AIRPORT PLANNING MANUAL

PSM 1-82-13

BOMBARDIER INC.
Bombardier Aerospace Regional Aircraft
Customer Support
123 Garratt Blvd., Downview, Ontario
Canada M3K 1Y5

Copyright© 2000 by Bombardier Inc. All rights reserved. No part of this work may be reproduced or copied in any form or by any means without written permission of Bombardier Inc.

Initial Issue: 4 August, 2000
The information, technical data and designs disclosed in this document (the “information”) are either the exclusive property of Bombardier Inc. or are subject to proprietary rights of others. The information is not to be used for design or manufacture or disclosed to others without the express prior written consent of Bombardier Inc. The holder of this document, by its retention and use, agrees to hold the information in confidence. These restrictions do not apply to persons having proprietary rights in the information, to the extent of those rights.
# AIRPORT PLANNING MANUAL

## TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>SECTION 1</td>
<td>PREFACE</td>
<td></td>
</tr>
<tr>
<td>1.0</td>
<td>Scope</td>
<td>1–1</td>
</tr>
<tr>
<td>1.1</td>
<td>Introduction</td>
<td>1–1</td>
</tr>
<tr>
<td>1.2</td>
<td>A Brief Description of the Q200 Aircraft (Model 201 and 202)</td>
<td>1–2</td>
</tr>
<tr>
<td>1.4</td>
<td>Guide to Series/Model Designations</td>
<td>1–3</td>
</tr>
<tr>
<td>SECTION 2</td>
<td>AIRCRAFT DESCRIPTION</td>
<td></td>
</tr>
<tr>
<td>2.0</td>
<td>Introduction</td>
<td>2–1</td>
</tr>
<tr>
<td>SECTION 3</td>
<td>AIRCRAFT PERFORMANCE</td>
<td></td>
</tr>
<tr>
<td>3.0</td>
<td>Introduction</td>
<td>3–1</td>
</tr>
<tr>
<td>3.1</td>
<td>Definitions</td>
<td>3–2</td>
</tr>
<tr>
<td>3.2</td>
<td>Use of Charts (Model 201)</td>
<td>3–2</td>
</tr>
<tr>
<td>3.2.1</td>
<td>Use of Charts (Model 202)</td>
<td>3–3</td>
</tr>
<tr>
<td>SECTION 4</td>
<td>GROUND MANEUVERING</td>
<td></td>
</tr>
<tr>
<td>4.0</td>
<td>Introduction</td>
<td>4–1</td>
</tr>
<tr>
<td>SECTION 5</td>
<td>TERMINAL SERVICING</td>
<td></td>
</tr>
<tr>
<td>5.0</td>
<td>Introduction</td>
<td>5–1</td>
</tr>
<tr>
<td>SECTION 6</td>
<td>OPERATING CONDITIONS AND NOISE DATA</td>
<td></td>
</tr>
<tr>
<td>6.0</td>
<td>Introduction</td>
<td>6–1</td>
</tr>
<tr>
<td>SECTION 7</td>
<td>PAVEMENT DATA</td>
<td></td>
</tr>
<tr>
<td>7.0</td>
<td>Introduction</td>
<td>7–1</td>
</tr>
<tr>
<td>SECTION 8</td>
<td>DERIVATIVE AIRCRAFT</td>
<td></td>
</tr>
<tr>
<td>8.0</td>
<td>Introduction</td>
<td>8–1</td>
</tr>
<tr>
<td>8.1</td>
<td>Q200 (Model 201)</td>
<td>8–1</td>
</tr>
<tr>
<td>8.2</td>
<td>Q200 (Model 202)</td>
<td>8–1</td>
</tr>
<tr>
<td>SECTION 9</td>
<td>SCALED Q200 DRAWING</td>
<td>9–1</td>
</tr>
</tbody>
</table>

4 AUG, 2000
## LIST OF ILLUSTRATIONS

### SECTION 2

<table>
<thead>
<tr>
<th>Figure</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>2−1</td>
<td>General Airplane Characteristics</td>
<td>2−2</td>
</tr>
<tr>
<td>2−2</td>
<td>CG Limits</td>
<td>2−3</td>
</tr>
<tr>
<td>2−3</td>
<td>General Airplane Dimensions</td>
<td>2−4</td>
</tr>
<tr>
<td>2−4</td>
<td>Ground Clearance</td>
<td>2−5</td>
</tr>
<tr>
<td>2−5</td>
<td>Interior Arrangement — Standard 37 Passenger Configuration</td>
<td>2−6</td>
</tr>
<tr>
<td>2−6</td>
<td>Cabin Cross Section</td>
<td>2−7</td>
</tr>
<tr>
<td>2−7</td>
<td>Baggage Compartment Dimensions and Loading Diagram</td>
<td>2−8</td>
</tr>
<tr>
<td>2−8</td>
<td>Baggage Compartment Nets and Tiedowns</td>
<td>2−9</td>
</tr>
<tr>
<td>2−9</td>
<td>Cargo Loading — Maximum Package Chart</td>
<td>2−10</td>
</tr>
<tr>
<td>2−10</td>
<td>Airstair Door Clearance</td>
<td>2−11</td>
</tr>
<tr>
<td>2−11</td>
<td>Baggage Compartment Door Clearance</td>
<td>2−12</td>
</tr>
<tr>
<td>2−12</td>
<td>Exterior Handles</td>
<td>2−13</td>
</tr>
</tbody>
</table>

### SECTION 3

<table>
<thead>
<tr>
<th>Figure</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>3−1</td>
<td>Payload Range at Maximum Cruise Rating and Long Range Cruise</td>
<td>3−4</td>
</tr>
<tr>
<td>3−2</td>
<td>Maximum Permissible Take—Off Weight (WAT LIMIT) Take—Off Flap 0° (Optional) (Model 201)</td>
<td>3−5</td>
</tr>
<tr>
<td>3−3</td>
<td>Maximum Permissible Take—Off Weight (WAT LIMIT) Take—Off Flap 0° (Model 202)</td>
<td>3−6</td>
</tr>
<tr>
<td>3−4</td>
<td>Maximum Permissible Take—Off Weight (WAT LIMIT) Take—Off Flap 5° (Model 201)</td>
<td>3−7</td>
</tr>
<tr>
<td>3−5</td>
<td>Maximum Permissible Take—Off Weight (WAT LIMIT) Take—Off Flap 5° (Model 202)</td>
<td>3−8</td>
</tr>
<tr>
<td>3−6</td>
<td>Maximum Permissible Take—Off Weight (WAT LIMIT) Take—Off Flap 15° (Model 201)</td>
<td>3−9</td>
</tr>
<tr>
<td>3−7</td>
<td>Maximum Permissible Take—Off Weight (WAT LIMIT) Take—Off Flap 15° (Model 202)</td>
<td>3−10</td>
</tr>
<tr>
<td>3−8</td>
<td>Take—Off Field Length Flap 0° (Optional) (Model 201)</td>
<td>3−11</td>
</tr>
<tr>
<td>3−9</td>
<td>Take—Off Field Length Flap 0° (Model 202)</td>
<td>3−12</td>
</tr>
<tr>
<td>3−10</td>
<td>Take—Off Field Length Flap 5° (Model 201)</td>
<td>3−13</td>
</tr>
<tr>
<td>3−11</td>
<td>Take—Off Field Length Flap 5° (Model 202)</td>
<td>3−14</td>
</tr>
<tr>
<td>3−12</td>
<td>Take—Off Field Length Flap 15° (Model 201)</td>
<td>3−15</td>
</tr>
<tr>
<td>3−13</td>
<td>Take—Off Field Length Flap 15° (Model 202)</td>
<td>3−16</td>
</tr>
<tr>
<td>3−14</td>
<td>Maximum Permissible Landing Weight (WAT LIMIT) Landing Flap 15°, Approach Flap 5° (Model 201)</td>
<td>3−17</td>
</tr>
<tr>
<td>3−15</td>
<td>Maximum Permissible Landing Weight (WAT LIMIT) Landing Flap 15°, Approach Flap 5° (Model 202)</td>
<td>3−18</td>
</tr>
<tr>
<td>3−16</td>
<td>Maximum Permissible Landing Weight (WAT LIMIT) Landing Flap 35°, Approach Flap 15° (Model 201)</td>
<td>3−19</td>
</tr>
<tr>
<td>3−17</td>
<td>Maximum Permissible Landing Weight (WAT LIMIT) Landing Flap 35°, Approach Flap 15° (Model 202)</td>
<td>3−20</td>
</tr>
</tbody>
</table>
### LIST OF ILLUSTRATIONS (Cont'd)

