51.7	57.9	64.9	73.0
38	42.7	47.3	52.7	59.0	66.3	74.5
40	43.5	48.2	53.8	60.3	67.7	76.1
42	44.3	49.1	54.9	61.5	69.1	77.8
44	45.2	50.1	56.0	62.8	70.7	79.6

RUNWAY LENGTH (METERS)

WEIGHT 1000 KG	REFERENCE FACTOR "R"									
	35	40	45	50	55	60	65	70	75	80
32	925	1045	1170	1295	1425	1550	1680	1805	1930	2050
34	1020	1160	1305	1445	1590	1735	1880	2025	2170	2310
36	1125	1285	1445	1610	1775	1940	2110	2270	2435	2595
38	1235	1415	1600	1785	1975	2165	2355	2545	2730	2915
40	1350	1555	1760	1975	2190	2405	2620	2840		
42	1475	1700	1935	2170	2415	2660	2910			
44	1600	1850	2110	2380	2655	2930				
46	1735	2010	2295	2595	2905					
48	1875	2175	2490	2820						
50	2025	2345	2685							

TABLE 41. AIRCRAFT PERFORMANCE, TAKEOFF (DOUGLAS DC-9-30 SERIES)
JT8D-9 ENGINE, 5° FLAPS, 5% SPEED INCREASE

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 KG)

TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	49.0	49.0	46.9	44.1	41.5	39.0
12	49.0	49.0	46.4	43.7	41.0	38.6
14	49.0	48.8	45.9	43.2	40.6	38.1
16	49.0	48.5	45.6	42.9	40.3	37.9
18	49.0	48.5	45.6	42.9	40.3	37.9
20	49.0	48.5	45.6	42.9	40.3	37.9
22	49.0	48.5	45.6	42.9	40.3	37.9
24	49.0	48.5	45.6	42.9	40.3	37.9
26	49.0	48.5	45.6	42.9	40.3	37.9
28	49.0	48.5	45.6	42.9	40.3	37.9
30	49.0	47.8	45.1	42.4	39.8	37.5
32	49.0	47.1	44.4	41.8	39.3	36.9
34	49.0	46.5	43.8	41.2	38.7	36.4
36	48.6	45.8	43.1	40.6	38.1	35.8
38	47.9	45.1	42.5	40.0	37.6	35.3
40	47.2	44.4	41.8	39.3	37.0	34.7
42	46.4	43.7	41.1	38.7	36.4	34.1
44	45.7	43.0	40.5	38.1	35.8	33.6

REFERENCE FACTOR "R"

TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	44.1	47.5	52.7	58.8	66.1	74.8
12	44.3	48.2	53.5	59.8	67.3	76.2
14	44.6	48.9	54.3	60.8	68.5	77.6
16	44.9	49.4	54.9	61.5	69.4	78.6
18	45.1	49.8	55.3	62.0	69.8	79.1
20	45.3	50.1	55.7	62.4	70.3	79.6
22	45.6	50.4	56.1	62.8	70.8	80.1
24	45.9	50.7	56.5	63.3	71.2	80.6
26	46.2	51.0	56.8	63.7	71.7	81.1
28	46.5	51.3	57.2	64.1	72.3	81.6
30	47.0	51.9	57.9	65.0	73.3	82.8
32	47.6	52.8	59.0	66.3	74.8	84.5
34	48.4	53.8	60.2	67.7	76.3	86.4
36	49.3	54.9	61.5	69.1	78.0	88.3
38	50.2	56.0	62.8	70.6	79.7	90.3
40	51.3	57.2	64.1	72.2	81.5	92.3
42	52.3	58.4	65.6	73.8	83.4	94.4
44	53.4	59.7	67.1	75.6	85.4	96.6

RUNWAY LENGTH (METERS)

WEIGHT 1000 KG	REFERENCE FACTOR "R"					
	40	50	60	70	80	90 100
32	985	1220	1450	1680	1905	2125 2345
34	1095	1355	1620	1880	2140	2400 2660
36	1205	1505	1800	2100	2400	2700 3000
38	1320	1660	1995	2335	2675	3020 3370
40	1435	1825	2205	2590	2970	3360
42	1555	2000	2430	2855	3275	
44	1685	2185	2665	3130	3595	
46	1825	2385	2915	3420		
48	1975	2600	3175			
50	2140	2830	3450			

TABLE 42. AIRCRAFT PERFORMANCE, TAKEOFF (DOUGLAS DC-9-30 SERIES)
JT8D-9 ENGINE, 0° FLAPS, 6% SPEED INCREASE

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 KG)

TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	49.0	49.0	47.7	45.0	42.3	39.7
12	49.0	49.0	47.2	44.5	41.8	39.2
14	49.0	49.0	46.7	44.0	41.3	38.8
16	49.0	49.0	46.5	43.7	41.1	38.6
18	49.0	49.0	46.5	43.7	41.1	38.6
20	49.0	49.0	46.4	43.7	41.0	38.5
22	49.0	49.0	46.4	43.7	41.0	38.5
24	49.0	49.0	46.4	43.7	41.0	38.5
26	49.0	49.0	46.4	43.7	41.0	38.5
28	49.0	49.0	46.4	43.6	41.0	38.5
30	49.0	48.7	45.9	43.1	40.5	38.0
32	49.0	48.0	45.2	42.5	40.0	37.5
34	49.0	47.3	44.5	41.9	39.4	37.0
36	48.6	46.6	43.9	41.3	38.8	36.4
38	48.0	45.9	43.2	40.6	38.2	35.9
40	47.3	45.2	42.5	40.0	37.6	35.3
42	46.7	44.5	41.8	39.4	37.0	34.7
44	46.0	43.7	41.2	38.7	36.4	34.2

REFERENCE FACTOR "R"

TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	47.8	51.8	57.5	64.6	73.0	82.1
12	48.2	52.6	58.5	65.7	74.2	83.7
14	48.5	53.3	59.5	66.8	75.4	85.2
16	48.8	53.9	60.1	67.6	76.3	86.2
18	49.0	54.2	60.5	68.1	76.8	86.8
20	49.2	54.5	60.9	68.5	77.4	87.4
22	49.5	54.8	61.3	69.0	77.9	88.0
24	49.8	55.2	61.7	69.4	78.4	88.6
26	50.2	55.6	62.2	69.9	78.9	89.2
28	50.5	56.0	62.6	70.4	79.4	89.8
30	51.2	56.8	63.5	71.4	80.6	91.2
32	52.1	57.8	64.7	72.9	82.4	93.3
34	53.0	58.9	66.0	74.4	84.2	95.3
36	54.0	60.1	67.4	76.0	86.0	97.3
38	55.0	61.3	68.9	77.7	87.9	99.5
40	56.0	62.6	70.4	79.5	89.9	101.7
42	57.1	64.0	72.0	81.3	92.0	104.1
44	58.3	65.4	73.6	83.2	94.2	106.7

RUNWAY LENGTH (METERS)

WEIGHT 1000 KG	REFERENCE FACTOR "R"							
	40	50	60	70	80	90	100	110
32	980	1215	1450	1675	1900	2125	2345	2560
34	1090	1355	1620	1880	2140	2400	2660	2925
36	1205	1505	1805	2100	2395	2690	2990	3295
38	1330	1665	1995	2330	2665	3000	3335	3675
40	1460	1830	2200	2575	2955	3330	3705	
42	1600	2005	2420	2845	3270	3690		
44	1745	2185	2650	3130	3610			
46	1900	2380	2900	3435	3980			
48	2060	2585	3160	3770				
50	2230	2800	3440					

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Appendix 6TABLE 43. AIRCRAFT PERFORMANCE LANDING (DOUGLAS DC-9-50 SERIES)
JT8D-17 ENGINE, FULL FLAPS

MAXIMUM ALLOWABLE LANDING WEIGHT (1000 KG)

TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	49.9	49.9	49.9	48.7	45.7	43.0
12	49.9	49.9	49.9	48.7	45.7	43.0
14	49.9	49.9	49.9	48.7	45.7	43.0
16	49.9	49.9	49.9	48.4	45.4	42.7
18	49.9	49.9	49.9	48.0	45.1	42.4
20	49.9	49.9	49.9	47.7	44.7	42.1
22	49.9	49.9	49.9	47.4	44.4	41.8
24	49.9	49.9	49.9	47.0	44.1	41.5
26	49.9	49.9	49.6	46.6	43.7	41.2
28	49.9	49.9	49.2	46.2	43.4	40.8
30	49.9	49.9	48.4	45.5	42.8	40.2
32	49.9	49.9	47.6	44.8	42.1	39.6
34	49.9	49.7	46.8	44.0	41.4	38.8
36	49.9	48.9	46.1	43.3	40.7	38.1
38	49.9	48.2	45.3	42.6	40.0	37.3
40	49.9	47.5	44.7	42.0	39.3	36.5
42	49.7	46.8	44.0	41.3	38.5	35.6
44	49.0	46.2	43.5	40.7	37.8	34.7

RUNWAY LENGTH (METERS)

WEIGHT 1000 KG	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
30	1125	1175	1225	1270	1320	1380
32	1180	1235	1285	1340	1395	1455
34	1240	1295	1350	1405	1465	1530
36	1300	1355	1410	1470	1535	1605
38	1360	1415	1475	1540	1610	1680
40	1420	1475	1535	1605	1680	1755
42	1480	1535	1600	1670	1750	1825
44	1540	1600	1665	1740	1820	1900
46	1600	1660	1730	1805	1895	1970
48	1660	1725	1795	1875	1955	2045
50	1720	1790	1860	1940	2025	2115

AIRPLANE CHARACTERISTICS

UNIT OF

	<u>MEASURE</u>	
MAXIMUM TAKEOFF WEIGHT	KG	54 886
MAXIMUM LANDING WEIGHT	KG	49 896
TYPICAL OPERATING EMPTY WEIGHT PLUS RESERVE FUEL	KG	33 162 ^{1/} 35 458 ^{2/}
AVERAGE FUEL CONSUMPTION	KG/KM	5.36
TYPICAL MAXIMUM PASSENGER LOAD @ 90.7 KG/PASSENGER	KG	12 247
MAXIMUM STRUCTURAL PAYLOAD	KG	15 343

^{1/} Based on 1.25 hours of reserve fuel.^{2/} Based on 2.00 hours of reserve fuel.

