



Log 2305

# National Transportation Safety Board

Washington, D.C. 20594  
Safety Recommendation

---

Date: AUG 23 1991

In reply refer to: A-91-73 and - 74

Honorable James B. Busey  
Administrator  
Federal Aviation Administration  
Washington, D.C. 20591

---

The Safety Board has investigated three accidents involving 14 Code of Federal Regulations (CFR) Part 135 operators where the flightcrew training records could not be substantiated by reference to actual flight time in company aircraft.

On July 22, 1986, a Borinquen Air DC-3, N27PR, lost power in the No. 2 engine shortly after takeoff from San Juan International Airport, Puerto Rico, and crashed in a 90-degree right bank while turning base during the single-engine landing approach. The captain was killed, the first officer was seriously injured, and the aircraft was destroyed.<sup>1/</sup> A review of the captain's company flight training records revealed that he had successfully completed a 1-hour flight check on July 3, 1985, in a company DC-3 aircraft. An examination of Borinquen Air's aircraft flight logbooks indicated that one of its DC-3 aircraft was flown on July 3, 1985, for a 2-hour cargo flight. The company president stated that the flight check took place on this flight. Similarly, the first officer's training records indicated a 1-hour flight check on November 25, 1985, in a company DC-3; however, an examination of the company aircraft logbooks failed to clearly establish that this training flight had actually taken place.

On April 4, 1986, a Key Largo Air Service, Inc. PA-31-350, N55WE, made a forced landing approximately 7 miles west of Homestead (Florida) General Aviation Airport due to fuel exhaustion. The pilot and passenger were not injured seriously, but the aircraft was substantially damaged.<sup>2/</sup> A review of the company training records indicated that the pilot successfully completed a flight check on December 10, 1985, in a company Aztec; however, a review of the company aircraft logbooks failed to clearly establish that a flight check had been flown on that date.

<sup>1/</sup>For more detailed information, read Field Accident Brief 1513 (attached).

<sup>2/</sup>For more detailed information, read Field Accident Brief 389 (attached).

On September 25, 1987, an Air Cargo America, Inc., Beech D-18S, N76Q, crashed and burned during an attempted takeoff from Miami International Airport, Florida. The pilots were killed and the aircraft was destroyed.<sup>3/</sup> An examination of company records by the Federal Aviation Administration (FAA) prior to the accident had revealed numerous discrepancies, including qualification/proficiency information about the two pilots involved in the accident.

Proficiency checking of air carrier flight crewmembers is essential to ensure both competency of the individual as well as standardization within the company. Currently, 14 CFR 135.63(a)(4)(vi) requires operators to keep an individual record of each pilot, including:

The date and result of each of the initial and recurrent competency tests and proficiency and route checks required by this part and the type of aircraft flown during that test or check.

The record of proficiency checks is kept on FAA Form 8410-3, Airman Competency/Proficiency Check, which includes a space for "TYPE AIRPLANE (Make/Model)" flown by the pilot for the proficiency check. The FAA does not require the specific registration number of the airplane to be recorded on the form. To verify that a specific check was performed, an FAA air carrier inspector must review each logbook of the type aircraft owned or operated by the carrier until the flight time is found. Even then, as revealed in the accidents investigated by the Safety Board, the records often are not conclusive.

There is sufficient space on FAA Form 8410-3 in the line allocated for "TYPE AIRPLANE (Make/Model)" to include the specific registration number of the aircraft used in the proficiency check. If the registration number was recorded on the check form, an inspector could quickly verify that the check was accomplished by referring to the logbook of the aircraft identified on the form. Although this would not confirm that all maneuvers were performed, it would eliminate the inspector's time-consuming task of reviewing many aircraft logbooks to verify that a check flight occurred.

---

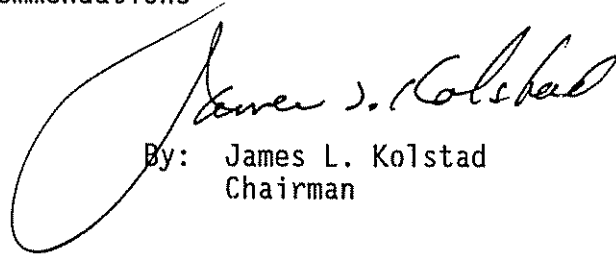
<sup>3/</sup>For more detailed information, read Field Accident Brief 1567 (attached).

