

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

T00003NY
Revision No. 15
Bombardier Inc.
BD-700-1A10
BD-700-1A11
December 18, 2008

TYPE CERTIFICATE DATA SHEET NO. T00003NY

This data sheet which is part of Type Certificate No. T00003NY, prescribes conditions and limitations under which the product for which the Type Certificate was issued meets the airworthiness requirements of the Federal Aviation Regulations.

Type Certificate Holder: **Bombardier Inc**
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Downsview, Ontario
Canada M3K 1Y5

I - Model BD-700-1A10 (Transport Category), Approved November 13, 1998, by the FAA and July 31, 1998, by the Canadian Department of Transport (DOT).

MAXIMUM
WEIGHTS

	lb.	kg.
Max. Taxi and Ramp	93 750	42 525
	95 250 (See NOTE 6)	43 205 (See NOTE 6)
	96 250 (See NOTE 7)	43 659 (See NOTE 7)
	98 250 (See NOTE 10)	44 565 (See NOTE 10)
	99 750 (See NOTE 15)	45 246 (See NOTE 15)
Max. Takeoff	93 500	42 415
	95 000 (See NOTE 6)	43 092 (See NOTE 6)
	96 000 (See NOTE 7)	43 546 (See NOTE 7)
	98 000 (See NOTE 10)	44 452 (See NOTE 10)
	99 500 (See NOTE 15)	45 132 (See NOTE 15)
Max. Landing	78 600	35 655
Max. Zero Fuel	56 000	25 400
Min. Flight Weight	48 200	21 865

FUEL CAPACITY

	Load		Weight **	
	U.S. Gal.	liters	lb.	kg
Usable				
2 main tanks (each)	2223	8415	15005	6805
1 Center Tank	1645	6227	11105	5036
1 Aft Tank	337	1276	2275	1032
Total	6428	24333	43390	19678
* Unusable (drainable)	30	114	203	92
* Undrainable	14.8	56.0	100	45.4

* See NOTE 3
** Assuming a fuel density of 6.75 lbs/US Gal

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For aircraft incorporating Service Bulletin 700-28-040 (or Modsum 700T804402):

Usable	Load		Weight **	
	U.S. Gal.	Liters	lb.	kg.
2 Main Tanks (each)	2229	8438	15045	6824
1 Center Tank	1879	7111	12683	5753
1 Aft Tank	337	1276	2275	1032
Total	6674	25256	45050	20433
Unusable (drainable)	10.6	40.1	72	32.4
Undrainable	14.8	56.0	100	45.4

See NOTE 3

Assuming a fuel density of 6.75 lbs./US Gal.

TYPE CERTIFICATION
APPLICATION DATE

27 January 1994

SERIAL NUMBERS
ELIGIBLE

9002 and subsequent

APPROVED
PUBLICATIONS

- (a) Airplane Flight Manual (AFM), Bombardier Publication CSP 700-1 or CSP 700-1A for the appropriate weight configuration and subsequent approved revisions.
- (b) Drawing List, Bombardier Publication RAL-700-0001 at Issue D.
- (c) Time Limits/Maintenance Checks Manual, Bombardier Publication BD 700 TLMC and subsequent approved revisions contains the Certification Maintenance Tasks, Life Limited Parts and Damage Tolerant Inspections. This information is consistent with Engineering Reports RBR-C700-167 and RAS-C700-990. See NOTE 5.
- (d) Structural Repair Manual (SRM), Bombardier Publication BD 700 SRM and subsequent approved revisions.
- (e) BD 700 JIC, Job Instruction Card (JIC)

Type Certification
Configuration

The approved type design is defined in the document RAZ-C700-127 at Issue NC or later approved revision. The approved type design number appropriate for the "as delivered" configuration of a particular BD-700-1A10 airplane is defined in the document RAL-700-XXXX (XXXX denotes the serial number for the aircraft concerned).