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TABLE 44. AIRCRAFT PERFORMANCE, TAKEOFF (DOUGLAS DC-9-50 SERIES)
JT8D-17 ENGINE, 15° FLAPS

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 KG)

TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	51.7	50.1	47.4	44.6	42.0	39.4
12	51.7	50.1	47.4	44.6	42.0	39.4
14	51.7	50.1	47.4	44.6	42.0	39.4
16	51.7	50.1	47.4	44.6	42.0	39.4
18	51.7	50.1	47.4	44.6	42.0	39.4
20	51.7	50.1	47.2	44.4	41.8	39.2
22	51.7	49.7	46.8	44.1	41.5	39.0
24	51.7	49.4	46.5	43.8	41.2	38.7
26	51.7	49.1	46.2	43.5	40.9	38.4
28	51.7	48.8	45.9	43.3	40.6	38.1
30	50.8	48.2	45.5	42.8	40.2	37.7
32	50.2	47.5	44.8	42.2	39.6	37.2
34	49.5	46.8	44.2	41.6	39.1	36.7
36	48.9	46.2	43.5	41.0	38.5	36.2
38	48.3	45.5	42.9	40.4	38.0	35.7
40	47.7	44.9	42.3	39.8	37.4	35.2
42	47.0	44.2	41.6	39.2	36.8	34.7
44	46.4	43.6	41.0	38.5	36.3	34.2

REFERENCE FACTOR "R"

TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	40.5	44.1	48.6	54.2	61.1	69.6
12	40.7	44.4	49.0	54.6	61.6	70.1
14	40.9	44.7	49.3	55.1	62.1	70.5
16	41.2	44.9	49.7	55.5	62.6	70.9
18	41.4	45.2	50.0	56.0	63.1	71.4
20	41.7	45.5	50.5	56.6	63.8	72.1
22	42.0	45.9	51.1	57.3	64.7	73.2
24	42.3	46.3	51.6	58.0	65.6	74.2
26	42.6	46.7	52.2	58.8	66.5	75.2
28	42.9	47.1	52.7	59.5	67.4	76.2
30	43.4	47.9	53.6	60.6	68.7	77.8
32	44.2	48.9	54.8	61.9	70.3	79.7
34	45.0	49.9	56.0	63.3	71.9	81.7
36	45.3	50.9	57.1	64.6	73.5	83.7
38	46.5	51.9	58.3	66.0	75.1	85.7
40	47.3	52.9	59.5	67.3	76.7	87.7
42	48.1	53.9	60.7	68.7	78.3	89.7
44	48.9	54.9	61.9	70.0	79.9	91.7

RUNWAY LENGTH (METERS)

WEIGHT 1000 KG	REFERENCE FACTOR "R"						
	40	50	60	70	80	90	100
32	825	1010	1180	1345	1505	1670	1835
34	910	1115	1305	1495	1685	1885	2095
36	995	1225	1445	1665	1885	2115	2360
38	1085	1340	1595	1845	2100	2360	2635
40	1180	1470	1755	2045	2335	2625	2920
42	1280	1605	1935	2265	2595	2915	3230
44	1390	1750	2125	2505	2875	3230	3560
46	1505	1905	2330	2765	3185	3575	
48	1625	2070	2555	3055	3530		
50	1760	2255	2800	3365			
52	1905	2445	3065	3705			
54	2055	2655	3350				
56	2225	2880	3655				

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Appendix 6TABLE 45. AIRCRAFT PERFORMANCE, TAKEOFF (DOUGLAS DC-9-50 SERIES)
JT8D-17 ENGINE, 15° FLAPS, 2% SPEED INCREASE

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 KG)						
TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	52.7	50.5	47.8	45.1	42.4	39.8
12	52.2	50.5	47.8	45.1	42.4	39.8
14	52.2	50.5	47.8	45.1	42.4	39.8
16	52.2	50.5	47.8	45.1	42.4	39.8
18	52.2	50.5	47.8	45.1	42.4	39.8
20	52.2	50.5	47.6	44.9	42.3	39.6
22	52.2	50.1	47.3	44.6	42.0	39.3
24	52.2	49.9	47.0	44.3	41.7	39.0
26	52.2	49.5	46.7	44.0	41.4	38.8
28	52.2	49.2	46.4	43.7	41.1	38.5
30	51.8	48.8	45.9	43.2	40.6	38.1
32	51.1	48.1	45.3	42.6	40.0	37.6
34	50.4	47.4	44.6	42.0	39.5	37.0
36	49.7	46.7	44.0	41.4	38.9	36.5
38	48.9	46.0	43.3	40.8	38.3	36.0
40	48.2	45.4	42.7	40.1	37.7	35.5
42	47.5	44.7	42.0	39.5	37.2	34.9
44	46.8	44.0	41.4	38.9	36.6	34.4

REFERENCE FACTOR "R"

TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	42.0	45.9	50.6	56.5	64.0	73.3
12	42.2	46.3	51.0	56.9	64.4	74.0
14	42.4	46.7	51.5	57.4	64.8	74.2
16	42.7	47.1	52.0	57.9	65.2	74.4
18	42.9	47.5	52.5	58.4	65.6	74.6
20	43.2	47.8	53.0	59.0	66.3	75.2
22	43.5	48.2	53.5	59.7	67.2	76.1
24	43.8	48.5	54.0	60.5	68.1	77.0
26	44.1	48.8	54.5	61.3	69.0	77.8
28	44.4	49.2	55.1	62.0	69.9	78.7
30	45.0	49.9	56.0	63.1	71.3	80.4
32	45.8	51.0	57.2	64.5	72.9	82.7
34	46.7	52.0	58.4	65.9	74.6	85.0
36	47.5	53.1	59.6	67.2	76.3	87.3
38	48.4	54.2	60.7	68.5	78.0	89.7
40	49.2	55.2	61.9	69.9	79.7	92.0
42	50.0	56.3	63.1	71.3	81.4	94.3
44	50.9	57.4	64.3	72.6	83.1	96.6

RUNWAY LENGTH (METERS)

WEIGHT 1000 KG	REFERENCE FACTOR "R"					
	40	50	60	70	80	100
32	860	1005	1175	1360	1530	1785
34	925	1110	1305	1505	1700	2010
36	1005	1220	1445	1670	1890	2280
38	1090	1340	1595	1855	2105	2575
40	1185	1465	1760	2055	2345	2895
42	1290	1600	1935	2270	2605	3230
44	1400	1750	2120	2505	2885	3570
46	1520	1905	2325	2760	3180	
48	1650	2070	2545	3030	3495	
50	1785	2250	2780	3315	3820	
52	1925	2445	3035	3625		
54	2075	2655	3305			
56	2230	2875	3600			

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TABLE 46. AIRCRAFT PERFORMANCE, TAKEOFF (DOUGLAS DC-9-50 SERIES)
JT8D-17 ENGINE, 5° FLAPS

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 KG)

TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	54.9	53.6	50.7	47.7	44.8	42.1
12	54.9	53.6	50.7	47.7	44.8	42.1
14	54.9	53.6	50.7	47.7	44.8	42.1
16	54.9	53.6	50.7	47.7	44.8	42.1
18	54.9	53.6	50.7	47.7	44.8	42.1
20	54.9	53.6	50.5	47.5	44.7	41.9
22	54.9	53.3	50.2	47.2	44.3	41.7
24	54.9	52.9	49.8	46.8	44.0	41.4
26	54.9	52.5	49.4	46.5	43.7	41.1
28	54.9	52.2	49.1	46.2	43.4	40.8
30	54.8	51.6	48.6	45.7	43.0	40.4
32	54.0	50.9	48.0	45.1	42.4	39.8
34	53.3	50.2	47.3	44.5	41.8	39.2
36	52.5	49.5	46.6	43.9	41.2	38.6
38	51.6	48.7	45.9	43.2	40.6	38.0
40	50.8	47.9	45.1	42.5	39.9	37.4
42	49.9	47.0	44.3	41.7	39.2	36.7
44	48.9	46.1	43.5	40.9	38.5	36.1

REFERENCE FACTOR "R"

TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	45.5	49.9	55.3	61.7	69.2	78.2
12	45.9	50.2	55.6	62.1	69.7	78.7
14	46.4	50.6	55.9	62.4	70.2	79.3
16	46.9	50.9	56.2	62.8	70.7	79.9
18	47.3	51.2	56.5	63.2	71.2	80.4
20	47.6	51.6	57.0	63.9	72.0	81.2
22	47.8	52.1	57.7	64.7	72.9	82.3
24	48.0	52.5	58.4	65.5	73.8	83.3
26	48.2	53.0	59.1	66.3	74.8	84.3
28	48.4	53.5	59.8	67.2	75.7	85.3
30	49.1	54.3	60.8	68.3	77.1	86.9
32	50.0	55.4	62.0	69.9	78.8	89.0
34	51.0	56.5	63.3	71.2	80.5	91.1
36	51.9	57.7	64.5	72.7	82.2	93.2
38	52.9	58.8	65.8	74.1	83.9	95.3
40	53.9	59.9	67.1	75.6	85.7	97.4
42	54.8	61.0	68.3	77.0	87.4	99.5
44	55.8	62.1	69.6	78.5	89.1	101.6

RUNWAY LENGTH (METERS)

WEIGHT 1000 KG	REFERENCE FACTOR "R"						
	40	50	60	70	80	90	100
32	815	1010	1195	1370	1545	1715	1880
34	895	1115	1320	1525	1720	1915	2110
36	980	1225	1460	1685	1910	2135	2355
38	1075	1345	1605	1865	2120	2370	2625
40	1175	1470	1760	2050	2340	2630	2920
42	1290	1605	1930	2255	2580	2910	3240
44	1395	1745	2105	2470	2845	3220	3595
46	1515	1895	2290	2700	3125	3555	
48	1645	2050	2490	2950	3430		
50	1780	2215	2695	3210	3755		
52	1925	2390	2915	3490			
54	2075	2570	3145	3785			
56	2235	2755	3385				

TABLE 47. AIRCRAFT PERFORMANCE, TAKEOFF (DOUGLAS DC-9-50 SERIES)
JT8D-17 ENGINE, 5° FLAPS, 5% SPEED INCREASE

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 KG)

TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	54.9	54.9	51.8	48.8	45.9	43.1
12	54.9	54.9	51.8	48.8	45.9	43.1
14	54.9	54.9	51.8	48.8	45.9	43.1
16	54.9	54.9	51.8	48.8	45.9	43.1
18	54.9	54.9	51.8	48.8	45.9	43.1
20	54.9	54.6	51.6	48.6	45.7	43.0
22	54.9	54.4	51.3	48.3	45.4	42.7
24	54.9	54.1	50.9	47.9	45.1	42.4
26	54.9	53.8	50.6	47.6	44.8	42.0
28	54.9	53.3	50.2	47.3	44.4	41.7
30	54.9	52.7	49.7	46.8	44.0	41.3
32	54.9	52.1	49.1	46.2	43.4	40.7
34	54.4	51.3	48.4	45.6	42.8	40.1
36	53.6	50.6	47.7	44.9	42.2	39.5
38	52.7	49.8	47.0	44.2	41.5	38.9
40	51.9	49.0	46.2	43.5	40.8	38.2
42	51.0	48.1	45.4	42.7	40.1	37.6
44	50.0	47.2	44.5	41.9	39.4	36.9

REFERENCE FACTOR "R"

TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	50.0	54.9	61.0	68.4	77.0	86.8
12	50.5	55.2	61.3	68.7	77.5	87.5
14	50.9	55.5	61.6	69.1	78.0	88.2
16	51.4	55.7	61.8	69.5	78.6	88.8
18	51.8	56.0	62.1	69.9	79.1	89.5
20	52.2	56.5	62.7	70.6	79.9	90.5
22	52.5	57.2	63.6	71.6	81.0	91.7
24	52.8	57.9	64.5	72.6	82.1	92.9
26	53.1	58.5	65.4	73.6	83.2	94.2
28	53.3	59.2	66.3	74.6	84.3	95.4
30	54.1	60.2	67.5	76.0	85.8	97.2
32	55.2	61.5	68.9	77.6	87.8	99.4
34	56.3	62.7	70.3	79.3	89.7	101.7
36	57.4	63.9	71.7	80.9	91.6	104.0
38	58.5	65.2	73.2	82.6	93.6	106.2
40	59.6	66.4	74.6	84.2	95.5	108.5
42	60.8	67.7	76.0	85.9	97.4	110.8
44	61.9	68.9	77.4	87.5	99.4	113.0

RUNWAY LENGTH (METERS)

WEIGHT 1000 KG	REFERENCE FACTOR "R"						
	50	60	70	80	90	100	110 120
32	1015	1200	1375	1550	1720	1890	2060 2245
34	1115	1325	1530	1725	1920	2115	2320 2530
36	1220	1460	1690	1915	2140	2365	2595 2840
38	1340	1605	1865	2120	2375	2630	2895 3165
40	1470	1760	2055	2340	2630	2920	3215 3510
42	1605	1930	2255	2580	2905	3230	3550
44	1750	2105	2465	2835	3200	3560	
46	1905	2290	2695	3105	3515		
48	2065	2485	2935	3395	3850		
50	2235	2695	3190	3705			
52	2410	2915	3465				
54	2595	3140	3750				