<table>
<thead>
<tr>
<th>Figure</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>SECTION 3 (Cont’d)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3–18</td>
<td>Unfactored Landing Distance – Flap 15°</td>
<td>3–21</td>
</tr>
<tr>
<td>3–19</td>
<td>Unfactored Landing Distance – Flap 35°</td>
<td>3–22</td>
</tr>
<tr>
<td>3–20</td>
<td>Landing Field Length Required</td>
<td>3–23</td>
</tr>
<tr>
<td>SECTION 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4–1</td>
<td>Turning Radii, No Slip Angle</td>
<td>4–2</td>
</tr>
<tr>
<td>4–2</td>
<td>Turning Radius at Minimum Power</td>
<td>4–3</td>
</tr>
<tr>
<td>4–3</td>
<td>Visibility from Cockpit in Static Position</td>
<td>4–4</td>
</tr>
<tr>
<td>4–4</td>
<td>Ground Line Visibility from Cockpit, Static Position</td>
<td>4–5</td>
</tr>
<tr>
<td>4–5</td>
<td>Greater than 90° Turn – Runway to Taxiway with Nose Gear and Cockpit</td>
<td>4–6</td>
</tr>
<tr>
<td>4–6</td>
<td>90° Turn – Runway to Taxiway with Nose Gear and Cockpit Tracks</td>
<td>4–7</td>
</tr>
<tr>
<td>4–7</td>
<td>90° Turn – Taxiway to Taxiway with Nose Gear and Cockpit Tracks</td>
<td>4–8</td>
</tr>
<tr>
<td>4–8</td>
<td>Runway Holding Bay (Apron)</td>
<td>4–9</td>
</tr>
<tr>
<td>4–9</td>
<td>Parking and Mooring</td>
<td>4–10</td>
</tr>
<tr>
<td>4–10</td>
<td>Nose Lift Dolly (For Hangar Storage Only)</td>
<td>4–11</td>
</tr>
<tr>
<td>SECTION 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5–1</td>
<td>Airplane Servicing Arrangement</td>
<td>5–1</td>
</tr>
<tr>
<td></td>
<td>(Typical – No APU)</td>
<td></td>
</tr>
<tr>
<td>5–2</td>
<td>Terminal Operations, Turnaround Station</td>
<td>5–2</td>
</tr>
<tr>
<td></td>
<td>(100% Passenger Exchange)</td>
<td></td>
</tr>
<tr>
<td>5–3</td>
<td>Terminal Operations, Turnaround Station</td>
<td>5–3</td>
</tr>
<tr>
<td></td>
<td>(50% Passenger Exchange)</td>
<td></td>
</tr>
<tr>
<td>5–4</td>
<td>Ground Service Connections</td>
<td>5–4</td>
</tr>
<tr>
<td>5–5</td>
<td>Ground Service Connections Data (Sheet 1 of 3)</td>
<td>5–5</td>
</tr>
<tr>
<td>5–5</td>
<td>Ground Service Connections Data (Sheet 2 of 3)</td>
<td>5–6</td>
</tr>
<tr>
<td>5–5</td>
<td>Ground Service Connections Data (Sheet 3 of 3)</td>
<td>5–7</td>
</tr>
<tr>
<td>5–6</td>
<td>Engine Starting Electrical Requirements</td>
<td>5–8</td>
</tr>
<tr>
<td>5–7</td>
<td>Ground Pneumatic Power Requirements</td>
<td>5–9</td>
</tr>
<tr>
<td></td>
<td>Heating and Cooling</td>
<td></td>
</tr>
<tr>
<td>5–8</td>
<td>Ground Air Conditioning Requirements Preconditioned</td>
<td>5–10</td>
</tr>
<tr>
<td></td>
<td>Airplane</td>
<td></td>
</tr>
<tr>
<td>5–9</td>
<td>Ground Towing Requirements</td>
<td>5–11</td>
</tr>
<tr>
<td>Figure</td>
<td>Title</td>
<td>Page</td>
</tr>
<tr>
<td>--------</td>
<td>-----------------------------------------------------------------------</td>
<td>--------</td>
</tr>
<tr>
<td>6−1</td>
<td>Jet Engine Exhaust Temperature and Prop/Engine</td>
<td>6−2</td>
</tr>
<tr>
<td></td>
<td>Slipstream Velocity Contours – Idle Power</td>
<td></td>
</tr>
<tr>
<td>6−2</td>
<td>Jet Engine Exhaust Temperature and Prop/Engine</td>
<td>6−3</td>
</tr>
<tr>
<td></td>
<td>Slipstream Velocity Contours – Taxi Power</td>
<td></td>
</tr>
<tr>
<td>6−3</td>
<td>Jet Engine Exhaust Temperature and Prop/Engine</td>
<td>6−4</td>
</tr>
<tr>
<td></td>
<td>Slipstream Velocity Contours – Take-Off Power</td>
<td></td>
</tr>
<tr>
<td>6−4</td>
<td>Take-Off and Landing Noise Footprint (A−Level Contours)</td>
<td>6−5</td>
</tr>
<tr>
<td>6−5</td>
<td>Optional APU-Exhaust Temperature and Distance Pattern</td>
<td>6−6</td>
</tr>
<tr>
<td>6−6</td>
<td>Optional APU-Exhaust A−Level Noise Contours</td>
<td>6−7</td>
</tr>
<tr>
<td>7−1</td>
<td>Landing Gear Footprint</td>
<td>7−2</td>
</tr>
<tr>
<td>7−2</td>
<td>Maximum Pavement Loads</td>
<td>7−3</td>
</tr>
<tr>
<td>7−3</td>
<td>Landing Gear Loading on Pavement</td>
<td>7−4</td>
</tr>
<tr>
<td>7−4</td>
<td>Flexible Pavement Design Curves for Critical Areas (Dual Wheel Gear)</td>
<td>7−5</td>
</tr>
<tr>
<td>7−5</td>
<td>Flexible Pavement Requirements – LCN Conversion</td>
<td>7−6</td>
</tr>
<tr>
<td>7−6</td>
<td>Rigid Pavement Requirements – LCN Conversion</td>
<td>7−7</td>
</tr>
<tr>
<td>7−7</td>
<td>Aircraft Classification Number Flexible Pavement</td>
<td>7−8</td>
</tr>
<tr>
<td>7−8</td>
<td>Aircraft Classification Number Rigid Pavement</td>
<td>7−9</td>
</tr>
<tr>
<td>7−9</td>
<td>Flexible Pavement Design Curves For Critical Areas (Dual Wheel Gear)</td>
<td>7−10</td>
</tr>
<tr>
<td>9−1</td>
<td>Scaled Q200 Drawing 1&quot; = 32' (1:384)</td>
<td>9−1</td>
</tr>
<tr>
<td>9−2</td>
<td>Scaled Q200 Drawing 1&quot; = 50' (1:600) and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1&quot; = 100' (1:1200)</td>
<td>9−2</td>
</tr>
<tr>
<td>9−3</td>
<td>Scaled Q200 Drawing 1:500 and 1:1000</td>
<td>9−3</td>
</tr>
</tbody>
</table>
SECTION 1

PREFACE

1.0 Scope

1.1 Introduction

1.2 A Brief Description of the Q200 Aircraft (Model 201 and 202)

1.3 Guide to Series/Model Designations
PREFACE

1.0 SCOPE

A. This manual provides airport planning data for the Q200 (Model 201 and 202) aircraft in a standardized format. Specific data should be co-ordinated with the operational procedures of end-user airlines and operators prior to facility design.

B. The performance data contained in Section 3 (Aircraft Performance) are for reference only. Refer to the applicable Approved Flight Manual (AFM) Q200 (Model 201 or 202) for specific performance information.

1.1 INTRODUCTION

A. The content of this document conforms to NAS 3601, Revision 6 (15 July/94). NAS 3601 is the result of agreements between representatives of the following organizations:

-- Aerospace industries
-- Airport Operators
-- Air Transport Association of America
-- International Air Transport Association

B. This manual provides Q200 (Model 201 and 202) data for airport planners and operators, airlines, architectural and engineering consultant organizations, and other interested industry agencies. Aircraft modifications and available options may alter model characteristics; therefore, the data contained in this manual represents the typical Q200 (Model 201 and 202) aircraft.

C. For more information contact:

Director, Technical Publications

Regional Aircraft Division

Bombardier Aerospace

Mail Stop N42-25

123 Garratt Boulevard, Downsview

Ontario, Canada, M3K 1Y5
1.2 A BRIEF DESCRIPTION OF THE Q200 (Model 201 and 202) AIRCRAFT

A. The Q200 (Model 201 and 202) is a pressurized, commercial transport airplane designed to accommodate up to 37 passengers. The aircraft establishes new standards in fuel efficiency, speed and comfort.

B. The aircraft is powered by two Pratt and Whitney PW123C or PW123D turboprop engines. Large diameter, slow turning Hamilton Standard 14SF-15 or 14SF-23 propellers provide high thrust efficiency and low noise levels.

C. The Q200 (Model 201 and 202) is capable of economic operations over a broad range of applications. These are:
   - Scheduled airline operations
   - Resource and regional development work
   - Corporate and military transport roles

D. The aircraft is capable of operation in ambient temperatures between −54°C (−65°F) and 48.9°C (120°F), unless otherwise specified. Transfer from one climate to another is accomplished without penalties or extensive modification or adjustments.

E. Significant features of interest to the airport planner include the following:
   - Engines are located high and on the wing.
   - The horizontal stabilizer is mounted on top of the fin, which places it higher than conventional locations.
   - The aircraft has a self-contained airstair entry door at the forward end of the cabin.
   - Servicing connections are provided for single station pressure refueling or overwing gravity refueling.
   - All servicing of the Q200 is accomplished with standard ground equipment.
   - High exhaust outlets produce modest pressure and temperature profiles.

