European Aviation Safety Agency

EASA

TYPE-CERTIFICATE
DATA SHEET

No. EASA.IM.A.570

For
BD-500 (A220 SERIES)

Type Certificate Holder:
C Series Aircraft Limited Partnership
13100 Henri-Fabre Blvd.
Mirabel, Québec, Canada
J7N 3C6

For Models:  BD-500-1A10 (A220-100)
              BD-500-1A11 (A220-300)
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SECTION 1: MODEL BD-500-1A10 (A220-100)

I. General

This Data Sheet, which is part of Type Certificate No. EASA.IM.A.570, prescribes conditions and limitations under which the product for which the Type Certificate was issued meets the airworthiness requirements of the European Aviation Safety Agency

1. Type/ Model/ Variant

BD-500 / BD-500-1A10 (A220-100 commercial designation)

2. Performance Class

A

3. Certifying Authority

Transport Canada Civil Aviation

4. State of Design Authority Certification Application Date

Initial: 10 December 2009
Deferred: 31 December 2011

5. EASA Type Certification Application Date

Initial: 4 March 2010
Deferred: 31 December 2011

6. State of Design Authority Type Certificate Date

17 December 2015

7. EASA Type Certification Date

15 June 2016

II. Certification Basis

1. Reference Date for determining the applicable airworthiness requirements

31 December 2011, nevertheless the 31st of October 2014 letter from TCCA was received (5010-A704 (10076915)) to elect to comply with CS-25 Amendment 12.

2. Reference Date for determining the applicable operational suitability requirements
SECTION 1: MODEL BD-500-1A10 (A220-100) - continued

31 December 2011 for CS-FCD, CS-MMEL and CS-CCD.

3. State of Origin Airworthiness Authority Type Certification Data Sheet No.

TCCA Type Certificate Data Sheet No. A-236 (initial revision 17th of December 2015, or subsequent revisions)

4. State of Origin Airworthiness Authority Certification Basis

Refer to TCCA Type Certificate Data Sheet No. A-236.

5. EASA Airworthiness Requirements

EASA Certification Specification 25, Amendment 12.

EASA Certification Specification All Weather Operations (CS-AWO), Initial Issue.

5.1 Special Conditions

B-01 Flight in Icing Conditions
B-02 Stalling and Scheduled Operating Speeds
B-03 Motion and Effects of Cockpit Controls
B-04 Static Directional, Lateral & Longitudinal Stability & Low Energy Awareness
B-05 Flight Envelope Protection Design
B-14 Steep Approach
B-17 Normal Load Factor Limiting System
C-02 Composite Fuel Tanks – Uncontained Engine Debris
C-06 Design Dive Speed
C-07 Design Manoeuvre Load
C-08 Pilot Limit Forces & torques (Side Stick)
C-12 Tyre Debris vs. Fuel Leakage for CFRP Fuel Tanks
C-13 Automatic Braking System Loads
D-04 Post-Crash Fire – Composite Construction
D-07 Heat Release and Smoke Emission for Seat Installation
D-08 In-Flight Fire – Composite and Unusual Construction
D-14 Towbarless Towing
D-16 Control Surface Position Awareness and EFCS
E-01 Water/ Ice Fuel System
E-11 Fire Withstand Capability of CFPR Wing Fuel Tanks
F-01 HIRF Protection
F-10 Data Link Services for the Single European Sky
F-11 Flight Recorders, Data Link Recording
F-14 Flight Instrument External Probes – Qualification in Icing Conditions
F-21 Airborne Systems & Network Security
F-29 Lithium Battery Installations
F-32 Non Rechargeable Lithium Battery Installation

5.2. Deviations

None.
SECTION 1: MODEL BD-500-1A10 (A220-100) - continued

5.3. Equivalent Safety Findings

- B-24 Out of Trim
- D-09 Burnthrough Protection at Aft Pressure Bulkhead
- D-13 Pack-off Dispatch
- D-23 Burnthrough on WTBF
- D-26 Burnthrough on Lower Deck Cargo Compartment
- D-30 APU Doors ESF
- E-13 Fan Zone Non Fire Zone
- E-14 Digital Only Displays of Power-Plant Instruments
- E-15 Engine Ignition Switches
- E-16 Automatic Take-Off Thrust Control System Indication
- F-24 Passenger Cabin Minimum Mass Flow of Supplemental Oxygen
- F-26 Crew Determination of Quantity of Oxygen in Passenger Oxygen System

5.4. Environmental Protection Requirements

- EASA Certification Specification 36, Amendment 3
- EASA Certification Specification 34, Initial Issue

For details of the certified noise levels see TCDSN EASA.IM.A.570.

