



# Type Certificate Data Sheet

Number: A-124

Issue No.: 4

Approval Date: Refer Below

Issue Date: January 31, 2006

This Data Sheet which is part of Type Certificate No. A-124 prescribes the conditions and limitations under which the product(s) for which the Type Certificate was granted meet(s) the standards of airworthiness required by the Canadian Aviation Regulations.

**Type Certificate Holder:**

Viking Air Limited  
9574 Hampden Road  
Sidney, British Columbia  
V8L 5V5

**Models**

DHC-5A

1. MODEL DHC-5A (Special Purpose)

Approved May 11, 1979

- Engines 2 General Electric CT64-820-1 or -3 (may be intermixed)
- Fuel MIL-L-5624 Grade JP4 or Grade JP5, Conforming to G.E. Spec. No. D50TF2  
Commercial Jet A, Jet A-1 and Jet B, (ASTM D-1655-71)
- Oil MIL-L-23699 or MIL-L-7808 conforming to G.E. Spec. No. D50TF1

Engine Limits	Torque	Prop Shaft	Gas Gen	Turb. Inlet	SHP S.L. Static	Equiv. SHP
	lb.-ft	RPM	RPM	Temp T5	(kw)	(kw)
Take-off	1075 (1457)	1160 (100)	17800 (104.2)	643	2970 (2215)	3060 (2282)
Max	1075	1160	17400	604	2405	2480
Continuous	(1457)	(100)	(102)		(1793)	(1849)
	1670	1392	18330			
Max Transients	(2263)	(120)	(107.3)			
	(3 sec)	(5 sec)	(10 sec)			

650 starting  
670 for 30 seconds

Fuel Pressure Inlet Press without boost

Min. 15 PSIA      Max. 50 PSIG

Not to exceed 0.30 V/L, S.L. to 6000 ft



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Oil Pressure		<u>Engine</u>	<u>SDG</u>
	Maximum operating	93 PSIG	95 PSIG
	Minimum operating	52 PSIG	60 PSIG
	Minimum Ground Idle	10 PSIG	5 PSIG

Refer to Operating/Maintenance Instructions for operating range limits and for reduced oil pressure limits above 15000 ft. altitude.

Oil Temp.	Maximum operating	113°C (5 minutes)
	Maximum continuous	107°C

Propellers 2 Hamilton Standard 63E60-17 or -21  
(may be intermixed)

Propeller Limits

Blades - A7139B-0 on 63E60-17  
Blades - A7139C-0 on 63E60-21  
Diameter 14.5 ft  
Pitch Setting at 72 in. Station

Feathered	+75.0°
Flight Fine	+ 6.8°
Ground Stop	- 2.2°
Reverse	-27.0°

RPM (maximum continuous and take-off) 1160

Airspeed Limits			CAS		IAS	
			<u>Knots</u>	<u>(km/h)</u>	<u>Knots</u>	<u>(km/h)</u>
V <sub>MO</sub>	(Max. Operating)					
	S.L. To	5000 ft	230	(426)	225	(417)
		10000 ft	217	(402)	212	(393)
		15000 ft	203	(376)	198	(367)
		20000 ft	190	(352)	186	(345)
		25000 ft	177	(328)	173	(320)
		30000 ft	164	(304)	160	(296)
V <sub>B</sub>	(Max. Gust)		150	(278)	147	(272)
V <sub>A</sub>	(Manoeuvring)		143	(265)	140	(259)
V <sub>FE</sub>	(Flaps Extended)	0°	124	(230)	122	(226)
		7°	120	(222)	117	(216)
		17°	115	(213)	113	(209)
		30°	105	(195)	103	(191)
		40°	100	(185)	99	(183)



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Airspeed Limits (Cont'd)		CAS		IAS	
		<u>Knots</u>	<u>(km/h)</u>	<u>Knots</u>	<u>(km/h)</u>
V <sub>LE</sub>	(Ldg Gear Extended)	160	(296)	156	(289)
V <sub>LO</sub>	(Ldg Gear Operation)	140	(259)	137	(254)
	Cargo Door Operating	140	(259)	137	(254)
V <sub>MCA</sub>	(Min. Control Speed) MCA Take-off and Climb	80	(148)	80	(148)

Flight Load Factors	Flaps up	+2.5g	-1.0g
	Flaps down	+2.0g	0.0g

Maximum Weight	Take-off	41000 lb (18594 kg)
	Landing	39100 lb (17732 kg)
	Zero Fuel	37000 lb (16780 kg)

C.G. Limits	Forward	337.83 inches (8.58m)
	Aft	356.35 inches (9.05m)

Datum Station 0 is 161.45 inches (4.10m) forward of jig point which is marked by a plate attached to the underside of the fuselage at the joint between the cockpit and the cabin.

Levelling Means Plumb-bob suspension and target located on the port side of the doorway in the cabin forward bulkhead.

Maximum Crew Two (Pilot and co-pilot)

Maximum Occupants 3 Flight crew members only (See NOTE 3)

Maximum Cargo See DHC-5 Buffalo Weight and Balance Manual (Civil), PSM1-5A-8

Maximum Operating Altitude 30,000 ft when equipped with approved oxygen systems.