1.3 GUIDE TO SERIES / MODEL DESIGNATIONS

<table>
<thead>
<tr>
<th>TYPE APPROVAL MODEL NO.</th>
<th>PWC ENGINE</th>
<th>MTOP (SHP)</th>
<th>MTOW (lb)</th>
<th>ANVS</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>201</td>
<td>PW123C</td>
<td>2150</td>
<td>36,300</td>
<td>Standard</td>
<td>C &amp; D Interior is current standard</td>
</tr>
<tr>
<td>202</td>
<td>PW123D</td>
<td>2150</td>
<td>36,300</td>
<td>Standard</td>
<td>C &amp; D Interior is current standard</td>
</tr>
</tbody>
</table>
SECTION 2

AIRCRAFT DESCRIPTION

2.0 Introduction

ILLUSTRATIONS

2–1 General Airplane Characteristics
2–2 CG Limits
2–3 General Airplane Dimensions
2–4 Ground Clearance
2–5 Interior Arrangement — Standard 37 Passenger Configuration
2–6 Cabin Cross — Section
2–7 Baggage Compartment Dimensions and Loading Diagram
2–8 Baggage Compartment Nets and Tiedowns
2–9 Cargo Loading — Maximum Package Chart
2–10 Airstair Door Clearance
2–11 Baggage Compartment Door Clearance
2–12 Exterior Handles
SECTION 2

AIRCRAFT DESCRIPTION

2.0 INTRODUCTION

General characteristics, arrangements and dimensions of the Q200 (Model 201 and 202) are provided in this section.

The Q200 (Model 201 and 202) has a maximum design take—off weight of 36,300 pounds (16,466 kg). Other weight parameters such as ramp weight, landing weight and zero fuel weight are set accordingly.

The following definitions are used throughout this manual (refer to Figure 2—1):

MAXIMUM DESIGN TAXI WEIGHT (MTW): Maximum weight for ground maneuvers as limited by aircraft strength and airworthiness requirements. (It includes weight of taxi and run—up fuel).

MAXIMUM DESIGN LANDING WEIGHT (MLW): Maximum weight for landing as limited by aircraft strength and airworthiness requirements.

MAXIMUM DESIGN TAKE—OFF WEIGHT (MTOW): Maximum weight for take—off as limited by aircraft strength and airworthiness requirements. (This is the maximum weight at start of the take—off run).

OPERATING WEIGHT EMPTY (OWE): Weight of structure, power plant, furnishings, systems, unusable fuel and other items of equipment that are considered an integral part of a particular airplane configuration. Also included are certain standard items, personnel, equipment and supplies necessary for full operations, excluding usable fuel and payload.

MAXIMUM DESIGN ZERO FUEL WEIGHT (MZFW): Maximum weight allowed before usable fuel and other specified usable agents must be loaded in defined sections of the aircraft, as limited by strength and airworthiness requirements.

MAXIMUM PAYLOAD: Maximum design zero fuel weight minus operational weight empty.

MAXIMUM SEATING CAPACITY: The maximum number of passengers specifically certified or anticipated for certification.

MAXIMUM CARGO VOLUME: The maximum space available for cargo.

USABLE FUEL: Fuel available for aircraft propulsion and optional A.P.U.
### DESCRIPTION

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>KILOGRAM</th>
<th>POUNDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAXIMUM DESIGN TAXI WEIGHT</td>
<td>16,556 kg</td>
<td>36,500 LB</td>
</tr>
<tr>
<td>MAXIMUM DESIGN LANDING WEIGHT</td>
<td>15,650 kg</td>
<td>34,500 LB</td>
</tr>
<tr>
<td>MAXIMUM DESIGN TAKE-OFF WEIGHT</td>
<td>16,466 kg</td>
<td>36,300 LB</td>
</tr>
<tr>
<td>OPERATING WEIGHT EMPTY (STANDARD AIRCRAFT)*</td>
<td>10,501 kg</td>
<td>23,151 LB</td>
</tr>
<tr>
<td>MAXIMUM DESIGN ZERO FUEL WEIGHT</td>
<td>14,515 kg</td>
<td>32,000 LB</td>
</tr>
<tr>
<td>MAXIMUM PAYLOAD (STANDARD AIRCRAFT)*</td>
<td>4,014 kg</td>
<td>8,849 KG</td>
</tr>
</tbody>
</table>

* Note: Figures shown are approximate. The Operating Empty Weight varies with aircraft configuration and custom installations.

### TANK CAPACITY – USABLE FUEL

<table>
<thead>
<tr>
<th>STANDARD TANKS</th>
<th>US GALS</th>
<th>LBS</th>
<th>LITRES</th>
<th>KG</th>
</tr>
</thead>
<tbody>
<tr>
<td>835</td>
<td>5678</td>
<td>3160</td>
<td></td>
<td>2576</td>
</tr>
</tbody>
</table>

---

**Figure 2–1 General Airplane Characteristics**

2–2 4 AUG, 2000
Figure 2–2 CG Limits
Figure 2–3 General Airplane Dimensions
## Maximum Ground Clearance

**Weight:** 22,000 lb  
C.G.: X392.3"  
Wt. On NLG: 2536 lb  
(1150 kg)

## Minimum Ground Clearance

**Weight:** 36,500 lb  
C.G.: X410.225"  
Z155.7"  
Wt. On NLG: 2013 lb  
(913 kg)

<table>
<thead>
<tr>
<th>ITEM</th>
<th>HEIGHT</th>
<th>FEET</th>
<th>METERS</th>
<th>FEET</th>
<th>METERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>TOP OF FUSELAGE</td>
<td>10.39</td>
<td>3.17</td>
<td>10.39</td>
<td>3.17</td>
</tr>
<tr>
<td>B</td>
<td>FLIGHT DECK</td>
<td>4.56</td>
<td>1.39</td>
<td>4.57</td>
<td>1.39</td>
</tr>
<tr>
<td>C</td>
<td>CABIN FLOOR</td>
<td>3.56</td>
<td>1.09</td>
<td>3.26</td>
<td>0.99</td>
</tr>
<tr>
<td>D</td>
<td>AIRSTAIR DOOR TYPE I EXIT SILL</td>
<td>3.39</td>
<td>1.03</td>
<td>3.34</td>
<td>1.02</td>
</tr>
<tr>
<td>E</td>
<td>FUSELAGE GROUND CLEARANCE</td>
<td>1.98</td>
<td>0.60</td>
<td>1.68</td>
<td>0.51</td>
</tr>
<tr>
<td>F</td>
<td>TYPE III EXIT SILL</td>
<td>5.22</td>
<td>1.59</td>
<td>5.07</td>
<td>0.55</td>
</tr>
<tr>
<td>G</td>
<td>BAGGAGE DOOR SILL</td>
<td>3.46</td>
<td>1.06</td>
<td>3.14</td>
<td>0.96</td>
</tr>
<tr>
<td>H</td>
<td>BAGGAGE STEP</td>
<td>4.47</td>
<td>1.36</td>
<td>4.14</td>
<td>1.26</td>
</tr>
<tr>
<td>I</td>
<td>VERTICAL STABILIZER</td>
<td>24.52</td>
<td>7.47</td>
<td>24.03</td>
<td>7.32</td>
</tr>
<tr>
<td>J</td>
<td>HORIZONTAL STABILIZER</td>
<td>23.69</td>
<td>7.22</td>
<td>23.19</td>
<td>7.07</td>
</tr>
<tr>
<td>K</td>
<td>WING TIP</td>
<td>11.88</td>
<td>3.62</td>
<td>11.70</td>
<td>3.57</td>
</tr>
<tr>
<td>L</td>
<td>PROP GROUND CLEARANCE</td>
<td>3.05</td>
<td>0.93</td>
<td>2.97</td>
<td>0.91</td>
</tr>
<tr>
<td>M</td>
<td>PROP HEIGHT CLEARANCE</td>
<td>16.05</td>
<td>4.89</td>
<td>15.97</td>
<td>4.87</td>
</tr>
</tbody>
</table>

**Note:** Dimensions are approximate.

**Figure 2-4 Ground Clearance**
Figure 2-5  Interior Arrangement – Standard 37 Passenger Configuration

37 PASSENGERS
Figure 2-6 Cabin Cross-Section
Figure 2-7 Baggage Compartment Dimensions and Loading Diagram
Figure 2-8 Baggage Compartment Nets and Tiedowns
### Figure 2-9 Cargo Loading — Maximum Package Chart

<table>
<thead>
<tr>
<th>Height (Inches)</th>
<th>Length (Inches)</th>
<th>Width (Inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>6</td>
<td>6</td>
<td>12</td>
</tr>
<tr>
<td>9</td>
<td>9</td>
<td>15</td>
</tr>
<tr>
<td>12</td>
<td>12</td>
<td>18</td>
</tr>
<tr>
<td>15</td>
<td>15</td>
<td>21</td>
</tr>
<tr>
<td>18</td>
<td>18</td>
<td>24</td>
</tr>
<tr>
<td>21</td>
<td>21</td>
<td>27</td>
</tr>
<tr>
<td>24</td>
<td>24</td>
<td>30</td>
</tr>
<tr>
<td>27</td>
<td>27</td>
<td>33</td>
</tr>
<tr>
<td>30</td>
<td>30</td>
<td>36</td>
</tr>
<tr>
<td>33</td>
<td>33</td>
<td>39</td>
</tr>
<tr>
<td>36</td>
<td>36</td>
<td>42</td>
</tr>
<tr>
<td>39</td>
<td>39</td>
<td>45</td>
</tr>
<tr>
<td>42</td>
<td>42</td>
<td>48</td>
</tr>
</tbody>
</table>

The chart above provides dimensions for cargo loading and maximum package capacity in a specific aircraft model.
Note:
Ground clearance dimensions are approximate only and may vary depending on aircraft configuration and loading conditions.