6. Operational Suitability Requirements

6.1 Flight Crew Data

Certification Specifications for Operational Suitability Data (OSD), Flight Crew Data (CS-FCD), Initial Issue, 31 January 2014

6.2. Cabin Crew Data


6.3. Master Minimum Equipment List

Certification Specifications for Master Minimum Equipment List CS-MMEL Initial Issue dated 31 January 2014 (Book 1 only)
Bombardier MMEL development and approval plan Ref. EASA – BD-500 – ORI 4 Issue 2 – 13 February 2014 (as AMC/GM)
SECTION 1: MODEL BD-500-1A10 (A220-100) - continued

III. Technical Characteristics and Operational Limitations

1. Type Design Definition

Type design definition applicable to this TCDS for the BD-500-1A10 is defined in RAZ-BA500-027 at Rev. A or later approved revisions.

2. Description

The BD-500-1A10 model airplane is a swept-wing monoplane with a pressurized single-aisle cabin. The airplane is fitted with two (2) Pratt & Whitney PW1500G ultra-high bypass geared turbofan engines.

The Airplane structure, in general, is fabricated from advanced weight-saving materials (Carbon Fibre Reinforced Plastic (CFRP) and advanced aluminium alloys). Steel alloys and titanium are also used.

3. Equipment

The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) and defined in the Type Certificate Type Design Definition (RAZ-BA500-027 Rev A or later approved revisions) must be installed in the airplane.

4. Dimensions

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wingspan</td>
<td>35.1 m (115 ft 1 in)</td>
</tr>
<tr>
<td>Overall Length</td>
<td>34.9 m (114 ft 9 in)</td>
</tr>
<tr>
<td>Height</td>
<td>11.8 m (38 ft 8 in)</td>
</tr>
</tbody>
</table>

5. Engines

Two (2) Pratt & Whitney PW1524G (EASA TCDS EASA.IM.E.090)

6. Auxiliary Power Unit

One (1) Honeywell 131-9(C)

For operating limits, see applicable AFM as listed in Section IV of this TCDS.

7. Propellers

N/A
SECTION 1: MODEL BD-500-1A10 (A220-100) - continued
8. Fluids (Fuel, Oil, Additives, Hydraulics)

In case of conflict with the applicable associated publication, the data contained in the associated publication takes precedence.

8.1 Fuel

<table>
<thead>
<tr>
<th>Specification</th>
<th>Canada</th>
<th>USA</th>
<th>UK</th>
<th>Australia</th>
<th>Other</th>
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<tr>
<td>ASTM D1655 – JET A</td>
<td></td>
<td>Defence Standard 91-91</td>
<td>1QTA K/1/80</td>
<td>GOST 10227 – TS-1, RT</td>
<td></td>
</tr>
<tr>
<td>ASTM D1655 – JET A1</td>
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<td>GB6537-2006</td>
<td></td>
</tr>
<tr>
<td>MIL-DTL-83133 – JP-8</td>
<td></td>
<td></td>
<td>--</td>
<td>JET No. 3</td>
<td></td>
</tr>
</tbody>
</table>

For additional approved fuel grades, fuel additives, fuel temperature limitations and fuel quantity gauging inaccuracy, see applicable AFM as listed in Section IV of this TCDS.

8.2 Oil

Approved engine oils* BP Turbine Oil 2380, Royco/Aeroshell Turbine Oil 500, Royco 500, Mobil Jet Oil II, BP Turbo Oil 2197, Royco/Aeroshell Turbine Oil 560, Mobil Jet Oil 254

*Or additional approved oils as listed in the applicable Aircraft Maintenance Publication (AMP) BD500-3AB48-10200-00.

8.3 Hydraulics

Hydraulic fluid: HYJET IV – A PLUS (BAMS 564-003)*

*For additional approved fluids, see applicable Aircraft Maintenance Publication (AMP) BD500-3AB48-10200-00.

