



NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety
Washington, D.C. 20594

August 11, 2014

AIRWORTHINESS

Group Chairman's Factual Report

DCA13MA121

**Attachment 2 – N93PC Supplemental Type Certificates
(12 pages)**

United States Of America
Department of Transportation - Federal Aviation Administration

Supplemental Type Certificate

Number SA09866SC

This Certificate issued to Texas Turbine Conversion, Inc.
8955 CR 135
Celina, TX 75009

certifies that the change in the type design for the following product with the limitations and conditions therefor as specified hereon meets the airworthiness requirements of Part 3 of the Civil Air Regulations.

Original Product Type Certificate Number: A-815
Make: Bombardier (Otter)
Model: DHC-3

Description of Type Design Change: Installation of Honeywell TPE-331 turboprop engine in accordance with Texas Turbine Conversions, Inc. Master Drawing List No. 4001, Revision C, dated May 5, 2001, or later FAA approved revision. FAA approved Airplane Flight Manual Supplement TTC-FMS-1, Revision A, dated January 31, 2002, or later FAA approved revision is required.

Limitations and Conditions: This alteration is compatible with approved Landplane and Seaplane configurations of the DHC-3 aircraft. Compatibility of this design change with previously approved modifications must be determined by the installer. If the holder agrees to permit another person to use this certificate to alter the product, the holder shall give the other person written evidence of that permission.

This certificate and the supporting data which is the basis for approval shall remain in effect until surrendered, suspended, revoked or a termination date is otherwise established by the Administrator of the Federal Aviation Administration.

Date of application: October 14, 2000

Date reissued:

Date of issuance: May 05, 2001

Date amended: January 31, 2002, Rev. 1



By direction of the Administrator

(Signature)
S. Frances Cox
Manager, Special Certification Office
Southwest Region

(Title)

Any alteration of this certificate is punishable by a fine of not exceeding \$1,000, or imprisonment not exceeding 3 years, or both.

United States of America
Department of Transportation—Federal Aviation Administration
Supplemental Type Certificate

Number SA4005NM

This certificate, issued to

Precise Flight, Inc.
63354 Powell Butte Road
Bend, OR 97701

*certifies that the change in the type design for the following product with the limitations and conditions therefor as specified hereon meets the airworthiness requirements of Part * of the * Regulations.*

Original Product—Type Certificate Number:

*See attached FAA Approved Model List (AML)

Make:

No. SA4005NM for list of approved airplane models

Model:

and applicable airworthiness regulations

Description of the Type Design Change: Precise Flight Inc. Pulselite Control System manufactured in accordance with Precise Flight Engineering Drawing Lists 002P0000, Revision H, dated July 11, 2001; 010P0000, Revision F, dated March 13, 2002; 015P0000, Revision J, dated April 19, 2002; 020P0000, Revision M, dated September 6, 2002; 025P0000, Revision E, dated July 10, 2001, or later FAA approved revisions. Installed in accordance with the appropriate Precise Flight drawing, listed on Precise Flight Engineering Drawing List 001P0020, Revision A, dated July 10, 2002, and/or the Installation Manual listed on FAA AML No. SA4005NM, dated November 27, 2002, or later FAA approved revisions. Maintained in accordance with the appropriate Precise Flight Instructions for Continued Airworthiness found on Engineering Drawing List 001P0020, Revision A, dated July 10, 2002, or found in the appropriate Installation Manual listed on FAA AML SA4005NM, dated November 27, 2002, or later FAA approved revision.

NOTE: Approval for the physical installation of the Pulselite Control Unit will be required if there is no specific reference provided in Engineering Drawing List 001P0020, Revision A, dated July 10, 2002, or later FAA approved revision.

Limitations and Conditions: Approval of this change in type design applies to the model aircraft on the FAA approved AML SA4005NM only. This approval should not be extended to other aircraft of these models on which other previously approved modifications are incorporated unless it is determined by the installer that the relationship between this change and any of those other previously approved modifications, including changes in type design, will introduce no adverse effect upon the airworthiness of that aircraft. A copy of this Certificate, FAA approved AML No. SA4005NM, dated November 27, 2002, or later FAA approved revision, and the Airplane Flight Manual Supplement called out in FAA approved AML SA4005NM, or later FAA approved revision, must be maintained as part of the permanent records for the modified aircraft.

If the holder agrees to permit another person to use this certificate to alter the product, the holder shall give the other person written evidence of that permission.

This certificate and the supporting data which is the basis for approval shall remain in effect until surrendered, suspended, revoked, or a termination date is otherwise established by the Administrator of the Federal Aviation Administration.