TABLE 48. AIRCRAFT PERFORMANCE, TAKEOFF (DOUGLAS DC-9-50 SERIES)
JT8D-17 ENGINE, 0° FLAPS

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 KG)						
TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	54.9	54.9	52.5	49.4	46.4	43.7
12	54.9	54.9	52.5	49.4	46.4	43.7
14	54.9	54.9	52.5	49.4	46.4	43.7
16	54.9	54.9	52.5	49.4	46.4	43.7
18	54.9	54.9	52.5	49.4	46.4	43.7
20	54.9	54.9	52.3	49.2	46.2	43.5
22	54.9	54.9	51.9	48.8	45.9	43.2
24	54.9	54.6	51.5	48.5	45.6	42.9
26	54.9	54.3	51.2	48.2	45.3	42.6
28	54.9	54.0	50.9	47.9	45.0	42.3
30	54.9	53.4	50.3	47.4	44.5	41.6
32	54.9	52.6	49.6	46.7	43.8	40.6
34	54.9	51.8	48.9	46.0	43.1	39.8
36	54.3	51.0	48.1	45.4	42.4	39.1
38	53.5	50.3	47.4	44.7	41.8	38.6
40	52.7	49.5	46.7	44.0	41.2	38.2
42	51.9	48.8	46.0	43.3	40.6	38.0
44	51.1	48.1	45.3	42.6	40.1	37.9

REFERENCE FACTOR "R"						
TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	51.0	54.9	60.8	68.4	77.4	87.2
12	51.2	55.4	61.3	68.9	77.9	87.9
14	51.5	55.8	61.9	69.5	78.4	88.7
16	51.7	56.3	62.4	70.0	79.0	89.4
18	51.9	56.7	62.9	70.5	79.5	90.1
20	52.2	57.3	63.6	71.2	80.4	91.1
22	52.6	57.9	64.3	72.1	81.4	92.3
24	53.0	58.5	65.1	73.0	82.5	93.5
26	53.4	59.0	65.8	73.9	83.5	94.7
28	53.8	59.6	66.6	74.8	84.6	95.9
30	54.6	60.6	67.7	76.2	86.1	97.8
32	55.7	61.8	69.1	77.8	88.1	100.2
34	56.8	63.1	70.5	79.5	90.1	102.6
36	57.9	64.3	72.0	81.1	92.1	105.0
38	59.0	65.5	73.4	82.8	94.1	107.5
40	60.1	66.8	74.8	84.5	96.1	109.9
42	61.3	68.0	76.2	86.1	98.1	112.3
44	62.4	69.2	77.6	87.8	100.1	114.7

RUNWAY LENGTH (METERS)							
WEIGHT 1000 KG	REFERENCE FACTOR "R"						
	50	60	70	80	90	100	110 120
32	1000	1190	1370	1550	1720	1890	2055 2220
34	1110	1315	1520	1720	1920	2115	2305 2495
36	1225	1455	1680	1910	2140	2360	2580 2790
38	1345	1600	1860	2120	2375	2630	2880 3120
40	1470	1760	2050	2340	2635	2920	3210 3490
42	1600	1930	2255	2580	2910	3240	3575 3910
44	1740	2110	2470	2835	3205	3585	3975 4385
46	1885	2295	2700	3105	3525	3960	4420
48	2040	2495	2940	3390	3860	4365	
50	2205	2700	3185	3685	4220		
52	2385	2915	3445	3995			
54	2570	3140	3710	4315			
56	2775	3370	3980				

TABLE 49. AIRCRAFT PERFORMANCE, TAKEOFF (DOUGLAS DC-9-50 SERIES)
JT8D-17 ENGINE, 0° FLAPS, 6% SPEED INCREASE

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 KG)

TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	54.9	54.9	53.6	50.4	47.4	44.6
12	54.9	54.9	53.6	50.4	47.4	44.6
14	54.9	54.9	53.6	50.4	47.4	44.6
16	54.9	54.9	53.6	50.4	47.4	44.6
18	54.9	54.9	53.6	50.4	47.4	44.6
20	54.9	54.9	53.4	50.2	47.2	44.4
22	54.9	54.9	53.0	49.8	46.8	44.1
24	54.9	54.9	52.6	49.5	46.5	43.8
26	54.9	54.9	52.3	49.2	46.2	43.4
28	54.9	54.9	52.0	48.9	46.0	43.2
30	54.9	54.5	51.4	48.4	45.4	42.4
32	54.9	53.7	50.6	47.7	44.7	41.5
34	54.9	52.9	49.9	47.0	44.0	40.7
36	54.9	52.1	49.1	46.3	43.4	40.0
38	54.6	51.3	48.4	45.6	42.7	39.4
40	53.8	50.6	47.7	44.9	42.1	39.0
42	53.0	49.8	47.0	44.2	41.5	38.8
44	52.2	49.1	46.2	43.5	41.0	38.6

REFERENCE FACTOR "R"

TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	57.5	62.1	68.8	77.5	87.9	100.0
12	57.7	62.5	69.4	78.1	88.6	100.7
14	57.9	63.0	69.9	78.7	89.2	101.4
16	58.2	63.4	70.5	79.3	89.9	102.1
18	58.4	63.8	71.0	79.9	90.5	102.8
20	58.7	64.4	71.8	80.8	91.5	103.9
22	59.1	65.1	72.7	81.9	92.8	105.3
24	59.5	65.9	73.7	83.0	94.0	106.7
26	59.9	66.6	74.6	84.1	95.3	108.2
28	60.3	67.3	75.5	85.2	96.5	109.6
30	61.2	68.4	76.9	86.8	98.3	111.7
32	62.6	69.9	78.6	88.8	100.7	114.5
34	63.9	71.4	80.3	90.7	103.0	117.3
36	65.2	72.9	82.0	92.7	105.3	120.0
38	66.5	74.4	83.7	94.7	107.6	122.8
40	67.8	75.9	85.5	96.7	109.9	125.5
42	69.1	77.5	87.2	98.7	112.2	128.3
44	70.4	79.0	88.9	100.6	114.6	131.1

RUNWAY LENGTH (METERS)

WEIGHT 1000 KG	REFERENCE FACTOR "R"								
	50	60	70	80	90	100	110	120	130
32	1025	1205	1380	1555	1725	1895	2065	2230	2405
34	1130	1330	1525	1725	1920	2115	2310	2510	2710
36	1240	1465	1690	1910	2135	2360	2585	2815	3045
38	1355	1610	1865	2115	2375	2630	2885	3145	3405
40	1475	1760	2050	2340	2630	2920	3210	3505	3795
42	1600	1925	2255	2580	2910	3235	3565	3890	4215
44	1730	2100	2470	2840	3205	3575	3940	4305	
46	1870	2285	2700	3110	3520	3930	4340		
48	2025	2485	2940	3395	3850	4305			
50	2190	2690	3195	3695	4200				
52	2365	2910	3460	4010					
54	2555	3145	3740	4335					
56	2760	3390	4025						

TABLE 50. GENERAL CHARACTERISTICS (BOEING 747 SERIES) JT9D-7A ENGINE

AIRPLANE CHARACTERISTICS	UNIT OF MEASURE	-100 BASIC	-100 MODIFIED	-200B	-200C PASS.	-200C CARGO	-200F
MAXIMUM TAKEOFF WEIGHT	KG	332,963	333,396	356,076	356,076	356,076	356,076
MAXIMUM LANDING WEIGHT	KG	255,830	255,830	255,830	285,768	285,768	285,768
TYPICAL OPERATING EMPTY WEIGHT PLUS RESERVE FUEL ^{1/}	KG	174,954 182,619	175,044 182,710	179,580 187,790	185,023 193,234	175,135 183,572	167,966 176,632
AVERAGE FUEL CONSUMPTION	KG/KM	12.69	12.69	13.25	13.25	13.81	14.38
TYPICAL MAXIMUM PASSENGER LOAD @ 90.7 KG/PASSENGER	KG	34,927 37,740 45,360	34,927 37,740 45,360	34,927 37,740 45,360	34,927 37,740 45,360	-- -- --	-- -- --
MAXIMUM STRUCTURAL PAYLOAD	KG	76,477	76,386	72,894	96,254	106,641	114,761
ENGINE INJECTION WATER	KG	2,273	2,273	2,654	2,654	2,654	2,654

^{1/} All values on the top line are based on 1.25 hours of reserve fuel. All values on the bottom line are based on 2.00 hours of reserve fuel. The 2.00 hour value should be used for operations, outside the 48 contiguous States, to an airport for which an alternate is not specified.

NOTE: This series of performance tables was developed around the wet thrust capability of the JT9D-7A engine; and for that reason, the weight of engine injection water should be added to the weight no payload prior to adding the value for payload, Section 1, English Tables, par 2a(3)(e).

TABLE 51. AIRCRAFT PERFORMANCE, LANDING (BOEING 747 SERIES)
JT9D-7A ENGINE, 30° FLAPS

MAXIMUM ALLOWABLE LANDING WEIGHT (1000 KG)

TEMP °C	AIRPORT ELEVATION (METERS)						
	0	500	1000	1500	1500	2000	2500
10	285.7	285.7	285.7	285.7	285.7	285.7	282.8
12	285.7	285.7	285.7	285.7	285.7	285.7	280.1
14	285.7	285.7	285.7	285.7	285.7	285.7	277.4
16	285.7	285.7	285.7	285.7	285.7	285.7	274.7
18	285.7	285.7	285.7	285.7	285.7	285.7	272.1
20	285.7	285.7	285.7	285.7	285.7	285.7	269.4
22	285.7	285.7	285.7	285.7	285.7	283.4	266.7
24	285.7	285.7	285.7	285.7	285.7	280.5	264.0
26	285.7	285.7	285.7	285.7	285.7	277.5	261.2
28	285.7	285.7	285.7	285.7	285.7	274.5	258.4
30	285.7	285.7	285.7	285.7	285.7	271.5	255.5
32	285.7	285.7	285.7	283.6	285.0	268.3	252.6
34	285.7	285.7	285.7	279.9	281.7	265.2	249.6
36	285.7	285.7	285.7	276.2	278.3	261.9	246.4
38	285.7	285.7	285.7	272.4	274.8	258.6	243.2
40	285.7	285.7	285.6	268.7	271.3	255.1	239.9
42	285.7	285.7	281.7	265.1	267.5	251.6	236.4
44	285.7	285.7	278.1	261.6	263.7	248.0	232.8

RUNWAY LENGTH (METERS)

WEIGHT 1000 KG	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
205	1915	1990	2070	2155	2245	2340
210	1950	2030	2115	2205	2295	2390
215	1990	2075	2160	2250	2340	2435
220	2030	2115	2205	2295	2385	2485
225	2065	2155	2245	2340	2430	2535
230	2105	2195	2290	2380	2480	2585
235	2145	2240	2330	2425	2525	2635
240	2180	2280	2375	2470	2575	2685
245	2220	2320	2415	2515	2625	2735
250	2260	2360	2455	2560	2670	2785
255	2300	2400	2500	2605	2720	2835
260	2340	2440	2545	2650	2765	2885
265	2380	2480	2585	2695	2810	2930
270	2420	2525	2630	2740	2860	2980
275	2465	2565	2675	2785	2905	3030
280	2505	2610	2720	2830	2955	3080
285	2545	2650	2760	2880	3000	3135
290	2585	2695	2805	2925	3050	3185

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TABLE 52. AIRCRAFT PERFORMANCE, LANDING (BOEING 747 SERIES)
JT9D-7A ENGINE, 25° FLAPS

MAXIMUM ALLOWABLE LANDING WEIGHT (1000 KG)