Figure 2-10 Airstair Door Clearance
NOTE
Clearance dimensions are approximate only and may vary depending on aircraft configuration and loading conditions.

Figure 2–11 Baggage Compartment Door Clearance
Figure 2-12 Exterior Handles
SECTION 3
AIRCRAFT PERFORMANCE

3.0 Introduction
3.1 Definitions
3.2 Use of Charts (Model 201)
3.2.1 Use of Charts (Model 202)

ILLUSTRATIONS
3–1 Payload Range at Maximum Cruise Rating and Long Range Cruise
3–2 Maximum Permissible Take–Off Weight (WAT LIMIT) Take–Off Flap 0° (Optional) (Model 201)
3–3 Maximum Permissible Take–Off Weight (WAT LIMIT) Take–Off Flap 0° (Model 202)
3–4 Maximum Permissible Take–Off Weight (WAT LIMIT) Take–Off Flap 5° (Model 201)
3–5 Maximum Permissible Take–Off Weight (WAT LIMIT) Take–Off Flap 5° (Model 202)
3–6 Maximum Permissible Take–Off Weight (WAT LIMIT) Take–Off Flap 15° (Model 201)
3–7 Maximum Permissible Take–Off Weight Take–Off Flap 15° (Model 202)
3–8 Take–Off Field Length – Flap 0° (Optional) (Model 201)
3–9 Take–Off Field Length – Flap 0° (Model 202)
SECTION 3
AIRCRAFT PERFORMANCE

ILLUSTRATIONS CONT’D.

3–10 Take–Off Field Length – Flap 5° (Model 201)
3–11 Take–Off Field Length – Flap 5° (Model 202)
3–12 Take–Off Field Length – Flap 15° (Model 201)
3–13 Take–Off Field Length – Flap 15° (Model 202)
3–14 Maximum Permissible Landing Weight (WAT LIMIT)
   Landing Flap 15°, Approach Flap 5° (Model 201)
3–15 Maximum Permissible Landing Weight (WAT LIMIT)
   Landing Flap 15°, Approach Flap 5° (Model 202)
3–16 Maximum Permissible Landing Weight (WAT LIMIT)
   Landing Flap 35°, Approach Flap 15° (Model 201)
3–17 Maximum Permissible Landing Weight (WAT LIMIT)
   Landing Flap 35°, Approach Flap 15° (Model 202)
3–18 Unfactored Landing Distance – Flap 15°
3–19 Unfactored Landing Distance – Flap 35°
3–20 Landing Field Length Required
AIRPORT PLANNING MANUAL

SECTION 3

AIRCRAFT PERFORMANCE

3.0 INTRODUCTION

This section contains the performance data for the Q200 (Model 201 and 202), as required for operations and Airport Planning purposes.

3.1 DEFINITIONS

The following are the definitions used in this Section:

**Maximum Structural Weights**

The maximum structural take-off and landing weights are as follows:

- Maximum Take-off Weight: 16,466 kg (36,300 lb)
- Maximum Landing Weight: 15,650 kg (34,500 lb)

**WAT Limits**

The maximum permissible take-off weight (Model 201: figure 3–2, figure 3–4 and figure 3–5), (Model 202: figure 3–3, figure 3–5 and figure 3–7) and landing weight (Model 201: figure 3–14 and figure 3–16), (Model 202: figure 3–15 and figure 3–17) are based on the limiting one engine inoperative climb requirements of FAR 25.

**Take-Off Field Length**

The take-off field length (Model 201: figure 3–8, figure 3–10 and figure 3–12), (Model 202: figure 3–9, figure 3–11 and figure 3–13) is the longest of:

(i) Accelerate stop distance.
(ii) Take-off distance to 35 ft. with one engine inoperative at $V_1$.
(iii) $1.15 \times$ all engine operating take-off distance to 35 ft.

**Landing Field Length**

The landing field length determined using figures 3–18 to 3–20 are based on an approach speed of 1.3 $V_s$ and a screen height of 50 ft. The landing field length factors, which are those required by FAR 121 are:

\[
\begin{align*}
\text{a)} & \quad \text{Destination Airport} \\
& \quad \text{Landing Field Length} = \text{Actual Landing Distance} \times \frac{1}{0.6} \\
\text{b)} & \quad \text{Alternate Airport} \\
& \quad \text{Landing Field Length} = \text{Actual Landing Distance} \times \frac{1}{0.7}
\end{align*}
\]

**Retardation Devices**

The following retardation devices are used:

(i) Main wheel anti-skid brakes
(ii) Both propellers in discing
AIRPORT PLANNING MANUAL

b) Landing — (i) Main wheel anti—skid brakes
(ii) Both propellers at flight idle

3.2 USE OF CHARTS (Model 201)
The use of charts is illustrated by "examples", which are depicted as arrowed broken lines.

EXAMPLE 1

Given: Outside Air Temperature = 26° C
Airfield Altitude = 6,000 ft

Find: Maximum permissible take—off weight with flaps 5°.

From figure 3—4: The maximum permissible take—off weight is 15,000 kg (33,070 lb).

EXAMPLE 2

Given: Outside Air Temperature = 26° C
Airfield Altitude = 6,000 ft
Aircraft Weight = 14,900 kg (32,850 lb)

Find: Take—off field length with flaps 5°.

From figure 3—10: The take—off field length is 1,525 m (5,005 ft).

EXAMPLE 3

Given: Outside Air Temperature = -4° C
Airfield Altitude = 9,000 ft

Find: Maximum permissible landing weight with flaps 35°.

From figure 3—16: The maximum permissible landing weight is 15,200 kg (33,520 lb).

EXAMPLE 4

Given: Airfield Altitude = 6,000 ft
Aircraft Weight = 14,700 kg (32,410 lb)

Find: Landing field length with flaps 15°.

From figure 3—18: The unfactored landing distance is 570 m (1,870 ft).

From figure 3—20: The landing field length at an operational factor of 1.67 (\(=\frac{1}{0.6}\)) is 950 m (3,120 ft).
The landing field length at an operational factor of 1.43 (\(=\frac{1}{0.7}\)) is 815 m (2,670 ft).
AIRPORT PLANNING MANUAL

3.2.1 USE OF CHARTS (Model 202)

The use of charts is illustrated by "examples", which are depicted as arrowed broken lines.

EXAMPLE 1

Given:  
Outside Air Temperature  = 26° C  
Airfield Altitude  = 7,000 ft

Find:  
Maximum permissible take-off weight with flaps 5°.

From figure 3—5: The maximum permissible take-off weight is 15,950 kg (35,170 lb).

EXAMPLE 2

Given:  
Outside Air Temperature  = 26° C  
Airfield Altitude  = 6,000 ft  
Aircraft Weight  = 14,900 kg (32,850 lb)

Find:  
Take-off field length with flaps 5°.

From figure 3—11: The take-off field length is 1,350 m (4,430 ft).

EXAMPLE 3

Given:  
Outside Air Temperature  = 26° C  
Airfield Altitude  = 8,000 ft

Find:  
Maximum permissible landing weight with flaps 35°.

From figure 3—17: The maximum permissible landing weight is 14,500 kg (31,970 lb).

EXAMPLE 4

Given:  
Airfield Altitude  = 6,000 ft  
Aircraft Weight  = 14,700 kg (32,410 lb)

Find:  
Landing field length with flaps 15°.

From figure 3—18: The unfactored landing distance is 570 m (1,870 ft).

From figure 3—20: The landing field length at an operational factor of 1.67 ($=\frac{1}{0.6}$) is 950 m (3,120 ft). The landing field length at an operational factor of 1.43 ($=\frac{1}{0.7}$) is 815 m (2,670 ft).
PAYLOAD-RANGE AT MAXIMUM CRUISE RATING AND LONG RANGE CRUISE

ASSOCIATED CONDITIONS:
1. MAXIMUM CRUISE ALTITUDE: 25,000 FT
2. IFR RESERVE
3. OPERATING WEIGHT EMPTY:
   - STANDARD TANKS: 10,338 KG (22,791 LB)
   - EXTENDED RANGE TANKS: 10,442 KG (23,021 LB)
4. TAKEOFF WEIGHT: 16,465 KG (36,300 LB)
5. MAXIMUM USEABLE FUEL:
   - STANDARD TANKS: 2,576 KG (5,678 LB)
   - EXTENDED RANGE TANKS: 3,402 KG (7,500 LB)
6. ISA, ZERO WIND

Figure 3-1 Payload Range at Maximum Cruise Rating and Long Range Cruise
Figure 3–3 (Model 202)
Figure 3–4 (Model 201)
Figure 3-5 (Model 202)
Figure 3-6 (Model 201)
Figure 3-7 (Model 202)
TAKE-OFF FIELD LENGTH - FLAP 0° (OPTIONAL)

ASSOCIATED CONDITIONS
1. DRY, HARD-LAND RUNWAY SURFACE, ZERO WIND.
2. BOTH ENGINES AT NORMAL TAKEOFF POWER TO VEF.
3. RETRACTION IN ACC-STBY; MAXIMUM MAIN WHEEL ANTI- SKID BRAKING, PROPELLERS AT DISC.

