

# Civil Aviation Authority United Kingdom



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## TYPE-CERTIFICATE DATA SHEET

**UK.TC.A.00143**

for

**DHC-6**

**Type Certificate Holder**

De Havilland Aircraft of Canada Limited

4100 Westwinds Drive NE,

Calgary, Alberta,

Canada,

T3J 4L2.

Model(s): DHC-6 Series 400

Issue: 01

Date of issue: 29 August 2025

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## GENERAL (All Models)

### Section 0 GENERAL (All Models)

#### I. General

This Type-Certificate Data Sheet (TCDS) is the concise definition of the type-certificated product accepted and or approved by the CAA in the UK for the affected types and models.

This TCDS includes:

1. Details of the type design that affect the TCDS that have been approved or accepted by the CAA in the UK since 01 January 2021.
2. Details of the type design that affected the TCDS and were approved or accepted by EASA before 01 January 2021, and were incorporated into EASA TCDS EASA.IM.A.575 at Issue 4 dated 29 September 2017 and are therefore accepted by the UK under Article 15 of Annex 30 of the UK-EU Trade and Cooperation Agreement.

## DHC-6 SERIES 400

### Section 1 DHC-6 SERIES 400

#### I. General

##### 1. Type / Variant / Model

- a) Type: DHC-6
- b) Variant or Model: DHC-6 Series 400

##### 2. Airworthiness Category

Normal Category

##### 3. Type Certificate Holder

De Havilland Aircraft of Canada Limited  
4100 Westwinds Drive NE,  
Calgary, Alberta,  
Canada,  
T3J 4L2.

##### 4. Manufacturer

De Havilland Aircraft of Canada Limited  
4100 Westwinds Drive NE,  
Calgary, Alberta,  
Canada,  
T3J 4L2.

##### 5. State of Design Authority

Transport Canada Civil Aviation (TCCA).

##### 6. State of Design Authority Application Date for Certification

02 April 1964 (DHC-6 Type).  
27 September 2007 (DHC-6 Series 400).

##### 7. UK CAA Reference Application Date for Validation

12 November 2008.

##### 8. State of Design Authority Type Certification Date

24 June 2010.  
TCCA Certificate A-82, Section 9 (DHC-6 Series 400).

## DHC-6 SERIES 400

### 9. UK CAA Type Certification Date

12 November 2010.

## II. Certification Basis

### 1. Reference Date for Determining the Applicable Requirements

Date of Application for original DHC-6 TCCA Type Approval: 02 April 1964.

Date of Application for DHC-6 Series 400 TCCA Approval: 27 September 2007.

### 2. State of Design Certification Basis

Refer to TCCA TCDS A-82.

### 3. Certification Basis

As defined in CRI A-01, latest Issue and below.

### 4. Airworthiness Requirements

14 CFR 23 for the basic DHC-6 Series 400 aeroplane.

### 5. Special Conditions

CRI F-52 Protection from the Effects of HIRF

CRI F-53 Direct Effects of Lightning

CRI F-54 Indirect Effects of Lightning

### 6. Equivalent Safety Findings

None

### 7. Exemptions

None

### 8. Environmental Standards

Refer to TCDS for Noise UK.TC.A.00143.

a) ICAO Annex 16, Volume I, Amendment 8 (2007) Noise (Ref.: EASA Doc 2003/04/RM)

b) ICAO Annex 16, Volume II, Amendment 5 (2007) Emissions (Ref.: EASA Doc 2003/04/RM).

CRI N-01 Approval of Noise Test Plan and Test Witnessing.

### 9. Additional National Requirements

None

## DHC-6 SERIES 400

**III. Technical Characteristic and Operating Limitations****1. Type Designation Definition**

Viking Air Limited Top Drawing C61000-9.

**2. Description**

Twin engine turboprop, all-metal, 19 passenger, unpressurized, high wing, fixed gear aeroplane.

**3. Equipment**

The list of approved equipment, including the basic required equipment which must be installed in the aircraft for certification, (see Basis of Certification), is given in manufacturer Report AEROC 6.6.G1.

**4. Dimensions**

Span	19.81 m [65 feet, 0 inches]
Length	15.77 m [51 feet, 9 inch]
Height	6.02 m [19 feet, 6 inches]
Wing Area	39.02 m <sup>2</sup> [420 ft <sup>2</sup> ]
MAC	1.98 m [6.5 ft]

**5. Engines**

Model 2 Pratt and Whitney Canada (PWC) PT6A-34 turboprop engines, flat rated at 620 shp.

Type Certificate TCCA TC No. E-6

Engine Limits	RATING	ESHP	SHP
	Take-off (5 min)	652*	620*
	Max. Continuous	652*	620*

\*Available to 42°C (108°F) Ambient Temperature. (S.L.)

