



European Aviation Safety Agency

EASA TYPE-CERTIFICATE DATA SHEET

EASA.IM.A.191

DHC-8

Type Certificate Holder:

Bombardier Inc.

123 Garratt Boulevard
Toronto, Ontario
CANADA M3K 1Y5

For models:	DHC-8-102	DHC-8-201	DHC-8-301	DHC-8-401
	DHC-8-103	DHC-8-202	DHC-8-311	DHC-8-402
	DHC-8-106		DHC-8-314	
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SECTION 1: GENERAL (ALL MODELS)

- | | |
|-----------------------------|--|
| 1. Data Sheet No: | EASA.IM.A.191 |
| 2. Airworthiness Category: | Large Aeroplanes |
| 3. Performance Category: | A |
| 4. Certifying Authority: | TCCA |
| 5. Type Certificate Holder: | Bombardier Inc.
123 Garratt Boulevard
Toronto, Ontario
Canada M3K 1Y5 |

SECTION 2: DHC-8 SERIES 100

I. General

1. Aeroplane: DHC-8 Series 100

II. Certification Basis

1. Reference Application Date for EASA Certification: February 7, 1986

2. TCCA Certification Date:

DHC-8-102	June 12, 1986
DHC-8-103	July 20, 1987
DHC-8-106	November 20, 1992

3. TCCA Certification Basis: Refer to TCCA Type Certificate Data Sheet No. A-142

4. EASA Certification Date:

DHC-8-102	January 27, 1988 (ACG, Austria)
DHC-8-103	January 27, 1988 (ACG, Austria)
DHC-8-106	February 23, 1995 (ACG, Austria and NCAA, Norway)

5. EASA Certification Basis:

FAR Part 25 dated February 1, 1965, including amendments 25-1 through 25-51; plus:
FAR 25.832, Amendment 25-56, Cabin Ozone Concentration.

Additional Airworthiness Requirements:

Flight Manual Policy ref. DOT letter 5010-10-366 (ABP/L) dated June 1, 1984.
AMA 525/1 Stalls, Compliance dated July 9, 1984. Airworthiness Manual 525.207(b) Stall
Warning, initial issue dated 1986. Airworthiness Manual 525.201(d) Stall Demonstration,
initial issue dated 1986.

Low Temperature Operations ref. AAR Review Document September 10, 1984.

Spoiler Policy ref. DOT letter 5010-10-366 (ABE/L), dated September 20, 1984.

Compliance with the following additional optional requirements has been established:

FAR 25.1419, Ice Protection.

Compliance with FAR 25.801 has been established when the safety equipment requirements
of FAR 25.1411 and the ditching equipment requirements of FAR 25.1415 are satisfied.

6. Special Conditions:

Automatic take-off power control system (ATPCS) (ref. FAA Special Conditions No. 25-ANM-3; TC letter 5010-10-366 (ABP/A), dated February 24, 1984).

Steep Approach and Short Landing (ref. TC letter 5010-10-366 (ABP/L), dated June 7, 1985).

[SC H-01 Enhanced Airworthiness Programme for Aeroplane Systems - ICA on EWIS](#)

7. Exemptions:

FAR 25.571(e)(2) Propeller Debris (ref. FAA Exemption No. NM-102; TC letter 5010-10-366 (ABP/A) dated February 10, 1984).

FAR 25.807(c)(1) 40 Passenger Configuration (ref. TC letter 5010-10-366, dated March 14, 1986).

8. Equivalent Safety Findings:

FAR 25.773(b)(2) Pilot compartment view.

9. Environmental Requirements:

Environmental requirements for noise:
ICAO Annex 16 Volume 1 – Chapter 3

Environmental requirements for fuel venting and emissions:
SFAR 27 dated December 12, 1973, including Amendments 27-1 through 27-5.

III. Technical Characteristics and Operational Limitations

1. Type Design Definition: Current issue of AEROC 8.1.AC.1 -
Definition of Certified Airplanes

2. Description: Detail Specification No. DS8-100

3. Equipment: Equipment Register

4. Dimensions:

Span	25.91 m (85 ft)
Length	22.25 m (73 ft)
Height	7.49 m (24 ft 7 in)
Wing Area	54.35 m ²

5. Engines: Two (2) Pratt and Whitney of Canada engines as follows:

DHC-8-102	PW120A or PW121
DHC-8-103	PW121
DHC-8-106	PW121

Refer to [TCCA-EASA](#) Engine Type Certificate Data Sheet [E-19-IM.E.041](#)

