

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

A-815 Revision 4 Bombardier (Otter) DHC-3 June 26, 1998
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TYPE CERTIFICATE DATA SHEET NO. A-815

Type Certificate Holder	Bombardier Inc. Regional Aircraft 123 Garratt Boulevard Downsview, Ontario, Canada M3K 1Y5
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I - Model DHC-3, 16 PCL-SM (Normal Category) (U.S. Military Model U-1A, see Note 4)

Engine. P&W Wasp S3H1-G, S1H1-G, R-1340-59 or R-1340-61

Fuel. 80/87 Min. grade aviation gasoline - see Fluid Specification Part 1 DHC-3 Maintenance Manual

Oil. See Fluid Specification Part 1 DHC-3 Maintenance Manual

<u>Engine limits.</u>	<u>S3H1-G, R-1340-59</u>	<u>HP</u>	<u>RPM</u>	<u>MP (IN. HG.)</u>	<u>ALT.</u>
	Takeoff (one minute)	600	2250	36.0	-
	Maximum continuous	550	2200	33.5	S.L.
		550	2200	32.5	5000 ft.
	<u>S1H1-G, R-1340-61</u>				
	Takeoff (one minute)	600	2250	36.0	-
	Maximum continuous	550	2200	35.0	S.L.
		550	2200	33.0	8000 ft.

Propeller and propeller limits. Propeller - Hamilton Standard, Counterweight, Hub Model 3D40 (c/w 4.5 CTWT)
Blade Models - 6511A-9X, 6529A-9X or 6631A-9
Pitch Setting - Low 19 degrees, High 33 degrees

Propeller - Hamilton Standard, Hydromatic Hub Model 23D40
Blade Models - 6511A-9, 6529A-9 or 7035A-9
Pitch Setting - Low 18.5 degrees, High 34.5 degrees

Constant Speed Governor 1A2-G5 for Counterweight Propeller, and 4B2-1 for Hydromatic Propeller

<u>Airspeed limits (TIAS).</u>	<u>Landplane & Skiplane</u>	<u>Seaplane</u>
	<u>(mph)</u> <u>(knot)</u>	<u>(mph)</u> <u>(knot)</u>
Never exceed	192 167	183 159
Maneuvering	126 110	126 110
Flaps extended	94 82	94 82

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<u>Control surface movements</u>	<u>Post-Mod. 3/744</u>		
	Tailplane	Up $4\ 1/2^\circ \pm 1/2^\circ$	Down $3\ 1/2^\circ \pm 1/2^\circ$
	Elevator (Tailplane neutral)	Up $23^\circ, +2^\circ, -1^\circ$	Down $15^\circ, +2^\circ, -1^\circ$
	Elevator trim tab	Up $5^\circ \pm 1^\circ$	Down $5^\circ \pm 1/2^\circ$
	Elevator servo tab	Up $10^\circ \pm 1^\circ$	Down $23^\circ \pm 1^\circ$
	Ailerons	Up $26\ 1/2^\circ \pm 1^\circ$	Down $18\ 1/2^\circ \pm 1^\circ$
	Flaps	Inboard leading	Down $35^\circ \pm 2^\circ$
		Inboard trailing	Down $60^\circ \pm 2^\circ$
		Outboard leading	Down $26^\circ \pm 2^\circ$
	Rudder	Right $25^\circ \pm 1^\circ$	Left $25^\circ \pm 1^\circ$
	Rudder trim tab	Right $19^\circ \pm 1^\circ$	Left $19^\circ \pm 1^\circ$
<u>Serial Nos. eligible</u>	1 and subsequent. The Canadian Certificate of Airworthiness for Export must be submitted for each individual aircraft for which application for certification is made. (Not required for those surplus military aircraft certificated in accordance with NOTE 4.)		
<u>Certification Basis</u>	Type Certificate No. 815 issued under CAR 10. (ICAO Annex 8, 2nd Edition (Transport Category D), and CAR 3 as amended to November 1, 1949		
<u>Equipment</u>	Essential equipment, which may not be removed unless replaced by approved equivalent items, is listed in DH Canada Report AEROC 3.1.G.7 Issue 1. Removable items are listed in the Flight Manual and the Weight and Balance Report contained therein must be corrected to show any changes.		
<u>Miscellaneous</u>	100:	Edo 55-7170A or Bristol Model 903 Float Installation to Edo Drawing 12700	
	101:	Ventral Fin to Bombardier Modification 3/337	
	102:	Wing Stall Plates to Bombardier Modification 3/272	
	103:	Wing Stall Bar to Bombardier 3/544	
	104:	Dual Wing Stall to Bombardier Modification 3/746	
	105:	DHC-3 Amphibious Gear Installation to Bombardier Modification 3/700	
	200:	11.00 x 12 Main wheel tires and tubes 6.00 x 6 Tail wheel tire and tube	
	201:	Tailwheel hydraulic shock absorber to Bombardier Modification 3/475	
	202:	Canoe Carrying Installations With items 100, 101, 102 and 103:	
		(a) Bombardier Modification No. 3/456 Starboard Side (See Note 3)	
		(b) Ontario Provincial Air Services Universal Carrier Drawing No. 1561-0 with method of attachment to Drawing 1561-0-1. Canoe not to exceed 17'-0" in length, 3'-6" beam, and 160 lb. The aircraft gross weight is limited to 7647 lb. with the Aft C.G. Limit at 145 inches aft of the datum.	
		(c) Ontario Provincial Air Services Universal Carrier Drawing No. 1561-0 with method of attachment to Drawing No. 1561- 0-1. Boat not to exceed 14'0" in length, 5'0" beam and 300 lb. Boat position: C.G. of boat at station 130. The aircraft gross weight is limited to 7048 lb. with the Aft C.G. Limit at 145 inches aft of datum. The maximum flap angle is limited to the takeoff setting.	
		With items 104 and 105:	
		(c) Bombardier Drawing C3-M-70, Starboard side. Canoe not to exceed 17'-0" in length, 3'-6" beam and 160 lb. The aircraft gross weight is limited to 7680 lb. Centre of canoe to be located at Station 196.	