**Temperature Limits (Inter-Turbine)**

Take-off	790°C
Max. Continuous	790°C
Starting (2 sec.)	1090°C

**Torque Limits**

Take-off	50 psi (1,536 lb-ft)
Max. Continuous	50 psi (1,536 lb-ft)

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## Gas Generator

Take-off 38,100 rpm (101.6%)

Max. Continuous 38,100 rpm (101.6%)

## Oil Temperature

Starting -40°C Minimum

Take-off 10°C to 99°C

Max. Continuous 10°C to 99°C

## Oil Pressure

Normal (27,000 rpm &amp; above) 85 to 105 psig

Minimum (below 27,000 rpm) 40 psig

**6. Propellers**

Model	2 Hartzell	
	Hub	HC-B3TN-3D (Y) note A.
	Blades	T10282N(B) (*1) note B.
	Note A: (Y) designates Zero Thrust Latches. Note B: (B) designates De-icing Boots.	
Type Certificate	EASA.IM.P.126	
Number of blades	3 (Aluminum)	
Sense of Rotation	Propellers rotate Clockwise in view of flight direction	
Diameter	2.591 m (8 ft. 6 in.) nominal	
	2.540 m (8 ft. 4 in.) after repairs	
Pitch	Pitch Settings at 76.2 cm (30") Station	
	Feather	+87°
	Take-off Low Pitch	+ 17°
	Idle Blade Angle	+ 11°
	Reverse Blade Angle	- 15°
Propeller Limits	(Np)	
	Take-off	2110 rpm (96%)
	Max. Continuous	2110 rpm (96%)

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**7. Fluids**

Fuel	Jet fuel – Refer to Pratt & Whitney Canada Inc. Service Bulletin 1244, latest issue.
Oil	Synthetic – Refer to Pratt & Whitney Canada Inc. Service Bulletin 1001, latest issue.
Coolant	n/a

**8. Fluids Capacities**

	Litres	IMP. Gal	U.S Gal
Fuel* (usable)			
Forward Tank (+162.5in.)	686	151	181
Rear Tank (+240.0 in)	746	164	197
Unusable	13.6	3.0	3.5
Total	1445.6	318	381.5

\*See NOTE 2.b. for Weight and Balance.

	Litres	IMP. Gal	U.S Gal
Oil* (usable)			
Left (+177.0 in.)	6.8	1.2	1.5
Right (+177.0 in.)	6.8	1.2	1.5
Total	13.6	2.4	3.0

\*See NOTE 2.c. for Weight and Balance.

Coolant system n/a

**9. Air Speeds**

	KCAS	KIAS
V <sub>MO</sub> Max. Operating S.L. to		
6,700 ft	170	166
10,000 ft	160	156
15,000 ft	145	141
20,000 ft	130	126
25,000 ft	115	112
VA Design Maneuvering	136*	132*



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	KCAS	KIAS
VMC Minimum Control	66	64
Flaps 10°		
VFE Flaps Extended	105	103
0° to 10°		
VFE Flaps Extended	95	93
11° to 37°		

\* Reduce VA=VMO above 18,000 ft.

**10. Maximum Operating Altitude**

25,000 ft.

**11. All Weather Capabilities**

VFR Day and Night, IFR.

**12. Maximum Masses**

Ramp	5,670 Kg (12,500 lb)	
Take-Off	5,670 Kg (12,500 lb)	
Landing	5,579 Kg (12,300** lb)	
	** Main Wheel Tire Pressure	38 psi
	Below -29°C (-20°F)	34 psi

**13. Centre of Gravity Range**

Linear variation between given points.

Weight	Fwd. Limit	Aft Limit
Kg (lbs)	%MAC (in) aft of datum	%MAC (in) aft of datum
Take-Off		
5,670 (12,500)	25 (207.74)	36 (216.32)
5,262 (11,600)	20 (203.84)	36 (216.32)
2,722 (6,000)	20 (203.84)	36 (216.32)
Landing		
5,579 (12,300)	25 (207.74)	36 (216.32)
4,990 (11,000)	20 (203.84)	36 (216.32)
2,722 (6,000)	20 (203.84)	36 (216.32)

**14. Datum**

Station 0 is 277.67 cm (109.32 inches) forward of a jig point which is marked by a plate attached to the bulkhead between the cockpit and the cabin.

## DHC-6 SERIES 400

**15. Control Surface Deflections**

See DHC-6 Twin Otter Series 400 Maintenance Manual, PSM 1-64-2 for rigging procedure and measurements.

**16. Mean Aerodynamic Chord (MAC)**

198.1 cm (78 inches). (The wing leading edge is at Station 188.24).

**17. Levelling Means**

The cabin floor rails provide a surface for leveling the airplane both laterally and longitudinally. The cabin floor level is 15 inches below water line zero.

