

Hageland Aviation  
Togiak, Alaska  
October 2, 2016  
ANC17MA001

**NATIONAL TRANSPORTATION SAFETY BOARD**

**Washington, D.C.**

ERRATA #1

Human Performance Factual

(6 Pages)

# NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety  
Washington, D.C. 20594

January 11, 2018

## HUMAN PERFORMANCE

### Specialist's Factual Report Errata 1

ANC17MA001

#### A. ACCIDENT

Operator: Hageland Aviation Services, Inc.  
Location: Togiak, Alaska  
Date: October 2, 2016  
Time: 1154 Alaska daylight time (AKDT)<sup>1</sup>  
Airplane: Cessna Grand Caravan 208B  
Registration: N208SD

#### B. PARTICIPANTS

Katherine Wilson  
Human Performance and Survival Factors  
Division (AS-60)  
National Transportation Safety Board  
Washington, DC 20594

Marvin Frantz  
Operational Factors (AS-30)  
National Transportation Safety Board  
Washington, DC 20594

Adam Ricciardi  
Ravn Connect  
Anchorage, Alaska

Eric West  
Federal Aviation Administration  
Washington, DC

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<sup>1</sup> All times are based on a 24-hour clock and are in AKDT unless otherwise noted. Time of the accident is approximate.

## **C. SUMMARY**

On October 2, 2016, about 1154 Alaska daylight time, a turbine-powered Cessna 208B Grand Caravan airplane, N208SD, sustained substantial damage after impacting steep, mountainous, rocky terrain about 12 miles northwest of Togiak, Alaska. The airplane was being operated as flight 3153 by Hageland Aviation Services, Inc., dba Ravn Connect, Anchorage, Alaska, as a scheduled commuter flight under the provisions of 14 Code of Federal Regulations (CFR) Part 135 and visual flight rules (VFR). All three people on board (two commercial pilots and one passenger) sustained fatal injuries. Visual meteorological conditions prevailed at the Togiak Airport (TOG), Togiak, and company flight following procedures were in effect. Flight 3153 departed Quinhagak, Alaska, (KWN) at 1133, destined for Togiak.

## **D. DETAILS OF THE ERRATA**

This erratum contains grammatical changes, edits to the summary of the post-accident actions agreed upon between Hageland and FAA, and modified Attachment 7 to accurately reflect the correspondence and post-accident actions agreed upon between Hageland and FAA.

## **E. FACTUAL INFORMATION**

Page 2, line 29 – replace “RA2” with “risk assessment (RA) 2”

Page 6, line 31 – change “an” to “and”

Page 13, line 42 – delete “by the pilot” and add “was left to the discretion of the pilot.”

Page 15, lines 4-10 – replace with:

### 5.2 Post-Accident Actions

Following the accident, the FAA and Hageland Aviation agreed to a 7-point mitigation plan<sup>18</sup> to prevent a future CFIT accident at the carrier which included implementing GPS VFR routes for all flights, installing FOQA equipment on all aircraft, converting the GOM, GMM and OTM to an electronic format/presentation, flying under IFR rules when able, developing a professional pilot program, creating a flight operations compliance monitoring department and requiring that flights without an operative GPS will be elevated to a RA3 risk, requiring specific management approval for the flight to be operated.

(Footnote 18: See Attachment 7 – FAA-Hageland Post-Accident CFIT Mitigation Plan.)

Exhibit 14 H/Attachment 7 – delete page 3; replace with:



January 9, 2017

FAA Flight Standards, Polaris CMO  
Mr. Deke Abbott, Office Manager  
300 W. 36<sup>th</sup> Ave., Suite 101  
Anchorage, AK 99503

Deke,

I am following up on our meeting of December 29<sup>th</sup>, 2016 and your letter dated December 20<sup>th</sup>, 2016. After our discussion, we had decided that we would combine items 1 and 4 from your letter and rephrase item number 7. I have concluded that combining items 1 and 4 could lead to some confusion so I have reworded them both. Please review the below statements to be included into your previous letter and let me know if you disagree with any or all of the below agreements.

1. **VFR ROUTES:** Hageland has committed to implementing VFR routes for all flights operated under VFR. All company routes will have minimum altitudes, routing, minimum visibility and ceiling assigned for day and night operations. The majority of routes will utilize a direct routing and will be flown using GPS lateral guidance to supplement the visual flight. For flights where a direct path is not practical due to terrain or other geographical concerns, a visual route will be assigned and flown. The operational parameters for each route will be entered into the Hageland management software system, (FlightMaster), and will be auto generated on the flight release for every departure. Routes will be assigned a specific number and will be authorized for each leg of the flight. This is a significant undertaking as Hageland has approximately 7600 possible city pair routes. This will be fully implemented NLT September 1, 2017.
2. **IFR ROUTE STUDY:** Effective November 17<sup>th</sup>, 2016 all routes that encompass adequate IFR infrastructure, and are flown by an IFR qualified pilot, in an IFR capable aircraft will either be flown IFR or if flown under VFR, will comply with the night VFR routes that are published in Operations Specification B050. Feedback from the pilots is currently being collected and will be analyzed to determine which routes lack IFR infrastructure and although are technically supported, lack the realistic capabilities to conduct safe operations under IFR. The study will be completed by January 31<sup>st</sup>, 2017.

