NATIONAL TRANSPORTATION SAFETY BOARD
Office of Aviation Safety
Washington, D.C. 20594

February 12, 2015

MAINTENANCE RECORDS REVIEW

A. ACCIDENT: ERA14MA060

LOCATION: La Alianza, Puerto Rico

DATE/TIME: December 2, 2013 about 2010 Atlantic Standard Time

AIRCRAFT: M7 Aerospace, LLC. SA227-AC, N831BC, SN AC654B

B. MAINTENANCE RECORD REVIEW:

Gregory Borsari
National Transportation Safety Board
Washington, DC

C. SUMMARY:

On December 2, 2013, at approximately 2010 Atlantic Standard Time, a M7 Aerospace SA227AC, N831BC, operating as IBC Airways flight 405 (Chasqui 405), was destroyed during a rapid descent to terrain near La Alianza, Puerto Rico. The captain and the first officer were fatally injured. Night visual meteorological conditions prevailed. The international cargo flight was operating on an instrument flight rules flight plan between Las Americas International Airport (MDSD), Santo Domingo, Dominican Republic, and San Juan International Airport (TJSJ), San Juan, Puerto Rico, under the provisions of 14 Code of Federal Regulations Part 135.

D. DETAILS OF THE RECORDS REVIEW:

1.0 Aircraft History

The airplane was originally manufactured in 1985. IBC Airways, Inc. obtained the aircraft from Aircraft Consultants, Inc. on March 29, 1999.

The airplane had approximately 33,883.4 total hours with 35,698 total cycles on November 29, 2013 three days prior to the accident.

2.0 Operation Specifications (OpSpecs)[1]

IBC Airways, Inc. Has a Part 135 Certificate, which included the standards, terms, conditions, and limitations contained in the FAA approved Operations Specifications (Parts D and E).

(a) Air carrier was authorized as a 14 CFR Part 135 operation and certificated in accordance with 14 CFR Part 119.21.

(b) Per Section D072 of the OpsSpecs, IBC Airways Inc. was authorized to use a Continuous Airworthiness Maintenance Program (CAMP).

(c) Per Section D085 of the OpSpecs, IBC Airways, Inc. have 6 M7 Aerospace SA-226/227, 11 Saab SF340 and 2 Embraer EMB-145-EP airplanes.

(d) Per section D095 of the OpSpecs, IBC Airways, Inc. was authorized to use an approved Fleet Minimum Equipment List (MEL).

(e) Per section D485 of the OpSpecs, IBC Airways, Inc. has an Aging Aircraft Inspection and Records Review. The Aging Aircraft Inspection Program is not applicable to their fleet of M7 Aerospace aircraft due to Part 135 (On Demand).

(f) Per section E096 of the OpSpecs, IBC Airways, Inc. was authorized for a Weight and Balance Program.

3.0 Type Certificate Data Sheet

The Type Certificate Data Sheet (A8SW) prescribes conditions and limitations under which the product for which the Type Certificate (TC) was issued meets the

[1] Operations Specifications contains the authorizations, limitations, and certain procedures under which each kind of operation, if applicable, is to be conducted by the certificate holder.

airworthiness requirements of the Federal Aviation Regulations. According to the document, M7 Aerospace LLC is the holder of the TC.

See Attachment 1 for further information.

4.0 Continuous Airworthiness Maintenance Program (CAMP):

IBC Airways, Inc. utilized a Continuous Airworthiness Maintenance Program (CAMP) to maintain the airworthiness of the airframe and engines. All the required regulatory requirements and recurring inspections were incorporated into the CAMP.

The CAMP used a phased inspection interval by zones as well as an 85 hour repetitive service check. The phased inspection check intervals are every 150 hours and numbered one through six. In addition to the phased inspections there are supplemental inspections that are tracked individually.

The last inspections accomplished on the accident airplane are as follows:

Table 1 – Inspections

Checks	Date	Total Time	Interval
85 Hour Service Check	9/27/2013	33818.5	85 hours
Phase One Inspection	5/19/2013	33663.8	150 hours to phase two
Phase Two Inspection	9/27/2013	33813.7	150 hours to phase three
Phase Three Inspection	9/27/2013	33813.7	150 hours to phase four
Phase Four Inspection	2/11/2013	33424.1	150 hours to phase five
Phase Five Inspection	2/11/2013	33424.1	150 hours to phase six
Phase Six Inspections	4/1/2013	33545.2	150 hours to phase one

Table 2 – Supplemental Inspections

Supplemental Inspection No.1	9/25/2013	33813.7	Cooling Turbine Lube 150 hours
Supplemental Inspection No.2	9/26/2013	33813.7	Engine Ground Run 150 hours
Supplemental Inspection No.3	9/24/2013	33818.5	Service Landing Gear Struts 900 hours
Supplemental Inspection No.4	5/15/2013	33657.4	Pitch Trim Travel 400 hours
Supplemental Inspection No.5	LH 5/7/2013 RH 7/13/2013	33631.7 33068.5	Fuel Nozzles 300 hours
Supplemental Inspection No.6	LH 9/25/2013 RH 7/13/2013	33813.7 33068.5	Plenum Drain 600 hours
Supplemental Inspection No.7	9/25/2012	33284.6	Un-Feathering Pump 800 hours
Supplemental Inspection No.8	LH 9/18/2012 RH 7/13/2013	32852.6 33068.5	Engine Oil change 900 hours
Supplemental Inspection No.9	Documented in Engine Logs	Documented in Engine Logs	Torque Load Air Insp 1000 hours
Supplemental Inspection No.10	9/25/2012	33284.6	NWS Filter 1000 hours
Supplemental Inspection No.11	4/1/2013	33555.0	De-Ice system insp 900 hours
Supplemental Inspection No.12	10/18/2011	32882.7	Elevator, Aileron, Ruder gust Lock 2250 hours
Supplemental Inspection No.13	10/15/2011	32882.4	Landing Gear Bellcrank Pivot Pin 2250 hours

Supplemental Inspection No.14	Not applicable to this model		Flammable Fluid Protection
Supplemental Inspection No.16	11/21/2003	26176.5	Block Inspection 9000 hours
Supplemental Inspection No.17	11/21/2003	26176.5	CAWI Distribution System 9000 hours
Supplemental Inspection No.18	LH 4/26/2013 RH 11/4/2013	33621.2 33200.8	Magnesium Housing Corrosion 1 year
Supplemental Inspection No.19	6/30/2012	33212.2	Avionics Inspection 2 year
Supplemental Inspection No.20	6/302012	33212.2	Transponder and Pitot Static 2 year
Supplemental Inspection No.21	6/30/2012	33212.2	Pitot Static Leak Check 2 year
Supplemental Inspection No.22	Not applicable System not installed		Air Conditioning System
Supplemental Inspection No.23	2/12/2010	31462.1	Block Insp 6750 hours
Supplemental Inspection No.24	9/24/2013	33818.5	ELT Insp 1 year
Supplemental Inspection No.25	11/13/2013	33863.8	GPS Update – periodic from manufacturer

5.0 Engine and Propeller Maintenance and History

The airplane was equipped with two Garrett TPE331 engines. The engines were inspected and maintained in accordance with the CAMP.