C. G. RANGE

Refer to Transport Canada approved Airplane Flight Manual (AFM), Bombardier Publication CSP 700-1. See NOTE 1.

DATUM

FS 0.0 located at 144 in. Fwd of the aircraft nose

II - Model BD-700-1A11 (Transport Category), Approved September 20, 2004, by the FAA and March 12, 2004, by the Canadian Department of Transport (DOT).

**MAXIMUM
WEIGHTS**

	lb.	kg.
Max. Taxi and Ramp	87 950 89 950* 92 750**	39 893 40 801* 42 071**
Max. Takeoff	87 700 89 700* 92 500**	39 780 40 687* 41 957**
Max. Landing	78 600	35 655
Max. Zero Fuel	56 000	25 400
Min. Flight Weight	51 200	23 224

* See NOTE 14

** See AFM, as listed in Approved Publications, for other weight limitations and aircraft eligibility.

FUEL CAPACITY

Usable	Load		Weight **	
	U.S. Gal.	liters	lb.	kg
2 main tanks (each)	2229	8438	15046	6824
1 Center Tank	903	3418	6095	2765
Total	5361	20294	36187	16413
* Unusable (drainable)	10	37.9	67.5	30.6
* Undrainable	14.8	56.0	100	45.4

* See NOTE 3

** Assuming a fuel density of 6.75 lbs/US Gal

For aircraft incorporating Bombardier Service Bulletin 700-1A11-11-008

Usable	Load		Weight **	
	U.S. Gal.	liters	lb.	kg
2 main tanks (each)	2229	8438	15046	6824
1 Center Tank	1357	5136	9158	4158
Total	5815	22012	39250	17806
* Unusable (drainable)	10	37.9	67.5	30.6
* Undrainable	14.8	56.0	100	45.4

* See NOTE 3

** Assuming a fuel density of 6.75 lbs/US Gal

**TYPE CERTIFICATION
APPLICATION DATE**

15 February 2002

**SERIAL NUMBERS
ELIGIBLE**

9127 and subsequent

**APPROVED
PUBLICATIONS**

- (a) Airplane Flight Manual (AFM), Bombardier Publication CSP 700-5000-1 for the appropriate weight configuration and subsequent approved revisions.
- (b) Drawing List, Bombardier Publication RAL-700-0002 at Issue B or later approved revisions.

- (c) Time Limits/Maintenance Checks Manual, Bombardier Publication BD-700-1A11 TLMC and subsequent approved revisions contains the Certification Maintenance Tasks, Life Limited Parts and Damage Tolerant Inspections. This information is consistent with Engineering Reports RBR-C700-167 and RAS-C700-990. See NOTE 5.
- (d) Structural Repair Manual (SRM), Bombardier Publication BD 700 SRM and subsequent approved revisions.
- (e) BD 700 JIC, Job Instruction Card (JIC)

Type Certification Configuration

The approved type design is defined in the document RAZ-C700-127 at Issue A-2. The approved type design number appropriate for the "as delivered" configuration of a particular BD-700-1A11 airplane is defined in the document RAL-700-XXXX (XXXX denotes the serial number for the aircraft concerned).

C. G. RANGE

Refer to Transport Canada approved Airplane Flight Manual (AFM), Bombardier Publication CSP 700-1. See NOTE 1.

DATUM

FS 0.0 located at 144 in. + 32 in. Fwd of the aircraft nose

Data Pertinent to all Models except where indicated

ENGINES

Two Rolls-Royce Deutschland Ltd. BR700-710A2-20

FUEL

Type	Specifications		
	Canada	U.S.A.	U.K.
Jet A	CAN2-3.23	ASTM D1655	D. Eng. RD.2494
Jet A-1	CAN2-3.23	ASTM D1655	D. Eng. RD.2494
JET-B	CAN2-3.22-M80	ASTM D1655-JETB	D. Eng. RD.2486
JP-4	CAN2-3.22-M80	MIL-T-5624-JP4	D. Eng. RD.2486
JP-8	-	MIL-T-83133	D. Eng. RD.2453
JP-5	-	MIL-T-5624	D. Eng. RD.2452