3. **GPS INOPERATIVE:** Flights without an operable GPS will be elevated to a RA3 risk and require management approval to be conducted. It is not the intent of the company to fly normal operations with a deferred GPS; these will not be common and thus will require specific guidance, from management, to the flight crews on how the operation is to be conducted. As is with all VFR flights, a minimum altitude, visibility, ceiling, and specific route will be designated for the specific flight. This will be incorporated into the next GOM revision that is scheduled to be submitted by January 31<sup>st</sup>, 2017.

Sincerely,



Luke Hickerson  
Director of Operation  
Hageland Aviation



U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

Polaris Certificate Management Office  
Alaskan Region

300 W. 36<sup>th</sup> Ave., Suite 101  
Anchorage, AK 99503

Phone: (907) 271-2000  
Fax: (907) 271-4777  
1-800-294-5116

January 10, 2017

**CERTIFIED MAIL, RETURN RECEIPT REQUESTED**

Hageland Aviation Services, Inc.  
James Hickerson, President  
4700 Old International Airport Rd.  
Anchorage, AK 99502

Jim,

I am following up on our meeting of December 29, 2016 and Luke's letter dated January 9, 2017. Below you will find the FAA's understanding of the final actions Hageland has committed to take after the October 2, 2016 event near Togiak, AK.

**VFR Routes.** Hageland has committed to implementing company VFR routes. All VFR flights will be operated on a company VFR route and will have minimum altitude(s), visibility and ceiling assigned for day/night operations. The majority of company routes will utilize a direct routing and will be flown using GPS lateral guidance to supplement visual flight. For flights where a GPS direct route is not practical due to terrain or other geographical concerns, a visual route will be developed, documented, assigned and flown. The operational parameters for each route will be entered into the Hageland management software system (FlightMaster) and will be auto generated on the flight release for every departure. Each route will be assigned a specific number and will be authorized for each leg of the flight. This is a significant undertaking as Hageland has approximately 7600 possible city pair routes. This will be fully implemented NLT September 1, 2017.

**FOQA.** Hageland has committed to installing FOQA type equipment in the entire fleet. This commitment will allow the company to have specific knowledge of exactly what is taking place on each individual flight. This commitment will require imagination on the part of Hageland and the FAA as there is no specific FOQA equipment approved for the C207, C208 and PA31 airframes. Implementation dates are a function of identifying the equipment and an installation schedule. The final implementation will be scheduled for December 1, 2017. However, it is understood between the FAA and Hageland that the final implementation schedule may need adjustment as this process unfolds. Hageland will regularly keep the FAA informed on the progress of this item.

**Electronic Manual System.** Hageland has committed to reformatting the GOM, GMM and the OTM into 100 percent electronic format/presentation. This complete rework will allow Hageland to enjoy complete consistency and ease of revision across the accepted

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manual system. The GOM is expected to be complete by February 1, 2017. Final implementation will be NLT September 1, 2017.

**IFR Route Study.** Effective November 17th, 2016, all routes that encompass adequate IFR infrastructure, flown by an IFR qualified pilot in an IFR capable aircraft will either be operated IFR or VFR. If operated VFR, all flights (day and night) will comply with the night VFR routes that are published in Operations Specification B050. Feedback from the pilots is currently being collected and will be studied and analyzed to determine which routes possess realistic infrastructure capabilities to safely conduct operations under IFR. This study will be complete NLT January 31, 2017.

**Professional Pilot Program.** Hageland is in the process of developing a program to address human factors training, SIC to PIC transition training, leadership and pilot evaluations. Hageland is currently interviewing third party consultants to help develop the program. Hageland intends to start conducting human factors training in January of 2017.

**Flight Operations Compliance Monitoring Department.** Hageland has committed to creating a separate department tasked with the monitoring of flights, reviews of proper flight release procedures and verification of operations. This department will be staffed with Flight Data Analysts (FDA) and company Flight Inspectors (FI) and will be managed by a Director of Flight Standards. The FDA will review FOQA data looking for anomalies. The FI will verify pilot compliance with company procedures and make recommendations to management on procedures that need to be modified. The primary focus of this department is to 1) maintain the company's Operations Manual, 2) assure compliance with company procedures thru data analysis, 3) follow up on data anomalies and 4) conduct flight operations inspections.

**GPS Inoperative.** Flights without an operable GPS will be elevated to a RA3 risk on the current Risk Assessment Worksheet. This elevated risk will require specific management approval for the flight to be operated. Management will provide specific guidance to the flight crews on how the GPS inoperative operation is to be conducted. This GPS inoperative requirement will be incorporated into the next GOM revision that is scheduled to be submitted by January 31, 2017.

Sincerely,



Deke Abbott  
Office Manager  
Polaris CMO

Please send stakeholder feedback to the following:

[http://www.faa.gov/about/office\\_org/headquarters\\_offices/avs/stakeholder\\_feedback/afs/field/sf\\_cmo/](http://www.faa.gov/about/office_org/headquarters_offices/avs/stakeholder_feedback/afs/field/sf_cmo/)