Therefore, the National Transportation Safety Board recommends that the Federal Aviation Administration:

Amend 14 CFR 135.63(a)(4)(vi) to require that the registration number, in addition to the type of aircraft flown during airman flight checks, be included in the pilot's training record maintained by the pilot's employer. (Class II, Priority Action)(A-91-73)

Modify FAA Form 8410.3, Airman Competency/Proficiency Check, FAR 135, to specify the addition of the registration number in the space now labeled "TYPE AIRPLANE (Make/Model)." (Class II, Priority Action)(A-91-74)

Chairman KOLSTAD, Vice Chairman COUGHLIN, and Members LAUBER, HART, and HAMMERSCHMIDT concurred in these recommendations

A large, stylized handwritten signature in black ink, which appears to read "James L. Kolstad". The signature is written in a cursive style with a large, sweeping initial 'J'.

By: James L. Kolstad  
Chairman

National Transportation Safety Board  
Washington, D.C. 20594

Brief of Accident

File No. - 1513      7/22/86      ISLA VERDE, PR      A/C Res. No. N27PR      Time (Lcl) - 1353 AST

---Basic Information---

Type Operating Certificate - ON-DEMAND AIR TAXI  
Name of Carrier - BORINQUEN AIR  
Type of Operation - NON SCHED, INTL, CARGO  
Flight Conducted Under - 14 CFR 135  
Accident Occurred During - DESCENT

Aircraft Damage  
DESTROYED  
Fire  
NONE  
Crew  
Pass  
Fatal  
Serious  
Minor  
Injuries  
None  
0  
0  
0

---Aircraft Information---

Make/Model - DOUGLAS DC-3  
Landing Gear - TAILWHEEL-RETRACTABLE MAINS  
Max Gross Wt - 26200  
No. of Seats - 2

End Make/Model - WRIGHT R-1820-202A  
Number Engines - 2  
Engine Type - RECIPROCATING-CARBURETOR  
Rated Power - 1200 HP

ELT Installed/Activated - YES-UNK/NR  
Stall Warning System - NO

---Environment/Operations Information---

Weather Data

Mx: Briefing - F89  
Method - TELEPHONE  
Completeness - WEATHER NOT PERTINENT  
Basic Weather - VMC  
Wind Dir/Speed - 070/015 KTS  
Visibility - 6.0 SM  
Lowest Sky/Clouds - 3500 FT SCATTERED  
Lowest Ceiling - NONE  
Obstructions to Vision - NONE  
Precipitation - NONE  
Condition of Light - DAYLIGHT

Itinerary

Last Departure Point  
SAN JUAN, PR  
Destination  
ST. KITT

Airport Proximity  
OFF AIRPORT/STRIP

Airport Data  
PUERTO RICO INTL - 10  
Runway Ident - 8016/  
Runway Lth/Wid - CONCRETE  
Runway Surface - DRY  
Runway Status - DRY

---Personnel Information---

Pilot-In-Command  
Certificate(s)/Rating(s)  
ATP  
ME LAND  
Age - 60  
Biennial Flight Review  
Current - YES  
Months Since - 11  
Aircraft Type - DC-3  
Medical Certificate - VALID MEDICAL-WAIVERS/LIMIT  
Flight Time (Hours)  
Total - 29100  
Make/Model - 2000  
Instrument - 7400  
Multi-End - 29000  
Last 24 Hrs - 1  
Last 30 Days - 50  
Last 90 Days - 150