TEMP °C	AIRPORT ELEVATION (METERS)						
	0	500	1000	1500	1500	2000	2500
10	285.7	285.7	285.7	285.7	285.7	285.7	285.7
12	285.7	285.7	285.7	285.7	285.7	285.7	285.4
14	285.7	285.7	285.7	285.7	285.7	285.7	282.3
16	285.7	285.7	285.7	285.7	285.7	285.7	279.2
18	285.7	285.7	285.7	285.7	285.7	285.7	276.3
20	285.7	285.7	285.7	285.7	285.7	285.7	273.3
22	285.7	285.7	285.7	285.7	285.7	285.7	270.3
24	285.7	285.7	285.7	285.7	285.7	284.4	267.4
26	285.7	285.7	285.7	285.7	285.7	281.3	264.4
28	285.7	285.7	285.7	285.7	285.7	278.1	261.5
30	285.7	285.7	285.7	285.7	285.7	274.9	258.4
32	285.7	285.7	285.7	285.7	285.7	271.6	255.4
34	285.7	285.7	285.7	282.5	285.2	268.2	252.3
36	285.7	285.7	285.7	278.7	281.5	264.8	249.1
38	285.7	285.7	285.7	274.9	277.8	261.3	245.8
40	285.7	285.7	285.7	271.1	273.9	257.7	242.4
42	285.7	285.7	284.5	267.3	269.9	254.0	238.9
44	275.1	282.5	280.4	263.6	265.8	250.2	235.2

RUNWAY LENGTH (METERS)

WEIGHT 1000 KG	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
205	2030	2110	2195	2285	2375	2480
210	2075	2155	2245	2335	2425	2535
215	2120	2205	2290	2385	2485	2590
220	2165	2250	2340	2435	2540	2645
225	2210	2295	2390	2485	2595	2705
230	2255	2345	2440	2540	2650	2760
235	2300	2390	2485	2590	2705	2820
240	2345	2435	2535	2645	2760	2880
245	2390	2480	2585	2695	2815	2935
250	2435	2530	2635	2750	2870	2995
255	2475	2580	2685	2800	2925	3055
260	2525	2630	2740	2855	2980	3115
265	2575	2680	2790	2910	3035	3170
270	2630	2735	2845	2960	3090	3230
275	2680	2785	2895	3015	3145	3290
280	2725	2835	2950	3070	3200	3345
285	2770	2885	3000	3125	3255	3405
290	2810	2930	3050	3175	3315	3460

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Appendix 6TABLE 53. AIRCRAFT PERFORMANCE, TAKEOFF (BOEING 747 SERIES)
JT9D-7A ENGINE, 20° FLAPS

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 KG)

TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	356.0	343.6	328.8	313.6	297.7	282.6
12	356.0	343.6	328.8	313.6	297.7	282.6
14	356.0	343.6	328.8	313.6	297.7	282.4
16	356.0	343.6	328.8	313.6	297.7	279.3
18	356.0	343.6	328.8	313.6	296.1	277.0
20	356.0	343.6	328.8	313.6	293.3	274.4
22	356.0	345.6	328.8	310.1	290.3	271.6
24	356.0	343.6	327.5	306.6	287.1	268.7
26	356.0	343.6	323.4	303.0	283.8	265.6
28	356.0	340.7	319.4	299.3	280.4	262.5
30	356.0	336.4	315.4	295.6	276.9	259.2
32	353.9	332.1	311.5	291.9	273.5	256.0
34	349.5	328.0	307.6	288.3	270.0	252.7
36	345.3	324.0	303.8	284.7	266.6	249.5
38	341.1	320.1	300.0	281.1	263.2	246.3
40	337.0	316.1	296.3	277.6	259.9	243.2
42	332.7	312.1	292.7	274.3	256.8	240.3
44	328.3	308.1	289.1	271.1	253.9	237.4

REFERENCE FACTOR "R"

TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	60.5	67.1	74.3	82.7	92.5	104.4
12	61.0	67.6	74.9	83.3	93.2	105.0
14	61.5	68.1	75.5	83.9	93.9	105.8
16	61.9	68.6	76.0	84.6	94.7	106.7
18	62.4	69.1	76.6	85.3	94.8	109.3
20	62.8	69.6	77.1	85.9	96.9	111.8
22	63.3	70.1	77.7	86.6	98.9	114.2
24	63.7	70.6	78.0	88.3	100.9	116.5
26	64.2	71.2	79.4	90.0	102.9	118.8
28	64.7	71.6	80.8	91.7	104.9	121.0
30	65.1	72.9	82.3	93.5	106.9	123.3
32	65.9	74.2	83.9	95.3	109.1	125.7
34	67.1	75.6	85.5	97.2	111.3	128.2
36	68.4	77.0	87.2	99.2	113.6	130.8
38	69.7	78.5	88.9	101.3	116.1	133.7
40	71.1	80.1	90.8	103.6	118.8	
42	72.5	81.7	92.8	106.0		
44	74.0	83.5	94.9	108.5		

RUNWAY LENGTH (METERS)

WEIGHT 1000 KG	REFERENCE FACTOR "R"								
	60	70	80	90	100	110	120	130	140
230	1260	1395	1545	1705	1880	2050	2220	2385	2530
240	1320	1495	1680	1865	2055	2245	2430	2615	2785
250	1400	1615	1825	2035	2250	2455	2660	2865	3065
260	1495	1740	1980	2220	2450	2685	2910	3140	3370
270	1605	1880	2150	2410	2670	2925	3185	3440	3700
280	1735	2035	2330	2620	2905	3190	3475	3760	4050
290	1875	2200	2520	2840	3155	3475	3790	4105	4420
300	2025	2375	2725	3075	3425	3775	4120	4465	4805
310	2190	2565	2945	3330	3715	4100	4480	4850	
320	2365	2765	3180	3600	4025	4450	4860		
330	2545	2975	3425	3890	4360	4820			
340	2735	3200	3690	4200	4715				
350	2930	3430	3975	4535	5095				
360	3135	3675	4270	4885					

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TABLE 54. AIRCRAFT PERFORMANCE, TAKEOFF (BOEING 747 SERIES)
JT9D-7A ENGINE, 10° FLAPS

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 KG)						
TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	356.0	356.0	343.5	327.4	310.8	294.6
12	356.0	356.0	343.5	327.4	310.8	294.6
14	356.0	356.0	343.5	327.4	310.8	294.6
16	356.0	356.0	343.5	327.4	310.8	291.9
18	356.0	356.0	343.5	327.4	309.2	289.0
20	356.0	356.0	343.5	327.4	306.2	286.3
22	356.0	356.0	343.5	323.8	303.0	283.4
24	356.0	356.0	342.0	320.2	299.6	280.2
26	356.0	356.0	338.0	316.4	296.1	277.0
28	356.0	356.0	333.9	312.5	292.4	273.6
30	356.0	352.0	329.7	308.6	288.7	270.1
32	356.0	347.5	325.5	304.6	284.9	266.6
34	356.0	343.0	321.3	300.6	281.2	263.1
36	356.0	338.6	317.1	296.7	277.5	259.7
38	356.0	334.2	313.0	292.8	273.9	256.3
40	351.8	329.9	309.0	289.1	270.5	253.1
42	347.4	325.7	305.1	285.6	267.2	250.1
44	343.1	321.7	301.4	282.2	264.2	247.2

REFERENCE FACTOR "R"						
TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	68.3	75.1	83.0	92.4	103.5	116.9
12	68.9	75.6	83.6	93.1	104.4	117.8
14	69.3	76.1	84.1	93.7	105.1	118.5
16	69.8	76.5	84.6	94.2	105.7	120.0
18	70.2	77.0	85.1	94.8	106.4	122.6
20	70.6	77.5	85.6	95.3	108.4	125.1
22	70.9	78.0	86.0	96.5	110.4	127.7
24	71.3	78.4	86.7	98.4	112.6	130.4
26	71.8	78.9	88.4	100.3	115.0	133.2
28	72.2	79.9	90.1	102.4	117.4	136.0
30	72.7	81.4	91.9	104.5	119.9	138.9
32	73.6	83.0	93.8	106.7	122.5	141.8
34	75.0	84.5	95.7	109.0	125.2	144.9
36	76.4	86.1	97.6	111.4	128.0	148.1
38	77.9	87.8	99.6	113.8	130.9	151.4
40	79.4	89.5	101.7	116.3	133.9	
42	81.1	91.2	103.7	118.9		
44	82.9	93.1	105.9	121.5		

RUNWAY LENGTH (METERS)										
WEIGHT 1000 KG	REFERENCE FACTOR "R"									
	60	70	80	90	100	110	120	130	140	150
250	1355	1575	1790	1995	2195	2395	2590	2785	2975	3170
260	1455	1700	1935	2165	2390	2610	2830	3050	3265	3485
270	1565	1830	2090	2345	2595	2840	3085	3330	3575	3820
280	1685	1970	2255	2535	2815	3085	3360	3630	3905	4180
290	1810	2125	2435	2745	3050	3350	3655	3955	4260	4565
300	1945	2290	2625	2965	3300	3635	3970	4305	4640	4975
310	2090	2460	2830	3200	3570	3940	4310	4680	5050	
320	2245	2645	3050	3455	3860	4270	4680	5090		
330	2405	2840	3280	3725	4175	4625	5075			
340	2575	3050	3530	4015	4510	5005				
350	2750	3265	3790	4325	4865					
360	2930	3495	4070	4655						

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Appendix 6TABLE 55. AIRCRAFT PERFORMANCE, LANDING (BOEING 727-100 SERIES)
JT8D-7 ENGINE, 40° FLAPS

MAXIMUM ALLOWABLE LANDING WEIGHT (1000 KG)

TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	62.4	62.4	62.4	62.4	60.6	56.9
12	62.4	62.4	62.4	62.4	60.5	56.8
14	62.4	62.4	62.4	62.4	60.4	56.7
16	62.4	62.4	62.4	62.4	60.3	56.7
18	62.4	62.4	62.4	62.4	60.2	56.6
20	62.4	62.4	62.4	62.4	60.1	56.5
22	62.4	62.4	62.4	62.4	59.8	56.2
24	62.4	62.4	62.4	62.4	59.4	55.9
26	62.4	62.4	62.4	62.4	58.9	55.5
28	62.4	62.4	62.4	62.2	58.4	55.0
30	62.4	62.4	62.4	61.5	57.8	54.4
32	62.4	62.4	62.4	60.7	57.1	53.7
34	62.4	62.4	62.4	59.9	56.3	53.0
36	62.4	62.4	62.3	59.0	55.4	52.2
38	62.4	62.4	61.3	57.9	54.4	51.3
40	62.4	62.4	60.3	56.8	53.4	50.3
42	62.4	62.4	59.1	55.6	52.2	49.2
44	62.4	61.8	57.9	54.3	51.0	48.0

RUNWAY LENGTH (METERS)

WEIGHT 1000 KG	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
46	1190	1225	1270	1320	1370	1415
48	1225	1265	1310	1360	1415	1460
50	1265	1305	1350	1400	1455	1510
52	1305	1345	1395	1445	1500	1555
54	1340	1385	1435	1490	1545	1605
56	1380	1430	1480	1535	1595	1655
58	1425	1475	1530	1585	1645	1705
60	1465	1520	1575	1635	1695	1760
62	1505	1565	1625	1685	1750	1810
64	1550	1610	1675	1740	1805	1865

AIRPLANE CHARACTERISTICS	UNIT OF MEASURE	ADVANCED PASSENGERS	OPTIONS QUICK CHANGE
MAXIMUM TAKEOFF WEIGHT	KG	72 600	76 700
MAXIMUM LANDING WEIGHT			
FLAPS 30°	KG	64 637	64 637
FLAPS 40°	KG	62 369	62 369
TYPICAL OPERATING EMPTY WEIGHT PLUS RESERVE FUEL	KG	45 964 48 748	45 964 ^{1/} 48 748 ^{2/}
AVERAGE FUEL CONSUMPTION	KG/KM	5.35	5.35
TYPICAL MAXIMUM PASSENGER LOAD AT 90.7 KG/PASSENGER	KG	11 338	8 526
MAXIMUM STRUCTURAL PAYLOAD	KG	14 700	18 600

^{1/} Based on 1.25 hours of reserve fuel.^{2/} Based on 2.00 hours of reserve fuel.