Table 3 – Engine History

		No.1 Engine	No.2 Engine	
Manufacturer		Garrett TPE331	Garrett TPE331	
Part Number		3102540-3	3102540-8	
Serial Number		P-44117C	P-44038C	
Date Installed		9/27/2012	7/13/2013	
Total Time of Airframe at engine installation (hours)		33284.6	33723.3	
Total Cycles of Airframe at engine installation		34927	35426	
Date of Overhaul		5/29/2012	11/20/2012	
Time Since New		12852.6	33228.4	
Cycles Since New		12395	38771	
Time Since Overhaul		598.8	160.1	
Cycles Since Overhaul		771	272	
Time Since Hot Section (3500 hr)		598.8	160.1	
Time Since Gearbox Inspection (3500 hr)		598.8	160.1	
Time Since CAM/Overhaul (7000 hr)		3785.0	4341.9	
Date 12 Month Corrosion Inspection		5/2012	11/2012	
Time Since Fuel Control & Fuel Pump (3700 hr)		598.8	160.1	

The airplane was equipped with two McCauley Propellers.

Table 4 – Propeller History

		LH Propeller	RH Propeller	
Manufacturer		McCauley	McCauley	
Part Number		4HFR34C652-JK	4HFR34C652-EFHJGK	
Serial Number		990329	881672	
Date Installed		3/23/2011	10/30/2009	
Time Since New		8202.4	22842.6	
Total Time of Airframe at propeller installation (hours)		32386.9	31268.6	
Total Cycles of Airframe at propeller installation		34204	33401	
Time Since Overhaul		1496.5	2614.8	
Cycles Since Overhaul		1494	2297	

6.0 Airworthiness Directive (AD)[2]

A review of all applicable Airframe, Powerplant and Accessory ADs found that the subject airplane was in compliance. Airworthiness Directives affecting flight control systems or structural integrity are listed in table 5.

Table 5 – Airworthiness Directives

AD Number		Subject		Compliance Date
87-02-02		Primary Flight Control Cables		9/28/2007
90-24-03		Rudder Trim Tab Link Assembly		11/27/1990
92-18-07		Power Lever – Loss of Control		10/2/1992
93-15-01		Elevator Pivot Fitting		1/24/2007
94-07-10 R1		Upper Wing Skin		3/22/2002
95-24-11		Flight Control Jam (cockpit opening)		3/12/1996
97-02-02		Loss of Pitch Control		2/16/1997
97-10-13		Elevator Torque Tubes		1/31/2005

[2] Airworthiness Directive (AD) is a regulatory notice sent out by the FAA informing the operator of an action that must be taken for the aircraft to maintain its airworthiness status.

2005-06-13C		Wing Spar Fatigue Cracks		10/5/2009
2007-16-03		Pitch Trim Actuator Free Play		6/26/2006
2012-18-01		Wing Attach Fittings		Due 500 Flight Cycles from 9/21/2012

7.0 Zone 8 Tail Inspections

As part of the maintenance review particular attention was focused on pitch control of the airplane. The IBC Airways CAMP phase inspection program includes a light inspection of the tail (zone 8) at the phase two interval and a heavy inspection at phase 5. See attachment 2 for the most recent phase two and phase five tail inspections including inspection items.

8.0 Flight Log Review

A review of all the daily flight logs from January 2012 thru November 29, 2013 was completed. Particular attention was given to flight controls, engines, and flight instruments, unusual flight characteristics such as airframe vibration, pitch, roll, and yaw attitude. Additional areas of review included the environmental control system and any systemic issues. None identified.

9.0 Major Alterations and Major Repairs

All major alterations and repairs were reviewed. There were 14 major alterations and 21 major repairs on the subject aircraft. Of note, one of the major repairs was accomplished in June 2008 due to right wing damage. Repairs were made to the wing skins, ribs and main spar. In addition, 18 of the 21 major repairs were accomplished on the wings, elevators, fuselage and doors in June of 1991.

10.0 Miscellaneous

The maintenance records include an item for the pitch trim warning box PN 27-82168-007 SN 606054 being overhauled on 9/4/2008 and subsequently installed on the subject aircraft on 12/22/2009. There was also an item for the left elevator outboard attach hinge being replaced due to corrosion on 10/18/2011.

Submitted by: Gregory Borsari
Aviation Accident Investigator
Maintenance

Attachments:

Attachment 1 – IBC Airways, Inc. Type Certificate
Attachment 2 – IBC Airways, Inc. Zone 8 Tail Inspections

Attachment 1

IBC Airways, Inc.
Type Certificate
Data Sheet

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

A8SW
Revision 24
M7 Aerospace LLC
SA226-TC
SA227-AC (C-26A)
SA227-PC
SA227-BC (C-26A)
April 26, 2012

TYPE CERTIFICATE DATA SHEET A8SW

This data sheet, which is part of Type Certificate No. A8SW, prescribes conditions and limitations under which the product for which the type certificate was issued meets the airworthiness requirements of the Federal Aviation Regulations.

Type Certificate Holder

M7 Aerospace LLC
10823 N.E. Entrance
San Antonio, Texas 78216

Fairchild Aircraft, Inc. transferred TC A8SW to M7 Aerospace LP on April 29, 2003. TC A8SW transferred to M7 Aerospace LLC on April 26, 2012.

I - Model SA226-TC, 22 PCLM, Normal Category, Approved June 11, 1970, Restricted Category Approved February 10, 1978, SFAR 41 Approval September 25. 198O (See Note 8).

(See note 7 for Restricted Category Operation at 14,000 lbs. gross weight)

Engines: 2 Garrett (AiResearch) TPE331-3U-303G or 304G Turboprop or 2 Garrett (AiResearch) TPE 331-3UW-303G or -304G Turboprop

Fuel: AVJET A, A-1, and B. JP-1, JP-4, and JP-5 fuels conforming to AiResearch Report No. PE-5064-R. (Fuels shall conform to the specification as listed or to subsequent revisions thereof.) (See Note 3.)

Oil: MIL-L-23699A conforming to Garrett (AiResearch) Report No. PE-5065-R. (Oil shall conform to the specification as listed or subsequent revisions thereof.)

Engine Limits (See Note 4A) — Static Sea Level Ratings

	Shaft Horse Power (S.H.P.)	Gas Gen. Speed (R.P.M.)	Prop Shaft Speed (R.P.M.)	Max. Perm. Turbine Interstage Temp. (C)
Take-off (5 min.) Dry-Static	840	41730	2000	923
Take-off (5 min.) Wet	940	41730	2000	944
Max. Continuous	840	41730	2000	923
Starting Limit (1 sec.) (Below 50%)	-	- -		1149

Oil Temps: Minus 40 C to 110 C (normal operations)
Minus 40 C to 127 C (ground idle only)

Propeller and Propeller Limits: 2 Hartzell HC-B3TN-5( )/T10282HB or T10282B.
Diameter 102 inches. No reduction permitted.
Pitch at 30 in. station.

Start locks	+ 2.0
Flight Idle	+13.0
Feathered	+89.0
Reverse	- 6.0

Page No.	1	2	3	4	5	6	7	8	9	10
Rev. No.	24	21	21	20	20	21	21	22	21	20

Rev 24: TC Holder name changed to M7 Aerospace LLC on April 26, 2012

Airspeed Limits (Knots CAS)

	Category		
	Normal	Restricted	Normal (SFAR 41)*
Max. Operating Speed	248	238	248
Decrease maximum operating speed 5 knots per 1000 ft. above:	17,000 ft.	19,000 ft.	17,000 ft.
Maneuvering	194	152	200
Flaps Full Extended	153	153	163
1/2 Extended	180	180	180
1/4 Extended	215	215	215
Landing Gear Extended	176	176	176
Landing Gear Operating	176	176	176
Landing Lights Extended	150	150	150

*Serial No. TC-398 through TC-418. (See Note 8.)