9. Fluid Capacities

In case of conflict with the applicable associated publication, the data contained in the associated publication takes precedence.

9.1 Fuel

See applicable AFM as listed in Section IV of this TCDS.

9.2 Oil

Maximum Engine Oil Volume: 24.4 liters
Minimum Engine Oil Volume: 8.23 liters
SECTION 1: MODEL BD-500-1A10 (A220-100) - continued

Maximum APU Oil Volume: 7.74 quarts
Minimum APU Oil Volume: 2.74 quarts

See applicable Aircraft Maintenance Publication (AMP) BD500-3AB48-10200-00.

10. Airspeed Limits

Unless otherwise specified, speeds are indicated airspeeds

<table>
<thead>
<tr>
<th>$V_{MO}$ and $M_{MO}$</th>
<th>knots</th>
<th>Mach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sea Level to 8,000 ft.</td>
<td>300</td>
<td>-</td>
</tr>
<tr>
<td>10,000 ft. to 27,500 ft.</td>
<td>330</td>
<td>-</td>
</tr>
<tr>
<td>Above 27,500 ft.</td>
<td>-</td>
<td>0.82</td>
</tr>
</tbody>
</table>

For additional approved speeds, see applicable AFM as listed in Section IV of this TCDS.

11. Flight Envelope

Maximum Operating Altitude:
- Take-off and Landing: 8,000 ft (2,438 m)
- Enroute: 41,000 ft (12,497 m)

12. Operating Limitations

See applicable AFM as listed in Section IV of this TCDS.

12.1 Approved Operations

- Visual (VFR)
- Instrument (IFR)
- Icing Conditions
- Low weather minima (CAT I, CAT II, CAT III with decision height 50ft and CAT III with no decision height)
- Ditching

12.2 Other Limitations

- Maximum Ambient Temperature for Takeoff and Landing: +52.5°C
- Minimum Ambient Temperature for Takeoff: -54°C
- Minimum Ambient Temperature for Landing: -30°C
- Runway slope: +/- 2%

13. Maximum Certified Weights

<table>
<thead>
<tr>
<th>Weight</th>
<th>kg</th>
<th>lb</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Ramp Weight (MRW)</td>
<td>61235</td>
<td>135000</td>
</tr>
<tr>
<td>Maximum Takeoff Weight (MTOW)</td>
<td>60781</td>
<td>134000</td>
</tr>
<tr>
<td>Maximum Landing Weight (MLW)</td>
<td>52390</td>
<td>115500</td>
</tr>
<tr>
<td>Maximum Zero Fuel Weight (MZFW)</td>
<td>50349</td>
<td>111000</td>
</tr>
</tbody>
</table>
14. Centre of Gravity Range

See applicable AFM as listed in Section IV of this TCDS.

15. Datum

FS 0.0 is located 640 cm (252.0 in) forward of the aircraft nose.

16. Levelling Means

Aircraft is levelled in the longitudinal and lateral axis by means of a plumb bob and target plate in the rear fuselage/aft equipment bay at FS 1390.83.

17. Minimum Flight Crew

Two (2) – Pilot and Co-Pilot

18. Minimum Cabin Crew

(in accordance with the emergency evacuation test)

Three (3)

19. Maximum Aircraft Occupants

133 (including 1 Pilot, 1 Co-pilot, 1 Observer, a minimum of 3 Cabin Crew* and a maximum of 127 Passengers*)

* Maximum 130 cabin occupants when fitted with an approved interior.

20. Baggage/ Cargo Compartment

<table>
<thead>
<tr>
<th></th>
<th>Maximum Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>lb</td>
</tr>
<tr>
<td>Fwd Cargo Compartment</td>
<td>3742</td>
</tr>
<tr>
<td>Aft Cargo Compartment</td>
<td>4548</td>
</tr>
</tbody>
</table>

See applicable Weight and Balance Manual as listed in Section IV of this TCDS.

21. Wheels and Tyres

21.1 Wheels

Nose Landing Gear:  12"
Main Landing Gear:  21"

21.2 Tyres
SECTION 1: MODEL BD-500-1A10 (A220-100) - continued

Nose Landing Gear: 27x8.5R12 - 16PR - 225 MPH
Main Landing Gear: H42x15.0R21 - 26PR - 225 MPH

22. ETOPS

No ETOPS approval granted.