TABLE 56. AIRCRAFT PERFORMANCE, LANDING (BOEING 727-100 SERIES)
JT8D-7 ENGINE, 30° FLAPS

MAXIMUM ALLOWABLE LANDING WEIGHT (1000 KG)

TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	64.6	64.6	64.6	64.6	64.6	64.6
12	64.6	64.6	64.6	64.6	64.6	64.6
14	64.6	64.6	64.6	64.6	64.6	64.6
16	64.6	64.6	64.6	64.6	64.6	64.6
18	64.6	64.6	64.6	64.6	64.6	64.6
20	64.6	64.6	64.6	64.6	64.6	64.6
22	64.6	64.6	64.6	64.6	64.6	64.6
24	64.6	64.6	64.6	64.6	64.6	64.6
26	64.6	64.6	64.6	64.6	64.6	64.6
28	64.6	64.6	64.6	64.6	64.6	63.7
30	64.6	64.6	64.6	64.6	64.6	62.6
32	64.6	64.6	64.6	64.6	64.5	61.5
34	64.6	64.6	64.6	64.6	63.9	60.4
36	64.6	64.6	64.6	64.6	63.2	59.4
38	64.6	64.6	64.6	64.6	62.4	58.4
40	64.6	64.6	64.6	64.6	61.6	57.4
42	64.6	64.6	64.6	64.6	60.7	56.5
44	64.6	64.6	64.6	63.8	59.7	55.7

RUNWAY LENGTH (METERS)

WEIGHT 1000 KG	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
46	1310	1365	1405	1440	1480	1535
48	1345	1395	1440	1485	1535	1585
50	1385	1430	1480	1530	1585	1640
52	1425	1465	1520	1580	1640	1695
54	1465	1505	1560	1625	1690	1745
56	1510	1550	1605	1675	1740	1800
58	1550	1590	1655	1720	1795	1855
60	1590	1640	1700	1770	1845	1910
62	1635	1685	1750	1820	1895	1960
64	1675	1735	1805	1875	1945	2015
66	1720	1790	1855	1925	1995	2028

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TABLE 57. AIRCRAFT PERFORMANCE, TAKEOFF (BOEING 727-100 SERIES)
JT8D-7 ENGINE. 25° FLAPS

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 KG)						
TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	74.2	70.0	65.9	61.9	58.2	54.5
12	73.7	69.5	65.4	61.5	57.7	54.2
14	72.6	68.1	64.1	60.4	57.1	54.0
16	72.6	68.1	64.1	60.4	57.1	54.0
18	72.6	68.1	64.1	60.4	57.1	54.0
20	72.6	68.1	64.1	60.4	57.1	54.0
22	72.6	68.1	64.1	60.4	57.1	54.0
24	72.6	68.1	64.1	60.4	57.1	54.0
26	72.6	68.1	64.1	60.4	57.1	54.0
28	72.6	68.1	64.1	60.4	57.1	53.4
30	71.9	67.5	63.5	59.8	56.2	52.6
32	70.7	66.5	62.5	58.8	55.3	51.8
34	69.6	65.4	61.6	57.9	54.4	51.0
36	68.4	64.4	60.6	56.9	53.5	50.2
38	67.2	63.3	59.6	56.0	52.6	49.3
40	66.1	62.3	58.6	55.1	51.7	48.5
42	64.9	61.2	57.6	54.1	50.8	47.6
44	63.8	60.2	56.6	53.2	49.9	46.7

REFERENCE FACTOR "R"

TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	36.5	39.7	44.1	49.8	57.0	65.6
12	36.5	40.2	44.8	50.7	57.9	66.8
14	36.5	40.7	45.6	51.5	58.9	67.9
16	36.5	41.1	46.3	52.4	59.3	69.0
18	36.5	41.1	46.3	52.4	59.3	69.0
20	36.5	41.1	46.3	52.4	59.3	69.0
22	36.6	41.2	46.3	52.4	59.3	69.2
24	36.7	41.3	46.3	52.4	60.1	69.9
26	37.3	41.8	47.0	53.2	61.1	70.9
28	37.9	42.5	47.8	54.2	62.3	72.2
30	38.6	43.2	48.7	55.4	63.7	74.0
32	39.4	44.1	49.8	56.8	65.4	76.0
34	40.3	45.1	51.0	58.3	67.3	78.5
36	41.3	46.2	52.3	60.0	69.5	81.3
38	42.3	47.4	53.8	61.8	71.9	84.4
40	43.4	48.8	55.4	63.9	74.5	87.9
42	44.7	50.2	57.2	66.1	77.4	91.8
44	46.0	51.8	59.1	68.4	80.5	96.0

RUNWAY LENGTH (METERS)

WEIGHT 1000 KG	REFERENCE FACTOR "R"						
	36	46	56	66	76	86	96
44	820	995	1155	1303	1445	1575	1700
46	860	1050	1235	1405	1565	1715	1850
48	910	1120	1325	1520	1710	1880	2040
50	960	1195	1430	1655	1875	2080	2270
52	1020	1260	1545	1805	2060	2310	2540
54	1085	1375	1675	1975	2275	2565	2850
56	1155	1480	1820	2160	2510	2855	
58	1230	1595	1975	2365	2765		
60	1310	1720	2145	2585			
62	1400	1855	2330	2825			
64	1490	1995	2525				
66	1590	2150	2735				
68	1695	2310	2955				
70	1805	2485					
72	1920	2665					
74	2040	2855					
76	2170						

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TABLE 58. AIRCRAFT PERFORMANCE, TAKEOFF (BOEING 727-100 SERIES)
JT8D-7 ENGINE, 15° FLAPS

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 KG)						
TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	76.7	76.7	74.6	70.1	65.7	61.8
12	76.7	76.7	73.9	69.6	65.4	61.3
14	76.7	76.7	72.3	68.3	64.6	61.1
16	76.7	76.7	72.3	68.3	64.6	61.1
18	76.7	76.7	72.3	68.3	64.6	61.1
20	76.7	76.7	72.3	68.3	64.6	61.1
22	76.7	76.7	72.3	68.3	64.6	61.1
24	76.7	76.7	72.3	68.3	64.6	61.1
26	76.7	76.7	72.3	68.3	64.6	61.1
28	76.7	76.7	72.3	68.3	64.3	60.3
30	76.7	76.2	71.6	67.3	63.2	59.3
32	76.7	75.0	70.5	66.3	62.2	58.4
34	76.7	73.8	69.4	65.2	61.2	57.4
36	76.7	72.6	68.3	64.2	60.2	56.5
38	75.8	71.4	67.2	63.1	59.2	55.6
40	74.6	70.3	66.1	62.1	58.2	54.6
42	73.4	69.1	65.0	61.0	57.3	53.7
44	72.2	67.9	63.8	60.0	56.3	52.8

REFERENCE FACTOR "R"						
TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	43.7	47.5	52.9	59.7	67.9	77.4
12	44.0	48.4	54.1	61.1	69.4	79.2
14	44.3	49.3	55.3	62.4	70.9	81.0
16	44.6	50.2	56.5	63.7	72.3	82.8
18	44.6	50.2	56.5	63.7	72.3	82.8
20	44.6	50.2	56.5	63.7	72.3	82.8
22	44.6	50.2	56.5	63.7	72.3	82.8
24	44.7	50.3	56.6	63.9	72.6	82.9
26	45.4	50.9	57.3	64.8	73.6	84.0
28	46.2	51.6	58.1	65.8	74.9	85.4
30	47.1	52.5	59.1	67.0	76.3	87.0
32	48.1	53.5	60.3	68.4	78.0	88.9
34	49.1	54.7	61.7	70.0	79.8	91.0
36	50.2	56.0	63.2	71.8	81.9	93.4
38	51.4	57.5	64.9	73.8	84.1	96.1
40	52.7	59.1	66.8	75.9	86.6	99.0
42	54.1	60.8	68.8	78.2	89.3	102.2
44	55.5	62.7	71.0	80.7	92.1	105.6

RUNWAY LENGTH (METERS)							
WEIGHT 1000 KG	REFERENCE FACTOR "R"						
	42	52	62	72	82	92	102
44	845	995	1160	1335	1505	1670	1820
46	900	1075	1260	1450	1635	1820	1990
48	960	1155	1360	1570	1780	1980	2170
50	1025	1245	1470	1700	1930	2150	2360
52	1095	1340	1590	1840	2085	2330	2570
54	1170	1440	1715	1985	2255	2525	2790
56	1250	1545	1845	2140	2435	2730	3020
58	1330	1655	1980	2300	2625	2945	3265
60	1420	1775	2125	2470	2820	3170	3525
62	1510	1895	2275	2650	3025	3410	
64	1610	2025	2430	2835	3245		
66	1710	2155	2595	3030	3470		
68	1815	2295	2765	3230			
70	1925	2440	2945	3445			
72	2040	2590	3125				
74	2160	2745	3315				
76	2285	2905	3515				
78	2410	3075					

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TABLE 59. AIRCRAFT PERFORMANCE, TAKEOFF (BOEING 727-100 SERIES)
JT8D-7 ENGINE, 5° FLAPS

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 KG)						
TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	76.7	76.7	76.7	75.0	70.2	66.2
12	76.7	76.7	76.7	74.5	70.0	66.1
14	76.7	76.7	76.7	72.9	68.7	65.3
16	76.7	76.7	76.7	72.9	68.7	65.3
18	76.7	76.7	76.7	72.9	68.7	65.3
20	76.7	76.7	76.7	72.9	68.7	65.3
22	76.7	76.7	76.7	72.9	68.7	65.3
24	76.7	76.7	76.7	72.9	68.7	65.3
26	76.7	76.7	76.7	72.9	68.7	65.3
28	76.7	76.7	76.7	72.9	68.7	64.6
30	75.6	76.7	75.6	72.1	67.7	63.6
32	76.7	76.7	74.8	71.0	66.7	62.6
34	76.7	76.7	74.0	69.9	65.7	61.6
36	76.7	76.7	73.1	68.8	64.6	60.6
38	76.7	76.5	72.0	67.7	63.6	59.6
40	76.7	75.5	70.9	66.6	62.5	58.6
42	76.7	74.1	69.7	65.5	61.5	57.7
44	76.5	72.5	68.4	64.4	60.4	56.7

REFERENCE FACTOR "R"						
TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	56.3	61.8	69.8	79.9	91.7	104.6
12	56.5	62.8	71.2	81.4	93.3	106.7
14	56.8	63.8	72.6	83.0	95.0	108.7
16	57.1	64.9	73.9	84.5	96.7	110.8
18	57.1	64.9	73.9	84.5	96.7	110.8
20	57.1	64.9	73.9	84.5	96.7	110.8
22	57.1	64.9	73.9	84.5	96.7	110.8
24	57.5	65.2	74.1	84.5	96.9	111.5
26	58.4	66.1	75.2	85.8	98.4	113.3
28	59.5	67.3	76.5	87.4	100.2	115.4
30	60.7	68.7	78.1	89.2	102.4	117.3
32	62.1	70.2	79.9	91.3	104.8	120.5
34	63.6	72.0	82.0	93.7	107.5	123.6
36	65.3	74.0	84.3	96.4	110.5	126.9
38	67.2	76.2	86.8	99.3	113.8	130.6
40	69.2	78.6	89.6	102.5	117.4	134.5
42	71.5	81.2	92.7	106.0	121.3	138.3
44	73.8	84.0	96.0	109.8	125.5	143.3

RUNWAY LENGTH (METERS)									
WEIGHT 1000 KG	REFERENCE FACTOR "R"								
	60	70	80	90	100	110	120	130	140
46	975	1160	1335	1495	1655	1805	1960	2120	2285
48	1070	1270	1455	1635	1805	1980	2150	2325	2510
50	1175	1380	1585	1780	1970	2160	2350	2545	2740
52	1280	1500	1720	1930	2140	2350	2560	2770	2985
54	1390	1630	1860	2090	2320	2550	2780	3010	3240
56	1505	1760	2010	2260	2510	2760	3010	3260	3510
58	1625	1900	2170	2440	2710	2980	3250	3520	3790
60	1750	2045	2335	2625	2915	3205	3500	3790	4080
62	1880	2195	2505	2820	3130	3445	3760	4070	4385
64	2015	2350	2685	3020	3355	3695	4030	4365	
66	2155	2515	2875	3235	3590	3950	4310		
68	2300	2685	3070	3450	3835	4215			
70	2450	2860	3270	3680	4085	4495			
72	2605	3045	3480	3915	4345				
74	2765	3235	3695	4155					
76	2930	3430	3920	4410					
78	3100	3630	4150						