AIRFIELD ALTITUDE - 1000 FT

OUTSIDE AIR TEMPERATURE - °C

WEIGHT - 1000 KG

WEIGHT - 1000 LB

REFERENCE LINE

Figure 3–8 (Model 201)
Figure 3-9 (Model 202)
TAKE-OFF FIELD LENGTH - FLAP 5°

ASSOCIATED CONDITIONS
1. DRY, HARD, LEVEL RUNWAY SURFACE, ZERO WIND.
2. BOTH ENGINES AT NORMAL TAKEOFF POWER TO VEF, THEREAFTER MAX TAKEOFF POWER ON OPERATING ENGINE.
3. RETARDATION IN ACC.STOP: MAXIMUM MAIN WHEEL ANTI-SKID BRAKING, PROPELLERS AT DISC.

OUTSIDE AIR TEMPERATURE - °C  WEIGHT - 1000 LB
TAKE-OFF FIELD LENGTH - FLAP 5°

ASSOCIATED CONDITIONS
1. DRY, HARD, LEVEL RUNWAY SURFACE, ZERO WIND.
2. BOTH ENGINES AT NORMAL TAKEOFF POWER TO VEF, THEREAFTER MAX TAKEOFF POWER ON OPERATING ENGINE.
3. RETARDATION IN ACC.STOP: MAXIMUM MAIN WHEEL ANTI-SKID BRAKING, PROPELLERS AT DISC.

OUTSIDE AIR TEMPERATURE - °C

WEIGHT - 1000 LB
Figure 3-12 (Model 201)
MAXIMUM PERMISSIBLE LANDING WEIGHT (WAT LIMIT)

LANDING FLAP 15°, APPROACH FLAP 5°

WEIGHT - 1000 LB

EXAMPLE

STRUCTURAL LIMIT

Figure 3-14 (Model 201)
Figure 3–15 (Model 202)
Figure 3–16 (Model 201)
Figure 3–17 (Model 202)
UNFACTORED LANDING DISTANCE

FLAP 15°

ASSOCIATED CONDITIONS
1. DRY, HARD, LEVEL RUNWAY SURFACE, ZERO WIND
2. RETARDATION IN GROUND ROLL: MAXIMUM MAIN WHEEL ANTI-SKID BRAKING, PROPellers AT DISC.

Figure 3-18 (Model 201/202)
UNFACTORED LANDING DISTANCE

FLAP 35°

ASSOCIATED CONDITIONS
1. DRY, HARD, LEVEL RUNWAY SURFACE, ZERO WIND
2. RETARDATION IN GROUND ROLL: MAXIMUM
MAIN WHEEL ANTI-SKID BRAKING,
PROPellers AT DISC.

Figure 3-19
LANDING FIELD LENGTH REQUIRED

Figure 3-20
THIS PAGE INTENTIONALLY LEFT BLANK
SECTION 4

GROUND MANEUVERING

4.0 Introduction

ILLUSTRATIONS

4–1 Turning Radii, No Slip Angle
4–2 Turning Radius at Minimum Power
4–3 Visibility from Cockpit in Static Position
4–4 Ground Line Visibility from Cockpit, Static Position
4–5 Greater than 90° Turn — Runway to Taxiway with Nose Gear and Cockpit Tracks
4–6 90° Turn — Runway to Taxiway with Nose Gear and Cockpit Tracks
4–7 90° Turn — Taxiway to Taxiway with Nose Gear and Cockpit Tracks
4–8 Runway Holding Bay (Apron)
4–9 Parking and Mooring
4–10 Nose Lift Dolly (for Hangar Storage Only)
SECTION 4
GROUND MANEUVERING

4.0 INTRODUCTION

This section provides data on the following items:

- Aircraft turning Capability (refer to Figure 4–1, and Figure 4–2)
- Visibility from cockpit (refer to Figure 4–3, and Figure 4–4)
- Maneuvering characteristics (refer to Figure 4–5, Figure 4–6, Figure 4–7, and Figure 4–8)
- Mooring data (refer to Figure 4–9)
- Nose lifting precautions (refer to Figure 4–10)

This data has been determined from the theoretical limits imposed by the geometry of the aircraft and includes normal allowance for tire slippage (as indicated). The purpose of this section is to show the turning capability of the aircraft in favorable operating circumstances (without the use of reverse thrust or differential braking). Use this data as a guideline only.

Varying airline practices may use more conservative turning procedures to avoid excessive tire wear and reduce possible maintenance problems. The operating techniques of each airline will vary and may be modified from the standard operating patterns due to the following physical factors within the maneuvering area:

- Adverse grades
- Limited area
- High risk of jet engine exhaust or propeller slipstream damage

Because of these reasons, ground maneuvering requirements should be coordinated with the user airline prior to layout planning.

The use of a nose lift dolly as detailed in Figure 4–10 is not a procedure recommended by Bombardier. It should only be used when absolutely necessary for operational purposes. The use of a nose lift dolly is at the sole risk of the operator of the aircraft.
Figure 4–1 Turning Radii, No Slip Angle
MINIMUM TURNING CENTRE ON MAIN AXLE GEAR PROJECTION
STN X428.51

STN X111.63

60°
APPROX 2° DUE TO TIRE SLIP

STN Y155.20
STN Y193.61 STD, TIRE
STN Y193.66 HF TIRE CENTRE FOR MINIMUM TURN

RUNWAY WIDTH

<table>
<thead>
<tr>
<th>ITEM</th>
<th>RADIUS (STANDARD &amp; HIGH FLOTATION TIRES)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A  — OUTER WING TIP</td>
<td>59 FT 4 IN (18.06 m)</td>
</tr>
<tr>
<td>B  — ELEVATOR TIP</td>
<td>49 FT 4 IN (15.02 m)</td>
</tr>
<tr>
<td>C  — PROPELLER TIP</td>
<td>37 FT 4 IN (11.38 m)</td>
</tr>
<tr>
<td>D  — NOSE WHEEL (OUTER TIRE)</td>
<td>31 FT 10 IN (9.70 m)</td>
</tr>
<tr>
<td>E  — MAIN WHEEL (OUTER TIRE)</td>
<td>30 FT 3 IN (9.22 m)</td>
</tr>
<tr>
<td>F  — RUNWAY WIDTH MINIMUM FOR 180° TURN</td>
<td>62 FT 0 IN (18.90 m)</td>
</tr>
</tbody>
</table>

NOTES:
1. DIMENSIONS QUOTED ARE GIVEN FOR DRY, HARD, LEVEL SURFACE AT RECOMMENDED TIRE PRESSURES FOR STANDARD AIRCRAFT.
2. NOSE WHEEL STEERING LIMIT IS APPROXIMATELY 60° LEFT & RIGHT.
3. SLIP ANGLE OF 2° IS APPROXIMATE ONLY AND MAY VARY DEPENDING ON AIRCRAFT CONFIGURATION, LOADING & TIRE WEAR.
4. DIMENSIONS GIVEN FOR MANEUVERING CLEARANCE & TURNING RADII ARE MINIMUM RECOMMENDED LIMITS.

Figure 4—2 Turning Radius at Minimum Power
PILOT'S FIELD OF VIEW ALONG PLANE A
(facilitated by additional 5" or 0.13 m head movement)

PILOT'S EYE POSITION:
STATIC: 19½" (0.50 m)
5" (0.13m) OUTBOARD: 24½" (0.62 m)

Note:
Pilot's/Copilot's ref. eye position at fuselage STA X157.00
56" (1.42 m) above fuselage datum
19½" (0.50 m) from A/C centreline

Figure 4–3 Visibility from Cockpit in Static Position
GROUND LEVEL: STA Z57.00
(1 448 mm)

PILOT'S EYE POSITION:
STA X157.00 (3 988 mm)
STA Y19.50 (495 mm)
STA Z156.00 (3 962 mm)

Figure 4-4 Ground Line Visibility from Cockpit, Static Position
Figure 4-5 Greater Than 90° Turn — Runway to Taxiway with Nose Gear and Cockpit Tracks
Figure 4-6 90° Turn—Runway to Taxiway with Nose Gear and Cockpit Tracks

Note: Consult using airline for specific operating procedure.
Figure 4-7 90° Turn—Taxiway to Taxiway with Nose Gear and Cockpit Tracks

Note: Consult using airline for specific operating procedure.
Figure 4-8 Runway Holding Bay (Apron)

Note:
Consult using airline for specific operating procedure.
PARKING & MOORING PROCEDURE

1. Park airplane heading into wind with flaps up and nose wheel centered.
2. Engage parking brake, check brake accumulator gauge and pump up as required.
3. Lock control surfaces.
4. Engage nose gear ground lock.
5. Install main gear ground lock pins (see illustration).
6. Install protective covers.
7. Install propeller restraints.
8. Close all doors and windows.
9. Slightly ground airplane on undercarriage drag strut crossbeam (both sides).
10. Check nose and main wheels.
11. Moor airplane (see illustrations).