Instrument Rating(s) - AIRPLANE

---Narrative---

SHORTLY AFTER TAKEOFF, THE ACFT'S CLIMB PERFORMANCE Began TO DETERIORATE & THE R ENG STARTED TO OVERHEAT. SUBSEQUENTLY, THE R ENG WAS FEATHERED & THE CREW ATTEMPTED TO RETURN TO THE ARPT. THE RADIO TRANSMITTER BCM UNINTELLIGIBLE, SO THE TOWER PSNL CLEARED THE ACFT TO LAND ON RWY 10 & ASKED THE CREW TO KEY THEIR MIKE TWICE, IF THEY UNDERSTOOD. THE MIKE WAS KEYED TWICE. THE ACFT ENTERED A R DOWNWIND FOR RWY 10 AT A VERY LOW ALT. ACCORDING TO WITNESSES, THE ACFT WENT INTO A STEEP BANK AS IT WAS TURNING ONTO A BASE LEG OVER WATER, THE R WING TIP HIT THE WATER & THE ACFT CARTWHEELED & CRASHED. THE COPLT RPTD THAT AFTER FEATHERING THE R ENG, THE VMC OF 84 KTS WAS MAINTAINED; HOWEVER, HE BELIEVED THE ACFT STALLED JUST PRIOR TO IMPACT. A TEARDOWN OF THE R ENG REVEALED THE EDGE OF THE #8 PISTON & ITS PISTON RINGS HAD FAILED, METAL FILINGS WERE FOUND IN THE OIL & THE OIL PUMP WAS SCORED. THERE WAS EVIDENCE OF OIL STARVATION TO THE CRANKSHAFT JOURNAL, AS WELL AS PISTON SLAP ASSOCIATED WITH THE RING FAILURE.

Brief of Accident (Continued)

File No. - 1513

7/22/86

ISLA VERDE, PR

A/C Reg. No. N27PR

Time (Lcl) - 1353 AST

Occurrence #1 LOSS OF POWER(TOTAL) - MECH FAILURE/MALFUNCTION  
Phase of Operation CLIMB - TO CRUISE

Findings(s)

1. ENGINE ASSEMBLY, RING - FAILURE, TOTAL
2. ENGINE ASSEMBLY, BEARING - FAILURE, TOTAL
3. ENGINE ASSEMBLY, MASTER ROD - FAILURE, TOTAL
4. PROPELLER FEATHERING - PERFORMED -
5. PRECAUTIONARY LANDING - INITIATED -

Occurrence #2 AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION  
Phase of Operation APPROACH

Findings(s)

6. COMM/NAV EQUIPMENT, TRANSMITTER - FAILURE, TOTAL

Occurrence #3 LOSS OF CONTROL - IN FLIGHT  
Phase of Operation APPROACH - VFR PATTERN - BASE TURN

Findings(s)

7. MANEUVER - INITIATED -
8. AIRSPEED - INADEQUATE - PILOT IN COMMAND
9. AIRCRAFT HANDLING - IMPROPER - PILOT IN COMMAND

Occurrence #4 IN FLIGHT COLLISION WITH TERRAIN  
Phase of Operation DESCENT - UNCONTROLLED

Findings(s)

10. TERRAIN CONDITION - WATER, ROUGH

-----Probable Cause-----

The National Transportation Safety Board determines that the Probable Cause(s) of this accident is/are finding(s) 8,9

Factor(s) relating to this accident is/are finding(s) 1,2,3,6,10

Brief of Accident

File No. - 389      4/04/86      HOMESTEAD, FL      A/C Reg. No: NSSWE      Time (Lcl) - 1835 EST

-----Basic Information-----  
Type Operating Certificate-ON-DEMAND AIR TAXI      Aircraft Damage  
SUBSTANTIAL  
Type of Operation      -POSITIONING      Fire  
NONE  
Flight Conducted Under      -14 CFR 91  
Accident Occurred During      -LANDING

-----Aircraft Information-----  
Make/Model      - PIPER PA-31-350      End Make/Model - LYCOMING TIO-540-J2RD      ELT Installed/Activated - YES/YES  
Landing Gear      - TRICYCLE-RETRACTABLE      Number Engines - 2      Stall Warning System - YES  
Max Gross Wt - 7000      Engine Type - RECIP-FUEL INJECTED  
No. of Seats - 8      Rated Power - 350 HP