C.G. Range (Inches aft of datum)

Gear Down
260.1 (13.7% MAC) to 277.1 (36% MAC) at 14,000 lbs.*
259.3 (12.7% MAC) to 277.1 (36% MAC) at 13,230 lbs.***
258.5 (11.6% MAC) to 277.1 (36% MAC) at 12,500 lbs.
254.4 (6.2% MAC) to 277.1 (36% MAC) at 8,500 lbs.
254.9 (6.9% MAC) to 277.1 (36% MAC) at 6,500 lbs.
Straight line variation between points given.

NOTE: Gear retraction will not move the c.g. beyond approved limits if the airplane is loaded within the gear-down envelope.

Empty weight C.G. Range: None

Maximum Weight (lbs.)

	Category		
	Normal	Normal (SFAR 41)***	Restricted
Ramp	12,600	13,330	14,100*
Take-off	12,500	13,230	14,000
Landing	12,500**	12,900**	12,500**

Maximum Operating Altitude: 25,000 feet (31,000 feet per AFM Supplement 12 dated December 1, 1976).

*May be operated at 14,000 lbs. max. takeoff weight in Restricted Category only after complying with Note 7.
** Maximum landing fuel not to exceed 1740 pounds per side.
*** Serial No. TC-398 through TC-418. (See Note 8.)

Minimum Crew: One Pilot except as otherwise required by the Airplane Flight Manual.

No. of seats: Maximum 22 (Crew at +111.0) See loading instructions for passenger loading.

Maximum Baggage and/or Equipment
Rear Compartment: 600 lbs. (+473.4)
Nose Compartment: 800 lbs. (600 lbs. with nose AWI tank installed) (+46.7)
Local loading on cargo floor: 150 lbs./sq. ft.

Fuel Capacity: 652 gal. total (324 gal. usable in each of 2 wing tanks (+281.4)), or 558 gal. total (277 gal. usable in each of two wing tanks (+282.0)).
See Note 1(A) for data on unusable fuel.

Oil Capacity: 16.5 qt. total (5 qt. usable in each engine oil tank (+205.0)).
(See Note 5.)
See Note 1(A) for data on unusable oil.

Control Surface

Wing Flaps	36 ± 1	
Main Surface		
Aileron	18.5 ± 1 up	21.5 ± 1 down
Elevator	30 ± 1 up	15 ± 1 down
Rudder	19 ± 1 right	19 ± 1 left
Stabilizer (mechanical stops):		
	2.40 ± .20 L.E. up	7.80 ± .20 L.E. down
	(electrical stops):	
	0.2 ± .05 before mechanical stops	
Tabs (Main surface in Neutral)		
Aileron	20 ± 2 , -1 up	20 ± 2 ,-1 down
Rudder	25 ± 1.5 right	25 ± 1.5 left

Serial Nos.	TC-201 through TC-397, TC-418, TC-419, TC-211E, TC-211EE, TC-211EEE, TC-211EEEE, Eligible TC-202E, TC-208E, TC-215E, TC-222E, TC-222EE, TC-227E, TC-228E, TC-229E, TC-234E, TC-237E, TC-238E, TC-239E, TC-255E, TC-246E, TC-303E, TC331E, TC-334E (See Note 8 for Serial No. TC-398 through TC-418.)
Datum	Located 274.1 inches forward of wing main (forward) spar centerline.
Leveling Means	Lateral : Nose baggage compartment door sill. Longitudinal : Nose baggage compartment floor.
Certification Basis	FAR 23 effective February 1, 1965, through Amendments 23-6; Special Conditions outlined in FAA letters November 19, 1965, August 22, 1967, February 5, 1968, and April 4, 1968; and SFAR 23. SFAR 27 effective February l, 1974, and FAR 36 effective January 1, 1980. Exemption No. 1240 dated January 7, 1971. Exemption No. 3256 dated June 17, 1981. Date of TC Application August 2, 1968. (See Note 8 for Serial No. TC-398 through TC-418.) Approved for flight into known icing in accordance with Rule 34 of SFAR 23.
Production Basis	Production Certificate No. 3SW (spares only) expired October 4. 1990. Current Certificate No. 6SW (spares only).
Equipment	The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification. Fairchild Drawing No. 27-l00l0 "Master Equipment List," contains listing of all additional required equipment as well as optional installations approved by the FAA. See Fairchild Report 2601-R429, "Metro Required Equipment Lists," an FAA approved report, for required systems and equipment for operating in specified environmental conditions. (See Note 8 for Serial No. TC-398 through TC-418.)

II - Model SA227-AC (C-26A), 22PCLM. Normal Category. SFAR 41. Approved 8 May 1981 (See Note 10 & 18).

Engines	2 Garrett (AiResearch) TPE331-llU-601G or -611G (with Dowty Rotol propellers) or 2 Garrett (AiResearch) TPE 331-llU-602G or -612G (with McCauley propellers)
Fuel	Aviation turbine fuels — AiResearch Specification Type A — EMS53111 Type A-1 — EMS53112 Class A-JP4 and Class B-Type B — EMS53113 Type JP-5 — EM553116 Type JP-8 — EMS53112 (Fuel shall conform to the specification as listed or to subsequent revisions thereof.) (See Note 3.)
Oil	MIL-L-23699B conforming to Garrett Turbine Engine Company (AiResearch) Specification EMS53110 Type II.

Engine Limits — Static Sea Level Ratings

	Shaft Horse Power (S.H.P.)	Gas Gen. Speed (R.P.M.)	Prop Shaft Speed (R.P.M.)	Exhaust Gas Temp. (EGT) (Single Red Line) (C)
Take-off (5 min.) Dry	1,000	41730*	1591*	650
Take-off (5 min.) Wet	1,100	41730*	1591*	650
Max. Continuous-Dry	1,000	41730*	1591*	650
Starting Limit (1 sec.}	-	-	-	770

*(See Note 4(B))

Oil Temps	Minus 40 C to 110 C (normal operations) Minus 40 C to 127 C (ground operations only)

Propeller and Propeller Limits	Number	2	2
	Make	Dowty Rotol	McCauley
	Model	(c) R.321/4-82-F/8	4HFR34C652()/()-L106LA-0
	Diameter	106 inches	106 inches
	Pitch At	J-J station*	30 in. station
	McCauley Prop. Assy. No.	-	D-5928 D-6933
	Start Locks	-30' ± 1 9 ± 0.5	6 ± 0.5
	Flight Idle	7 ± 30'	15 ± 0.2 15 ± 0.2
	Feather	84 46' ± 20'	88.9 ± .5 88.5 ± .5
	Reverse	-13 30' ± 1	-5 ± 0.5 -5 ± 0.5

*See Note 9 for the location of the J-J station

Airspeed Limits (Knots CAS)		Altitude (ft)	Basic	Increased GW (See Note 11)	Optional (Increase)GW (See Note 14)
	Max. Operating	17,800	248	248	248
	Speed Up to	18,000	247	247	247
		20,000	237	237	237
		23,000	223	223	223
		26,000	209	209	209
		29,000	196	196	196
		31,000	188	188	188
	Maneuvering		174	176	186
	Flaps Full Extended		156	159 or 166**	166
	½ Extended		180	180	180
	¼ Extended		215	215	215
	Landing Gear Extended		176	176	176
	Landing Gear Operating		176	176	176

**159 KCAS with Dowty Rotol propellers and 166 KCAS with McCauley propellers.

C.G. Range
Gear Down
(Inches aft of datum)

262.3 (15.72% MAC) to 277.0 (36% MAC) at 16,000 lbs. (See Note 14)
260.7 (13.50% MAC) to 277.0 (36% MAC) at 14,500 lbs. (See Note 11)
260.0 (12.54% MAC) to 277.0 (36% MAC) at 14,000 lbs.
258.5 (10.47% MAC) to 277 0 (36% MAC) at 12.500 lbs. (See Note 10)
257.0 (8.4% MAC) to 277.0 (36% MAC) at 11,000 lbs.
257.0 (8.4% MAC) to 277.0 (36% MAC) at 8,225 lbs.
Straight line variation between points given.