Outside Air Temp. Limits ISA +36.6°C (ISA + 66°F)



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Fuel Capacity

Note: Outer tanks are the main tanks and must be filled before any fuel is added to the inner tanks.

	<u>Imp. Gals.</u>	<u>Litres</u>	<u>Lbs.</u>	<u>Kg.</u>
Outer port	345	1568	2691	1221
Outer stbd.	345	1568	2691	1221
Inner port	533	2423	4157	1886
Inner stbd.	<u>533</u>	<u>2423</u>	<u>4157</u>	<u>1886</u>
Total	1756	7982	13696	6214

	<u>Imp. Gals.</u>	<u>Litres</u>	<u>Lbs.</u>	<u>Kg.</u>
Unusable Fuel				
Outer port	3.5	15.9	27.0	12.2
Outer stbd.	3.5	15.9	27.0	12.2
Inner port	6.5	30.0	51.0	23.1
Inner stbd.	6.5	30.0	51.0	23.1
Total	20.0	91.8	156.0	70.6

Oil Capacity	Usable/engine	1.7	7.6	15.0	6.8
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Control Surface Movements	See DHC-5 Buffalo Maintenance Manual, PSM1-5-2				
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Basis of Certification	a)	Canadian Military Service Records
	b)	Engine FAA Type Certificate No. E13EA-8 dated January 15, 1975.
	c)	Propellers FAA Type Certificate No. P19EA-5

Serial Numbers Eligible	Serial numbers 5 through 14, 19, 21, 23, 25.
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Approved  
Installations

## ITEM 100 SPECIAL PURPOSE INSTALLATION

This Special Purpose Installation embodies a number of modifications (listed in de Havilland Aircraft of Canada Ltd. Report Aeroc 5.1.AC.1 Section 1.1 which removes military equipment and provides for other requirements to permit operation in a civil role (See Note 1).

The following documents are applicable to

### Item 100 Special Purpose Installation:

- a) Definition of Aircraft - DHC Report Aeroc 5.1.AC.1 Section 1.1
- b) Aircraft Operating Instructions (See NOTE 2) Canadian Forces Technical Order C-12-115-000/MB-000
- c) Aircraft Weight and Balance Data (See NOTE 2) Canadian Forces Technical Order C-12-115-000/MW-000)
- d) Aircraft Equipment Codes and Inspection Requirements (See NOTE 2) Canadian Forces Technical Order C-12-115-000/NE-000.

Serial numbers eligible under Item 100: Numbers 5 through 14, 19, 21, 23, 25.

## ITEM 101 SPECIAL PURPOSE INSTALLATION

This Special Purpose Installation embodies a number of modifications listed in de Havilland Aircraft of Canada Ltd. Report Number Aeroc. 5.1.AC.1, Section 3. Details of Modifications are stated in DHC PSM 1-5-12. The de Havilland Aircraft of Canada Ltd. designates this commercially as the DHC-5D configuration.

Engines: 2 General Electric CT64820-4 (See DOT Approved Flight Manual for engine limits)

Propellers: 2 Hamilton Standard 63E60-25. Propeller data is identical with that for 63E60-21.

Maximum	Take-off	41000 lb (18594 kg)
Weights	Landing	39100 lb (17732 kg)
	Zero fuel	37000 lb (16780 kg)

Performance: See DOT Approved Flight Manual.



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Approved  
Installations  
(Cont'd)

The following documents are applicable to  
Item 101 Special Purpose Installation (See NOTE 2):

- a) Definition of Aircraft - DOT Approved Aeroc Report 5.1.AC.1 Section 3
- b) DOT Approved DHC-5 Buffalo Airplane Flight Manual (Civil), PSM1-5A-1A (in each airplane)
- c) DHC-5 Buffalo Inspection Requirements Manual (Civil), PSM1-5A-7 (for finite life items, see Structures Section, Table 1).
- d) DHC-5 Buffalo Weight and Balance Manual (Civil), PSM1-5A-8

Serial numbers eligible under Item 101, Special Purpose Installation:

Numbers 95A and subsequent. New airplanes manufactured by de Havilland Aircraft of Canada Ltd., when designated as Model DHC-5A" (CIVIL) and bearing a serial number with suffix "A".

- NOTE 1 Required modifications will be defined by re-issue of Aeroc. 5.1.AC.1 Section 1.1 and will be subject to DOT Approval at the time these Aircraft are offered for sale to the public.
- NOTE 2 These documents shall form the basis of any DOT approved Airplane Flight Manuals and Inspection Requirement Manuals.
- NOTE 3 Model DHC-5A is approved for cargo carriage only.
- NOTE 4 Effective 31 January 2006, Type Certificate A-124 and the design responsibility for all Models listed on this data sheet were transferred from Bombardier Inc. to Viking Air Limited.

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J.D. Turnbull  
Acting Chief, Project Management  
Aircraft Certification  
for Minister of Transport