IV. Operating and Service Instructions

1. Airplane Flight Manual (AFM)

Airplane Flight Manual (AFM), BD500-3AB48-22200-00, Issue 003, or later approved revisions.

2. Instructions for Continued Airworthiness and Airworthiness Limitations

The Instructions for Continued Airworthiness consist of the publications listed in the Aircraft Maintenance Publication (AMP) BD500-3AB48-10200-00 (Instructions for Continued Airworthiness, Data Module BD500-A-J00-00-00-00AAA-00VA-A).

Airworthiness Limitations (AWL), BD500-3AB48-11400-02, Issue 002 or later approved revisions.

Maintenance Review Board Report BD500-3AB48-11400-01 Issue 03 or later approved revisions.

3. Weight and Balance Manual (WBM)

Weight and Balance Manual, BD500-3AB48-22100-00-xxx, where xxx denotes the customer-specific code.

V. Operational Suitability Data (OSD)

The Operational Suitability Data elements listed below are approved by the European Aviation Safety Agency under the EASA Type Certificate [original TC number] as per Commission Regulation (EU) 748/2012 as amended by Commission Regulation (EU) No 69/2014.

1. Master Minimum Equipment List

a. The MMEL is defined in BD500-3AB48-12701-00, Issue 001 or later approved revisions

2. Flight Crew Data

a. The Flight Crew Data is defined in BAT-BD500-OSD-FC, Initial Issue or later approved revisions

3. Cabin Crew Data
SECTION 1: MODEL BD-500-1A10 (A220-100) - continued

a. The Cabin Crew Data has been approved as per the defined Operational Suitability Data Certification Basis (see Chapter 2) and as demonstrated by the Bombardier C5SCCD, Doc#CC-E-BD500-100 EASA Operational Suitability Data (OSD), Cabin Crew Data (CCD) for Bombardier CSeries BD-500-1A10 (CS100) Report, Issue 1, dated June 1st 2016”, or later approved revisions.

b. The BD-500-1A10 aircraft model is determined to be a new type for cabin crew.

VI. Notes

1. Import Requirements:

   a. The Export Certificate of Airworthiness to EU country issued by TCCA should contain the following statement (in the English language):

   “The aircraft covered by this certificate has been examined, tested, and found to conform to the Type Design approved under EASA Type Certificate No. EASA.IM.A.570 as defined in TCDS EASA.IM.A.570 issue 1 (or later revision) and to be in condition for safe operation.”
SECTION 2: MODEL BD-500-1A11 (A220-300)

I. General

This Data Sheet, which is part of Type Certificate No. EASA.IM.A.570, prescribes conditions and limitations under which the product for which the Type Certificate was issued meets the airworthiness requirements of the European Aviation Safety Agency.

1. Type/ Model/ Variant

BD-500 / BD-500-1A11 (A220-300 commercial designation)

2. Performance Class

A

3. Certifying Authority

Transport Canada Civil Aviation

4. State of Design Authority Certification Application Date

Initial: 10 December 2009
Deferred: 31 December 2011

5. EASA Type Certification Application Date

Initial: 4 March 2010
Deferred: 31 December 2011

6. State of Design Authority Type Certificate Date

8 July 2016

7. EASA Type Certification Date

07 October 2016

II. Certification Basis

1. Reference Date for determining the applicable airworthiness requirements

31 December 2011, nevertheless the 31st of October 2014 letter from TCCA was received (5010-A704 (10076915)) to elect to comply with CS-25 Amendment 12.
SECTION 2: MODEL BD-500-1A11 (A220-300) - continued

2. Reference Date for determining the applicable operational suitability requirements

31 December 2011 for CS-FCD, CS-MMEL and CS-CCD.

3. State of Origin Airworthiness Authority Type Certification Data Sheet No.

TCCA Type Certificate Data Sheet No. A-236 (initial revision 17th of December 2015, or subsequent revisions)

4. State of Origin Airworthiness Authority Certification Basis

Refer to TCCA Type Certificate Data Sheet No. A-236.

5. EASA Airworthiness Requirements

EASA Certification Specification 25, Amendment 12.