5.1 Engine Limits: For details refer to AFM – PSM 1-81-1A
(Models 102, 103, 106)

6. Auxiliary Power Unit (APU): Options only. Refer to AFM - PSM 1-81-1A (Models 102, 103, 106)
- 6.1 APU Limits: For details refer to AFM – PSM 1-81-1A (Models 102, 103, 106)
7. Propellers: Hamilton Standard Model 14SF-7, 14SF-15 or 14SF-23
Refer to FAA Propeller Type Certificate Data Sheet P7NE.
- 7.1 Propeller Limits:
- | | | |
|--------------------------------|------------------------|----------|
| Blade | SFA13 ()-OA | |
| Diameter | 3.96 m (13 ft) nominal | |
| Pitch settings at 0.75 radius: | | |
| Feather | | 77.5° |
| Flight fine | | 10.5° |
| Ground fine | | -5.5° |
| Full reverse | | -18.5° |
| Propeller (Np) | - Take off | 1212 rpm |
| | - Max. continuous | 1212 rpm |
- The following Hamilton Standard Propeller combinations are approved 14SF-7 & 14SF-7
- Modification 8/2579 allows the following additional Hamilton Standard Propeller combinations.
- | | |
|--|-------------------|
| | 14SF-15 & 14SF-15 |
| | 14SF-15 & 14SF-7 |
| | 14SF-15 & 14SF-23 |
| | 14SF-23 & 14SF-23 |
| | 14SF-23 & 14SF-7 |
8. Fluids (Fuel/Oil/Additives): For details refer to AFM – PSM 1-81-1A (Models 102, 103, 106)
- 8.1 Eligible Fuels
- | | |
|----------|------------------------|
| Kerosene | JET A, A-1, JP-5, JP-8 |
| Wide Cut | JET B, JP-4 |
- For other approved fuel types refer to AFM – PSM 1-81-1A (Models 102, 103, 106)
- 8.2 Eligible Oils Oils conforming to Specification MIL-L-23699

9. Fluid Capacities

9.1 Fuel Capacity

	Kg.	lbs.	Liters	Imp. Gals.
Usable	2575	5678	3160	695
Unusable	40	87	48	11
Total	2615	5765	3208	706

9.2 Oil Capacity per Engine

	Liters	Imp. Gals.
Usable	3.8	0.83
Total	17.7	3.90

10. Air Speeds:

IAS	V _{MO} (Maximum Operating)	0 to 14000 ft	<u>Knots</u>
		15000 ft	242
		20000 ft	239
		25000 ft	223
			207
	V _{FE} (Flap extended)	Flap 5° & 15°	148
		Flap 35°	130
	V _A (Maneuvering)	(Models 102, 103)	163
	V _A (Maneuvering)	(Model 106)	164
	V _{LO} (Landing gear operation)		158
	V _{LE} (Landing gear extended)		172

For other airspeeds refer to AFM – PSM 1-81-1A (Models 102, 103, 106)

11. Maximum Operating Altitude: 7,620 m (25,000 ft) (Pressure Altitude)

12. All Weather Capability: Cat II

13. Maximum Weights:

DHC-8-102

	Basic	Mod 8/1335	AFM Supplement 57	AFM Supplement 87
Taxi and ramp	15,740 kg (34,700 lb)	15,740 kg (34,700 lb)	15,740 kg (34,700 lb)	15,740 kg (34,700 lb)
Take-off	15,649 kg (34,500 lb)	15,649 kg (34,500 lb)	15,649 kg (34,500 lb)	15,649 kg (34,500 lb)
Landing	15,377 kg (33,900 lb)	15,377 kg (33,900 lb)	15,377 kg (33,900 lb)	15,377 kg (33,900 lb)
Zero fuel	14,061 kg (31,000 lb)	14,179 kg (31,300 lb)	14,243 kg (31,400 lb)	14,515 kg (32,000 lb)

DHC-8-103

	Basic	Mod 8/1335	MS8Q420649	AFM Supplement 57	AFM Supplement 87
Taxi and ramp	15,740 kg (34,700 lb)	15,740 kg (34,700 lb)	16,057 kg (35,400 lb)	15,740 kg (34,700 lb)	15,740 kg (34,700 lb)
Take-off	15,649 kg (34,500 lb)	15,649 kg (34,500 lb)	15,966 kg (35,200 lb)	15,649 kg (34,500 lb)	15,649 kg (34,500 lb)
Landing	15,377 kg (33,900 lb)	15,377 kg (33,900 lb)	15,377 kg (33,900 lb)	15,377 kg (33,900 lb)	15,377 kg (33,900 lb)
Zero fuel	14,061 kg (31,000 lb)	14,179 kg (31,300 lb)	14,515 kg (32,000 lb)	14,243 kg (31,400 lb)	14,515 kg (32,000 lb)

DHC-8-106

Taxi and ramp	16,556 kg (36,500 lb)
Take-off	16,466 kg (36,300 lb)
Landing	15,377 kg (33,900 lb)
Zero fuel	14,515 kg (32,000 lb)

14. Center of Gravity Range: For details refer to AFM – PSM 1-81-1A (Models 102, 103, 106)
15. Datum: Plate located on centerline at “Station 423.0 in” (1074.4 cm) on underside of fuselage.
16. Mean Aerodynamic Chord (MAC): 87.0 in
17. Leveling Means: Plumb bob and target in RH emergency exit opening.
18. Minimum Flight Crew: 2 (Pilot and Copilot)
19. Maximum Passenger Seating Capacity: 40 passengers (see Note 1)
20. Exits:

No.	Type	Size
1	I	0.762 m x 1.65 m (30 in x 65 in)
1	II	0.508 m x 1.37 m (20 in x 54 in)
2	III	0.508 m x 0.914 m (20 in x 36 in)

21. Baggage/Cargo Compartments:

	Class	Volume	Max. Allowable Load
Rear	B	8.48 m ³ (300 ft ³)	907 kg (2,000 lb)

Refer to Weight & Balance Manual PSM 1-8-8 for mixed passenger-cargo configurations.

22. Wheels and Tires: Tricycle landing gear, retractable, dual side by side wheel type.
Main wheel sized to accept 26.5 × 8.0–13 or 31.0 × 9.75–13 tubeless tires.
Nose gear sized to accept 18 × 5.50–8 tubeless tires or with S.O.O. 8009, 22.0 × 6.5–10 flotation type tire.