Figure 4–9 Parking and Mooring
Figure 4-10 Nose Lift Dolly (For Hangar Storage Only)

Associated Conditions:
1. Limit use in lift mode for hangar storage only.
2. Aircraft at basic weight with one brake operator.
3. Maximum tilt angle to be avoided if aircraft has appreciable fuel load.
4. Nose landing gear and main landing gear locked and MLG Pins installed.
5. Yard level surface.
6. Use of ramps over steps (i.e. hangar door tracks).
7. Zero to 5 mph wind velocity.
8. Limit turns to +10° to -10°.
9. Maximum tractor speed 5 mph (8 kmh).
10. Nose wheel steering switch "off".
11. Check aircraft brake system.
12. During towing use brakes only in emergency.
SECTION 5

TERMINAL SERVICING

ILLUSTRATIONS

5–1 Airplane Servicing Arrangement (Typical – No APU)
5–2 Terminal Operations, Turnaround Station (100% Passenger Exchange)
5–3 Terminal Operations, Enroute Station (50% Passenger Exchange)
5–4 Ground Service Connections
5–5 Ground Service Connection Data (3 sheets)
5–6 Engine Starting Electrical Requirements
5–7 Ground Pneumatic Power Requirements – Heating and Cooling
5–8 Ground Air Conditioning Requirements – Preconditioned Airplane
5–9 Ground Towing Requirements
SECTION 5
TERMINAL SERVICING

---

**SYSTEM** | **ADAPTER**
---|---
PRESSURE REFUELING | MS 24484-2
DC ELECTRICAL POWER | MS 3506-1 (AIRCRAFT CONNECTOR); MS 25488 (MATING GROUND CONNECTOR)
AC ELECTRICAL POWER | CANNON CE9310-10 (AIRCRAFT CONNECTOR) CE9183 (MATING GROUND CONNECTOR)
GROUND AIR CONDITIONING | MS 33562 6" (20.3 cm); RECEPTACLE (OPTIONAL INSTALLATION)
TOILET SERVICING | MS2651-133 ROYLYN "Y" DRAIN COUPLING PLUS STANDARD 1" (2.5 cm) FILLPORT
GROUND CREW INTERPHONE | 300 OHM IMPEDANCE THROAT MICROPHONE WITH SWITCH – AIRCRAFT CONNECTOR 72340012-001 (SWITCHCRAFT C-55B); MATING GROUND CONNECTOR PJ051B (NATO 4-WAY JACK PLUG)

---

Figure 5-1  Airplane Servicing Arrangement  
(TYPICAL – NO APU)
1. SHUTDOWN ENGINES
2. PROVIDE GROUND ELECTRICAL POWER
3. POSITION SERVICE EQUIPMENT
4. UNLOAD BAGGAGE
5. LOWER AIRSTAIR DOOR
6. DEPLANE 37 PASSENGERS
7. CHECK AIRPLANE LOG BOOK
8. SERVICE TOILET
9. SERVICE GALLEY (see 'A')
10. SERVICE AIRPLANE INTERIOR (see 'A')
11. PERFORM MAINTENANCE CHECK
12. REFUEL AIRPLANE (see 'B')
13. LOAD BAGGAGE
14. ENPLANE 37 PASSENGERS
15. CHECK AIRPLANE LOG BOOK
16. RAISE AIRSTAIR DOOR
17. START ENGINES
18. MONITOR ENGINE STARTS
19. CLEAR AIRPLANE FOR DEPARTURE

'A' - Galley and cabin serviced through airstair door.

'B' - Pumping time only, at a rate of 75 U.S. gpm (283.9 l/min).

Note:
This data is provided to illustrate the general scope and types of tasks involved in terminal operations. Varying airline practices and operating circumstances will result in different sequences and time intervals to accomplish the tasks shown. Because of this, ground operations requirements should be coordinated with the using airline prior to ramp planning.

Figure 5–2 Terminal Operations, Turnaround Station (100% Passenger Exchange)
NO REFUELING OR SERVICING
1. SHUTDOWN ENGINES
2. PROVIDE GROUND ELECTRICAL POWER
3. POSITION BAGGAGE HANDLING EQUIPMENT
4. UNLOAD BAGGAGE
5. LOWER AIRSTAIR DOOR
6. DEPLANE 18 PASSENGERS
7. CHECK AIRPLANE LOG BOOK
8. LOAD BAGGAGE
9. ENPLANE 18 PASSENGERS
10. CHECK AIRPLANE LOG BOOK
11. RAISE AIRSTAIR DOOR
12. START ENGINES
13. MONITOR ENGINE STARTS
14. CLEAR AIRPLANE FOR DEPARTURE

WITH REFUEILING & SERVICE
1. SHUTDOWN ENGINES
2. PROVIDE GROUND ELECTRICAL POWER
3. POSITION SERVICE EQUIPMENT
4. UNLOAD BAGGAGE
5. LOWER AIRSTAIR DOOR
6. DEPLANE 18 PASSENGERS
7. CHECK AIRPLANE LOG BOOK
8. SERVICE TOILET
9. SERVICE GALLEY (see 'A')
10. REFUEL AIRPLANE (see 'B')
11. LOAD BAGGAGE
12. ENPLANE 18 PASSENGERS
13. CHECK AIRPLANE LOG BOOK
14. RAISE AIRSTAIR DOOR
15. START ENGINES
16. MONITOR ENGINE STARTS
17. CLEAR AIRPLANE FOR DEPARTURE

'A' - Galley serviced through airstair door.
'B' - Pumping time only, at a rate of 75 U.S. gpm (280.3 l/min).

Note: This data is provided to illustrate the general scope and types of tasks involved in terminal operations. Varying airline practices and operating circumstances will result in different sequences and time intervals to accomplish the tasks shown. Because of this, ground operations requirements should be coordinated with the using airline prior to ramp planning.

Figure 5–3 Terminal Operations, Enroute Station (50% Passenger Exchange)
1. Airstair Door
2. Cargo Door
3. Type I Emergency Exit
4. Type III Emergency Exit
5. Flight Compartment Emergency Exit
6. Interphone Connectors (fore & aft)
7. Avionics Bay
8. Wardrobe
9. Lavatory
10. Galley
11. Optional APU
12. Optional Air Conditioning Ground Connection - on RH side if no APU
13. Electrical DC Power Receptacle
14. Electrical AC Power Receptacle
15. Pressure Refueling Panel & Grounding Point
16. Grounding Point (overwing)
17. Grounding Point (on u/c drag strut crossbeam - both sides)
18. Gravity Fuel Filler (overwing)
19. Aux. Tank Gravity Fuel Filler (optional)
20. Magnastick (fuel contents - underwing)
21. Aux. Tank Magnastick
22. Engine Oil Filler Panel
23. No. 1 Hydraulic System
24. No. 2 Hydraulic System
25. Brake Accumulator & Hydraulic Handpump
26. Emergency Landing Gear Hydraulic Reservoir & Handpump
27. Nose Gear Shock Strut Air Charging Points
28. Main Gear Shock Strut Air Charging Points (under nacelle)
29. Nose Jacking Point
30. Wing Jacking Point
31. Nose Gear Jacking Point
32. Main Gear Jacking Point
33. Crew oxygen supply

Figure 5–4 Ground Service Connections
# AIRPORT PLANNING MANUAL

<table>
<thead>
<tr>
<th>SYSTEM</th>
<th>DISTANCE AFT OF NOSE</th>
<th>DISTANCE FROM AIRPLANE CENTER-LINE</th>
<th>HEIGHT FROM GROUND*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FT</td>
<td>m</td>
<td>FT</td>
</tr>
<tr>
<td>HYDRAULIC SYSTEM</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No. 1 SYSTEM – 2.68 U.S. QUARTS</td>
<td>34'1&quot;</td>
<td>10.39</td>
<td>12'1&quot;</td>
</tr>
<tr>
<td>(2.5 L) CAPACITY RESERVOIR</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No. 2 SYSTEM – 5.19 U.S. QUARTS</td>
<td>34'1&quot;</td>
<td>10.39</td>
<td>–</td>
</tr>
<tr>
<td>(4.9 L) CAPACITY RESERVOIR</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ALTERNATIVE EXTENSION SYSTEM</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RESERVOIR (IN NOSE EQUIPMENT COMPARTMENT)</td>
<td>5'4&quot;</td>
<td>1.63</td>
<td>–</td>
</tr>
<tr>
<td>MAIN GEAR SHOCK STRUT VALVES</td>
<td>32'4&quot;</td>
<td>9.86</td>
<td>12'11&quot;</td>
</tr>
<tr>
<td>NOSE GEAR SHOCK STRUT VALVE</td>
<td>5'7&quot;</td>
<td>1.70</td>
<td>0</td>
</tr>
<tr>
<td>PARKING BRAKE ACCUMULATOR</td>
<td>34'5&quot;</td>
<td>10.49</td>
<td>–</td>
</tr>
<tr>
<td>ELECTRICAL SYSTEM</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28v DC EXTERNAL CONNECTION</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(250 AMP CONTINUOUS, 1200 AMP PEAK)</td>
<td>5'3&quot;</td>
<td>1.60</td>
<td>2'8&quot;</td>
</tr>
<tr>
<td>115/200v AC EXTERNAL CONNECTION</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(3–PHASE 400 Hz FREQ., AMP 20 kVA MIN)</td>
<td>33'4&quot;</td>
<td>10.16</td>
<td>–</td>
</tr>
<tr>
<td>OXYGEN SYSTEM</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CREW OXYGEN SUPPLY</td>
<td>4'3&quot;</td>
<td>1.30</td>
<td>–</td>
</tr>
<tr>
<td>IN NOSE COMPARTMENT – 39.4 CU FT (1100 L) CAPACITY</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PORTABLE CYLINDER IN–FLIGHT COMPARTMENT</td>
<td>11'4&quot;</td>
<td>3.45</td>
<td>–</td>
</tr>
<tr>
<td>11.3 CU FT (320 L) CAPACITY</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 PORTABLE CYLINDERS IN GALLEY UNIT FOR PASSENGERS – 4.3 CU FT (122 L) EACH</td>
<td>15'11&quot;</td>
<td>4.85</td>
<td>–</td>
</tr>
</tbody>
</table>

* Dimensions are approximate and vary depending on airplane configuration and loading conditions.