Date of application: July 21, 1984
Date of issuance: August 19, 1988

Date reissued:
Date amended: 3/31/88; 5/4/89; 6/24/93; 6/22/00;
6/4/01; 11/27/02; 11/7/03



By direction of the Administrator

(Signature)

Acting Manager, Seattle Aircraft Certification Office
(Title)

Any alteration of this certificate is punishable by a fine of not exceeding \$1,000, or imprisonment not exceeding 3 years, or both.

FAA APPROVED MODEL LIST (AML) NO. SA4005NM
PRECISE FLIGHT PULSELITE

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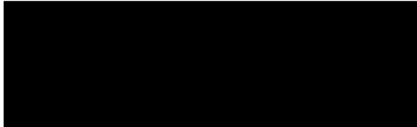
ORIGINAL ISSUE DATE: August 19, 1987

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Amendment Date
July 24, 2003
November 30, 2007
November 30, 2007
November 30, 2007
July 24, 2003
December 18, 2007
July 24, 2003
July 24, 2003
July 24, 2003
July 24, 2003

FAA Approved:


Acting Manager, Seattle Aircraft
Certification Office

AMENDED:

9/10/87; 3/31/88; 5/4/88; 5/4/89; 7/10/89; 2/19/90; 5/18/92;
9/30/92; 10/16/92; 6/24/93; 4/7/99; 6/22/00; 6/4/01;
11/26/02; 7/10/02; 11/27/02; 7/24/03; 11/30/07, 12/18/07
000PENG0001S.doc

PFI Document Number:

FAA APPROVED MODEL LIST (AML) NO. SA4005NM
PRECISE FLIGHT PULSELITE

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ORIGINAL ISSUE DATE: August 19, 1987

ITEM	AIRCRAFT MAKE	AIRCRAFT MODEL	ORIGINAL TYPE CERTIFICATE NUMBER	CERTIFICATION BASIS FOR ALTERATION	FAA APPROVED AIRCRAFT FLIGHT MANUAL SUPPLEMENT	FAA Approved Drawing			AML AMDT. DATE
						Number	Rev.	Date	
16	B-N Group Ltd. (Pilatus, B-N Limited, B-N (Bembridge))	BN2A MK.III, BN2A MK.III-2, BN2A MK.III-3	A29EU	FAR 21.29 (FAR 23)	Document No.: 000PMAN0001 Revision: A dated 7/24/03	PPRI-2000 PPRI-3000 8076	Rev. 14 4/19/02 Rev. 9 11/22/99 Rev. C 07/10/02	7/24/03	
		BN-2, BN-2A, BN-2A-2, BN-2A-3, BN-2A-6, BN-2A-8, BN-2A-9, BN-2A-20, BN-2A-21, BN- 2A-26, BN-2A-27, BN-2B- 20, BN-2B-21, BN-2B-27, BN-2T	A17EU	FAR 21.29 FAR 23					
17	Cessna Aircraft Corporation	140	A-768	CAR 4a	Document No.: 000PMAN0001 Revision: A dated 7/24/03	PPRI-2000 PPRI-3000 8076	Rev. 14 4/19/02 Rev. 9 11/22/99 Rev. C 07/10/02	7/24/03	
		140A (Landplane) (Seaplane and Skiplane)	5A2 5A2	CAR 3 CAR 4a					
		150, 150A, 150B, 150C, 150D, 150E, 150F, 150G, 150H, 150J, 150K, A150K, 150L, A150L, 150M, A150M, 152, A152	3A19	CAR 3					
		170, 170A, 170B	A-799	CAR 3					

FAA APPROVED MODEL LIST (AML) NO. SA4005NM
PRECISE FLIGHT PULSELITE

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ORIGINAL ISSUE DATE: August 19, 1987