Fuel additives restricted to those listed in AFM (Limitations, Fuel Additives)

OIL

Engine, APU: Refer to Aircraft Maintenance Manual, Bombardier Publication BD 700 AMM, Chapter 51 (Global Express) or BD 700-1A11 AMM, Chapter 51 (Global 5000)

ENGINE LIMITS CONDITIONS

	SL Static Thrust		Fan RPM	Core RPM	ITT		Time Limit
	lbf	kN	N ₁ %	N ₂ %	°C	°F	
Max. Takeoff	14750	65.6	102.0	99.6	900	1652	5 min.
Max. Continuous	14450	64.3	102.0	98.9	860	1580	-
Idle Range	-	-	-	58.0 min.	860 max.	1580 max.	-
Max. Overspeed/Over temperature	-	-	102.5	99.8	905	1661	20 sec.
Reverse Thrust	-	-	*	-	-	-	-
Starting, on ground	-	-	N/A	N/A	700	1292	-
Starting, in air	-	-	N/A	N/A	850	1562	-

* For Reverse Thrust, FADEC controls the Fan RPM (N₁) to 70.0 % for 30 seconds.

OIL TEMPERATURE

	°C	°F
Minimum for Starting	-40	-40
Minimum before accelerating above idle	20	68

Maximum Continuous	160	320
Maximum Permissible	160	320

OIL PRESSURE

Take-off Power	45 psi min.
Steady State Idle	25 psi min.

APU

Allied Signal RE 220 (GX)

APU LIMITS

Maximum RPM:	106%	
Maximum EGT:	°C	°F
Starting	657-1020	1215-1868
Running	594-714	1101-1317

AIRSPEED LIMITS

V_{mo} and M_{mo}	m.p.h.	knots	Mach
Sea Level to 8000 ft.	346	300	-
8000 ft. to 30267 ft.	392	340	-
30267 ft. to 35000 ft.	-	-	0.89
@ 47000 ft.	-	-	0.871
@ 47000 ft.	-	-	0.858 (see Note 8)
@ 51000 ft.	-	-	0.855
@ 51000 ft.	-	-	0.842 (see Note 8)
V_{fe}	6°	242	210
	16°	242	210
	30°	213	185
V_{fc}		-	369
V_d		-	398
See Flight Manual for variation of V_a with altitude and aircraft weight			
V_{se}		259	225
V_{mca}		99	86
V_{mcg}		96	84
V_{LO}		230	200
V_{LE}		288	250

MEAN AERO-DYNAMIC CHORD

153.6 in. (3.9 m) (MAC leading edge at fuselage station 676.87 in.)

LEVELING MEANS

Plumb bob and target in the Aft equipment bay at FS 926

MINIMUM CREW

Two (Pilot and Co-Pilot)

MAXIMUM OCCUPANTS

Twenty two (including the crew and no more than 19 passengers)
See NOTE 2

OIL CAPACITY

	Load		Weight	
	U.S. Gal.	liters	lb.	kg.
2 Engines (each) (Incl. oil repl. lines)	2.6	9.9	20.0	9.1
1 Oil Repl. Tank	1.7	6.4	13	5.9
Total	6.9	26.2	53.0	24.1
Usable	1.01	3.83	7.8	3.55

MAX. OPERATING ALTITUDE

Take off and landing: 13,700 ft
En route: 51,000 ft

CONTROL SURFACE MOVEMENTS

Rudder	37° Left	37° Right
Horizontal Stabilizer	2° LE Up	12° LE Down
Aileron	26.5° TE Up	23° TE Down
Elevator	24° TE Up	19° TE Down
Ground spoilers	45° Up	-
Multi-function spoilers (Inboard to Outboard)	40/40/46/46 ° Up	-