Figure 5–5 Ground Service Connection Data (Sheet 1 of 3)
<table>
<thead>
<tr>
<th>SYSTEM</th>
<th>DISTANCE AFT OF NOSE</th>
<th>DISTANCE FROM AIRPLANE CENTER-LINE</th>
<th>HEIGHT FROM GROUND*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FT</td>
<td>m</td>
<td>FT</td>
</tr>
<tr>
<td></td>
<td>LEFT SIDE</td>
<td>RIGHT SIDE</td>
<td>LEFT SIDE</td>
</tr>
<tr>
<td>FUEL SYSTEM</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 STANDARD TANK PER WING</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>– 423 U.S. GAL. (1601 L) EACH,</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTALLING 846 U.S. GAL. (3202 L)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>REFUELING AT MAX PRESSURE OF</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50 PSI (345 kPa) AT RATE OF</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>75 U.S. GAL./MIN. (284 L/MIN.)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STANDARD CONNECTIONS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 REFUEL/DEFUEL ADAPTER</td>
<td>39'5&quot;</td>
<td>12.01</td>
<td>–</td>
</tr>
<tr>
<td>2 OVERWING GRAVITY FILLERS</td>
<td>30'10&quot;</td>
<td>9.40</td>
<td>31'5&quot;</td>
</tr>
<tr>
<td>FUEL VENTS</td>
<td>30'11&quot;</td>
<td>9.42</td>
<td>33'4&quot;</td>
</tr>
<tr>
<td>PNEUMATIC SYSTEM</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NOSE LANDING GEAR – UPPER SHOCK</td>
<td>5'7&quot;</td>
<td>1.70</td>
<td>0</td>
</tr>
<tr>
<td>STRUT VALVE (NITROGEN)</td>
<td>– 290 psi (2000 kPa)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MAIN LANDING GEAR – UPPER SHOCK</td>
<td>32'4&quot;</td>
<td>9.86</td>
<td>12'11&quot;</td>
</tr>
<tr>
<td>STRUT VALVES (NITROGEN)</td>
<td>– 287 psi (1979 kPa)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PARKING BRAKE ACCUMULATOR –</td>
<td>34'5&quot;</td>
<td>10.49</td>
<td>–</td>
</tr>
<tr>
<td>CHARGED WITH 900 – 1000 psi</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(6205 – 6895 kPa) NITROGEN</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Dimensions are approximate and vary depending on airplane configuration and loading conditions.

Figure 5–5 Ground Service Connection Data (Sheet 2 of 3)
## AIRPORT PLANNING MANUAL

<table>
<thead>
<tr>
<th>SYSTEM</th>
<th>DISTANCE AFT OF NOSE</th>
<th>DISTANCE FROM AIRPLANE CENTER-LINE</th>
<th>HEIGHT FROM GROUND*</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIR CONDITIONING GROUND CONNECTION (OPTIONAL)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8&quot; (20.3 cm) RECEPTACLE (ON L.H. SIDE IF OPTIONAL APU INSTALLED)</td>
<td>54'1&quot; 16.49</td>
<td>2'10&quot; 0.86</td>
<td>7'2&quot; 2.18</td>
</tr>
<tr>
<td>POTABLE WATER</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OPTIONAL WATER—WASH INSTALLATION IN LAVATORY — 5.8 U.S. GAL. (22 L) CAPACITY</td>
<td>14'3&quot; 4.34</td>
<td>— —</td>
<td>8'0&quot; 2.44</td>
</tr>
<tr>
<td>LAVATORY</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.5 U.S. GAL. (13 L) CAPACITY FLUSH SOLUTION RESERVOIR WITH DRAIN</td>
<td>13'9&quot; 4.19</td>
<td>— —</td>
<td>3'3&quot; 0.99</td>
</tr>
<tr>
<td>OIL</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.5 U.S. GAL. (21 L) PER ENGINE — ACCESS TO FILLER THROUGH DOOR ON L.H. SIDE OF EACH NACELLE</td>
<td>24'10&quot; 7.57</td>
<td>14'3&quot; 4.34</td>
<td>8'11&quot; 2.72</td>
</tr>
<tr>
<td>WINDSHIELD WASHER SYSTEM (OPTIONAL)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 U.S. GAL. (7.6 L) RESERVOIR THROUGH THE RIGHT UPPER NOSE COMPARTMENT ACCESS DOOR</td>
<td>4'1&quot; 1.25</td>
<td>— —</td>
<td>5'7&quot; 1.70</td>
</tr>
</tbody>
</table>

* Dimensions are approximate and vary depending on airplane configuration and loading conditions.

Figure 5—5 Ground Service Connection Data (Sheet 3 of 3)
### PW 123 ENGINE

<table>
<thead>
<tr>
<th>NOMINAL VOLTAGE</th>
<th>STARTING CURRENT</th>
<th>DURATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>28</td>
<td>1100 - 1300 AMPS</td>
<td>2 - 3 SECONDS</td>
</tr>
<tr>
<td>28</td>
<td>500 - 700 AMPS</td>
<td>5 SECONDS</td>
</tr>
<tr>
<td>28</td>
<td>300 AMPS</td>
<td>60 SECONDS</td>
</tr>
</tbody>
</table>

The 28 volt DC electrical system which supplies the external DC starting power is connected to the aircraft by means of a DC external power receptacle – (type MS 3506-1) located on the left side of the aircraft nose section approximately 52 inches (1.32 m) above the static ground line.

**Figure 5–6 Engine Starting Electrical Requirements**
Figure 5–7 Ground Pneumatic Power Requirements – Heating and Cooling
Figure 5–8 Ground Air Conditioning Requirements – Preconditioned Airplane
Drawbar pull and total traction wheel load may not be determined for straight-line tow by considering aircraft weight, pavement slope and coefficient of friction.

Associated Conditions:
1. Unusual breakaway conditions not reflected.
2. Estimated for tow vehicle with rubber tires.
3. Coefficient of friction (μ) approximate.

Example:
At an aircraft gross weight of 30,000 lb. (13,608 Kg), an uphill slope of 2% and with a wet concrete surface, the corresponding drawbar pull or push required is 1,800 lb (817 Kg) and the total traction wheel load is 3,200 lb (1,452 Kg).

Figure 5-9 Ground Towing Requirements
SECTION  6
OPERATING CONDITIONS
AND NOISE DATA

6.0 Introduction

ILLUSTRATIONS

6–1 Jet Engine Exhaust Temperature and Prop/Engine Slipstream Velocity Contours – Idle Power

6–2 Jet Engine Exhaust Temperature and Prop/Engine Slipstream Velocity Contours – Taxi Power

6–3 Jet Engine Exhaust Temperature and Prop/Engine Slipstream Velocity Contours – Take–Off Power

6–4 Take–Off and Landing Noise Footprint (A–Level Contours)

6–5 Optional APU – Exhaust Temperature and Distance Pattern

6–6 Optional APU – Exhaust A–Level Noise Contours
6.0 INTRODUCTION

Aircraft operating conditions and noise are important to airport and community planners. Although an airport is a major element in a community transportation system and is vital to its growth, it must also be accountable to the best interests of the neighborhood in which it is located. This can only be accomplished with proper planning. Because aircraft noise extends beyond the boundaries of the airport, it is vital to consider the impact on surrounding communities.

The Q200 (Model 201 and 202) aircraft is designed with advanced quiet turboprop technology. Its noise impact is minimal compared to most aircraft, larger and smaller, currently being operated in a typical airport.

To help the airport planner estimate the impact of the Q200 (Model 201 and 202) on airport operations, the following material is provided:

1. Data on the Exhaust Temperature Contours at Idle Power, Taxi Power and Take–Off. Power setting are shown in Figure 6–1, Figure 6–2, and Figure 6–3.

2. Data on the Take–Off and Landing Noise Footprint (A–Level Contours) is shown in Figure 6–4.

3. Data on the optional APU for Exhaust Temperature and Distance Patterns is shown in Figure 6–5.

4. Data on the Optional APU – Exhaust A – Level Noise Contours is shown in Figure 6–6.

5. The Q200 (Model 201 and 202) complies with the Stage 3 noise–level limits under the trade–off clause specified in FAR 36, Section C36.5b and also under AWM 516 and JAR 36 standards. A summary of the certified noise levels, measured and corrected to these standards, is shown in the following table:

<table>
<thead>
<tr>
<th></th>
<th>FAR 36 Limit</th>
<th>DHC–8 Noise Level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Stage 3 (EPNdB)</td>
<td>(EPNdB)</td>
</tr>
<tr>
<td>Take–off (Flap 5°; 36,300 lbs)</td>
<td>89</td>
<td>80.5</td>
</tr>
<tr>
<td>Sideline (Flap 5°)</td>
<td>94</td>
<td>85.6</td>
</tr>
<tr>
<td>Approach (Flap 35°; 34,500 lbs)</td>
<td>98</td>
<td>94.7</td>
</tr>
</tbody>
</table>
Temperature Conversion: °F = (°C x 1.8) + 32

Associated Conditions:
1. All temperatures in °C.
2. Sea level, zero wind, standard day.
4. PW120A engines.
5. Prop/engine thrust = 2 x 500 lb.st.