ITEM	AIRCRAFT MAKE	AIRCRAFT MODEL	ORIGINAL TYPE CERTIFICATE NUMBER	CERTIFICATION BASIS FOR ALTERATION	FAA APPROVED AIRCRAFT FLIGHT MANUAL SUPPLEMENT	FAA Approved Drawing			AML AMDT. DATE
						Number	Rev.	Date	
11	Augustair, Inc. (Mountainair, Inc., Varga, Morrissey)	2150, 2180	4A19	CAR 3	Document No.: 000PMAN0001 Revision: A dated 7/24/03	PPRI-2000 PPRI-3000 8076	Rev. 14 Rev. 9 Rev. C	4/19/02 11/22/99 07/10/02	7/24/03
12	Ayres Corporation	See Quality Aerospace, Inc. for (Rockwell Commander) S2A	-	-	-	-	-	-	-
13	Bellanca Aircraft Corporation (Aeronca, American Champion)	14-13, 14-13-2, 14-13-3, 14-13-3W See Alexandria Aircraft, LLC for 14-19, 14-19-2, 14-19-3, 14-19-3A, 17-30, 17-31, 17-31TC, 17-30A, 17-31A, 17-31ATC	A-773	CAR 4a	Document No.: 000PMAN0001 Revision: A dated 7/24/03	PPRI-2000 PPRI-3000 8076	Rev. 14 Rev. 9 Rev. C	4/19/02 11/22/99 07/10/02	7/24/03
14	Bombardier Inc. Regional Aircraft (DeHavilland, Twin Otter)	DHC-3 (Otter) DHC-6-1, DHC-6-100, DHC-6-200, DHC-6-300	A-815 A9EA	CAR 3, CAR 10 CAR 3	Document No.: 000PMAN0001 Revision: A dated 7/24/03	8043 8051 8052 8053 PPRI-2000 PPRI-3000 8076	Rev. - Rev. C Rev. B Rev. A Rev. 14 Rev. 9 Rev. C	11/02/98 2/15/01 2/27/01 1/24/00 4/19/02 11/22/99 07/10/02	7/24/03
15	British Aerospace (Scotland) (Jetstream Aircraft Ltd.)	Beagle B.206 series 1& 2 Beagle B.121 Series 1, 2, 3 Jetstream Series 3101 Jetstream Series 3201	A11EU A22EU A21EU A56EU	FAR 21.29, CAR 3 FAR 21.29 FAR 23 FAR 21.29 FAR 23 FAR 21.29 FAR 23	Document No.: 000PMAN0001 Revision: A dated 7/24/03	PPRI-2000 PPRI-3000 8076	Rev. 14 Rev. 9 Rev. C	4/19/02 11/22/99 07/10/02	7/24/03



Transport Canada Transports Canada

Department of Transport

Supplemental Type Certificate

This approval is issued to:

Stolairus Aviation
6095 Airport Way
Kelowna, British Columbia
Canada V1V 1S1

Number: SA94-114

Issue No.: 3

Approval Date: August 23, 1994

Issue Date: May 04, 2007

Responsible Office:

Pacific

Aircraft/Engine Type or Model:

DEHAVILLAND DHC-3

Canadian Type Certificate or Equivalent:

A-27

Description of Type Design Change:

Installation of Baron STOL Systems STOL Kit

Installation/ Operating Data,
Required Equipment and Limitations:

Installation is to be done in accordance with DOT approved AOG Air Support Inc. Drawing Number AOG-02-001-1, New issue, dated 07/06/94*.

Required Equipment:

DOT approved AOG Air Support Inc. Flight Manual Supplement No. 4, Revision 1, dated September 29, 1994, or Revision 2, dated August 18, 2005*.

(*or later DOT approved revisions)

THIS STA/STC AUTHORIZED FOR
USE ON ONE AIRPLANE ONLY

REGISTRATION # G-FMPX
SERIAL # 280

For Kit #

B30 2111

ONLY



Conditions: This approval is only applicable to the type/model of aeronautical product specified therein. Prior to incorporating this modification, the installer shall establish that the interrelationship between this change and any other modification(s) incorporated will not adversely affect the airworthiness of the modified product


Natasa Mudrinic
For Minister of Transport

Canada

United States of America
Department of Transportation -- Federal Aviation Administration

Supplemental Type Certificate

IMPORT

Number SA01855NY

This certificate issued to

Kal Air Repair Limited
6400 Tronson Road
Vernon, British Columbia
Canada V1H 1N5

certifies that the change in the type design for the following product with the limitations and conditions therefore as specified hereon meets the airworthiness requirements of Part 3 of the Civil Air Regulations.

Original Product -- Type Certificate Number : A-815

Make : DeHavilland

Model : DHC-3

Description of Type Design Change:

Installation of Kal Air, Model 1460, Extended Range Fuel System in accordance with Outback Aviation Drawing No. 1460, Issue 4, dated November 9, 2001.