EASA Certification Specification All Weather Operations (CS-AWO), Initial Issue.

5.1 Special Conditions

B-01 Flight in Icing Conditions
B-02 Stalling and Scheduled Operating Speeds
B-03 Motion and Effects of Cockpit Controls
B-04 Static Directional, Lateral & Longitudinal Stability & Low Energy Awareness
B-05 Flight Envelope Protection Design
B-17 Normal Load Factor Limiting System
C-02 Composite Fuel Tanks – Uncontained Engine Debris
C-06 Design Dive Speed
C-07 Design Maneouvre Load
C-08 Pilot Limit Forces & torques (Side Stick)
C-12 Tyre Debris vs. Fuel Leakage for CFRP Fuel Tanks
C-13 Automatic Braking System Loads
D-04 Post-Crash Fire – Composite Construction
D-07 Heat Release and Smoke Emission for Seat Installation
D-08 In-Flight Fire – Composite and Unusual Construction
D-14 Towbarless Towing
D-16 Control Surface Position Awareness and EFCS
E-01 Water/ Ice Fuel System
E-11 Fire Withstand Capability of CFPR Wing Fuel Tanks
F-01 HIRF Protection
F-10 Data Link Services for the Single European Sky
F-11 Flight Recorders, Data Link Recording
F-14 Flight Instrument External Probes – Qualification in Icing Conditions
F-21 Airborne Systems & Network Security
F-29 Lithium Battery Installations
F-32 Non Rechargeable Lithium Battery Installation

5.2. Deviations
None.

5.3. Equivalent Safety Findings
SECTION 2: MODEL BD-500-1A11 (A220-300) - continued

B-24 Out of Trim
D-09 Burnthrough Protection at Aft Pressure Bulkhead
D-13 Pack-off Dispatch
D-23 Burnthrough on WTBF
D-26 Burnthrough on Lower Deck Cargo Compartment
D-30 APU Doors ESF
E-13 Fan Zone Non Fire Zone
E-14 Digital Only Displays of Power-Plant Instruments
E-15 Engine Ignition Switches
E-16 Automatic Take-Off Thrust Control System Indication
F-24 Passenger Cabin Minimum Mass Flow of Supplemental Oxygen
F-26 Crew Determination of Quantity of Oxygen in Passenger Oxygen System

5.4. Environmental Protection Requirements

EASA Certification Specification 36, Amendment 3
EASA Certification Specification 34, Initial Issue

For details of the certified noise levels see TCDSN EASA.IM.A.570.

6. Operational Suitability Requirements

6.1 Flight Crew Data

Certification Specifications for Operational Suitability Data (OSD), Flight Crew Data (CS-FCD), Initial Issue, 31 January 2014

6.2. Cabin Crew Data


6.3. Master Minimum Equipment List

Certification Specifications for Master Minimum Equipment List CS-MMEL Initial Issue dated 31 January 2014 (Book 1 only)
Bombardier MMEL development and approval plan Ref. EASA – BD-500 – ORI 4 Issue 2 – 13 February 2014 (as AMC/GM)
SECTION 2: MODEL BD-500-1A11 (A220-300) - continued

III. Technical Characteristics and Operational Limitations

1. Type Design Definition

Type design definition applicable to this TCDS for the BD-500-1A11 is defined in RAZ-BA503-027 at Rev. A or later approved revisions.

2. Description

The BD-500-1A11 model airplane is a swept-wing monoplane with a pressurized single-aisle cabin. The airplane is fitted with two (2) Pratt & Whitney PW1500G ultra-high bypass geared turbofan engines.

The Airplane structure, in general, is fabricated from advanced weight-saving materials (Carbon Fibre Reinforced Plastic (CFRP) and advanced aluminium alloys). Steel alloys and titanium are also used.

3. Equipment

The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) and defined in the Type Certificate Type Design Definition (RAZ-BA503-027 Rev A or later approved revisions) must be installed in the airplane.