Note: Gear retraction will not move the c.g. beyond approved limits if the airplane is loaded within the gear-down envelope.

Empty weight C.G. Range: None.

Maximum weight (lbs.)

	Category , Normal (with SFAR 41)	Normal (without SFAR 41)		Normal (Incr.GW with SFAR 41) (See Note 11)	Normal (Optional Incr. GW with SFAR 41)*
Ramp	14,100	12,600		14,600	16,100
Take-off	14,000	12,500		14,500	16,000
Landing	14,000	12,500		14,000	15,500
Max 0 Fuel	13,130**	13,130**	13,130**	13,900**	

*(See Note 14)
**See Note 17)

Maximum Operating Altitude: 31,000 feet

Minimum Crew: One pilot except as otherwise required by the Airplane Flight Manual.

No. of seats: Maximum 22 (Crew at +111.O) (Maximum of 19 passengers per SFAR 41C)
See AFM loading instructions for crew and passenger loading.

Maximum Baggage and/or Equipment:
Rear Compartment: 850 lbs. (+473.4)
Nose Compartment: 800 lbs.(600 lbs. with nose CAWI tank installed) (+46.7)
Local loading on cargo floor: 150 lbs./sq. ft.

Fuel Capacity	652 Gal. total (324 gal. usable in each of 2 wing tanks (+281.4)). See Note 1(B) for data on unusable fuel.
Oil Capacity	14.1 quarts total (3.8 quarts usable in each engine oil tank (+205.0)). See Note 1(B) for data on unusable oil.
Control Surface	Wing Flaps 36 ± 1 Main Surface Aileron 18.5 ± 1 up 21.5 ± 1 down Elevator 30 ± 1 up 15 ± 1 down Rudder 25 ± 1 right 25 ± 1 left Stabilizer (mechanical stops): 2.40 ± .20 L.E. Up 7.80 ± .20 L.E. down (electrical stops); 0.2 ± .05 before mechanical stops Tabs (Main surface in Neutral) Aileron 20 + 2 , -1 / up 20 + 2 , -1 / down Rudder 25 ± 1.5 right 25 ± 1.5 left
Serial Nos.	AC 420 through AC 510 (See Note 10 and 11). AC 514 and UP (See Note 10 and 11). AC 398, 399, 401, 402, 404, 406, 408, 409, 411-413, 415, 416, 418 (See note 13).
Datum	Located 274.1 inches forward of wing main (forward) spar centerline.
Leveling Means	Lateral : Nose baggage compartment door sill. Longitudinal : Nose baggage compartment floor.
Certification Basis	FAR 23 effective February l, 1965, through Amendments 23-6; Special (See Note 10) Conditions outlined in FAA letters November 19, 1965, August 22, 1967, (See Note 12) February 5, 1968, and April 4, 1968; SFAR 23; SFAR 27 through Amendment 3; and Amendment C of SFAR 41 including paragraph 4(c) and the compartment interior requirements of 25.853 (a), (b), (b-1), (b-2), and (b-3) in effect on September 26, 1978; FAR 23.175(d) of Amendment 23-14; and FAR 36 Appendix F. through Amendment 36-6. Approved for flight into known icing in accordance with Rule 34 of SFAR 23 and SFAR 41.
Production Basis	Production Certificate No. 3SW expired October 4, 1990. Current Certificate No. 6SW. (Spares Only)
Equipment	The basic required equipment, as prescribed in the applicable airworthiness regulations (See Certification Basis) must be installed in the aircraft for certification. Fairchild Drawing No. 27-10026 "Master Equipment List," contains listing of all additional required equipment as well as optional installations approved by the FAA.

III - Model SA227-PC. 22 PCLM, Normal Category. SFAR 41, Approved October 24. 1985.

Engines	2 Pratt & Whitney Aircraft of Canada, Ltd. PT6A-45R
Fuel	Per Pratt & Whitney Service Bulletin 3044, including the following:

Fuel Grade	Specification	Remarks
Jet A	ASTM D1655	
Jet A-1	ASTM D1655	
Jet B(JP-4)	MIL-T-5624	Contains icing inhibitor per MIL-I-27686
JP-5	MIL-T-5624	Contains icing inhibitor per MIL-I-27686
JP-8	MIL-T-83133	
100LL Avgas	MIL-G-5572	Emergency use only (See Note 16.)

Fuel shall conform to the listed specifications or to subsequent revisions thereof.
Anti-icing additives conforming to specification MIL-I-27686 are the only approved fuel additives.

Oil	Per Pratt & Whitney Service Bulletin 3001, including Aero Shell Turbine Oil 500. Mobil Jet Oil II, Mobil Jet Oil 254, Stauffer Jet II, Castrol 5000, Esso Turbo Oil 2380, and Exxon Turbo Oil 2380.

Engine Limits

Static Sea Level Ratings

	Shaft Horse Power (S.H.P.)	Gas Generator Speed (R.P.M.)	Prop Shaft Speed (R.P.M.)	Max. Perm. Turbine Interstage Temp. (C)	
Takeoff (5 min.	1100	38967	1700	845	
Max. Continuous)	906	38967	1700	812	(Torque is permitted to
	906	38967	1600	812	increase as RPM is re-
	906	38967	1500	812	duced. 1400 RPM minimum
	906	38967	1400	812	flight propeller speed.)

Propeller and Propeller Limits

2 McCauley 4HFR34C752-()/()-106LA-0
Diameter 106 inches.
Pitch at 30.0 in. station.

Feathered	89.0 ± 0 5	
Beta rest	24.0 ± 0 5	
Flight idle	17.0 ± 0 2	
Ground idle	9.0 ± 0.5	
Full reverse	-7.0 ± 0.5	(Reverse restricted to ground operation between 90 and approximately 40 KIAS.)

Airspeed Limits (Knots CAS)

Max. operating speed	248
Decrease maximum operating speed 4.6 knots per 1,000 ft. above:	14,700 ft.
Maneuvering	176
Flaps fully extended	169
l/2 extended	184
1/4 extended	219
Landing gear extended	179
Landing gear operating	179

C.G. Range (Inches aft Of datum)

260.7 (13.5% MAC) to 273.45 (31.1% MAC) at 14,500 lbs.
Gear Down 257.0 (8.4% MAC) to 272.13 (29.3% MAC) at 11,000 lbs.
257.0 (8.4% MAC) to 271.38 (28.3% MAC) at 9,000 lbs.
Straight line variation between points given.
NOTE: Gear retraction will not move the c.g. beyond approved limits if the airplane is loaded within the gear down envelope.

Empty Weight C. G. Range

None

Maximum weight (lbs.)

Ramp	14.600
Takeoff	14,500
Landing	14,000
Max. Zero Fuel	13,130 (See Note 17.)

Maximum Operating Altitude

25,000 ft.

Minimum Crew

One pilot except as otherwise required by the Airplane Flight Manual.