IV. Operating and Service Instructions

- | | |
|--|------------------------------------|
| 1. Airplane Flight Manual | PSM 1-81-1A (Models 102, 103, 106) |
| 2. Airplane Maintenance Manual | PSM 1-8-2 |
| 3. Weight and Balance Manual | PSM 1-8-8 |
| 4. Maintenance Program Manual | |
| - Maintenance Review Board Report (MRB Report) | PSM 1-8-7, Part 1 |
| 5. Maintenance Program Manual | |
| - Airworthiness Limitations (AWL) | PSM 1-8-7, Part 2 |
| 6. Maintenance Task Cards Manual | PSM 1-8-7TC |
| 7. Service Letters and Service Bulletins | Refer to Publications Index |

V. Notes

1. Cabin Interior and Seating Configurations must be approved and are listed in AEROC 8.1.AC.1 Section 100 current issue.

SECTION 3: DHC-8 SERIES 200

I. General

1. Aeroplane: DHC-8 Series 200

II. Certification Basis

1. Reference Application Date for EASA Certification: August 1, 1997

2. TCCA Certification Date:

DHC-8-201	August 24, 1995
DHC-8-202	March 9, 1995

3. TCCA Certification Basis: Refer to TCCA Type Certificate Data Sheet No. A-142

4. EASA Certification Date:

DHC-8-201	February 17, 1998 (LBA, Germany)
DHC-8-202	February 17, 1998 (LBA, Germany)

5. EASA Certification Basis:

FAR Part 25 dated February 1, 1965, including amendments 25-1 through 25-66; plus:

FAR 25.963(e), Amendment 25-69,	Fuel Tank Access Covers
FAR 25.361, Amendment 25-72,	Engine Torque
FAR 25.729(e), Amendment 25-75,	Retraction Mechanism

With the following exceptions:

(The DHC-8 Series 200 was certificated as a derivative of the Series 100 aircraft. The applicable basis of certification is the same as the Series 100, but the manufacturer elected to demonstrate compliance with FAR Part 25, up to Amendment, 25-66, less the exceptions shown under Basis of Certification, Series 200.)

FAR 25.365(e), Amendment 25-54,	Pressurized Cabin Loads
FAR 25.561, Amendment 25-64,	Emergency Landing Conditions
FAR 25.562, Amendment 25-64,	Emergency Landing Dynamic Conditions
FAR 25.783, Amendment 25-54,	Doors
FAR 25.785, Amendment 25-64,	Seats, Berths, Safety Belts and Harnesses
FAR 25.904, Amendment 25-62,	Automatic Takeoff Thrust Control System (replaced by ATPCS Special Condition)
FAR 25.1091(e), Amendment 25-57,	Air Intakes

Additional Airworthiness Requirements

Flight Manual Policy ref. DOT letter 5010-10-366 (ABP/L) dated June 1, 1984.

AMA 525/1, Stalls, Compliance dated July 9, 1984. Airworthiness Manual 525.207(b) Stall Warning, initial issue dated 1986. Airworthiness Manual 525.201(d) Stall Demonstration, initial issue dated 1986.

Low Temperature Operations ref. AAR Review Document September 10, 1984.
Spoiler Policy ref. DOT letter 5010-10-366 (ABE/L), dated September 20, 1984.

Compliance with the following additional optional requirements has been established:

FAR 25.1419, Ice Protection

Compliance with FAR 25.801 has been established when the safety equipment requirements of FAR 25.1411 and the ditching equipment requirements of FAR 25.1415 are satisfied.

6. Special Conditions:

Automatic take-off power control system (ATPCS) (ref. FAA Special Conditions No. 25-ANM-3; TC letter 5010-10-366 (ABP/A), dated February 24, 1984).

Steep Approach and Short Landing - (ref. TC letter 5010-10-366 (ABP/L), dated June 7, 1985).

[SC H-01 Enhanced Airworthiness Programme for Aeroplane Systems - ICA on EWIS](#)

7. Exemptions:

FAR 25.571(e)(2),	Propeller Debris (ref. FAA Exemption No. NM-102; TC letter 5010-10-366 (ABP/A) dated February 10, 1984).
FAR 25.807(c)(1),	40 Passenger Configuration (ref. TC letter 5010-10-366, dated March 14, 1986)

8. Equivalent Safety Findings:

FAR 25.773(b)(2),	Pilot compartment view.
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9. Environmental Requirements:

Environmental requirements for noise:
ICAO Annex 16 Volume 1 – Chapter 3

Environmental requirements for fuel venting and emissions:
ICAO Annex 16, Second Edition, Volume II

III. Technical Characteristics and Operational Limitations

- | | |
|----------------------------|---|
| 1. Type Design Definition: | Current issue of AEROC 8.1.AC-1 - Definition of Certified Airplanes |
| 2. Description: | Detail Specification No. DS8-200 |
| 3. Equipment: | Equipment Register |

4. Dimensions:

Span	25.89 m (85 ft)
Length	22.25 m (73 ft)
Height	7.49 m (24 ft 7 in)
Wing Area	54.35 m ²

5. Engines: 2 Pratt and Whitney of Canada engines as follows:

	Original	Optional
DHC-8-201	PW123C	PW123, PW123B, PW123D, PW123E
DHC-8-202	PW123D	PW123, PW123B, PW123E

Refer to ~~EASA~~~~TCCA~~ Engine Type Certificate Data Sheet ~~IM.E.041E-19~~.