Limitations and Conditions:

1. DHC-3 fitted with Turbine Engine - Kal Air Limited Airplane Flight Manual Supplement 615-TE, Issue 1, dated October 3, 2003 or later Transport Canada approved revision is required with this modification.
2. DHC-3 fitted with Piston Engine - Kal Air Repair Limited Airplane Flight Manual Supplement 615-PE, Issue 1, dated October 3, 2003 or later Transport Canada approved revision is required with this modification.
3. Kal Air Repair Ltd. Instructions for Continuing Airworthiness for De Havilland DHC-3 "Otter;" Maintenance Manual Supplement 614-PE MMS.
4. If the holder agrees to permit another person to use this certificate to alter the product, the holder shall give the other person written evidence of that permission.
5. Compatibility of this design change with previously approved modifications must be determined by the installer.

This certificate and the supporting data, which is the basis for approval, shall remain in effect until surrendered, suspended, revoked or a termination date is otherwise established by the Administrator of the Federal Aviation Administration.

Date of application : October 3, 2003

Date of issuance : January 16, 2004

Date reissued :

Date amended :

By direction of the Administrator



(Signature)

Vito A. Pulera
Manager
New York Aircraft Certification Office

(Title)



Department of Transport

Supplemental Type Certificate

This approval is issued to:

Kal Air Repair Ltd.
6400 Tronson Road
Vernon, British Columbia
Canada V1H 1N5

Number: SA03-82

Issue No.: 3

Approval Date: October 03, 2003

Issue Date: May 02, 2008

Responsible Office:

Pacific

Aircraft/Engine Type or Model:

DEHAVILLAND DHC-3

Canadian Type Certificate or Equivalent:

A-27

Description of Type Design Change:

Installation of Kal- Air model 1460 extended range fuel system

Installation/Operating Data,

Installation to be carried out in accordance with Outback Aviation Drawing No. 1460, Issue 5, DOT Approved May 2, 2008 (*).

Required Equipment and Limitations:

1. Flight Manual Supplement no. 615 (PE), DOT Approved October 03, 2003 or - Flight Manual Supplement no. 615 (TEG), Issue 1, DOT Approved January 19, 2004. (*).
2. Placards:
Adjacent Fuel quantity gauge: REAR TANK CAPACITY: 73 IMP GAL.
Adjacent rear tank filler port: 73 IMP GAL.
3. Report 614-PE-MMS, "Instructions for Continuing Airworthiness For De Havilland DHC-3 Otter Equipped with Kal Air Model 1460 Extended Fuel Range Fuel System, STC SA03-82" DOT accepted 19 January 2004(**)

Weight and Balance Data: (includes .5 Imp. Gal unusable fuel)

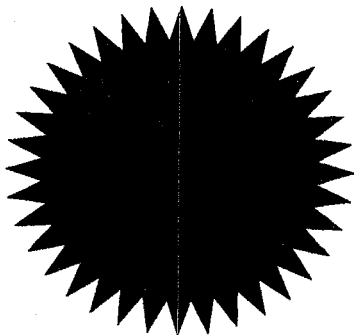
Weight: + 34 pounds, Arm: FS 217.6

Basis of Certification:

CAR 3 (May 15, 1956)

(*) or later TCCA approved revision (**) or later TCCA accepted revision.

- End -



Conditions: This approval is only applicable to the type/model of aeronautical product specified therein. Prior to incorporating this modification, the installer shall establish that the interrelationship between this change and any other modification(s) incorporated **will not** adversely affect the airworthiness of the modified product.

Jorge Canal
Regional Engineer, Aircraft Certification
For Minister of Transport

Canada



Department of Transport

Limited Supplemental Type Certificate

This approval is issued to:

JCM Aerodesign Limited
P.O. Box 415
Peterborough Ontario K9J 6Z3

Number: O-LSA01-452/D

Issue No.: 2

Approval Date: May 14, 2001

Issue Date: August 26, 2002

Responsible Office: Ontario

Aircraft/Engine Type or Model: DeHavilland DHC-3

Registration/Serial No.: see continuation page

Canadian Type Certificate or Equivalent: A-27

Description of Type Design Change: Cargo Net Installation

Installation/Operating Data,
Required Equipment and Limitations:

- 1) Install cargo nets in accordance with Air Saguenay dwg 2010 approved May 14, 2001 or later approved revision.
- 2) Nets to be fabricated in accordance with Air Saguenay drawings 2011 and 2012 approved May 14, 2001 or later approved revision.

