

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

T00003NY
Revision No. 8
Bombardier Aerospace
BD-700-1A10
February 5, 2003

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**
P.O. Box 6087, Station Centre-ville
Montreal, Quebec
Canada H3C 3G9

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).

ENGINES Two BMW Rolls-Royce Aero Engines Model 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 (CSP 700-1) (Limitations, Fuel Additives)

OIL

Engine, APU: Refer to Aircraft Maintenance Manual, Bombardier Publication BD 700 AMM, Chapter 12

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.

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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	0.915
	V_d	-	398	0.97
	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	-

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

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

MAXIMUM
WEIGHTS

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

MINIMUM CREW

Two (Pilot and Co-Pilot)

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

FUEL CAPACITY

Usable	Load		Weight **	
	U.S. Gal.	liters	lb.	kg
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

For aircraft incorporating Service Bulletin 700-28-029 or Modsum 700T01614:

Usable	Load		Weight **	
	U.S. Gal.	Liters	lb.	kg.
2 Main Tanks (each)	2229	8435	15045	6824
1 Center Tank	1655	6265	11170	5068
1 Aft Tank	337	1276	2275	1032
Total	6450	24416	43538	19753
* Unusable (drainable)	10.2	38.6	69	31.2
* Undrainable	14.8	56.0	100	45.4

* See NOTE 3

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

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: 10,000 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	-

TYPE CERTIFICATION APPLICATION DATE 27 January 1994

SERIAL NUMBERS ELIGIBLE 9002 and subsequent

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.

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 C-4 and subsequent approved revisions and RAD-700-207 at revision NC-2 and subsequent approved revisions.
- (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)

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".

The approved type design appropriate to the "as delivered" configuration of a particular BD-700-1A10 airplane is defined in the document RAL-700-XXXX. (XXXX represents the Serial Number for the airplane concerned).

CERTIFICATION BASIS	<p>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.</p> <p>Exemptions: (1) No. 6726. FAR 25.1435(b)(1) Hydraulic System Proof Pressure Testing</p> <p>Additional FAA Requirements: (1) FAR Part 36 dated December 1, 1969, as amended through Amendment 36-21 inclusive. (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</p> <p>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</p> <p>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.</p>
Type Certification Configuration	<p>The approved type design is defined in the document RAZ-C700-127 at Issue NC or later approved revision which supersedes both RAL-700-0001 at Issue C-4 and Bombardier Report No. RAD-700-207 Revision NC-2.</p>
EQUIPMENT	<p>The basic equipment as prescribed in the applicable Federal Airworthiness Regulations must be installed in the aircraft.</p>
NOTE 1	<p>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.</p>
NOTE 2	<p>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.</p>
NOTE 3	<p>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.</p>
NOTE 4	<p>All placards must be installed in accordance with Bombardier Drawings: GC 789-0001, GD 972-0001, GM 972-0010, GS 782-0001.</p>

- 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. 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 aircraft which incorporate Bombardier Service Bulletin SB 700-34-020, or have modification 700T01613 incorporated during production.
- NOTE 9 The FAA Exemption No. 7120A (Regulatory Docket No. 29820) was issued to Bombardier Business Aircraft Services, a Division of Bombardier Aerospace, on November 17, 2000 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 manufactured prior to January 1, 2004.
- 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 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.

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