4. Dimensions

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wingspan</td>
<td>35.1 m (115 ft 1 in)</td>
</tr>
<tr>
<td>Overall Length</td>
<td>38.7 m (127 ft)</td>
</tr>
<tr>
<td>Height</td>
<td>11.5 m (37 ft 9 in)</td>
</tr>
</tbody>
</table>

5. Engines

Two (2) Pratt & Whitney PW1521G-3 (EASA TCDS EASA.IM.E.090)
Two (2) Pratt & Whitney PW1524G-3 (EASA TCDS EASA.IM.E.090)

6. Auxiliary Power Unit

One (1) Honeywell 131-9(C)
For operating limits, see applicable AFM as listed in Section IV of this TCDS.

7. Propellers

N/A

8. Fluids (Fuel, Oil, Additives, Hydraulics)
SECTION 2: MODEL BD-500-1A11 (A220-300) - continued

In case of conflict with the applicable associated publication, the data contained in the associated publication takes precedence.

8.1 Fuel

<table>
<thead>
<tr>
<th>Specification</th>
<th>Canada</th>
<th>USA</th>
<th>UK</th>
<th>Australia</th>
<th>Other</th>
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<td>ASTM D1655 – JET A</td>
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<td>Defence Standard 91-91</td>
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<td></td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

8.2 Oil

Approved engine oils*:
BP Turbine Oil 2380, Royco/Aeroshell Turbine Oil 500, Royco 500, Mobil Jet Oil II, BP Turbo Oil 2197, Royco/Aeroshell Turbine Oil 560, Mobil Jet Oil 254
*Or additional approved oils as listed in the Pratt and Whitney Service Bulletin PW1500 Series 79-00-00-00A. See also, applicable Aircraft Maintenance Publication (AMP) BD500-3AB48-10200-00.

8.3 Hydraulics

Hydraulic fluid: HYJET IV – A PLUS (BAMS 564-003)*
* For additional approved fluids, see applicable Aircraft Maintenance Publication (AMP) BD500-3AB48-10200-00.

9. Fluid Capacities

In case of conflict with the applicable associated publication, the data contained in the associated publication takes precedence.

9.1 Fuel

See applicable AFM as listed in Section IV of this TCDS.

9.2 Oil

Maximum Engine Oil Volume: 24.4 liters
Minimum Engine Oil Volume: 8.23 liters

Maximum APU Oil Volume: 7.74 quarts
Minimum APU Oil Volume: 2.74 quarts

See applicable Aircraft Maintenance Publication (AMP) BD500-3AB48-10200-00.

10. Airspeed Limits
SECTION 2: MODEL BD-500-1A11 (A220-300) - continued

Unless otherwise specified, speeds are indicated airspeeds

\[ V_{MO} \text{ and } M_{MO} \]

<table>
<thead>
<tr>
<th></th>
<th>knots</th>
<th>Mach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sea Level to 8,000 ft.</td>
<td>300</td>
<td>-</td>
</tr>
<tr>
<td>10,000 ft. to 27,500 ft.</td>
<td>330</td>
<td>-</td>
</tr>
<tr>
<td>Above 27,500 ft.</td>
<td>-</td>
<td>0.82</td>
</tr>
</tbody>
</table>

For additional approved speeds, see applicable AFM as listed in Section IV of this TCDS.

11. Flight Envelope

Maximum Operating Altitude:
- Take-off and Landing: 8,000 ft (2,438 m)
- Enroute: 41,000 ft (12,497 m)

12. Operating Limitations

See applicable AFM as listed in Section IV of this TCDS.

12.1 Approved Operations

- Visual (VFR)
- Instrument (IFR)
- Icing Conditions
- Low weather minima (CAT I, CAT II, CAT III with decision height 50ft and CAT III with no decision height)
- Ditching

12.2 Other Limitations

- Maximum Ambient Temperature for Takeoff and Landing: +52.5°C
- Minimum Ambient Temperature for Takeoff: -54°C
- Minimum Ambient Temperature for Landing: -54°C
- Runway slope: +/- 2%

13. Maximum Certified Weights

<table>
<thead>
<tr>
<th>Weight</th>
<th>kg</th>
<th>lb</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Ramp Weight (MRW)</td>
<td>68039</td>
<td>150000</td>
</tr>
<tr>
<td>Maximum Takeoff Weight (MTOW)</td>
<td>67585</td>
<td>149000</td>
</tr>
<tr>
<td>Maximum Landing Weight (MLW)</td>
<td>58740</td>
<td>129500</td>
</tr>
<tr>
<td>Maximum Zero Fuel Weight (MZFW)</td>
<td>55792</td>
<td>123000</td>
</tr>
</tbody>
</table>

For additional approved weight variants see applicable AFM as listed in Section IV of this TCDS.