-----Environment/Operations Information-----  
Weather Data      Itinerary  
Wx Briefings      - FSS      Last Departure Point  
Method      - TELEPHONE      KEY WEST, FL  
Completeness      - FULL      Destination  
Basic Weather      - VMC      HOMESTEAD, FL  
Wind Dir/Speed - 080/008 KTS      ATC/Airspace  
Visibility      - 8.0 SM      Type of Flight Plan - NONE  
Lowest Sky/Clouds - 3000 FT SCATTERED      Type of Clearance - NONE  
Lowest Ceiling      - NONE      Type Apch/Lnds - FORCED LANDING  
Obstructions to Vision - NONE  
Precipitation      - NONE  
Condition of Light      - DUSK

-----Personnel Information-----  
Pilot-In-Command      Age - 43      Medical Certificate - VALID MEDICAL-WAIVERS/LIMIT  
Certificate(s)/Rating(s)      Biennial Flight Review      Current      - YES      Total Flight Time (Hours)      3467  
ATP/CFI      Months Since      - 4      Make/Model -      118      Last 24 Hrs -      4  
SE LAND, ME LAND      Aircraft Type - PA-23      Instrument-      780      Last 30 Days -      51  
Multi-Ens -      1780      Last 90 Days -      85

-----Instrument Rating(s) - AIRPLANE  
-----Narrative-----  
THE FLT WAS NEARING COMPLETION OF A 4.2 HR X-COUNTRY FLT & WAS APPROX 7 MILES FROM THE DEST WHEN BOTH ENGS QUIT DUE TO FUEL EXHAUSTION. A FORCED LDO WAS PERFORMED. THE FLT STATED THE ACFT HAD DEPARTED WITH A FULL FUEL LOAD OF 182 GALS. THE ACFT OWNER STATED THAT FUEL CONSUMPTION AVERAGED ABOUT 44 GALS PER HR. AT THAT RATE, THE ACFT WOULD HAVE CONSUMED APPROX 185 GALS. AFTER THE ACCIDENT, THE FLT STATED THAT A FACTOR IN THE ACCIDENT MAY HAVE BEEN THAT HE HAD BEEN RECENTLY FLYING ANOTHER PA-31 WHICH HAD A GREATER FUEL CAPACITY DUE TO THE INSTALLATION OF AUX FUEL TANKS & HE MAY HAVE SURCONSCIOUSLY THOUGHT THAT HE HAD MORE FUEL THAN HE ACTUALLY HAD.

Brief of Accident (Continued)

File No. - 389      4/04/86      HOMESTEAD, FL      A/C Res. No. N55WE      Time (Lcl) - 1835 EST

Occurrence #1      LOSS OF POWER(TOTAL) - NON-MECHANICAL  
Phase of Operation      CRUISE - NORMAL

Findings(s)

1. FLUID, FUEL - EXHAUSTION
2. FUEL SUPPLY - EXCEEDED - PILOT IN COMMAND

Occurrence #2      FORCED LANDING  
Phase of Operation      DESCENT - EMERGENCY

Occurrence #3      ON GROUND COLLISION WITH TERRAIN  
Phase of Operation      LANDING - ROLL

Findings(s)

3. TERRAIN CONDITION - HIGH VEGETATION

-----Probable Cause-----

The National Transportation Safety Board determines that the Probable Cause(s) of this accident is/are findings(s) 1,2

Brief of Accident

File No. - 1567      9/25/87      MIAMI, FL      A/C Res. No. N76Q      Time (LCL) - 1355 EDT

Basic Information

Type Operating Certificate - ON-DEMAND AIR TAXI  
Name of Carrier - AIR CARGO AMERICA, INC.  
Type of Operation - NON SCHED, DOMESTIC, CARGO  
Flight Conducted Under - 14 CFR 135  
Accident Occurred During - DESCENT

Aircraft Damage  
DESTROYED  
Fire  
ON GROUND

	Fatal	Serious	Minor	Injuries
Crew	2	0	0	None
Pass	0	0	0	0

Aircraft Information

Make/Model - BEECH D189  
Landing Gear - TAILWHEEL-ALL RETRACTABLE  
Max Gross Wt - 10200  
No. of Seats - 2