**18. Minimum Flight Crew**

1 (pilot).

**19. Maximum Passenger Seating Capacity**

19, for passenger seating locations see POH.

**20. Baggage / Cargo Compartments**

	Kg	Lb	Arm
Forward (see NOTE 5)	130	285	(+25.0 in.)
Rear	227	500	(+354.0 in.)
Rear Extension Shelf	68	150	(+391.0 in.)

\*Total Rear + Rear Extension Shelf not to exceed 227 Kg (500 lb) maximum.

**21. Wheels and Tyres**

Nose Wheel Tyre Size:	8.90 x 12.5 Type III 6 ply
Main Wheel Tyre Size:	11.00 x 12 Type III 10 ply
Main Wheel Tyre Pressure	38 psi
Below -29 °C (-20°F)	34 psi
See NOTE 7.	

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**IV. Operating and Service Instructions**

1. Aircraft Flight Manual (AFM) PSM 1-64-1A: Approved June 18, 2010 or later TCCA approved revision.  
Airplanes must be operated commercially according to UK CAA approved AFM Supplement 37, Issued June 18, 2010 or later TCCA approved revision.
2. Pilot's Operating Handbook (POH) PSM 1-64-POH: Issued June 24, 2010 or later OEM approved revision.
3. Aircraft Maintenance Manual (AMM) PSM 1-64-2: Issued June 24, 2010 or later OEM approved revision.
4. Ground Support Manual (GSM) (also includes the table of Dimensions, Limits and Clearances) PSM 1-6-2T: Issued June 24, 2010 or later OEM revision.
5. Structural Repair Manual (SRM) PSM 1-6-3: Issued June 24, 2010 or later OEM revision.
6. Service Bulletins (SBs) PSM 1-6-SB/TAB: Issued December 20, 2006 or later OEM approved revision.
7. Corrosion Prevention and Control Manual (CPCP) PSM 1-6-5: Approved June 24, 2010 or later TCCA approved revision.
8. Inspection Requirements Manual (IRM) PSM 1-6-7: Approved June 24, 2010 or later TCCA approved revision.
9. Weight and Balance Manual (W&B) PSM 1-64-8: Issued June 24, 2010 or later OEM approved revision.
10. Structural Components Service Life Limits Manual PSM 1-6-11: Approved June 18, 2010 or later TCCA approved revision.
11. Airworthiness Limitations – Avionics PSM 1-6-13: Approved June 18, 2010 or later TCCA approved revision.

**V. Operational Suitability Data**

The Operational Suitability Data elements listed below are approved by the European Union Aviation Safety Agency under the EASA Type Certificate EASA.IM.A.575 as per Commission Regulation (EU) 748/2012 as amended by Commission Regulation (EU) No 69/2014, and are therefore accepted by the UK under Article 15 of Annex 30 of the UK-EU Trade and Cooperation Agreement.

Master Minimum Equipment List (MMEL)

EASA-OSD-VAL-DHC6-400-MMEL, IR,  
EASA approved January 21, 2016 or any later UK CAA approved Revision.

Flight Crew Data (FCD)

EASA-OSD-VAL-DHC6-400-FC, IR,  
EASA approved December 16, 2015, or any later UK CAA approved Revision.

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Maintenance Certifying Staff Data (MCSD)

EASA-OSD-VAL-DHC6-400-MCS, Rev. 1,

EASA approved February 14, 2017, or any later UK CAA approved Revision.

**VI. Notes**

1. Serial numbers eligible: S/N 845 and subsequent.
2.
  - a. The current Weight and Balance Handbook, Part Number PSM 1-64-8, giving the list of equipment included in the empty weight and loading instructions, must be in each aircraft except in the case of operators having an approved weight control system.
  - b. The following amount of unusable fuel is included in the empty weight: 13,6 Liters (3.0 Imp. Gal., 3.5 US. Gal.)
  - c. For weight and balance purposes the total oil (including system and tank) is included in the empty weight and equals 24,5 kg (54 lbs) at +177 in.
3. The following placards must be displayed in clear view of the pilot at all times:
  - a. "This airplane must be operated as a Normal Category Airplane in compliance with the operating limitations stated in the form of placards, markings and manuals".
  - b. "No aerobatic manoeuvres (including spins) are approved".
  - c. "Day, Night, VFR".
  - d. "IFR" when the aircraft is equipped in accordance with the requirements for the operation intended.
  - e. "This airplane is equipped for operation in icing conditions" when the aircraft is fitted with the modifications specified in NOTE 8.
4. The TCCA Approved Airplane Flight Manual PSM 1-64-1A must be in the aircraft at all times.
5. The DHC-6 Series 400 must have a long nose (Viking Mod 6/2020).
6. The appropriate TCCA approved DHC-6 Flight Manual Supplements are to be inserted in the Airplane Flight Manual. Compliance with the service life limits specified in DHC-6 Twin Otter Structural Components Service Life Limits Manual, PSM 1-6-11 is required.
7. Viking Intermediate Floatation Gear is approved when installed in accordance with Viking Drawing C6U1000.  
Aircraft to be operated in accordance with approved Viking Flight Manual Supplement.
8. Aircraft is approved for operation in icing conditions when equipped with the following Viking Modifications:  
Mods 6/1043, 6/1066, 6/1089, 6/2028, 6/2042 and 6/2045; plus S.O.O. 6004, S.O.O. 6187 and S.O.O. 6202 or S.O.O. 6237.  
Aircraft to be operated in accordance with appropriate TCCA approved Flight Manual Supplement.
9. Commuter interior installed to Viking Mod 6/2013.