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TABLE 60. AIRCRAFT PERFORMANCE, LANDING (BOEING 727-200 SERIES)
JT8D-15 ENGINE, 40° FLAPS

MAXIMUM ALLOWABLE LANDING WEIGHT (1000 KG)

TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	64.6	64.6	64.6	64.6	64.6	64.6
12	64.6	64.6	64.6	64.6	64.6	64.6
14	64.6	64.6	64.6	64.6	64.6	64.6
16	64.6	64.6	64.6	64.6	64.6	64.6
18	64.6	64.6	64.6	64.6	64.6	64.6
20	64.6	64.6	64.6	64.6	64.6	64.6
22	64.6	64.6	64.6	64.6	64.6	64.6
24	64.6	64.6	64.6	64.6	64.6	64.6
26	64.6	64.6	64.6	64.6	64.6	64.6
28	64.6	64.6	64.6	64.6	64.6	64.3
30	64.6	64.6	64.6	64.6	64.6	63.6
32	64.6	64.6	64.6	64.6	64.6	62.8
34	64.6	64.6	64.6	64.6	64.6	62.0
36	64.6	64.6	64.6	64.6	64.6	61.0
38	64.6	64.6	64.6	64.6	63.8	60.0
40	64.6	64.6	64.6	64.6	62.6	58.8
42	64.6	64.6	64.6	64.6	61.3	57.6
44	64.6	64.6	64.6	63.8	59.9	56.2

RUNWAY LENGTH (METERS)

WEIGHT 1000 KG	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
50	1220	1270	1310	1355	1400	1465
52	1260	1310	1350	1400	1450	1510
54	1300	1350	1395	1445	1500	1560
56	1345	1390	1440	1490	1545	1610
58	1385	1435	1485	1540	1595	1660
60	1425	1475	1530	1590	1650	1715
62	1470	1525	1580	1640	1700	1765
64	1510	1570	1630	1690	1755	1820
66	1555	1615	1680	1740	1805	1875

AIRPLANE CHARACTERISTICS	UNIT OF MEASURE	ADVANCED OPTIONS		
MAXIMUM TAKEOFF WEIGHT	KG	82 328	86 411	89 359
MAXIMUM LANDING WEIGHT	KG			
FLAPS 30°		70 081	72 576	72 576
FLAPS 40°		64 638	64 638	64 638
TYPICAL OPERATING EMPTY WEIGHT PLUS RESERVE FUEL	KG	49 538	49 784	51 182 ^{1/}
		52 682	52 927	54 325 ^{2/}
AVERAGE FUEL CONSUMPTION	KG/KM	6.20	6.20	6.20
TYPICAL MAXIMUM PASSENGER LOAD AT 90.7 KG/PASSENGER	KG	14 697	15 876	17 146
MAXIMUM STRUCTURAL PAYLOAD	KG	18 298	18 959	19 376

^{1/} Based on 1.25 hours of reserve fuel.

^{2/} Based on 2.00 hours of reserve fuel.

TABLE 61. AIRCRAFT PERFORMANCE, LANDING (BOEING 727-200 SERIES)
JT8D-15 ENGINE, 30° FLAPS

TEMP °C	MAXIMUM ALLOWABLE LANDING WEIGHT (1000 KG)					
	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	72.5	72.5	72.5	72.5	72.5	72.5
12	72.5	72.5	72.5	72.5	72.5	72.5
14	72.5	72.5	72.5	72.5	72.5	72.5
16	72.5	72.5	72.5	72.5	72.5	72.5
18	72.5	72.5	72.5	72.5	72.5	72.5
20	72.5	72.5	72.5	72.5	72.5	72.5
22	72.5	72.5	72.5	72.5	72.5	72.5
24	72.5	72.5	72.5	72.5	72.5	72.5
26	72.5	72.5	72.5	72.5	72.5	72.5
28	72.5	72.5	72.5	72.5	72.5	72.5
30	72.5	72.5	72.5	72.5	72.5	72.4
32	72.5	72.5	72.5	72.5	72.5	71.5
34	72.5	72.5	72.5	72.5	72.5	70.5
36	72.5	72.5	72.5	72.5	72.5	69.4
38	72.5	72.5	72.5	72.5	72.5	68.2
40	72.5	72.5	72.5	72.5	71.3	66.9
42	72.5	72.5	72.5	72.5	69.3	65.6
44	72.5	72.5	72.5	72.5	63.2	64.1

WEIGHT 1000 KG	RUNWAY LENGTH (METERS)					
	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
50	1265	1295	1330	1375	1420	1470
52	1290	1325	1365	1410	1455	1505
54	1320	1355	1395	1445	1490	1540
56	1350	1390	1430	1480	1530	1580
58	1380	1425	1470	1515	1570	1620
60	1415	1460	1505	1555	1610	1665
62	1450	1495	1545	1595	1650	1710
64	1485	1535	1585	1640	1695	1755
66	1520	1575	1630	1680	1740	1805
68	1560	1620	1675	1725	1785	1855
70	1600	1665	1720	1775	1830	1905
72	1640	1710	1765	1820	1880	1960
74	1680	1755	1815	1870	1930	2015

TABLE 62. AIRCRAFT PERFORMANCE, TAKEOFF (BOEING 727-200 SERIES)
JT8D-15 ENGINE, 25° FLAPS

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 KG)						
TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	36.2	31.0	26.5	22.2	17.3	13.7
12	33.7	31.0	26.5	22.2	17.3	13.7
14	33.7	31.0	26.5	22.2	17.3	13.7
16	33.7	31.0	26.5	22.2	17.3	13.7
18	33.7	31.0	26.5	22.2	17.3	13.7
20	33.7	31.0	26.5	22.2	17.3	13.7
22	33.7	31.0	26.5	22.2	17.3	13.7
24	33.7	31.0	26.5	22.2	17.3	13.7
26	33.7	29.0	25.0	20.9	16.8	13.6
28	33.3	28.9	24.0	20.9	16.8	13.7
30	32.9	27.6	23.0	20.9	16.8	13.7
32	31.5	26.5	22.0	20.9	16.8	13.7
34	30.2	25.4	21.0	20.9	16.8	13.7
36	28.9	24.3	20.9	20.9	16.8	13.7
38	27.7	23.1	20.9	20.9	16.8	13.7
40	26.5	22.0	20.8	20.9	16.8	13.7
42	25.3	20.9	20.7	20.9	16.8	13.7
44	24.3	20.8	20.7	20.9	16.8	13.7

REFERENCE FACTOR "R"						
TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	53.6	58.2	65.5	75.3	86.5	99.2
12	53.7	58.3	65.7	75.4	86.6	99.3
14	53.7	58.6	66.0	75.5	86.6	99.3
16	53.8	59.0	66.5	75.9	86.9	99.4
18	53.9	59.5	67.0	76.4	87.5	100.2
20	54.2	60.1	67.8	77.1	88.2	101.3
22	54.3	60.3	68.6	78.0	89.3	102.6
24	54.8	61.7	69.6	79.1	90.5	104.2
26	55.5	62.6	70.8	80.4	92.0	105.9
28	56.3	63.7	72.0	81.9	93.7	108.0
30	57.3	64.9	73.5	83.5	95.6	110.2
32	58.4	66.2	75.0	85.4	97.7	112.7
34	59.7	67.6	76.7	87.4	100.1	115.4
36	61.1	69.2	78.5	89.6	102.7	118.3
38	62.6	70.8	80.5	92.0	105.5	121.5
40	64.3	72.6	82.6	94.6	108.6	124.9
42	66.2	74.5	84.9	97.3	111.9	128.6
44	68.2	76.5	87.3	100.3	115.4	132.5

RUNWAY LENGTH (METERS)									
WEIGHT 1000 KG	REFERENCE FACTOR "R"								
	55	65	75	85	95	105	115	125	135
50	1065	1275	1465	1640	1810	1975	2135	2300	2465
60	1140	1355	1560	1750	1935	2115	2290	2475	2655
62	1215	1445	1660	1865	2065	2260	2460	2650	2870
64	1295	1535	1765	1985	2205	2420	2635	2855	3085
66	1380	1630	1875	2115	2350	2585	2820	3065	3310
68	1465	1735	1995	2250	2505	2760	3020	3280	3545
70	1555	1840	2120	2395	2670	2945	3225	3505	3795
72	1645	1950	2250	2545	2845	3140	3440	3740	4040
74	1740	2065	2385	2705	3025	3345	3665	3985	
76	1840	2180	2525	2870	3215	3560	3900		
78	1940	2305	2675	3045	3415	3780			
80	2045	2435	2825	3225	3620	4010			
82	2150	2565	2985	3410	3835				
84	2260	2700	3150	3605	4055				
86	2370	2845	3320	3805					
88	2490	2990	3500	4015					
90	2605	3140	3680						

TABLE 63. AIRCRAFT PERFORMANCE, TAKEOFF (BOEING 727-200 SERIES)
JT8D-15 ENGINE, 20° FLAPS

TEMP °C	MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 KG)					
	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	89.4	86.8	81.8	77.4	72.8	69.1
12	89.4	86.8	81.8	77.4	72.8	68.1
14	89.4	86.8	81.8	77.4	72.8	68.1
16	89.4	86.8	81.8	77.4	72.8	68.1
18	89.4	86.8	81.8	77.4	72.8	68.1
20	89.4	86.8	81.8	77.4	72.8	68.1
22	89.4	86.8	81.8	77.4	72.8	68.1
24	89.4	86.8	81.8	77.4	72.8	68.1
26	89.4	85.4	80.3	75.7	71.4	66.9
28	89.4	84.2	79.2	74.7	70.4	66.0
30	83.5	83.0	78.1	73.7	69.4	65.1
32	37.1	81.9	77.1	72.6	68.3	64.1
34	35.7	80.7	76.0	71.5	67.3	63.2
36	34.4	79.5	74.8	70.4	66.3	62.3
38	33.1	78.3	73.7	69.4	65.2	61.4
40	31.8	77.1	72.6	68.2	64.2	60.5
42	30.6	75.9	71.4	67.1	63.2	59.6
44	29.4	74.7	70.2	66.0	62.1	58.7

TEMP °C	REFERENCE FACTOR "R"					
	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	55.4	60.7	66.6	73.5	80.3	101.9
12	55.4	60.8	68.7	76.6	89.9	102.0
14	55.5	61.1	68.9	78.6	89.9	102.3
16	55.6	61.4	69.3	79.0	90.2	102.3
18	55.6	61.9	69.9	79.5	90.3	103.7
20	56.0	62.6	70.6	80.2	91.6	104.3
22	56.4	63.3	71.5	81.1	92.6	106.2
24	57.1	64.2	72.5	82.2	93.9	107.8
26	57.3	65.2	73.6	83.6	95.4	109.6
28	58.7	66.3	74.9	85.1	97.2	111.8
30	59.7	67.6	76.4	86.8	99.2	114.1
32	60.9	68.9	78.0	88.7	101.4	116.7
34	62.2	70.4	79.8	90.8	103.9	119.6
36	63.6	72.0	81.7	93.1	106.6	122.7
38	65.2	73.8	83.8	95.6	109.5	126.1
40	66.9	75.6	86.0	98.2	112.7	129.7
42	68.7	77.6	88.4	101.1	116.1	133.6
44	70.7	79.7	90.9	104.2	119.8	137.7