Any combination of original engines and/or optional engines within each aircraft model is permitted. Optional engines must incorporate modification 8/2735.

5.1 Engine Limits: For details refer to AFM – PSM 1-82-1A (Models 201, 202)

6. Auxiliary Power Unit (APU): Options only. Refer to AFM - PSM 1-82-1A (Models 201, 202)

6.1 APU Limits: For details refer to AFM – PSM 1-82-1A (Models 201, 202)

7. Propellers: Hamilton Standard Model 14SF-23

Refer to FAA Propeller Type Certificate Data Sheet P7NE.

7.1 Propeller Limits: Blade SFA13 ()-OA
Diameter 3.96 m (13 ft) nominal

Pitch settings at 0.75 radius:

Feather	77.5°
Flight fine	10.5°
Ground fine	-5.5°
Full reverse	-18.5°
Propeller (Np)	- Take off 1212 rpm
	- Max. continuous 1212 rpm

The following Hamilton Standard Propeller combinations are approved 14SF-23 & 14SF-23

Modification 8/2579 allows the following additional Hamilton Standard Propeller combinations. 14SF-15 & 14SF-15
14SF-15 & 14SF-23

8. Fluids (Fuel/Oil/Additives): For details refer to AFM – PSM 1-82-1A (Models 201, 202)

8.1 Eligible Fuels Kerosene JET A, A-1, JP-5, JP-8
Wide Cut JET B, JP-4

For other approved fuel types refer to AFM – PSM 1-82-1A (Models 201, 202)

8.2 Eligible Oils Oils conforming to Specification MIL-L-23699

9. Fluid Capacities:

9.1 Fuel Capacity:

	Kg.	Lbs.	Liters	Imp. Gals.
Usable	2575	5678	3160	695
Unusable	40	87	48	11
Total	2615	5765	3208	706

9.2 Oil Capacity per Engine:

	Liters	Imp. Gals.
Usable	8.0	1.6
Total	19.3	4.57

10. Air Speeds:

			<u>Knots</u>
IAS	V _{MO} (Maximum Operating)	0 to 14000 ft	242
		15000 ft	239
		20000 ft	223
		25000 ft	207
		V _{FE} (Flap extended)	Flap 5° & 15°
		Flap 35°	130
	V _A (Maneuvering)		164
	V _{LO} (Landing gear operation)		158
	V _{LE} (Landing gear extended)		172

For other airspeeds refer to AFM – PSM 1-82-1A (Models 201, 202)

11. Maximum Operating Altitude: 7,620 m (25,000 ft) (Pressure Altitude)

12. All Weather Capability: Cat II

13. Maximum Weights:

DHC-8-201 & DHC-8-202

	Basic	AFM Supplement 57
Taxi and ramp	16,556 kg (36,500 lb)	16,556 kg (36,500 lb)
Take-off	16,466 kg (36,300 lb)	16,466 kg (36,300 lb)
Landing	15,650 kg (34,500 lb)	15,650 kg (34,500 lb)
Zero fuel	14,515 kg (32,000 lb)	14,696 kg (32,400 lb)

14. Center of Gravity Range: For details refer to AFM – PSM 1-82-1A (Models 201, 202)

15. Datum: Plate located on centerline at "Station 423.0 in" (1074.4 cm) on underside of fuselage.

16. Mean Aerodynamic Chord (MAC): 87.0 in

17. Leveling Means: Plumb bob and target in RH emergency exit opening.

18. Minimum Flight Crew: 2 (Pilot and Copilot)

19. Maximum Passenger Seating Capacity: 40 passengers (see Note 1)

20. Exits:

No.	Type	Size
1	I	0.762 m x 1.65 m (30 in x 65 in)
1	II	0.508 m x 1.37 m (20 in x 54 in)
2	III	0.508 m x 0.914 m (20 in x 36 in)

21. Baggage/Cargo Compartments:

	Class	Volume	Max. Allowable Load
Rear	B	8.48 m ³ (300 ft ³)	907 kg (2,000 lb)

Refer to Weight & Balance Manual PSM 1-82-8 for mixed passenger-cargo configurations.

22. Wheels and Tires: Tricycle landing gear, retractable, dual side by side wheel type.
Main wheel sized to accept 31.0 × 9.75–13 tubeless tires.
Nose gear sized to accept 18 × 5.50–8 tubeless tires or with S.O.O. 8009, 22.0 × 6.5–10 flotation type tire.

IV. Operating and Service Instructions

1. Airplane Flight Manual	PSM 1-82-1A (Models 201, 202)
2. Airplane Maintenance Manual	PSM 1-82-2
3. Weight and Balance Manual	PSM 1-82-8
4. Maintenance Program Manual	
- Maintenance Review Board Report (MRB Report)	PSM 1-82-7, Part 1
5. Maintenance Program Manual	
- Airworthiness Limitations (AWL)	PSM 1-82-7, Part 2
6. Maintenance Task Cards Manual	PSM 1-82-7TC
7. Service Letters and Service Bulletins	Refer to Publications Index

V. Notes

1. Cabin Interior and Seating Configurations must be approved and are listed in AEROC 8.1.AC.1 Section 200 current issue.