Eng Make/Model - P & W R-985  
Number Engines - 2  
Engine Type - RECIP-FUEL INJECTED  
Rated Power - 450 HP

ELT Installed/Activated - YES/YES  
Stall Warning System - NO

Environment/Operations Information

Weather Data  
Wx Briefing - F89  
Method - TELEPHONE  
Completeness - WEATHER NOT PERTINENT  
Basic Weather - VMC  
Wind Dir/Speed - 310/006 KTS  
Visibility - 7.0 SM  
Lowest Sky/Clouds - 2500 FT SCATTERED  
Lowest Ceiling - 10000 FT BROKEN  
Obstructions to Vision - NONE  
Precipitation - NONE  
Condition of Light - DAYLIGHT

Airport Proximity  
ON AIRPORT

Airport Data  
MIAMI INTERNATIONAL  
Runway Ident - 27R  
Runway Lth/Wid - 10500/ 200  
Runway Surface - ASPHALT  
Runway Status - DRY

Personnel Information

Pilot-In-Command  
Certificate(s)/Rating(s)  
ATP, CFI  
SE LAND, ME LAND

Age	32	Medical Certificate - VALID MEDICAL-WAIVERS/LIMIT
Biennial Flight Review	Current - YES	Flight Time (Hours)
Months Since	6	Total - 10250
Aircraft Type	BE-18	Make/Model - 1500
		Instrument - 1500
		Multi-Eng - 7700
		Last 24 Hrs - UNK/NR
		Last 30 Days - 70
		Last 90 Days - 220

Instrument Rating(s) - AIRPLANE

Narrative

WITNESSES OBSERVED THE AIRCRAFT TAXI TO THE END OF RUNWAY 27R AND POSITIONED SO THE TAIL WAS OUT IN THE OVERRUN AREA. THE AIRCRAFT PITCHED UP VERTICALLY, CLIMBED TO ABOUT 100 FEET, ROLLED LEFT INVERTED, BEFORE LIFTING OFF. AFTER LIFT OFF, A HEAVING OF 035 DEGREES AND BURST INTO FLAMES. THE AIRCRAFT WAS 955 POUNDS OVER MAXIMUM GROSS WEIGHT AND THE CG WAS 14.5 INCHES AFT OF THE MOST REARWARD LIMIT, THE WEIGHT AND BALANCE FORM HAD BEEN ALTERED TO INDICATE THE AIRCRAFT WAS WITHIN LIMITS FOR WEIGHT AND BALANCE PRIOR TO DEPARTURE. EXAMINATION OF FAA RECORDS REVEALED AIR CARGO AMERICA HAD BEEN CITED FOR NUMEROUS BREACHES OF FEDERAL AIR REGULATIONS AND THE PILOT-IN-COMMAND HAD A HISTORY OF SUSPENSIONS/REVOCATIONS OF HIS PILOT AIRMAN ~~XX~~ CERTIFICATE. A PILOT OF AIR CARGO AMERICA REPORTED THE COMPANY PRESSURED THEIR PILOTS TO OPERATE THE AIRCRAFT OUTSIDE THE REQUIREMENTS OF THE FEDERAL AIR REGULATIONS. FAA WAS NOTIFIED OF THESE PRACTICES IN 1985.



Brief of Accident (Continued)

File No. - 1567                      9/25/87                      MIAMI, FL                      A/C Res. No. N760                      Time (Lcl) - 1355 EDT

Occurrence #1                      LOSS OF CONTROL - IN FLIGHT  
Phase of Operation                      TAKEOFF - INITIAL CLIMB

Findings(s)

1. AIRCRAFT WEIGHT AND BALANCE - EXCEEDED - PILOT IN COMMAND
2. OVER CONFIDENCE IN PERSONAL ABILITY - PILOT IN COMMAND
3. DOCUMENTATION - INACCURATE - PILOT IN COMMAND
4. COMPANY-INDUCED PRESSURE - PILOT IN COMMAND
5. JUDGEMENT - POOR - PILOT IN COMMAND
6. SUPERVISION - INADEQUATE - COMPANY/OPERATOR MGMT
7. SUPERVISION - INADEQUATE - FAA(OTHER/ORGANIZATION)