14. Centre of Gravity Range

See applicable AFM as listed in Section IV of this TCDS.
SECTION 2: MODEL BD-500-1A11 (A220-300) - continued

15. Datum

FS 0.0 is located 427 cm (168.0 in) forward of the aircraft nose.

16. Levelling Means

Aircraft is levelled in the longitudinal and lateral axis by means of a plumb bob and target plate in the rear fuselage/aft equipment bay at FS 1453.83.

17. Minimum Flight Crew

Two (2) – Pilot and Co-Pilot

18. Minimum Cabin Crew

(in accordance with the emergency evacuation test)

Three (3)

19. Maximum Aircraft Occupants

153 (including 1 Pilot, 1 Co-pilot, 1 Observer, a minimum of 3 Cabin Crew and a maximum of 145 Passengers)

20. Baggage/ Cargo Compartment

<table>
<thead>
<tr>
<th></th>
<th>Maximum Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>lb</td>
</tr>
<tr>
<td>Fwd Cargo Compartment</td>
<td>5393</td>
</tr>
<tr>
<td>Aft Cargo Compartment</td>
<td>5746</td>
</tr>
</tbody>
</table>

See applicable Weight and Balance Manual as listed in Section IV of this TCDS.

21. Wheels and Tyres

21.1 Wheels

Nose Landing Gear: 12"
Main Landing Gear: 21"

21.2 Tyres

Nose Landing Gear: 27x8.5R12 - 16PR - 225 MPH
Main Landing Gear: H42x15.0R21 - 26PR - 225 MPH

22. ETOPS

No ETOPS approval granted.
SECTION 2: MODEL BD-500-1A11 (A220-300) - continued

IV. Operating and Service Instructions

1. Airplane Flight Manual (AFM)

Airplane Flight Manual (AFM), BD500-3AB48-32200-00, Issue 004, or later approved revisions.

2. Instructions for Continued Airworthiness and Airworthiness Limitations

The Instructions for Continued Airworthiness (ICA) consist of the publications listed in the Aircraft Maintenance Publication (AMP) BD500-3AB48-10200-00 (Instructions for Continued Airworthiness, Data Module BD500-A-J00-00-00AAA-00VA-A).

Airworthiness Limitations (AWL), BD500-3AB48-11400-02, Issue 002 or later approved revisions.

Maintenance Review Board Report BD500-3AB48-11400-01 Issue 03 or later approved revisions

3. Weight and Balance Manual (WBM)

Weight and Balance Manual, BD500-3AB48-32100-00-xxx, where xxx denotes the customer-specific code.

V. Operational Suitability Data (OSD)

1. Master Minimum Equipment List

a. The MMEL is defined in BD500-3AB48-12701-00, Issue 002, dated September 14th 2016, or later approved revisions.

2. Flight Crew Data

a. The Flight Crew Data is defined in BAT-BD500-OSD-FC, Revision 1, dated 28 Oct 2016 or later approved revisions.

3. Cabin Crew Data

a. The Cabin Crew Data has been approved as per the defined Operational Suitability Data Certification Basis (see Chapter 2) and as demonstrated by the Bombardier CSCCD, Doc#CC-E-BD500-100/300 EASA Operational Suitability Data (OSD), Cabin Crew Data (CCD) for Bombardier C Series Family (CS100; CS300), BD-500-1A10 (CS100) Report, BD-500-1A11 (CS300) Report, Issue 2, dated August 5th, 2016, or later approved revisions.
SECTION 2: MODEL BD-500-1A11 (A220-300) - continued

b. For cabin crew, the BD-500-1A11 aircraft model is determined to be the same type as the BD-500-1A10 model.