No. Seats

Maximum 22 (crew at + lll.0). (Maximum of l9 Passengers per SFAR 41.) See AFM for loading instructions.

Maximum Baggage and/or Equipment

Rear Compartment:	850 lbs. (+473.4)
Nose Compartment:	800 lbs. (+46.7)

Local loading on cargo and passenger compartment floor: 150 lbs./sq. ft.

Fuel Capacity

652 U.S. gallons total (324 gal. usable in each of 2 wing tanks (+281.4))
See Note l(C) for unusable fuel

Oil Capacity

18.4 U.S. quarts, total (6.0 quarts usable in each engine (+229.0))
See Note l(C) for unusable oil.

Control Surface	Wing Flaps	36 ± 1 down	
	Main Surface		
	Aileron	18.5 ± 1 up	21.5 ± 1 down
	Elevator	30 ± 1 up	15 ± 1 down
	Rudder	25 +0 -1 right	25 +0 -1 left
	Stabilizer (mechanical stops):		
		2.1 ± .20 L.E. up	8.1 ± .20 L.E. down
		(electrical stops):	
		0.2 ± .05 before mechanical stops	
		Tabs (Main surface in Neutral)	
	Aileron	20 +2 , -1 up	20 ± 2 ,-1 down
	Rudder	25 ± 1.5 right	25 ± 1.5 left
Serial Nos.	PC-436, PC-562 and up.		
Datum	Located 274.1 inches forward of wing main (forward) spar centerline.		
Leveling Means	Lateral :	Nose baggage compartment door sill.	
	Longitudinal :	Nose baggage compartment floor.	
Certification Basis	FAR 23 effective February 1, 1965, through Amendment 23-6; Special Conditions No. 23-ACE-6, SFAR 23, FAR 23.175(d) and FAR 23.153 of Amendment 23-14; SFAR 41 through Amendment C and the compartment interior requirements of FAR 25.853(a), (b), (b-1), (b-2), and (b-3) in effect on September 26, 1978: FAR 36 Appendix F through Amendment 36-6: SFAR 27 through Amendment 4. Approved for flight into known icing in accordance with Rule 34 of SFAR 23 and SFAR 41.		
Production Basis	Type Certificate only.		
Equipment	The basic required equipment, as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification. Fairchild Drawing No. 32-10003 "Master Equipment List" contains listing of all additional required equipment as well as optional installations approved by the FAA.		

IV - Model SA227-BC (Military C-26A) 22 PCLM, Normal Category. SFAR 41. Approved September 25, 1989 (See Notes 18 and 19).

Engines	2 Garrett (AiResearch)	TPE331-12UA-701G, TPE331-12UAR-701G, TPE331-12UHR-701G
Fuel	Aviation turbine fuels	AiResearch Specification
	Type A	EMS53111
	Type A-l	EMS53112
	Class A-JP4 and Class B-Type B	EMS53113
	Type JP-5	EMS53116
	Type JP-8	EMS53112
	(Fuel shall conform to the specification as listed or to subsequent revisions thereof.) (See Note 3.)	
Oil	MIL-L-23699B conforming to Garrett Turbine Engine Company (AiResearch) Specification EMS53110 Type II.	

Engine Limits — Static Sea Level Ratings

	Shaft Horse Power (S.H.P.)	Gas Gen. Speed (R.P.M.)	Prop Shaft Speed (R.P.M.)	Exhaust Gas Temp. (EGT) (Single Red Line) (C)
Take-off (5 min.) Dry	1,000	41730*	1591*	650
Take-off (5 min.) wet	1,100	41730*	1591*	650
Max. Continuous-Dry	1,000	41730*	1591*	650
Starting Limit (1 sec.)	-	-	-	770

*(See Note 4(B))

Oil Temps	Minus 40 C to 110 C (normal operations) Minus 40 C to 127 C (ground operations only)

Propeller and Propeller Limits	Number	2
	Make	McCauley
	Model	4HFR34C652()/()-Ll06LA-0
	Diameter	106 inches
	Pitch At	30 in. station
	McCauley Prop. Assy. No.	D-5928 D-6933
	Start Locks	9 ± 0.5 6 ± 0.5
	Flight Idle	15 ± 0.2 15 ± 0.2
	Feather	88.9 ± 2 88.5 ± 0.5
	Reverse	-5 ± 0.5 -5 ± 0.5

Airspeed Limits (Knots CAS)

	Altitude (ft)	Basic	Increased GW (See Note 1l)	Optional (Increase) GW (See Note 14)
Max. Operating 17,800	248	248	248	
Speed up to	18,000	247	247	247
	20,000	237	237	237
	23,000	223	223	223
	26,000	209	209	209
	29,000	196	196	196
	31,000	188	l88	188
Maneuvering		174	176	183
Flaps Full Extended		156	166	166
1/2 Extended		180	180	180
l/4 Extended		215	215	215
Landing Gear Extended		176	176	176
Landing Gear Operating		176	176	176

C.G. Range
Gear Down
(Inches aft of datum)

262.3 (15.72%MAC) to 277.0 (36%MAC) at 16,000 lbs. (See Note 14)
260.7 (13.50%MAC) to 277.0 (36%MAC) at 14,500 lbs. (See Note 11)
260.0 (12.54%MAC) to 277.0 (36%MAC) at 14,000 lbs.
258.5 (10.47%MAC) to 277.0 (36%MAC) at 12,500 lbs. (See Note 10)
257.0 (8.4%MAC) to 277.0 (36%MAC) at 11,000 lbs.
257.0 (8.4%MAC) to 277.0 (36%MAC) at 8,225 lbs.
Straight line variation between points given.

NOTE: Gear retraction will not move the c.g. beyond approved limits if the airplane is loaded within the gear down envelope.

Empty weight C.G. Range: None

Maximum weight (lbs.) *(See Note 14)

	Category: Normal (Incr. GW with SFAR 41) (See Note 11)	Normal (Optional Incr. GW with SFAR 41)*
Ramp	14,600	16,100
Take-off	14,500	16,000
Landing	14,000	15,500
Max. Zero Fuel	14,000	14,000

Maximum Operating Altitude: 31,000 feet

Minimum Crew: One pilot except as otherwise required by the Airplanes Flight Manual.

No. Seats: Maximum 22 (crew at + 111.0). (Maximum of 19 passengers per SFAR 41C.) See AFM for loading instructions for crew and passenger loading.

Maximum Baggage and/or Equipment

Rear Compartment: 850 lbs. (+473.4)
Nose Compartment: 800 lbs. (600 lbs. with nose CAWI tank installed) (+46.7)
Local loading on cargo and passenger compartment floor: 150 lbs./sq. ft.

Fuel Capacity: 652 gal. total (324 gal. usable in each of 2 wing tanks (+281.4))
See Note l(B) for data on unusable fuel.

Oil Capacity: 14.1 qt. total (3.8 qt. usable in each engine oil tank (+205.0))
See Note l(B) for data on unusable oil.