- SERVICE INFORMATION** Service Bulletins, structural repair manuals, and aircraft flight manuals which contain a statement that the document is Transport Canada approved or Transport Canada approved through the Manufacturers Design Approval Representative are accepted by the FAA and are considered FAA approved. These approvals pertain to the type design only.
- IMPORT ELIGIBILITY** A U.S. Airworthiness Certificate may be issued on the basis of the Canadian Department of Transport "Certificate of Airworthiness for Export" signed by the Minister of Transport. This form must contain the following statement:
- "This certifies that the aircraft described below has been manufactured in conformity with data forming the basis for the Transport Canada Type Certificate No. A-177 and includes the minimum type design defined in document RAZ-C700-127 at Issue NC or subsequent approved revisions as being required to comply with the basis for the FAA Type Certificate No. T00003NY", and is in a condition for safe operation.
- The U.S. airworthiness certification basis for aircraft type certificated under FAR 21.29 and exported by the country of manufacture is FAR 21.183(c) or FAR 21.185(c)
- The U.S. airworthiness certification basis for aircraft type certificated under FAR 21.29 and exported from countries other than the country of manufacture (e.g. third party country) is FAR 21.183(d) or FAR 21.185(b)
- The U.S. airworthiness certification basis for the issuance of an airworthiness certificate for aircraft type certificated under FAR 21.21 and manufactured in a foreign country under a licensing arrangement is FAR 21.183(d) or FAR 21.183(b)
- The U.S. airworthiness certification basis for an aircraft originally type certificated under FAR 21.21 but transferred outside the U.S. is 21.183(d)
- Additional guidance is contained in FAA AC 21-23A, or subsequent revision, Airworthiness Certification of Civil Aircraft, Engines, Propellers and Related Products Imported into the United States.
- CERTIFICATION BASIS** FAR Part 25 dated February 1, 1965, including:
Amendments 25-1 through 25-91,
Amendment 25-94, Amendment 25-96 and Amendment 25-97.
There are no exceptions.
- Exemptions:
- (1) No. 6726. FAR 25.1435(b)(1) Hydraulic System Proof Pressure Testing, applicable to BD-700-1A10 only.
 - (2) See Notes 9 and 12 for additional exemptions
- Additional FAA Requirements:
- (1) FAR Part 36 dated December 1, 1969,
as amended through Amendment 36-28 for both BD-700-1A10 and BD-700-1A11.
 - (2) Applicable portions of FAR 34 dated September 10, 1990,
as amended through Amendment 34-1 inclusive.

- (3) Special Condition No. 25-140-SC dated 24 August 1998, HIRF
- (4) Special Condition No. 25-288-SC, Enhanced Flight Visibility System, effective date May 12, 2005

Equivalent safety has been established for the following requirements:

- (1) FAR 25.109 Rejected Take-off and Landing Performance Criteria
- (2) FAR 25.933 Thrust Reversers
- (3) FAR 25.1435(b)(1) Hydraulic System Proof Pressure Testing, applicable to BD-700-1A11 only, documented in Transport Airplane Directorate ELOS Memo AT3532NY-S-1. This equivalent safety finding is similar to exemption no. 6726 FAR 25.1435(b)(1)

Compliance with the following optional requirements has been established:

- (1) Ditching provisions of FAR 25.801 when the safety equipment requirements of FAR 25.1411 and the ditching equipment requirements of FAR 25.1415 are satisfied. Ditching provisions are applicable to the maximum passenger capacity 22 persons (19 passenger and 3 crew)

EQUIPMENT

The basic equipment as prescribed in the applicable Federal Airworthiness Regulations must be installed in the aircraft.

NOTE 1

A current weight and balance report must be provided for each aircraft at the time of the original airworthiness certification and at all times thereafter except in case of an operator having an FAA approved loading system for weight and balance control.

NOTE 2

The green aircraft type design configuration does not include passenger provisions. Carriage of persons in the cabin is permitted when an approved seating arrangement and related required passenger provisions are incorporated in accordance with the Type Certificate Basis.