VI. Notes

1. Import Requirements:

   a. The Export Certificate of Airworthiness to EU country issued by TCCA should contain the following statement (in the English language):

   “The aircraft covered by this certificate has been examined, tested, and found to conform to the Type Design approved under EASA Type Certificate No. EASA.IM.A.570 as defined in TCDS EASA.IM.A.570 issue 1 (or later revision) and to be in condition for safe operation.”
SECTION: ADMINISTRATIVE

I. Acronyms and Abbreviations

AFM  Airplane Flight Manual  
ALI  Airworthiness Limitation Items  
AMC  Acceptable Means of Compliance  
APU  Auxiliary Power Unit  
AWO  All Weather Operations  
CCD  Cabin Crew Data  
CG  Center of Gravity  
CRI  Certification Review Item  
CS  Certification Specification  
EASA  European Aviation Safety Agency  
ESF  Equivalent Safety Finding  
ETOPS  Extended Range Operations with Two-Engine Aeroplanes  
EU  European Union  
EWIS  Enhanced Wiring Interconnection System  
FCD  Flight Crew Data  
ICA  Instructions for Continued Airworthiness  
ICAO  International Civil Aviation Organization  
IFR  Instrument Flight Rules  
OSD  Operational Suitability Data  
PW  Pratt and Whitney  
SC  Special Condition  
TC  type Certificate  
TCCA  Transport Canada Civil Aviation  
TCD  Type Certificate Data Sheet  
TCDSN  Type Certificate Data Sheet for Noise  
VFR  Visual Flight Rules

II. Type Certificate Holder Record

C Series Aircraft Limited Partnership  
13100 Henri-Fabre Blvd.  
Mirabel, Québec, Canada  
J7N 3C6
### SECTION: ADMINISTRATIVE

#### III. Change Record

<table>
<thead>
<tr>
<th>Issue</th>
<th>Date</th>
<th>Changes</th>
<th>TC issue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Issue 01</td>
<td>16 June 2016</td>
<td>Initial Issue</td>
<td>Initial Issue, 15 June 2016</td>
</tr>
<tr>
<td>Issue 02</td>
<td>30 June 2016</td>
<td>Header correction and chapter 21 Baggage/Cargo Compartment values corrected.</td>
<td>30 June 2016</td>
</tr>
<tr>
<td>Issue 03</td>
<td>20 July 2016</td>
<td>Removal of manufacturer information.</td>
<td>20 July 2016</td>
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<tr>
<td>Issue 04</td>
<td>07 October 2016</td>
<td>CS300 introduced in Section 2.</td>
<td>07 October 2016</td>
</tr>
<tr>
<td>Issue 05</td>
<td>18 Nov 2016</td>
<td>CS300 additional weights introduced. CS300 FCD introduced.</td>
<td>07 October 2016</td>
</tr>
<tr>
<td>Issue 06</td>
<td>28 Nov 2016</td>
<td>MRB report added.</td>
<td>07 October 2016</td>
</tr>
<tr>
<td>Issue 07</td>
<td>07 Dec 2016</td>
<td>Cargo Compartment values corrected. CS300 CCD OSD statement corrected.</td>
<td>07 October 2016</td>
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<tr>
<td>Issue 08</td>
<td>26 Apr 2017</td>
<td>Added CRI B-14, Steep Approach SC. CS100/CS300 Fuel Loads tables revised.</td>
<td>07 October 2016</td>
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<tr>
<td></td>
<td></td>
<td>Introduced engine PW1524G-3 for CS300. Removed engine variants in CS300 maximum certified weights tables.</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Introduced new weights in CS300 maximum certified weights tables.</td>
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<tr>
<td></td>
<td></td>
<td>OSD FCD updated to cover Steep Approach. CS300 AFM updated to the Issue 6.</td>
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<tr>
<td>Issue 09</td>
<td>02 Oct 2017</td>
<td>Transfer of TC to C Series Aircraft Limited Partnership</td>
<td>07 October 2016</td>
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<tr>
<td>Issue 10</td>
<td>29 Jan 2018</td>
<td>Various editorial changes.</td>
<td>07 October 2016</td>
</tr>
<tr>
<td>Issue 11</td>
<td>30 Nov 2018</td>
<td>Commercial designations revised from CS100 &amp; CS300 to A220-100 &amp; A220-300. CAT IIIa, &amp; b auto-land operations introduced. Corrected Minimum Ambient Temperature for Landing, on BD-500-1A11 only. Various editorial changes.</td>
<td>07 October 2016</td>
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-END-