- 203: Lumber and Freight Carrying Installation
- (a) Ontario Provincial Air Services Universal Carrier Drawing No. 1561-0 with method of attachment to Drawing No. 1561- 0-2. Lumber or freight must not exceed 18'-0" in length; 12" in width, 2'-0" in height and 1600 lb. in weight. Lumber or freight must be symmetrically distributed by weight and dimensions on each side of the aircraft with the fore and aft distribution midway between the strut arms. The aircraft gross weight is limited to 7863 lb. with the aft C.G. limit at 144.8 inches aft of the datum. The maximum flap angle is limited to the take-off setting.
- 204: Water Dropping Tank Installations
With items 100, 101, 102 and 103
- (a) Bombardier Modification SOO/3009 with drawings C3-M-153 and C3-M-154.
- (b) Ontario Provincial Air Services Drawing No. 2436.
The aircraft gross weight is limited to 7967 lb. with the aft C.G. limit at 143.5 inches aft of datum.
- With items 104 and 105
- (a) Bombardier Drawing C3-M-153
The aircraft gross weight is limited to 8000 lb. with the aft C.G. limit at 141.0 inches aft of datum.
- 300: Ski Installations
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| (a) Bombardier Drawing No. C3-US-1 | Use |
| (b) Bombardier Retractable Ski to Drawing No. C3-US-100, Issue 1 | Actual Weight |
| (c) Federal AWB-8000 wheel-skis to Federal Aircraft Works' Drawing No. 11R 1010 change "C" | and Balance |
| (d) Ontario Provincial Air Services Drawing 1872 | Change |
| (e) Ontario Provincial Air Services Drawing 1861-1 | |
- 400: Rework Bulkhead at sta. 444.38 to Bombardier Modification No. 3/396

NOTE 1. Refer to Approved Flight Manual for specific information. The Flight Manual shall include an approved Weight and Balance Report and shall be carried in the aircraft at all times.

NOTE 2. The following placards must be displayed as noted:

- (a) Instruments shall be placarded to show all normal operating ranges and limitations.
- (b) All doors shall be placarded on the inside: "Exit - Turn to Release".
- (c) In front and in clear view of pilot: "THIS AEROPLANE MUST BE OPERATED IN COMPLIANCE WITH THE OPERATING LIMITATIONS SPECIFIED IN THE APPROVED DEHAVILLAND DHC-3 FLIGHT MANUAL."

NOTE 3. Canoe Carrying Installation on starboard side of aircraft to Bombardier Modification No. 3/456. Canoe not to exceed 16'6" length, 3'6" beam and 100 lb.

NOTE 4. Those surplus military Bombardier Model U-1A aircraft, identified by civil and military serial numbers in Bombardier Report QA/DHC-3/G13, are eligible for a U.S. Standard Airworthiness Certificate without requiring a Canadian Certificate of Airworthiness for Export when all of the following conditions have been satisfied:

- (a) Aircraft records must indicate, or a determination must be made, that the aircraft has been subjected to FAA initial screening inspection. The screening inspection record must show that the aircraft has a reasonable potential for standard certification. (Those aircraft dispositioned as having no reasonable potential for standard certification are not certifiable. These aircraft are sold by U.S. Department of Defense only for the purpose of "Recovery of Parts or Reduction to Scrap".)

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- (b) The aircraft must be converted to Bombardier Model DHC-3 in accordance with Bombardier Modification SOO-3028, Issue 6, and Bombardier Service Bulletin 3/21, Original Issue.
 - (c) The applicant shows and the FAA finds that the aircraft conforms to the type design and is in a condition for safe operation.
 - (d) A satisfactory "100 hour" type inspection has been accomplished and recorded.
 - (e) Any deviations to the type design must be appropriately approved by an FAA Supplemental Type Certificate or other methods acceptable to the FAA.

Upon satisfying all the foregoing conditions, and when all other pertinent U.S. regulatory requirements have been met, a U.S. Standard Airworthiness Certificate may be issued. (Certification basis is FAR 21.183(c) since these are import aircraft.)

Technical data needed for conversion purposes are available to the applicant through Bombardier of Canada Limited. Inquiries for this data should be submitted to The Product Support Department, Bombardier of Canada, Limited, Downsview, Ontario, Canada.

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