SECTION 4: DHC-8 SERIES 300

I. General

1. Aeroplane: DHC-8 Series 300

II. Certification Basis

1. Reference Application Date for EASA Certification: September 9, 1988

2. TCCA Certification Date:

DHC-8-301	February 14, 1989
DHC-8-311	July 31, 1990
DHC-8-314	February 20, 1992
DHC-8-315	June 2, 1995

3. TCCA Certification Basis: Refer to TCCA Type Certificate Data Sheet No. A-142

4. EASA Certification Date:

DHC-8-301	February 23, 1995 (NCAA, Norway)
DHC-8-311	August 15, 1990 (LBA, Germany)
DHC-8-314	May 3, 1993 (ACG, Austria)
DHC-8-315	March 22, 1996 (DGAC, Romania)

5. EASA Certification Basis:

FAR Part 25 dated February 1, 1965, including amendments 25-1 through 25-51; plus:

FAR 25.832,	Amendment 25-56 Cabin Ozone Concentration
FAR 25.812,	Amendment 25-58 Emergency Lighting
FAR 25.853,	Amendment 25-59 Compartment Interiors (Seat cushions)
FAR 25.853,	Amendment 25-66 Compartment Interiors (Materials) (Models 311, 314, and 315)

Additional Airworthiness Requirements

Flight Manual Policy ref. DOT letter 5010-10-366 (ABP/L), dated June 1, 1984.

AMA 525/1 Stalls, Compliance dated July 9, 1984. Airworthiness Manual 525.207(b) Stall Warning, initial issue dated 1986. Airworthiness Manual 525.201(d) Stall Demonstration, initial issue dated 1986.

Low Temperature Operations ref. AAR Review Document September 10, 1984.
Spoiler Policy ref. DOT letter 5010-10-366 (ABE/L) dated September 20, 1984.

Compliance with the following additional optional requirements has been established:

FAR 25.1419, Ice Protection

Compliance with FAR 25.801 has been established when the safety equipment requirements of FAR 25.1411 and the ditching equipment requirements of FAR 25.1415 are satisfied.

6. Special Conditions:

Automatic take-off power control system (ATPCS) (Ref. FAA Special Conditions No. 25-ANM-3; TC letter 5010-10-366 (ABP/A), dated February 24, 1984).

Steep Approach and Short Landing - (ref. TC letter 5010-10-366 (ABP/L), dated June 7, 1985).

[SC H-01 Enhanced Airworthiness Programme for Aeroplane Systems - ICA on EWIS](#)

7. Exemptions:

FAR 25.571(e)(2), Propeller Debris (ref. FAA Exemption No. NM-102; TC letter 5010-10-366 (ABP/A) dated February 10, 1984).

FAR 25.785(h), Exemption No. 89-2, dated February 3, 1989, Flight Attendants Seats

8. Equivalent Safety Findings:

FAR 25.773(b)(2), Pilot compartment view.

FAR 25.807(d)(2), Ditching emergency exits for passengers (Applies to Models -311, 314, and 315 with Change Request CR803SO00001 or CR803SO00002 incorporated).

9. Environmental Requirements:

Environmental requirements for noise:
ICAO Annex 16 Volume 1 – Chapter 3

Environmental requirements for fuel venting and emissions:

DHC-8-301 SFAR 27 dated December 12, 1973, including
DHC-8-311 Amendments 27-1 through 27-5.

DHC-8-314

DHC-8-315 ICAO Annex 16, Second Edition, Volume II

III. Technical Characteristics and Operational Limitations

1. Type Design Definition: Current issue of AEROC 8.1.AC.1 – Definition of Certified Airplanes
2. Description: Detail Specification No. DS8-300
3. Equipment: Equipment Register
4. Dimensions:
- | | |
|-----------|----------------------|
| Span | 27.43 m (90 ft) |
| Length | 25.68 m (84 ft 3 in) |
| Height | 7.49 m (24 ft 7 in) |
| Wing Area | 56.1 m ² |

5. Engines: Two (2) Pratt and Whitney of Canada engines as follows:

	Original	Optional
DHC-8-301 & DHC-8-311	PW123	PW123B, PW123E
DHC-8-314	PW123B	
DHC-8-315	PW123E	

Refer to [EASATCGA](#) Engine Type Certificate Data Sheet [IM.E.041E-19](#).

Any combination of original engines and/or optional engines within each aircraft model is permitted. Optional engines must incorporate modification 8/2735.

5.1 Engine Limits: For details refer to AFM – PSM 1-83-1A (Models 301, 311, 314, 315)

6. Auxiliary Power Unit (APU): Options only. Refer to AFM – PSM 1-83-1A (Models 301, 311, 314, 315)

6.1 APU Limits: For details refer to AFM – PSM 1-83-1A (Models 301, 311, 314, 315)

7. Propellers:

DHC-8-301, DHC-8-311 & DHC-8-315 Hamilton Standard Model 14SF-15

DHC-8-301, DHC-8-311, DHC-8-314 & DHC-8-315 Hamilton Standard Model 14SF-23

Refer to FAA Propeller Type Certificate Data Sheet P7NE.