WEIGHT 1000 KG	REFERENCE FACTOR "R"							
	55	65	75	85	95	105	115	125
58	1100	1300	1485	1665	1830	1995	2155	2315
60	1165	1380	1575	1770	1950	2130	2305	2490
62	1240	1460	1675	1880	2080	2275	2470	2660
64	1315	1550	1775	2000	2215	2430	2645	2855
66	1395	1640	1835	2125	2360	2595	2825	3060
68	1475	1740	2000	2260	2515	2770	3020	3275
70	1560	1840	2120	2400	2675	2950	3225	3500
72	1650	1950	2250	2545	2845	3145	3440	3740
74	1740	2060	2380	2700	3025	3345	3655	3990
76	1835	2190	2520	2865	3210	3555	3900	
78	1935	2300	2665	3035	3405	3775	4150	
80	2035	2425	2815	3210	3605	4005		
82	2140	2555	2975	3395	3820			
84	2250	2690	3140	3575	4040			
86	2360	2835	3310	3745				
88	2475	2980	3485	3990				
90	2595	3130	3665	4245				

TABLE 64. AIRCRAFT PERFORMANCE, TAKEOFF (BOEING 727-200 SERIES)
JT8D-15 ENGINE, 15° FLAPS

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 KG)						
TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	89.4	89.4	86.9	82.0	77.0	72.2
12	89.4	89.4	86.9	82.0	77.0	72.2
14	89.4	89.4	86.9	82.0	77.0	72.2
16	89.4	89.4	86.9	82.0	77.0	72.2
18	89.4	89.4	86.9	82.0	77.0	72.2
20	89.4	89.4	86.9	82.0	77.0	72.2
22	89.4	89.4	86.9	82.0	77.0	72.2
24	89.4	89.4	86.9	82.0	77.0	72.2
26	89.4	89.4	85.2	80.3	75.7	71.1
28	89.4	89.4	84.1	79.2	74.6	70.1
30	89.4	88.1	83.0	78.1	73.5	69.1
32	89.4	86.9	81.8	77.0	72.5	68.9
34	89.4	85.6	80.6	75.9	71.4	67.0
36	89.4	84.3	79.4	74.7	70.3	66.0
38	88.1	83.0	78.2	73.6	69.2	64.9
40	86.7	81.8	77.0	72.4	68.0	63.9
42	85.4	80.5	75.7	71.2	66.9	62.8
44	84.2	79.2	74.4	70.0	65.8	61.7

REFERENCE FACTOR "R"						
TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	59.4	64.1	72.0	82.4	94.4	107.0
12	59.4	64.2	72.3	82.5	94.5	107.9
14	58.5	64.4	72.5	82.6	94.5	108.2
16	58.6	64.8	73.0	83.0	94.9	108.8
18	58.7	65.3	73.5	83.6	95.6	109.7
20	59.1	65.9	74.3	84.3	96.4	110.7
22	59.6	66.7	75.1	85.3	97.4	111.7
24	60.3	67.6	76.2	86.5	98.9	113.7
26	61.1	68.6	77.4	87.9	100.5	115.6
28	62.1	69.7	78.8	89.4	102.3	117.0
30	63.2	71.1	80.3	91.2	104.4	118.2
32	64.4	72.5	82.0	93.2	106.7	122.3
34	65.7	74.1	83.8	95.4	109.2	125.8
36	67.3	75.8	85.8	97.8	112.0	129.0
38	69.0	77.7	88.0	100.4	115.0	132.4
40	70.7	79.6	90.3	103.1	118.3	135.1
42	72.6	81.7	92.8	106.1	121.8	140.1
44	74.7	84.0	95.5	109.3	125.6	144.3

RUNWAY LENGTH (METERS)								
WEIGHT 1000 KG	REFERENCE FACTOR "R"							
	58	68	78	88	98	108	118	128
59	1210	1385	1590	1800	2015	2220	2405	2560
61	1280	1490	1690	1905	2120	2325	2510	2675
63	1355	1575	1800	2030	2235	2445	2640	2820
65	1435	1675	1910	2140	2365	2585	2795	2995
67	1520	1770	2030	2275	2510	2740	2970	3205
69	1605	1890	2155	2415	2665	2920	3175	3440
71	1700	2000	2285	2560	2835	3110	3400	3710
73	1795	2115	2425	2720	3020	3325	3630	4005
75	1895	2235	2565	2835	3215	3555	3925	4335
77	1995	2360	2710	3060	3420	3805	4225	
79	2105	2490	2865	3245	3645	4075		
81	2215	2620	3025	3475	3890	4360		
83	2330	2755	3195	3640	4125			
85	2450	2905	3355	3850	4385			
87	2575	3040	3510	4065				
89	2705	3190	3715	4295				

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Appendix 6TABLE 65. AIRCRAFT PERFORMANCE, TAKEOFF (BOEING 727-200 SERIES)
JT8D-15 ENGINE, 5° FLAPS

TEMP °C	MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 KG)					
	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	89.4	89.4	89.4	85.1	80.0	75.2
12	89.4	89.4	89.4	85.1	80.0	75.2
14	89.4	89.4	89.4	85.1	80.0	75.2
16	89.4	89.4	89.4	85.1	80.0	75.2
18	89.4	89.4	89.4	85.1	80.0	75.2
20	89.4	89.4	89.4	85.1	80.0	75.2
22	89.4	89.4	89.4	85.1	80.0	75.2
24	89.4	89.4	89.4	85.1	80.0	75.2
26	89.4	89.4	88.5	83.5	78.7	73.6
28	89.4	89.4	87.3	82.4	77.5	72.6
30	89.4	89.4	86.1	81.2	76.4	71.6
32	89.4	89.4	84.9	80.0	75.2	70.5
34	89.4	88.9	81.7	79.8	74.1	69.5
36	89.4	87.6	82.5	77.6	73.0	69.4
38	89.4	86.2	81.2	76.4	71.8	67.4
40	89.4	84.9	80.0	75.2	70.7	66.3
42	88.7	83.6	78.7	74.0	69.6	65.3
44	87.3	82.3	77.5	72.8	68.4	64.2

TEMP °C	REFERENCE FACTOR "R"					
	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	65.0	72.3	82.0	94.2	109.1	122.9
12	66.0	72.5	82.1	94.3	109.2	123.3
14	66.0	72.9	82.4	94.3	109.3	124.0
16	66.2	73.4	82.9	94.7	109.7	125.0
18	66.3	74.0	83.4	95.3	109.5	126.3
20	66.7	74.8	84.5	96.2	110.5	127.8
22	67.4	75.7	85.5	97.3	111.9	129.5
24	68.1	76.3	86.7	98.7	113.3	131.6
26	69.1	77.0	87.1	100.3	115.2	133.9
28	70.1	77.6	87.7	102.1	117.4	136.6
30	71.4	78.9	88.5	104.2	119.3	139.2
32	72.3	82.3	89.5	106.5	122.5	142.3
34	74.4	84.3	89.6	109.1	125.5	145.7
36	76.2	86.3	97.9	111.9	128.3	149.3
38	79.1	88.3	100.4	114.9	132.3	153.2
40	82.2	90.6	103.1	119.2	136.2	157.3
42	85.4	92.9	106.0	121.8	140.3	161.7
44	88.3	95.4	109.1	125.6	144.7	166.4

WEIGHT 1000 KG	RUNWAY LENGTH (METERS)								
	REFERENCE FACTOR "R"								
	70	80	90	100	110	120	130	140	150
58	1380	1575	1760	1940	2115	2285	2450	2610	2770
60	1470	1675	1870	2065	2250	2435	2615	2795	2970
62	1565	1770	1990	2195	2395	2595	2795	2990	3195
64	1660	1890	2115	2335	2555	2770	2935	3200	3415
66	1765	2010	2250	2495	2720	2955	3190	3425	3660
68	1870	2130	2390	2645	2900	3155	3410	3665	3920
70	1980	2260	2540	2815	3090	3365	3645	3920	4195
72	2100	2395	2695	2995	3295	3590	3890	4190	
74	2220	2540	2860	3135	3505	3830	4150		
76	2345	2690	3035	3370	3730	4030			
78	2475	2840	3215	3590	3965	4340			
80	2610	3005	3405	3805	4210				
82	2745	3170	3600	4035					
84	2890	3340	3805	4270					
86	3040	3520	4015						
88	3190	3705	4235						

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TABLE 66. AIRCRAFT PERFORMANCE, LANDING (BOEING 737-200 SERIES)
JT8D-15 ENGINE, 40° FLAPS

MAXIMUM ALLOWABLE LANDING WEIGHT (1000 KG)

TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	46.8	46.8	46.8	46.8	45.6	42.7
12	46.8	46.8	46.8	46.8	45.6	42.7
14	46.8	46.8	46.8	46.8	45.6	42.7
16	46.8	46.8	46.8	46.8	45.6	42.7
18	46.8	46.8	46.8	46.8	45.6	42.7
20	46.8	46.8	46.8	46.8	45.4	42.4
22	46.8	46.8	46.8	46.8	45.1	42.2
24	46.8	46.8	46.8	46.7	44.8	41.9
26	46.8	46.8	46.8	46.6	44.4	41.6
28	46.8	46.8	46.8	46.7	43.9	41.2
30	46.8	46.8	46.8	46.2	43.5	40.3
32	46.8	46.8	46.8	45.6	42.9	40.4
34	46.8	46.8	46.8	45.0	42.4	39.3
36	46.8	46.8	46.8	44.4	41.7	39.3
38	46.8	46.8	46.4	43.7	41.1	38.6
40	46.8	46.8	45.6	42.9	40.4	37.9
42	46.8	46.8	44.8	42.2	39.6	37.2
44	46.8	46.6	43.9	41.3	38.8	36.4

RUNWAY LENGTH (METERS)

WEIGHT 1000 KG	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
32	1210	1260	1305	1350	1395	1450
34	1265	1315	1360	1410	1465	1525
36	1320	1370	1420	1475	1535	1600
38	1375	1430	1485	1540	1605	1675
40	1430	1485	1545	1610	1675	1745
42	1485	1545	1610	1675	1745	1820
44	1545	1610	1675	1745	1815	1895
46	1605	1670	1740	1810	1885	1965
48	1665	1735	1805	1880	1955	2035
50	1725	1800	1875	1950	2025	2110

AIRPLANE CHARACTERISTICS	UNIT OF MEASURE	ADVANCED 200	OPTIONS 200C
MAXIMUM TAKEOFF WEIGHT	KG	49 480	52 440
MAXIMUM LANDING WEIGHT			
FLAPS 30°	KG	44 490	46 760
FLAPS 40°	KG	40 690	46 760
TYPICAL OPERATING EMPTY	KG	30 499	31 815 ^{1/}
WEIGHT PLUS RESERVE FUEL	KG	32 423	33 740 ^{2/}
AVERAGE FUEL CONSUMPTION	KG/KM	4.23	4.23
TYPICAL MAXIMUM PASSENGER LOAD AT 90.7 KG./PASSENGER	KG	11 791	11 791
MAXIMUM STRUCTURAL PAYLOAD	KG	15 810	14 500

^{1/} Based on 1.25 hours of reserve fuel.

^{2/} Based on 2.00 hours of reserve fuel.