Control Surface	Wing Flaps	36 ± 1 down	
	Main Surface		
	Aileron	18.5 ± 1 up	21.5 ± 1 down
	Elevator	30 ± 1 up	15 ± 1 down
	Rudder	25 ± 1 right	25 ± 1 left
	Stabilizer (mechanical stops):		
	2.40 ± .20 L.E. up	7.80 ± .20 L.E. down	
	(electrical stops):		
	0.2 ± .05 before mechanical stops		
	Tabs (Main surface in Neutral)		
	Aileron	20 ± 2 , -1 up	20 ± 2 ,-1 down
	Rudder	25 ± 1.5 right	25 ± 1.5 left
Serial Nos.	BC-420 and up. See Note 19.		
Datum	Located 274.1 inches forward of wing main (forward) spar centerline.		
Leveling Means	Lateral :	Nose baggage compartment door sill.	
	Longitudinal :	Nose baggage compartment floor.	
Certification Basis	FAR 23 effective February l, 1965, through Amendment 23-6: Special Conditions No. 23-ACE-6, SFAR 23, FAR 23.175(d) and FAR 23.153 of Amendment 23-14; SFAR 41 through Amendment C and the compartment interior requirements of FAR 25.853(a), (b), (b-l), (b-2), and (b-3) in effect on September 26, 1978: FAR 36 Appendix F through Amendment 36-6; SFAR 27 through Amendment 4. Approved for flight into known icing in accordance with Rule 34 of SFAR 23 and SFAR 41.		
Production Basis	Production Certificate No. 3SW expired October 4, l99O. Current Certificate No. 6SW. (Spares Only)		
Equipment	The basic required equipment, as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification. Fairchild Drawing No. 27-10043 "Equipment List, Model SA227-BC" contains listing of all additional required equipment as well as optional installations approved by the FAA.		

NOTE 1. Current weight and balance report, together with list of equipment included in certificated empty weight, and loading instructions when necessary, must be provided for each aircraft at the time of original certification. The airplane must be loaded so that the C.G. is within the specified limits at all times. Empty weight and corresponding center of gravity location must include:

(A) SA226-TC	
Unusable Fuel	27 lbs. (+282)
Unusable Oil	12 lbs. (+205)
(B) SA227-AC and SA227-BC	
Unusable Fuel	27 lbs. (+282)
Unusable Oil	12 lb3. (+205)
(C) SA227-PC	
Unusable Fuel	30 lbs. (+282)
Unusable Oil	12.8 lbs. (+229)

NOTE 2. All placards required in the approved AFM must be installed in the appropriate locations.

NOTE 3. Emergency use of MIL-G-5572D, 80/87, aviation gasoline permitted not to exceed 1,000 gallons per engine for each 100 hours of engine operation. Emergency use of MIL-G-5572D, Grade 100/130 (low lead) aviation gasoline permitted not to exceed 250 gallons per engine for each 100 hours of engine operation with the total use limited to 7,000 gallons during any 3,000-hour period. Jet fuel and aviation gasoline may be mixed in any proportion. If 25% or more aviation gasoline is used, add 1 quart of MIL-L-6082 specification grade 1065 or 1100 piston engine oil per 100 gallons of aviation gasoline to provide fuel pump lubrication.

NOTE

The amount of aviation gasoline used must be recorded in the Engine Log Book. Fuel System Icing Inhibitor MIL-I-27686E fuel additive approved not to exceed 0.15 percent by volume. No fuel system anti-icing credit is allowed.

NOTE 4. (A) The maximum allowable propeller shaft speed is 2100 RPM (105%) for a transient period not to exceed 5 seconds and 2020 RPM (101%) for 5 minutes. Normal propeller shaft speed is 2000 RPM (100%). Dry static take-off SHP is not to exceed 840 SHP (2206 ft. lbs. torque max.) but may increase to 900 SHP (2363 ft. lbs. torque max.) due to ram for a period not to exceed 5 minutes. See Airplane Flight Manual for alcohol-water injection system operation and limitations.
(B) For SA227-AC and SA227-BC: The maximum propeller shaft overspeed limit is 1686 RPM (106%) for 5 seconds and 1615 RPM (101.5%) for 5 minutes. 100% is defined as 1591 RPM.

NOTE 5. For Model SA226-TC, S/N TC-203 and up and earlier serial numbers modified per Swearingen Service Bulletin 79-10-2021 or 79-003, the oil capacity is reduced to 13.7 quarts total (3.6 quarts usable in each oil tank (+205.0)). Unusable oil is unchanged.

NOTE 6. Model SA226-TC airplanes to be exported to France must comply with the additional equipment requirements listed on Fairchild Drawing 27-13074, Revision A. Model SA227-AC airplanes to be exported to France must comply with the requirements of Drawing 27-13074, Revision B or Drawing 27K14051.

NOTE 7. Model SA226-TC is eligible for operation in the Restricted Category at 14,000 lbs. maximum take-off gross weight when modified with structural beef-up and special purpose equipment per Drawing 27-13146 and operated in accordance with the basic Airplane Flight Manual and the Flight Manual Supplement applicable to the special purpose of patrol or aerial photography survey missions. Some parts or all of the following FAR 23 sections are inappropriate for the special purpose: 23.1, 23 337. 23 345, 23.397, 23.473.

NOTE 8. Compliance with SFAR 41 including paragraph 4(b) and the compartment interior requirements of 25.853(a), (b), (b-1), (b-2), and (b-3) in effect on September 26, 1978, has been shown for S/N's TC-398 through TC-418. Exemption No. 3256 dated June 17, 1981, applicable for S/N's TC-398 through TC-4l8. The following are required equipment for S/N TC-398 through TC-418; 19.5 X 6.75-8 main wheel tires and an instantaneous vertical speed indicator (IVSI), and supplement 26 to FAA approved Airplane Flight Manual at weights above 12,500 lbs. The airworthiness certificate shall be endorsed "This airplane at weights in excess of 5,700 kg does not meet the airworthiness requirements of ICAO, as prescribed by Annex 8 of the Convention on International Civil Aviation."

NOTE 9. Station J-J is station 36.278 inches on the Dowty Rotol (c) R.321/4-82-F/8 propellers.

NOTE 10. An "A" designation following the serial number signifies that the airplane is not eligible for SFAR 41 approval of weights greater than 12,500 lbs. Certification basis same as noted herein except omit SFAR 41 approval.

NOTE 11. The increased ramp and takeoff gross weight applies to aircraft S/N's AC 514 and subsequent. Aircraft with S/N's AC 420 through AC 510 may be operated at the increased ramp and takeoff gross weight noted after modification in accordance with Fairchild Service Bulletin SB 11-001, revised December 11, 1981.

NOTE 12. The Airworthiness Limitations ST-UN-M001 Manual contains overhaul times, replacement times, and special inspections required for continued airworthiness.

NOTE 13. Serial Nos. 398, 399, 401, 402, 404, 406, 408, 409, 411-413, 415, 416, and 418 eligible to be licensed *as* SA227-AC aircraft when modified in accordance with Fairchild Drawing 27-13451.

NOTE 14. Airplanes with a 14,500 lbs. maximum gross takeoff weight can be modified for a 16,000 lb. maximum gross takeoff weight if the modification is performed in accordance with ECP 437 "Compilation of changes 16,000 lb. airplane." After modification, affix a letter "B" at the end of the serial number on the data plate.

NOTE 15. Airplanes for which the serial number on the data plate is followed by the letter "B" have ECP 437 changes incorporated and are eligible for a 16,000 lbs. maximum gross takeoff weight. These airplanes can be converted to a 14,500 lbs. maximum gross takeoff weight configuration if performed in accordance with Fairchild Drawing 27-13946 and returned to 16,000 lbs. maximum gross takeoff weight configuration in accordance with Fairchild Drawing 27Kl3000.

NOTE 16. Emergency use of MIL-G-5572 grade 100/130 (low lead) aviation gasoline permitted not to exceed 150 hours use between engine overhauls.

NOTE

The amount of aviation gasoline used must be recorded in the Engine Log Book.