NOTE 3

System fuel, which must be included in the empty weight, is the amount of fuel required to fill the system plumbing and tanks to the undrainable level plus unusable fuel in the fuel tanks. The weight of undrainable and unusable fuel defined in the Fuel Capacity section must be included in the empty weight of the airplane.

NOTE 4

All placards must be installed in accordance with Bombardier Drawings: GC 789-0001, GD 972-0001, GM 972-0010, GS 782-0001 (for BD-700-1A10 only), and GS 782-5001 (for BD-700-1A11 only).

NOTE 5

The airplane life limits and repetitive inspections for components and equipment and information essential for proper maintenance, are listed in Bombardier Publication BD 700 TLMC (Global Express) BD-700-1A11 TLMC (Global 5000). These limitations may not be changed without FAA Engineering approval.

NOTE 6

Refers to aircraft which incorporate Bombardier Service Bulletin SB 700-11-007

NOTE 7

Refers to aircraft which incorporate Bombardier Service Bulletin SB 700-11-011

- NOTE 8 Refers to BD-700-1A10 aircraft which incorporate Bombardier Service Bulletin SB 700-34-020, or have modification 700T01613 incorporated during production. All BD-700-1A11 aircraft have modification 700T01613 incorporated during production.
- NOTE 9 FAA Exemption No. 7120C (Regulatory Docket No. FAA-2002-13385) was issued to Bombardier Aerospace, on September 2, 2003 which granted an exemption from the requirements of 25.785(b) for the general occupant protection requirements for occupants of multiplace side-facing seats that are occupied during take off and landing for Bombardier Global Express BD-700-1A10 airplanes.
- FAA Exemption No. 7120D (Regulatory Docket No. FAA-2002-13385) was issued to Bombardier Aerospace, on June 13, 2005 which granted an exemption from the requirements of 25.785(b) for the general occupant protection requirements for occupants of multiplace side-facing seats that are occupied during take off and landing for Bombardier Global Express BD-700-1A11 airplanes.
- NOTE 10 Refers to aircraft which incorporate Bombardier Service Bulletin SB 700-11-016.
- NOTE 11 The certification basis for airplane model BD-700-1A10 and BD-700-1A11 includes FAR 25.831 at Amendment 25-89 and FAR 25.841 at Amendment 25-87. These regulations address operation at high altitude and include pressurization system requirements, as well as structural requirements on the pressure vessel. In addition, a high altitude special condition, which contains similar requirements, was applied by the Canadian authorities. Therefore, any changes to the pressurization system or modifications or repairs to the pressure vessel must be approved in accordance with these and other applicable requirements.
- NOTE 12 FAA Exemption No. 7259 (Regulatory Docket No. 29819) and 7891 (Regulatory Docket No. FAA-2002-12350) were issued to Bombardier Aerospace, on June 29, 2000 which granted exemption from the requirements of FAR 25.813(e) for the installation of doors in partitions between passenger compartments for the BD-700-1A10 aircraft.
- FAA Exemption No. 7259A (Regulatory Docket No. FAA-2005-21272) was issued to Bombardier Aerospace, on June 13, 2005 which granted exemption from the requirements of FAR 25.813(e) for the installation of doors in partitions between passenger compartments for the BD-700-1A11 aircraft.
- NOTE 13 The Global Express is a marketing designation for the Model BD-700-1A10 aircraft and the Global 5000 is a marketing designation for the Model BD-700-1A11 aircraft. FAA Airworthiness Directives will be issued against the Model numbers (BD-700-1A10, or BD-700-1A11)
- NOTE 14 The higher weights are applicable to aircraft that are either post modification Bombardier Service Bulletin SB 700-1A11-11-002 or post modification Bombardier Modsum 700T97079C.
- NOTE 15 Refers to aircraft which incorporate Bombardier Service Bulletin SB 700-11-020

.....END.....