10. Air Speeds:			<u>Knots</u>
IAS	V _{MO} (Maximum Operating)	0 to 17000 ft	243
		20000 ft	232
		25000 ft	214
	<u>DHC-8-301</u>		
	V _{FE} (Flap extended)	Flap 5°	160
		Flap 10° & 15°	149
		Flap 35°	127
	V _A (Maneuvering)		176
	V _{LO} (Landing gear operation)		158
	V _{LE} (Landing gear extended)		173
	<u>DHC-8-311, DHC-8-314 & DHC-8-315</u>		
	V _{FE} (Flap extended)	Flap 5°	163
		Flap 10°	154
		Flap 15°	150
		Flap 35°	138
	V _A (Maneuvering)		177
	V _{LO} (Landing gear operation)		163
	V _{LE} (Landing gear extended)		173

For other airspeeds refer to AFM – PSM 1-83-1A (Models 301, 311, 314, 315)

11. Maximum Operating Altitude: 7,620 m (25,000 ft) (Pressure Altitude)

12. All Weather Capability: Cat II

13. Maximum Weights:

DHC-8-301, DHC-8-311, DHC-8-314, DHC-8-315

	Basic
Taxi and ramp	18,734 kg (41,300 lb)
Take-off	18,643 kg (41,100 lb)
Landing	18,144 kg (40,000 lb)
Zero fuel	16,874 kg (37,200 lb)

DHC-8-311, DHC-8-314, DHC-8-315

	CR 803SO00001	CR 803SO00002
Taxi and ramp	19,087 kg (42,080 lb)	19,595 kg (43,200 lb)
Take-off	18,997 kg (41,880 lb)	19,505 kg (43,000 lb)
Landing	18,597 kg (41,000 lb)	19,051 kg (42,000 lb)
Zero fuel	17,463 kg (38,500 lb)	17,917 kg (39,500 lb)

For other weights refer to AFM – PSM 1-83-1A (Models 301, 311, 314, 315)

14. Center of Gravity Range: for details refer to AFM – PSM 1-83-1A

(Models 301, 311, 314, 315)

15. Datum: Plate located on centerline at "Station 423.0 in" (1074.4 cm) on underside of fuselage.
16. Mean Aerodynamic Chord (MAC): 85.5 in
17. Leveling Means: Plumb bob and target in RH emergency exit opening.
18. Minimum Flight Crew: 2 (Pilot and Copilot)
19. Maximum Passenger Seating Capacity: 56 passengers (see Note 1)
20. Exits:

No.	Type	Size
1	I	0.762 m x 1.65 m (30 in x 65 in)
1	I	0.508 m x 1.37 m (20 in x 54 in)
2	III	0.508 m x 0.914 m (20 in x 36 in)

21. Baggage/Cargo Compartments:

	Class	Volume	Max. Allowable Load
Rear	B	9.1 m ³ (320 ft ³)	1134 kg (2,500 lb)

Refer to Weight & Balance Manual PSM 1-83-8 for mixed passenger-cargo configurations.

22. Wheels and Tires: Tricycle landing gear, retractable, dual side by side wheel type.
Main wheel sized to accept 31.0 × 9.75–14 tubeless tires.
Nose gear sized to accept 18 × 5.50–8 or 22.0 × 6.5–10 tubeless tires.

IV. Operating and Service Instructions

- | | |
|--|--|
| 1. Airplane Flight Manual | PSM 1-83-1A
(Models 301, 311, 314, 315) |
| 2. Airplane Maintenance Manual | PSM 1-83-2 |
| 3. Weight and Balance Manual | PSM 1-83-8 |
| 4. Maintenance Program Manual | |
| - Maintenance Review Board Report (MRB Report) | PSM 1-83-7, Part 1 |
| 5. Maintenance Program Manual | |
| - Airworthiness Limitations (AWL) | PSM 1-83-7, Part 2 |
| 6. Maintenance Task Cards Manual | PSM 1-83-7TC |
| 7. Service Letters and Service Bulletins | Refer to Publications Index |

V. Notes

1. Cabin Interior and Seating Configurations must be approved and are listed in AEROC 8.1.AC.1 Section 300 current issue.

SECTION 5: DHC-8 SERIES 400

I. General

1. Aeroplane: DHC-8 Series 400

II. Certification Basis

1. Reference Application Date for EASA Certification: 31 January 1995

2. EASA Certification Date:

DHC-8-401	December 01, 1999	(CAA Denmark)
DHC-8-402	December 01, 1999	(CAA Denmark)

3. EASA Certification Basis:

JAR 25 Change 14
JAR 25 Amendment 25/96/01
JAR AWO Change 2
JAR 1 Definitions Change 4
JAR 21 Change 1

4. Special Conditions:

CRI C-01	Yawing Maneuvering Conditions INT/POL/25/8 Issue 1
CRI D-01	Worn Brakes INT/POL/25/6 Issue 1
CRI F-01	Protection from the Effects of HRIF INT/POL/25/2 Issue 1
CRI F-02	Protection from the Effects of Lightning Strike – Direct Effects INT/POL/25/3 Issue 1
CRI F-03	Protection from the Effects of Lightning Strike – Indirect Effects INT/POL/25/4 Issue 2
CRI G-07	Steep Approach Landing Capability (SAL)

[SC H-01 Enhanced Airworthiness Programme for Aeroplane Systems - ICA on EWIS](#)