NOTE 17. 13,900 lbs. zero fuel weight approved for airplanes S/N AC, AT, or PC-624 and up and for earlier S/N airplanes with P/N 27-13900-65, -66, -67, and -69 installed per Drawing 27-13900, by ECP 441. by Kit Drawing 27K20004, or by Service Bulletin 227-08-001; 14,000 lbs. for airplanes with additional modifications per Kit Drawing 27K31017.

NOTE 18. The C-26A is an SA227-AC airplane modified in accordance with ECP 567 or an SA227-BC modified per ECP 592. The FAA Approved Airplane Flight Manual Supplement for the C-26A configuration must be used.

NOTE 19. SA227-AC airplanes may be converted to SA227-BC airplanes by incorporating ECP 563.

NOTE 20. Model SA227-AC aircraft to be exported to Italy must comply with the requirements noted on Fairchild Drawing 27-14068.

…..END…..

Attachment 2

IBC Airways, Inc.
Phase 2 and 5
Zone 8
Tail Inspections

[METRO]

PHASE 2 ACCOUNTABILITY SHEET

Date	Registration Number	TAT Phase 2 Inspection Begun	TAT Phase 2 Inspection Due
09/27/13	831BC	09/24/13	33813.7

Task Card & Revision Status	Date Zone/SI Completed	TAT Zone/SI Completed	Flight Log Page Number	RII Mechanic Signature	FAA Cert Number
Service Check Rev 0	09/26/13	33813.7	3966	[redacted]	[redacted]
Zone 1 Heavy Rev 0	09/24/13	33813.7	3966	[redacted]	[redacted]
Zone 7 Light Rev 0	09/26/13	33813.7	3966	[redacted]	[redacted]
Zone 8 Light Rev 0	09/24/13	33813.7	3966	[redacted]	[redacted]
Zone 9L Heavy Rev 0	09/24/13	33813.7	3966	[redacted]	[redacted]
Zone 9R Light Rev 0	09/24/13	33813.7	3966	[redacted]	[redacted]
Zone 10L Light Rev 0	9/24/13	33813.7	3966	[redacted]	[redacted]
Zone 10R Light Rev 0	09/24/13	33813.7	3966	[redacted]	[redacted]
SI-1 Rev 0	09/25/13	33813.7	3966	[redacted]	[redacted]
SI-2 Rev 0	09/26/13	33813.7	3964	[redacted]	[redacted]

[METRO]

PHASE 2 ACCOUNTABILITY SHEET (Cont.)

Service Check			Phase Inspection	
Service Check Completed	33813.7 TAT	Next Inspection Due Calculation	Phase 2 Insp Started	33813.7 TAT
SC Inspection Interval	+85.0 hrs		Phase Inspection Interval	+150.0 hrs
Phase SC Insp Is Due	33898.7 TAT		Phase 3 Insp is Due	33963.7 TAT

Release From Maintenance

I certify that this aircraft was inspected in accordance with the IBC Airways Phase 2 Inspection and was found to be in an airworthy condition and is approved for return to service for the work performed. All open discrepancies have been corrected and properly signed off. The aircraft and/or engines are free from all debris and all tools have been accounted for, for the work performed.

[redacted]	[redacted]	09/27/13	831BC
RII Signature	FAA Certificate Number	Date	N#

Fax Maintenance this completed Accountability Sheet when Phase 2 Inspection is complete.

[METRO]

ZONE 8 – TAIL – LIGHT INSPECTION

Mechanic Signature / Initial List		
Mechanic Signature	**Initials**	**FAA Certificate Number**
[redacted]	[redacted]	[redacted]

Discrepancy Report Accountability

The following Discrepancy Report(s), Form 006, were used for this inspection and all discrepancies have been accounted for, all discrepancies have been properly signed off, an audit performed to verify proper sign off's and no discrepancies have been noted. Legibly write in the Discrepancy Report(s) serialized number(s) used for this inspection.

Release From Maintenance

I certify that this aircraft was inspected in accordance with the IBC Airways Zone 8 – Tail – Light Inspection and was found to be in airworthy condition and is approved for return to service for the work performed. All open discrepancies have been corrected and properly signed off. The aircraft and/or engines are free from all debris and all tools have been accounted for, for the work performed.

[redacted]	33813.7 TAT Zone Completed	09/24/13 Date Zone Completed	[redacted] FAA Certificate Number

Fax Maintenance this completed Accountability Sheet when all items have been completed.

N# 831BC DATE 09/24/13

ZONE 8 – TAIL – LIGHT INSPECTION (Cont.)

Item	ATA	Operation	Eff	Mech	Insp
1	21-30	Remove tailcone and pressure bulkhead	All	[redacted]	
2	21-30	Clean outflow valve. Check for loose or missing fasteners	All	[redacted]	
3	27-40	Remove access panels and lube horizontal stabilizer trunnion bolt. Check panels for loose or missing fasteners	All	[redacted]	
4	27-20	Check condition of rudder hinge points and close out fairings for loose and missing fasteners	All	[redacted]	
5	27-30	Check condition of elevator hinge points and close out fairings for loose and missing fasteners	All	[redacted]	
6	55-20	Inspect elevator hinge bolts and bushings for security, condition and safety	All	[redacted]	
7	55-10	Inspect horizontal stabilizer, outer skins and visible area of spar for buckling, cracks, corrosion, working fasteners and general condition	All	[redacted]	
8	55-10	Inspect horizontal trim range markings for condition	All	[redacted]	
9	30-10	Inspect condition of deice boots. Inspect all patches condition and security. Ensure that no patches overlap each other	All	[redacted]	
10	30-10	Inspect leading edge of left and right horizontal stabilizers by feeling to detect possible impact damage that may be hidden by deice boots	All	[redacted]	
11	55-40	Inspect rudder trim tab for condition	All	[redacted]	
12	55-40	Inspect rudder trim tab rod(s) and bearings for corrosion, scratches, gouges, security and condition	All	[redacted]	
13	55-40	Inspect rudder trim tab rod(s) for freedom of operation	All	[redacted]	
14	55-40	Inspect rudder trim tab bearings for freedom of operation	All	[redacted]	
15	12-20	Lube the rudder trim actuator chain with MIL-G-81322	All	[redacted]	
16	55-30	Inspect vertical stabilizer, outer skins and visible area of spar for buckling, cracks, corrosion, working fasteners and general condition. Inspect fairings for condition and security	All	[redacted]	
17	55-30	Inspect leading edge of vertical stabilizer for impact damage	All	[redacted]	
18	23-20	Inspect antennas for condition and security	All	[redacted]	
19	27-30	Inspect static wicks for condition and security	All	[redacted]	
20	27-40	Install horizontal stabilizer access panels. Inspect for loose or missing fasteners	All	[redacted]	
21	21-30	Install tailcone and pressure bulkhead. Inspect for loose or missing fasteners	All	[redacted]	
End of Zone 8 – Tail – Light Inspection					

[METRO]

PHASE 5 ACCOUNTABILITY SHEET

Date	Registration Number	TAT Phase 5 Inspection Begun	TAT Phase 5 Inspection Due
02/11/13	N831BC	33424.1	33434.0

Task Card & Revision Status	Date Zone/SI Completed	TAT Zone/SI Completed	Flight Log Page Number	RII Mechanic Signature	FAA Cert Number
Service Check Rev 0	2/11/2013	33440.9		[redacted]	[redacted]
Zone 5L Light Rev 0	02/07/13	33358		[redacted]	[redacted]
Zone 5R Light Rev 0	02/07/13	33435.8		[redacted]	[redacted]
Zone 5N Light Rev 0	02/07/13.	33435.8		[redacted]	[redacted]
Zone 7 Heavy Rev 0	02/06/13	33430.7		[redacted]	[redacted]
Zone 8 Heavy Rev 0	02/06/13	33430.7		[redacted]	[redacted]
Zone 9L Light Rev 0	02/05/13	33430.7		[redacted]	[redacted]
Zone 9R Heavy Rev 0	02/05/13	33430.7		[redacted]	[redacted]
SI-1 Rev 0	2/9/13	33438.3		[redacted]	
SI-2 Rev 0	02/09/13	33438.8		[redacted]	[redacted]

[METRO]

PHASE 5 ACCOUNTABILITY SHEET (Cont.)