TABLE 67. AIRCRAFT PERFORMANCE, LANDING (BOEING 737-200 SERIES)
JT8D-15 ENGINE, 30° FLAPS

MAXIMUM ALLOWABLE LANDING WEIGHT (1000 KG)

TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	46.8	46.8	46.8	46.8	45.6	42.7
12	46.8	46.8	46.8	46.8	45.6	42.7
14	46.8	46.8	46.8	46.8	45.6	42.7
16	46.8	46.8	46.8	46.8	45.6	42.7
18	46.8	46.8	46.8	46.8	45.6	42.7
20	46.8	46.8	46.8	46.8	45.4	42.4
22	46.8	46.8	46.8	46.8	45.1	42.2
24	46.8	46.8	46.8	46.8	44.8	41.9
26	46.8	46.8	46.8	46.8	44.4	41.6
28	46.8	46.8	46.8	46.7	43.9	41.2
30	46.8	46.8	46.8	46.2	43.5	40.8
32	46.8	46.8	46.8	45.6	42.9	40.4
34	46.8	46.8	46.8	45.0	42.4	39.8
36	46.8	46.8	46.8	44.4	41.7	39.3
38	46.8	46.8	46.4	43.7	41.1	38.6
40	46.8	46.8	45.6	42.9	40.4	37.9
42	46.8	46.8	44.8	42.2	39.6	37.2
44	46.8	46.6	43.9	41.3	38.8	36.4

RUNWAY LENGTH (METERS)

WEIGHT 1000 KG	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
32	1305	1355	1405	1455	1510	1570
34	1365	1420	1475	1525	1585	1650
36	1425	1485	1545	1600	1660	1730
38	1485	1555	1610	1670	1730	1805
40	1550	1620	1680	1740	1805	1885
42	1615	1685	1750	1810	1880	1960
44	1680	1750	1815	1885	1955	2040
46	1745	1815	1885	1955	2030	2115
48	1810	1880	1950	2025	2105	2195
50	1880	1945	2020	2100	2185	2270

TABLE 68. AIRCRAFT PERFORMANCE, TAKEOFF (BOEING 737-200 SERIES)
JT8D-15 ENGINE, 25° FLAPS

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 KG)						
TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	47.4	44.4	42.0	39.3	36.9	35.0
12	47.3	44.2	42.0	39.3	36.9	35.0
14	47.2	44.0	42.0	39.3	36.9	35.0
16	47.1	43.8	42.0	39.3	36.9	35.0
18	47.0	43.6	42.0	39.3	36.9	35.0
20	45.8	44.2	42.1	39.5	36.9	34.5
22	45.8	44.0	41.7	39.2	36.6	34.3
24	45.8	43.8	41.4	38.8	36.3	34.1
26	45.6	43.4	41.0	38.4	36.0	33.9
28	45.4	43.1	40.5	38.0	35.6	33.6
30	45.1	42.6	40.1	37.6	35.3	33.3
32	44.7	42.1	39.5	37.1	34.9	32.9
34	44.2	41.6	39.0	36.6	34.4	32.6
36	43.7	41.0	38.4	36.0	33.9	32.2
38	43.0	40.3	37.8	35.5	33.1	31.7
40	42.3	39.6	37.1	34.9	33.1	31.3
42	41.4	38.8	36.4	34.3	32.4	30.8
44	40.5	37.9	35.7	33.7	31.9	30.3

REFERENCE FACTOR "R"						
TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	43.5	46.0	53.1	60.3	68.2	77.2
12	43.7	46.3	53.2	60.3	68.3	77.4
14	43.9	46.6	53.4	60.5	68.6	77.8
16	44.1	47.0	53.7	60.8	69.0	78.4
18	44.3	47.3	54.1	61.3	69.5	79.1
20	44.5	48.4	54.7	61.9	70.2	79.9
22	44.7	49.0	55.3	62.6	71.0	80.9
24	44.9	49.7	56.1	63.4	72.0	82.0
26	45.3	50.5	57.0	64.4	73.1	83.2
28	45.7	51.4	57.9	65.5	74.4	84.6
30	46.6	52.4	59.0	66.8	75.7	86.1
32	47.6	53.5	60.3	68.1	77.3	87.9
34	48.6	54.6	61.6	69.7	79.0	89.6
36	49.7	55.9	63.0	71.3	80.8	91.6
38	50.9	57.2	64.6	73.1	82.7	93.6
40	52.1	58.6	66.2	75.0	84.8	95.9
42	53.4	60.2	68.0	77.0	87.1	98.3
44	54.8	61.8	69.9	79.1	89.4	100.9

RUNWAY LENGTH (METERS)							
WEIGHT 1000 KG	REFERENCE FACTOR "R"						
	40	50	60	70	80	90	100
32	700	835	960	1090	1205	1345	1500
34	730	870	1000	1135	1260	1405	1575
36	760	905	1040	1180	1315	1470	1650
38	790	940	1080	1220	1360	1530	1735
40	825	985	1130	1270	1415	1595	1835
42	865	1030	1185	1330	1475	1675	1955
44	910	1085	1250	1400	1550	1775	2095
46	960	1145	1320	1480	1645	1895	2265
48	1015	1210	1400	1575	1760	2035	2465
50	1075	1280	1490	1680	1895	2205	2695
52	1140	1365	1595	1805	2055	2405	2955
54	1215	1460	1720	1945	2235	2635	3255

TABLE 69. AIRCRAFT PERFORMANCE, TAKEOFF (BOEING 737-200 SERIES)
JT8D-15 ENGINE, 15° FLAPS

MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 KG)

TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	49.9	46.9	44.3	41.5	39.0	36.7
12	49.8	46.7	44.3	41.5	39.0	36.7
14	49.7	46.5	44.3	41.5	39.0	36.7
16	49.6	46.3	44.3	41.5	39.0	36.7
18	49.5	46.1	44.3	41.5	39.0	36.7
20	48.3	46.6	44.3	41.5	38.9	36.4
22	48.3	46.4	43.9	41.2	38.5	36.1
24	48.2	46.0	43.6	40.9	38.3	35.9
26	48.0	45.7	43.1	40.5	38.0	35.6
28	47.8	45.3	42.7	40.1	37.6	35.2
30	47.4	44.8	42.2	39.7	37.2	34.9
32	47.0	44.3	41.7	39.2	36.8	34.5
34	46.5	43.7	41.1	39.7	36.4	34.1
36	45.9	43.1	40.5	38.1	35.8	33.6
38	45.3	42.4	39.9	37.5	35.3	33.1
40	44.5	41.7	39.2	36.9	34.7	32.6
42	43.7	40.9	38.4	36.2	34.1	32.1
44	42.9	40.1	37.7	35.4	33.4	31.6

REFERENCE FACTOR "R"

TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	46.0	48.5	56.2	63.6	71.8	81.2
12	46.3	48.9	56.3	63.7	71.9	81.4
14	46.6	49.4	56.6	64.0	72.2	81.8
16	46.9	49.8	56.9	64.3	72.7	82.3
18	47.2	50.3	57.4	64.8	73.3	83.0
20	47.5	51.0	57.9	65.5	74.0	83.9
22	47.8	51.7	58.6	66.2	74.9	84.9
24	48.1	52.5	59.4	67.1	75.9	86.1
26	48.4	53.3	60.3	68.1	77.1	87.4
28	48.7	54.3	61.3	69.3	78.4	88.9
30	49.1	55.3	62.4	70.5	79.9	90.5
32	50.2	56.4	63.7	72.0	81.5	92.3
34	51.4	57.7	65.0	73.5	83.2	94.3
36	52.6	58.9	66.5	75.2	85.1	96.4
38	53.8	60.3	68.0	77.0	87.2	98.7
40	55.1	61.8	69.7	78.9	89.4	101.2
42	56.5	63.4	71.5	80.9	91.7	103.8
44	57.9	65.0	73.4	83.1	94.2	106.5

RUNWAY LENGTH (METERS)

WEIGHT 1000 KG	REFERENCE FACTOR "R"						
	45	55	65	75	85	95	105
32	735	895	1035	1165	1295	1425	1570
34	815	985	1145	1300	1460	1630	1815
36	895	1085	1265	1445	1635	1840	2060
38	985	1190	1395	1600	1820	2050	2305
40	1080	1310	1540	1770	2010	2270	2545
42	1180	1440	1695	1950	2215	2490	2780
44	1285	1575	1860	2145	2425	2715	3010
46	1395	1725	2040	2350	2650	2945	3260
48	1510	1885	2235	2565	2880	3190	3465
50	1630	2050	2435	2795	3120	3415	3690
52	1760	2230	2655	3035	3370	3660	

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TABLE 70. AIRCRAFT PERFORMANCE, TAKEOFF (BOEING 737-300 SERIES)
JT8D-15 ENGINE, 5° FLAPS

TEMP °C	MAXIMUM ALLOWABLE TAKEOFF WEIGHT (1000 KG)					
	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	52.4	52.4	49.4	46.4	43.5	41.0
12	52.4	52.4	49.4	46.4	43.5	41.0
14	52.4	52.4	49.4	46.4	43.5	41.0
16	52.4	52.4	49.4	46.4	43.5	41.0
18	52.4	52.4	49.4	46.4	43.5	41.0
20	52.4	52.1	49.3	46.3	43.3	40.7
22	52.4	51.8	48.9	45.9	43.0	40.4
24	52.4	51.2	48.3	45.4	42.5	39.9
26	52.4	50.5	47.7	44.8	42.0	39.4
28	52.4	49.9	47.1	44.2	41.5	39.0
30	51.9	49.3	46.5	43.7	40.9	38.5
32	51.3	48.7	45.9	43.1	40.4	38.0
34	50.8	48.0	45.3	42.5	39.9	37.6
36	50.2	47.4	44.7	42.0	39.4	37.1
38	49.6	46.8	44.0	41.4	38.9	36.6
40	49.0	46.2	43.4	40.8	38.4	36.2
42	48.5	45.5	42.8	40.3	37.9	35.7
44	47.9	44.9	42.2	39.7	37.4	35.2

REFERENCE FACTOR "R"

TEMP °C	AIRPORT ELEVATION (METERS)					
	0	500	1000	1500	2000	2500
10	48.0	50.5	53.8	66.7	75.5	85.9
12	48.1	50.9	59.0	66.9	75.7	86.0
14	48.2	51.4	59.2	67.2	76.1	86.4
16	48.3	51.8	59.6	67.6	76.6	87.0
18	48.4	52.3	60.1	68.1	77.2	87.7
20	48.5	52.5	60.8	68.8	78.0	88.6
22	48.6	52.3	61.5	69.7	79.0	89.6
24	48.7	52.1	62.4	70.7	80.1	90.9
26	49.6	56.0	63.3	71.8	81.4	92.3
28	50.6	57.0	64.4	73.0	82.8	93.9
30	51.7	58.1	65.6	74.4	84.3	95.6
32	52.9	59.3	67.0	75.9	86.0	97.5
34	54.1	60.6	68.4	77.5	87.9	99.6
36	55.3	62.0	70.0	79.3	89.9	101.9
38	56.6	63.5	71.7	81.2	92.1	104.3
40	58.0	65.0	73.5	83.3	94.4	106.9
42	59.4	66.7	75.4	85.4	96.9	109.7
44	60.9	68.5	77.4	87.8	99.5	112.7

WINGSPAN LENGTH (METERS)

WEIGHT 1000 KG	REFERENCE FACTOR "R"						
	50	60	70	80	90	100	110
32	905	1060	1100	1225	1350	1435	1630
34	900	1060	1220	1370	1525	1695	1890
36	985	1170	1350	1525	1710	1915	2145
38	1035	1295	1495	1695	1905	2140	2400
40	1130	1425	1650	1890	2115	2370	2650
42	1305	1555	1720	2075	2335	2605	2900
44	1430	1720	2000	2280	2565	2850	3150
46	1550	1895	2195	2505	2805	3100	3400
48	1675	2055	2405	2740	3055	3355	3635
50	1840	2240	2625	2985	3320	3620	3975
52	1995	2435	2855	3245	3595	3935	4310

* APPENDIX 7. PRELIMINARY AIRCRAFT PERFORMANCE CURVES

1. AIRCRAFT PERFORMANCE CURVES. The aircraft performance curves contained in this Appendix are based on estimated operational data. Final aircraft performance curves for these airplanes will be published in the appropriate Appendices after certification and operational data have been received.
2. EXPLANATORY INSTRUCTIONS. Instructions for use of the preliminary aircraft performance curves are contained in Paragraphs 6, 10, and 14, and in the notes on the figures where applicable. The percentage increase of design runway landing length under wet or slippery conditions is explained in Paragraph 4-1 and contained in the appropriate figures.

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