5. Equivalent Safety Findings:

CRI B-04	Stall Warning and Stall Warning Speeds and Maneuver Capability (JAR 25.103, 107, 119, 125, 143 and 207)
CRI C-04	Flutter, Deformation and Failsafe Criteria (JAR 25.629)
CRI D-10	Nose-Wheel Steering System Protection {JAR 25x745(d)}
CRI D-02	Hydraulic System Proof Testing {JAR 25.1435(b)(1)}
CRI G-04	Accelerate Stop Distance INT/POL/25/5 Issue 1 (JAR 25.109)

6. Environmental Requirements: for details refer to CRI A-03

Environmental requirements for noise:

ICAO Annex 16 Volume 1 – Chapter 3 (Refer to Note 2)

For specific noise levels refer to AFM – PSM 1-84-1A (Models 401 or 402)

Environmental requirements for fuel venting and emissions:

ICAO Annex 16, Second Edition, Volume II

III. Technical Characteristics and Operational Limitations

1. Type Design Definition: Current issue of AEROC 8.1.AC.1 - Definition of Certified Airplanes

2. Description: Detail Specification No. DS8-400

3. Equipment: Equipment Register

4. Dimensions:

Span	28.4 m (93 ft 3 in)
Length	32.8 m (107 ft 9 in)
Height	8.3 m (27 ft 4 in)
Wing Area	63.1 m ² (679 ft ²)

5. Engines: Two (2) Pratt and Whitney of Canada engines Model PW150A

Refer to TCCA Engine Type Certificate Data Sheet No. E-29.

5.1 Engine Limits: for details refer to AFM – PSM 1-84-1A (Models 401 or 402)

6. Auxiliary Power Unit (APU): One Hamilton Sundstrand Power System
APS 1000 T-62T-46C12
TSO authorization, dated 23 July 1999
Note: Options only.

6.1 APU Limits: for details refer to AFM – PSM 1-84-1A (Models 401 or 402)

7. Propellers: Two (2) Dowty Aerospace Propellers
Model R408/6-123-F/17

Refer to EASA Type Certificate Data Sheet P.002 (previously covered under UK-CAA Propeller Type Certificate Data Sheet No. 117)

7.1 Propeller Limits:	Blade diameter		4.11 m (13.5 ft)
	Pitch settings at 0.70 radius:		
	Feather		84.5°
	Flight fine (Electronic)		16.5°
	Flight fine (Hydraulic)		16.0°
	Ground fine		-3.5°
	Full reverse		-19.0°
	Propeller (Np)	- Take off	1020 rpm
		- Max. continuous	1020 rpm

8. Fluids (Fuel/Oil/Additives): for details refer to AFM – PSM 1-84-1A (Models 401 or 402)

8.1 Eligible Fuels	Kerosene	JET A, A-1, JP-5, JP-8
	Wide Cut	JET B, JP-4

For other approved fuel types refer to AFM – PSM 1-84-1A (Models 401, 402)

8.2 Eligible Oils	Oils conforming to Specification MIL-L-23699
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9. Fluid Capacities:

9.1 Fuel Capacity:

	Kg.	lbs.	Liters	Imp. Gals.
Usable	5318	11724	6526	1436
Unusable	73	160	89	20
Total	5391	11884	6615	1456

9.2 Oil Capacity per Engine:

	Liters	Imp. Gals.
Usable	5.6	1.23
Total	24.9	5.48

10. Air Speeds:

IAS			<u>Knots</u>	
V _{MO} (Maximum Operating)	0 to 8,000 ft		245	
			282	
			286	
			275	
			248	
	V _{FE} (Flap extended)	Flap 5°		200
		Flap 10°		181
		Flap 15°		172
		Flap 35°		158
V _A (Maneuvering)			204	
V _{LO} (Landing gear operation)			200	
V _{LE} (Landing gear extended)			215	

For other airspeeds refer to AFM – PSM 1-84-1A (Models 401 or 402)

11. Maximum Operating Altitude: 7,620 m (25,000 ft) (Pressure Altitude)

12. All Weather Capability: Cat II

13. Maximum Weights:

DHC-8-401 & DHC-8-402

	Basic Gross Weight MS 4-201539	Intermediate Gross Weight MS 4-308807	High Gross Weight MS 4-308907	Enhanced High Gross Weight MS 4-309238
Taxi and ramp	28,077 kg (61,900 lb)	29,089 kg (64,130 lb)	29,347 kg (64,700 lb)	29,665 kg (65,400 lb)
Take-off	27,987 kg (61,700 lb)	28,998 kg (63,930 lb)	29,257 kg (64,500 lb)	29,574 kg (65,200 lb)
Landing	27,442 kg (60,500 lb)	28,009 kg (61,750 lb)	28,009 kg (61,750 lb)	28,123 kg (62,000 lb)
Zero fuel	25,174 kg (55,500 lb)	25,855 kg (57,000 lb)	25,855 kg (57,000 lb)	26,308 kg (58,000 lb)
Zero fuel – Supplement 87	26,308 kg (58,000 lb)	26,308 kg (58,000 lb)	26,308 kg (58,000 lb)	N/A

14. Center of Gravity Range: For details refer to AFM – PSM 1-84-1A (Models 401 or 402)

15. Datum: Plate located on centerline at "Station 428.0 in" (1087.1 cm) on underside of fuselage.

16. Mean Aerodynamic Cord (MAC): 94.512 in.

17. Leveling Means: Plumb bob and target in RH emergency exit opening.

18. Minimum Flight Crew: 2 (Pilot and Copilot)

19. Maximum Passenger Seating Capacity:

DHC-8-401	70 passengers
DHC-8-402	80 passengers
(refer to Note 1)	