Note: Propeller discing on idle power would greatly reduce slipstream velocity shown.
Figure 6-2 Jet Engine Exhaust Temperature and Prop/Engine Slipstream Velocity Contours – Taxi Power
Figure 6–3 Jet Engine Exhaust Temperature and Prop/Engine Slipstream Velocity Contours – Take-Off Power
Figure 6-4 Take-Off and Landing Noise Footprint (A-Level Contours)
Associated Conditions:
1. APU load: 100%.
2. Ambient temperature: 61°F (16°C)

Figure 6-5 Optional APU – Exhaust Temperature and Distance Pattern
Figure 6–6 Optional APU – Exhaust A—Level Noise Contours
SECTION 7
PAVEMENT DATA

7.0 Introduction

ILLUSTRATIONS
7–1 Landing Gear Footprint
7–2 Maximum Pavement Loads
7–3 Landing Gear Loading on Pavement
7–4 Flexible Pavement Design Curves for Critical Areas (Dual Wheel Gear)
7–5 Flexible Pavement Requirements – LCN Conversion
7–6 Rigid Pavement Requirements – LCN Conversion
7–7 Aircraft Classification Number – Flexible Pavement
7–8 Aircraft Classification Number – Rigid Pavement
7.0 INTRODUCTION

The pavement requirements for commercial airplanes are customarily derived from the static analysis loads imposed on the main landing—gear wheels and tires via the shock struts.

1. Basic data on the landing—gear footprint configuration, maximum—design taxi loads, and tire sizes and pressures are shown in Figure 7–1.
2. Maximum pavement loads for certain critical conditions at the tire—ground interfaces are shown in Figure 7–2.
3. Landing gear loading on pavement for aircraft weights and position of Percent MAC (Mean Aerodynamic Chord) are shown in Figure 7–3.
4. The California Bearing Ratio (CBR) for unlimited commercial use at all aircraft weights is shown in Figure 7–4.
5. The minimum Load Classification Number (LCN) for flexible and rigid pavement are shown in Figure 7–5 through Figure 7–8.

Make sure that all runways or pavements to be used meet these minimum CBR, LCN and ACN requirements.
<table>
<thead>
<tr>
<th>LANDING GEAR FOOTPRINT DATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAXIMUM DESIGN TAXI WEIGHT</td>
</tr>
<tr>
<td>PERCENT OF WEIGHT ON MAIN GEAR</td>
</tr>
<tr>
<td>NOSE GEAR TIRE SIZE / PRESSURE</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>MAIN GEAR TIRE SIZE / PRESSURE</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

![Diagram of landing gear footprint](image)

**Figure 7–1 Landing Gear Footprint**
**LEGEND**

\[ V_{NG} = \text{MAXIMUM VERTICAL NOSE GEAR GROUND LOAD AT MOST FORWARD CG.} \]

\[ V_{MG} = \text{MAXIMUM VERTICAL MAIN GEAR GROUND LOAD AT MOST AFT CG.} \]

\[ H = \text{MAXIMUM HORIZONTAL GROUND LOAD FROM BRAKING.} \]

<table>
<thead>
<tr>
<th>TAXI WEIGHT</th>
<th>( V_{NG} ) AT FORWARD CG</th>
<th>( V_{MG} ) (PER STRUT)</th>
<th>( H ) (PER STRUT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LB 36,500</td>
<td>4,435</td>
<td>8,417</td>
<td>17,046</td>
</tr>
<tr>
<td></td>
<td>36,500</td>
<td>8,417</td>
<td>17,046</td>
</tr>
<tr>
<td>Kg 16,556</td>
<td>2,012</td>
<td>3,818</td>
<td>7,732</td>
</tr>
<tr>
<td></td>
<td>16,556</td>
<td>3,818</td>
<td>7,732</td>
</tr>
</tbody>
</table>

**NOTES**

1. Maximum main gear horizontal force excludes alleviating effect of nose gear rolling friction.

2. Instantaneous braking applied during a steady braking run.

*Figure 7-2 Maximum Pavement Loads*
Figure 7–3 Landing Gear Loading on Pavement
31 X 9.75–13 main tire at 92 psi (loaded)

CALIFORNIA BEARING RATIO (CBR)

Aircraft weight (94.2%)
- weight on main gear
  - 36,500 lb
  - 32,000 lb
  - 27,000 lb
  - 22,000 lb

Annual departures
(20 year pavement life)
- 1,200
- 3,000
- 6,000
- 15,000
- 25,000

FLEXIBLE PAVEMENT THICKNESS (inches)

Flexible Pavement Requirements – US Army Corps of Engineers Design Method (S–77–1) and FAA Design Method

Figure 7–4 Flexible Pavement Design Curves for Critical Areas (Dual Wheel Gear)
Figure 7-6 Rigid Pavement Requirements - LCN Conversion

S200 LCN (Rigid) 31 X 9.75-13 MLG Tire @ 92 psi (loaded)
94.2% of weight on MLG

AIRCRAFT WEIGHT
A - 36,500 lb
B - 32,000 lb
C - 27,000 lb
D - 22,000 lb

RADIUS OF RELATIVE STIFFNESS (L)

ESWL (lb)

LCN

A
B
C
D
Aircraft Classification Number
Flexible Pavement (ICAO)
Q200

Max Aft C.G. (94% on MLG)
31 X 9.75–13 MLG Tire (17.2 inch Wheel Centres)
92 psi Inflation Pressure (Loaded)

Figure 7–7 Aircraft Classification Number – Flexible Pavement
Aircraft Classification Number
Rigid Pavement
Q200

Max Aft C.G. (94% on MLG)
31 X 9.75–13 MLG Tire (17.2 inch Wheel Centres)
92 psi Inflation Pressure (Loaded)

Figure 7–8 Aircraft Classification Number – Rigid Pavement

4 AUG, 2000
SECTION 8

DERIVATIVE AIRCRAFT

8.0 Introduction
8.1 Q200 (Model 201)
8.2 Q200 (Model 202)
8.0 INTRODUCTION

Additional versions of the Q200 airplane are currently available. All products are continually evaluated for possible modifications with the potential of leading to new derivative models tailored to meet specific airline requirements.

8.1 Q200 (MODEL 201)

The Q200 (Model 201) is powered by two Pratt & Whitney PW123C engines, each developing a MTOP (Maximum Take-off Power) of 2150 SHP. The maximum take-off weight is 36,300 lb (16,466 kg) and the landing weights is 15,650 kg (34,500 lb).

For more information regarding the performance of this aircraft refer to AEROC 8.2 (201). AC. 20.

8.2 Q200 (MODEL 202)

The Q200 (Model 202) is powered by two Pratt & Whitney PW123D engines, each developing a MTOP (Maximum Take-off Power) of 2150 SHP. The maximum take-off weight and the maximum landing weight are identical to the Model 201. However, the PW123D engine installed on the Model 202 features increased thermodynamic power for enhanced “hot and high” performance.

For more information regarding the performance of this aircraft refer to AEROC 8.2 (202). AC. 20.
SECTION 9

SCALED Q200 DRAWINGS

ILLUSTRATIONS

9—1  Scaled Q200 Drawing 1"=32' (1:384)

9—2  Scaled Q200 Drawing 1"=50' (1:600)
     and 1" = 100' (1:1200)

9—3  Scaled Q200 Drawing 1:500 and 1:1000
LEGEND

A1  AIR CONDITIONING
A2  GROUND AIR CONDITIONING CONNECTION
B   BAGGAGE DOOR
E1  ELECTRICAL CONNECTION (DC)
E2  ELECTRICAL CONNECTION (AC)
F   PRESSURE REFUELING POINT
G   GALLEY
L   LAVATORY
MLG MAIN LANDING GEAR
NG  NOSE GEAR
V   FUEL VENT (STD & LONG RANGE TANKS)
X1  AIRSTAIR DOOR
X2  EMERGENCY EXITS

Figure 9–1 Scaled Q200 Drawing 1" = 32' (1:384)
LEGEND

A1  AIR CONDITIONING
A2  GROUND AIR CONDITIONING CONNECTION
B   BAGGAGE DOOR
E1  ELECTRICAL CONNECTION (DC)
E2  ELECTRICAL CONNECTION (AC)
F   PRESSURE REFUELING POINT
G   GALLEY
L   LAVATORY
MLG MAIN LANDING GEAR
NG  NOSE GEAR
V   FUEL VENT (STD & LONG RANGE TANKS)
X1  AIRSTAIR DOOR
X2  EMERGENCY EXITS

Figure 9–2 Scaled Q200 Drawing 1” = 50’ (1:600) and 1” = 100’ (1:1200)
LEGEND

A1  AIR CONDITIONING
A2  GROUND AIR CONDITIONING CONNECTION
B   BAGGAGE DOOR
E1  ELECTRICAL CONNECTION (DC)
E2  ELECTRICAL CONNECTION (AC)
F   PRESSURE REFUELING POINT
G   GALLEY
L   LAVATORY
MLG MAIN LANDING GEAR
NG  NOSE GEAR
V   FUEL VENT (STD & LONG RANGE TANKS)
X1  AIRSTAIR DOOR
X2  EMERGENCY EXITS

Figure 9–3 Scaled Q200 Drawing 1:500 and 1:1000