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## 10. DHC-6 Series 400

a. The electrical system upgrade consists of removing the AC system; replacing the starter-generator and the DC system wiring, connectors, lights (strobe, navigation, nose-wheel position indicator, and interior) and door proximity switches, and installing an increased capacity battery, 12V DC outlets in the cockpit and an optional pulsing landing light system.

b. The cockpit and avionics upgrades consist of replacing the conventional primary flight instruments, engine instruments and crew alerting system with an integrated Honeywell Primus Apex® EFIS avionics suite; the installation of / provisions for comm/nav equipment, radar altimeter (second radar altimeter optional), flight director, autopilot (optional), flight management system (second flight management system optional), SBAS GPS upgrade (optional), SVS (optional), TCAS I, TCAS II (optional), ADS-B out (optional), Class A TAWS, CVR, FDR, weather radar and cabin public address system; and related changes to the electrical system, circuit breakers and switches.

c. Aircraft equipped with Mod. 6/2303 to be operated in accordance with DOT Approved Viking Series 400 Flight Supplement 50, Issue 4 (VAL Document Number: PSM 1-64-1A) or any later DOT (TCCA) approved revision.

11. In support of compliance with 14 CFR 23.1309 at Amendment 23-57 for all avionics, the DHC-6 Series 400 is a Class IV aircraft in the meaning of FAA Advisory Circular (AC) 23.1309-1E.

## Administration

**Administration****I. Acronyms and Abbreviations**

<b>Acronym / Abbreviation</b>	<b>Definition</b>
TC	Type Certificate
TCDS	Type Certificate Data Sheet
TCH	Type Certificate Holder
DOT	Department of Transport (Canada)
FAR	Federal Aviation Regulations
SFAR	Special Federal Aviation Regulation
TCCA	Transport of Canada Civil Aviation
SBAS	Satellite Based Augmentation System
SVS	Synthetic Vision System
TCAS I, II	Traffic Alert and Collision Avoidance System
TAWS	Terrain Awareness and Warning System
CVR	Cockpit Voice Recorder
FDR	Flight Data Recorder
GPS	Global Positioning System
14 CFR	Title 14 of the United States Code of Federal Regulations (CFR)

## Administration

**II. Type Certificate Holder Record**

<b>TCH Record</b>	<b>Period</b>
The de Havilland Aircraft Company of Canada, Limited	1966
The de Havilland Aircraft Company of Canada (a Division of Boeing of Canada Ltd.)	1986
Boeing of Canada Ltd. (de Havilland Division)	1988
De Havilland Inc.	1992
Bombardier Inc.	1998
Viking Air Limited	2006
De Havilland Aircraft of Canada Limited	Since 28 August 2025 (current)

**III. Amendment Record**

<b>TCDS Issue No.</b>	<b>TCDS Issue Date</b>	<b>Changes</b>	<b>TC Issue and Date</b>
01	29 Aug 2025	<p>The content of the initial issue of this UK CAA TCDS was taken from EASA TCDS No. [EASA.A.575 Issue 04] dated [29 September 2017] which was the current EASA version at 31 December 2020 and therefore the version of the TCDS for the DHC-6 Series 400 accepted by the UK under Article 15 of Annex 30 of the UK-EU Trade and Cooperation Agreement, except as listed below:</p> <p>The following changes have been made to reflect EU-Exit as well as corrections:</p> <ol style="list-style-type: none"> <li>1. The definition for MAC has been repositioned to better align with current UK CAA TCDS template at time of issue.</li> <li>2. Previous "Certification Basis" and "Airworthiness Requirements" are combined under "Airworthiness Requirements" to better align with current UK CAA TCDS template at time of issue.</li> </ol> <p>Type certificate holder updates to De Havilland Aircraft of Canada Limited to reflect takeover of Viking Air Limited on 01 August 2024.</p>	Issue 01 29 Aug 2025

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