20. Exits:

No.	Type	Size
1	II / III*)	0.508 m x 1.42 m (20 in x 56 in)
1	I	0.762 m x 1.65 m (30 in x 65 in)
1	I	0.610 m x 1.37 m (24 in x 54 in)
1	I	0.610 m x 1.65 m (24 in x 65 in)

*) Type III exit for showing compliance with JAR 25.801 only

21. Baggage/Cargo Compartments:

	Class	Volume	Max. Allowable Load
Front	C	2.58 m ³ (91 ft ³)	413 kg (910 lb)
Aft	C	11.64 m ³ (411 ft ³)	1,669 kg (3,680 lb)

Refer to Weight & Balance Manual PSM 1-84-8 for individual airplane configurations.

22. Wheels and Tires: Tricycle landing gear, retractable, dual side by side wheel type.
Main wheels sized to accept 32 × 8.8-16 or 34 × 8.8-16 tubeless tires.
Nose gear sized to accept 22 × 6.5-10 tubeless tires.

IV. Operating and Service Instructions

- | | |
|---|---------------------------------|
| 1. Airplane Flight Manual | PSM 1-84-1A (Models 401 or 402) |
| 2. Airplane Operating Manual | PSM 1-84-1 |
| 3. Weight and Balance Manual | PSM 1-84-8 |
| 4. Master Minimum Equipment List | PSM 1-84-16A |
| 5. Minimum Equipment List Procedures Manual | PSM 1-84-16 |
| 6. Airplane Maintenance Manual | PSM 1-84-2 |
| 7. Maintenance Requirements Manual | PSM 1-84-7 |
| Part 1: MRB Report | |
| Part 2: Airworthiness Limitation Items (ALIs) | |
| a) Certification Maintenance Requirements | |
| b) Structural Maintenance Program | |
| c) System Safe Life Components | |
| 8. Service Letters and Service Bulletins | Refer to Publications Index |
| 9. Structural Repair Manual | PSM 1-84-3 |
| 10. Cargo Loading Manual | PSM 1-84-8A |
| 11. Illustrated Parts Manual | PSM 1-84-4 |
| 12. Task Cards Manual | PSM 1-84-7TC |

V. Notes

1. Cabin Interior and Seating Configurations must be approved and are listed in AEROC 8.1.AC.1 Section 400 current issue.
2. DHC-8 Models 401 and 402 are in compliance with the requirements of the ICAO Annex 16, Volume 1 - Chapter 4.

SECTION 6: ADMINISTRATIVE**I. Change Record**

Issue	Date	Changes	TC issue
Issue 01	14/03/07	- Page 25, Section 5 III Item 7- Reference to propeller TCDS added	14/03/2007 Initial Issue
Issue 02	22/05/07	- Page 27, Section 5 III Item 13- Take Off Weight for Intermediate Gross Weight option MS 4-308807 corrected	14/03/2007
Issue 03	14/01/10	<ul style="list-style-type: none"> - Page 1, List of Effective Pages updated - Page 4 – 5, Page number updated from Section 4 III Item 11 and onwards, Section 6 Change Record added - Page 9, Section 2 III Item 8.1 - Fuel Type reference added - Page 10, Section 2 III Item 10 - Model 106 Maneuvering Airspeed added - Page 12, Section 3 - Section number corrected from 2 to 3 - Page 14, Section 3 III Item 5 - Engine Part number corrected - Page 15, Section 3 III Item 8.1 - Fuel Type reference added - Page 16, Section 3 III Item 10 - Maneuvering Airspeed corrected, Reference for Airspeeds corrected - Page 20, Section 4 III Item 5 - Engine part number corrected - Page 20, Section 4 III Item 7- Aircraft Model number corrected for propeller Model 14SF-15 - Page 21, Section 4 III Item 8.1 - Fuel Type reference added - Page 21-22, Section 4 III Item 10 - Air Speeds updated to include DHC-8-301, 311, 314 and 315 values, Fuel Type reference added - Page 22, Section 4 III Item 13 - Weights reference added - Page 23, Section 4 III Item 21 - Rear Class B baggage compartment Max. Allowable Load corrected - Page 25, Section 5 II Item 6 - “Refer to Note 2” added - Page 25, Section 5 III Item 4 - Height dimension corrected - Page 26, Section 5 III Item 8.1 - Fuel Type reference added - Page 27, Section 5 III Item 19 - Model 402 Maximum Passenger Seating Capacity increase from 78 to 80 - Page 28, Section 5 V - Note 2 added - Page 29 – 30 List of Revisions pages added 	14/03/2007
Issue 04	14/12/10	<ul style="list-style-type: none"> - Page 1, List of Effective Pages deleted - Page 2-5, Page numbers revised - Page 8, Section II item 6 - SC H-01 added - Page 14, Section II renumbered, item 6 - SC H-01 added - Page 19 - Section II renumbered, item 6 - SC H-01 added - Page 24 - Section II renumbered, item 6 - SC H-01 added 	14/03/2007
Issue 05	11/02/11	<ul style="list-style-type: none"> - Page 9, Section 5, TCDS EASA IM.E.041 inserted - Page 15, Section 5, TCDS EASA IM.E.041 inserted - Page 20 - Section 5, TCDS EASA IM.E.041 inserted 	14/03/2007