Maximum compartment limits are as follows:

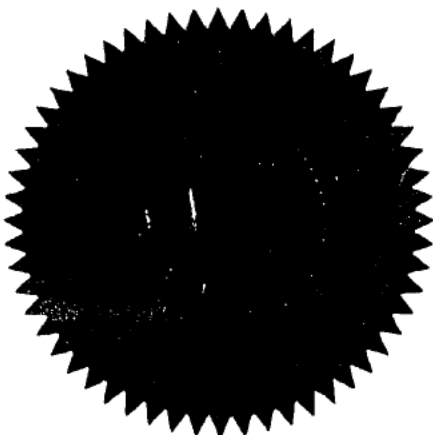
Zone 1 (station 111 to station 153) - 700 lbs

Zone 2 (station 153 to station 204) - 700 lbs

Baggage Compartment (aft of station 253) - 750 lbs

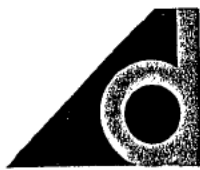
continued on page 2 of 2

Conditions: This approval is only applicable to the type/model of aeronautical product specified therein. Prior to incorporating this modification, the installer shall establish that the interrelationship between this change and any other modification(s) incorporated will not adversely affect the airworthiness of the modified product.



James C. Mewett DAR 205
For Minister of Transport

Canada



JCM Aerodesign Limited

P. O. Box 415 Peterborough, Ontario K9J 6Z3 Tel: (705) 743 9483 FAX: 749 0841 E-Mail: jcm@ptbo.igs.net

02.08.26

Air Saguenay (1980) Inc.

CP 1102

Chicoutimi, QC G7H 5G4

Phone # 418 548 5505

FAX # 418 673 3692

Attn.: Jean Tremblay

Re.: Approval Package, O-LSA01-452/D
DeHavilland DHC-3

Cargo Net Installation

C-GLFL	s/n 329
C-GQDU	43
C-GUTQ	402
C-GLMT	216
C-FODT	218
C-FMPX	280
C-FDAK	157
C-FAZW	451
C-FJZN	205
C-GVNX	353
C-GLJI	150
C-FEEU	119
C-GLCO	420

Dear Sir:

Attached please find issue 2 of the subject approval certificate. This issues makes the following corrections:

C-GODT corrected to C-FODT
C-GMPX corrected to C-FMPX
C-GDAK corrected to C-FDAK
C-GJZN corrected to C-FJZN

These errors came to my attention from Transport Canada. Apparently the certificate had been corrected by hand and was submitted with a 24-0045 form. In future please advise me of any errors you find in approval certificates so that corrections can be made in a timely manner.

Sincerely,


James C. Mewett, DAR 205



(Continuation Sheet)

Number: O-LSA01-452/D

Issue No.: 2

Approval Date: 2001.05.14

Issue Date: 2002.08.26

NOTE: THIS ADDENDUM SHALL REMAIN PART OF THE CERTIFICATE REFERRED TO THEREIN.

This modification applies to the following DHC-3 aircraft:

C-GLFL	s/n 329
C-GQDU	s/n 43
C-GUTQ	s/n 402
C-GLMT	s/n 216
C-FODT	s/n 218
C-FMPX	s/n 280
C-FDAK	s/n 157
C-FAZW	s/n 451
C-FJZN	s/n 205
C-GVNX	s/n 353
C-GLJI	s/n 150
C-FBEU	s/n 119
C-GLCO	s/n 420

-----END-----

Supplemental Type Approval

Number: SA95-17

1

This approval is issued to:
Viking Air Ltd.
9574 Hampden Road
Sidney, B.C.
Canada, V8L 5V5

Issue No.:

Approval Date:

March 15, 1995

Issue Date:

March 16, 1995

Pacific

Responsible Region:

DeHavilland DHC-3

Aircraft/Engine Type or Model:

Canadian Type Approval or Equivalent:

DOT Type Approval A-27

Description or Type Design Change:

Installation of shoulder harnesses at pilot and co-pilot positions

Installation/Operating Data,
Required Equipment
and Limitations:

DHC-3 Installations are made in accordance with Viking Air drawing VAL
OTS 1287, dated 95-01-19, or later approved revision:
Part Number VAL OTS 1287-1 or -2: with a lift latch type of lap
strap buckle.
or
Part Number VAL OTS 1287-3 or -4: with a rotary latch type of
lap strap buckle.

NOTE: The two dash numbers are due to the colour of the three
belt systems: -1 & -3 are Blue; -2 and -4 are Black.

Conditions: This approval is only applicable to the type/model of aeronautical product specified therein. Prior to incorporating this modification, the installer shall establish that the interrelationship between this change and any other modification(s) incorporated will not adversely affect the airworthiness of this modified product.

L.B. Samoil

Regional Airworthiness Engineer
For Minister of Transport