Occurrence #2                      IN FLIGHT COLLISION WITH TERRAIN/WATER  
Phase of Operation                      DESCENT - UNCONTROLLED

-----Probable Cause-----

The National Transportation Safety Board determines that the Probable Cause(s) of this accident is/are finding(s) 1

Factor(s) relating to this accident is/are findings(s) 2,3,4,5,6,7

**AIRMAN COMPETENCY/PROFICIENCY CHECK**

**FAR 135**

NAME OF AIRMAN (last, first, middle initial)

LOCATION

DATE OF CHECK

TYPE OF CHECK

FAR 135.293

FAR 135.297

FAR 135.299

PILOT  
CERTIFICATION  
EXPIRES BY

Grade  
Number

MEDICAL INFORMATION: Date of Exam.

Date of Birth

Class

BASED AT (City, State)

TYPE AIRPLANE (Make/Model)

REG No.

Simulator/Training Device (Make/Model)

NAME OF CHECK AIRMAN

SIG. OF CHECK AIRMAN

FLIGHT TIME

FLIGHT MANEUVERS GRADE (S - Satisfactory U - Unsatisfactory)

PILOT

Air-craft Simulator Trng. Dev.

Air-craft Simulator Trng. Dev.

PREFLIGHT

HELICOPTER

1. Equipment Examination (Oral or written)

1. Ground and/or Air Taxi

2. Preflight Inspection

2. Hovering Maneuvers

3. Taxiing

3. Normal & Crosswind T.O. & Landings

4. Powerplant Checks

4. High Altitude Takeoffs & Landings

TAKEOFFS

5. Sim. Engine Failure

5. Normal

6. Confined Areas, Slopes, & Pinnacles

6. Instrument

7. Rapid Deceleration (Quick Stops)

7. Crosswind

8. Autorotations (Single Engine)

8. With Simulated Powerplant Failure

9. Hovering Autorotations (Single Engine)

9. Rejected Takeoff

10. Tail Rotor Failures (Oral)

INFLIGHT MANEUVERS

11. Settling With Power (Oral or Flight)

10. Steep Turns

SEAPLANE OPERATIONS

11. Approaches to Stalls

1. Taxiing, Sailing, Docking

12. Specific Flight Characteristics

2. Step Taxi & Turns

13. Powerplant Failure

3. Glassy/Rough Water T.O./Landings

LANDINGS

4. Normal Takeoff & Landings

14. Normal

5. Crosswind T.O. & Landings

15. From an ILS

OTHER

16. Crosswind

6. Ski Plane Ops. (when applicable)

17. With Simulated Powerplant(s) Failure

GENERAL

18. Rejected Landing

7. Judgment

19. From Circling Approach

8. Crew Coordination

EMERGENCIES

AIRMAN COMPETENCY INFORMATION:

20. Normal and Abnormal Procedures

Demonstrated Current Knowledge FAR 135.293(a)

21. Emergency Procedures

Make/Model Expires (12 months) ( )

22. Area Departure

Demonstrated Competency FAR 135.293(b)

23. Holding

Make/Model Expires (12 months) ( )

24. Area Arrival

Satisfactorily Demonstrated Line Checks

25. ILS Approaches

FAR 135.299 Expires (12 months) ( )

26. Other Instrument Approaches

Satisfactorily Demonstrated IFR Proficiency

Approaches: NDB/ADF

FAR 135.297 Expires ( 6 months) ( )

VOR

Use of Autopilot (is) (is not) Authorized.

ILS

Expires (12 months) ( )

Other (Specify)

REMARKS

27. Circling Approaches

28. Missed Approaches

29. Comm./Nav. Procedures

30. Use of Auto. Pilot

APPROVED BY

Approved  
 Disapproved

CHECK AIRMAN'S PERFORMANCE (FAA Only)

Satisfactory  
 Unsatisfactory

REGION

DISTRICT OFFICE

FAA INSPECTOR'S SIGNATURE