Service Check			Next Inspection Due Calculation	Phase Inspection	
Service Check Completed	33440.9 TAT			Phase 5 Insp Started	33424.1 TAT
SC Inspection Interval	+85.0 hrs			Phase Inspection Interval	+150.0 hrs
Phase SC Insp Is Due	33525.9 TAT			Phase 6 Insp is Due	33574.1 TAT

Release From Maintenance

I certify that this aircraft was inspected in accordance with the IBC Airways Phase 5 Inspection and was found to be in an airworthy condition and is approved for return to service for the work performed. All open discrepancies have been corrected and properly signed off. The aircraft and/or engines are free from all debris and all tools have been accounted for, for the work performed.

[redacted]	[redacted] FAA Certificate Number	02/11/13 Date	N838BC N#

Fax Maintenance this completed Accountability Sheet when Phase 5 Inspection is complete.

[METRO]

ZONE 8 – TAIL – HEAVY INSPECTION

Mechanic Signature / Initial List		
Mechanic Signature	**Initials**	**FAA Certificate Number**
[redacted]	[redacted]	[redacted]

Discrepancy Report Accountability

The following Discrepancy Report(s), Form 006, were used for this inspection and all discrepancies have been accounted for, all discrepancies have been properly signed off, an audit performed to verify proper sign off's and no discrepancies have been noted. Legibly write in the Discrepancy Report(s) serialized number(s) used for this inspection.

Release From Maintenance

I certify that this aircraft was inspected in accordance with the IBC Airways Zone 8 – Tail – Heavy Inspection and was found to be in airworthy condition and is approved for return to service for the work performed. All open discrepancies have been corrected and properly signed off. The aircraft and/or engines are free from all debris and all tools have been accounted for, for the work performed.

RII Mechanic Signature	33430.7 TAT Zone Completed	02/06/13 Date Zone Completed	[redacted] FAA Certificate Number

Fax Maintenance this completed Accountability Sheet when all items have been completed.

N# 831BC DATE 02/06/13

ZONE 8 – TAIL – HEAVY INSPECTION (Cont.)

Item	ATA	Operation	Eff	Mech	Insp
1	51-00	Remove all access panels, fairings and dorsal fin on horizontal and vertical stabilizers	All	[redacted]	[redacted]
2	27-40	Lubricate horizontal stabilizer trunnion bolt	All	[redacted]	[redacted]
3	21-30	Remove tailcone and pressure bulkhead	All	[redacted]	[redacted]
4	21-30	Clean outflow valve	All	[redacted]	[redacted]
5	21-30	Inspect condition of outflow valve and replace filter element	All	[redacted]	[redacted]
6	34-20	Inspect flux valve for condition and security (if installed in tail)	All	[redacted]	[redacted]
7	30-10	Inspect leading edge of horizontal stabilizer by feel to detect possible impact damage hidden by deice boot. Inspect all patches condition and security. Ensure that no patches overlap each other	All	[redacted]	[redacted]
8	30-10	Inspect deicer boots and leading edges for damage and general condition	All	[redacted]	[redacted]
9	27-40	Inspect pitch trim actuator wiring for evidence of overheating, proper routing and clamping. Inspect limit switches and position transmitter for condition and security	All	[redacted]	[redacted]
10	23-70	Inspect CVR transmitter for condition and security	If Equipped	N/A	N/A
11	31-30	Inspect FDR transmitter for condition and security	If Equipped	N/A	N/A
12		Inspect the ELT for general condition and security, check and record ELT battery due date. Record ELT battery due date here: 04/2017	All	[redacted]	[redacted]
13	27-40	Cycle pitch trim actuator through full limits and check limit switches and warning horns for operation	All	[redacted]	[redacted]
14	27-40	Inspect horizontal stabilizer trunnion bolt for condition and security	All	[redacted]	[redacted]
15	27-40	Inspect horizontal stabilizer for cracks, loose fasteners, corrosion, buckling and general condition	All		
16	27-30	Inspect elevator cables, cable pulleys, fairleads, pressure seals, stops, bolts and bearings for wear and condition	All		
17	27-30	Inspect elevator quadrant, downspring and cable for condition and security	All		
18	27-30	Inspect elevator torque tubes and actuating rods for condition and security	All		
19	27-30	Inspect elevator hinges and hinge brackets for corrosion, condition and security	All		
20	55-20	Inspect elevator for structural integrity	All		
21	55-20	Inspect elevator counter balance for security	All		
22	55-20	Inspect elevator fairings for condition, security and proper length hardware	All		
23	27-30	Inspect elevator for freedom of movement and travel from stop to stop	All		
24	55-30	Inspect vertical stabilizer for cracks, loose fasteners, corrosion, buckling and general condition	All		
25	55-10	Inspect vertical stabilizer visible segments of ribs, stringers and spars for cracks, loose fasteners, buckling, corrosion and security of attaching brackets and hinge assemblies	All		
26	30-10	Inspect vertical stabilizer leading edge erosion boot for condition and security	All		

ZONE 8 – TAIL – HEAVY INSPECTION (Cont.)

Item	ATA	Operation	Eff	Mech	Insp
27	55-40	Inspect rudder for structural integrity	All		
28	55-50	Inspect rudder counter balance for security	All		
29	27-20	Inspect rudder for freedom of movement and free play	All		
30	27-20	Inspect rudder trim tab for free play	All		
31	27-20	Inspect rudder trim tab, actuator, chain cables rod end, hinge and hinge brackets for operation and security	All		
32	12-20	Lube the rudder trim actuator chain with MIL-G-81322	All		
33	27-20	Inspect rudder torque tube for condition and security	All		
34	27-20	Inspect rudder bellcrank assembly for condition and security	All		
35	27-70	Inspect rudder control lock assembly for operation and security	All		
36	27-20	Inspect rudder cables and cable pulleys for condition and security	All		
37	27-00	Inspect static wicks for bonding, condition and security	All		
38	33-40	Inspect logo lights for operation, condition and security (if equipped)	All		
39	33-04	Inspect navigation lights, anticollision strobe and/or rotating beacon and lenses for operation, condition and security	All		
40	33-40	Inspect tail strobe light power supply for condition and security (if equipped)	All		
41	53-40	Inspect ventral fin for damage, loose or missing rivets and general condition	All		
42	34-10	Inspect static ports for cleanliness and proper stenciling	All		
43	27-30	Inspect dorsal fin mounting brackets and bulkhead for condition and security	All		
44	51-00	Install all removed inspection panels, fairings, etc and inspect for fit and security	All		
CAUTION ENSURE PROPER TORQUE IS USED WHEN INSTALLING THE PRESSURE BULKHEAD					
45	21-30	Install pressure bulkhead and tailcone	All		
End of Zone 8 – Tail – Heavy Inspection					