



NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety
Washington, D.C. 20594

January 25, 2018

Specialist's Factual Report Errata 1

OPERATIONAL FACTORS

ANC17MA001

A. ACCIDENT

Operator: Hageland Aviation Services, Inc.
Location: Togiak, Alaska
Date: October 2, 2016
Time:¹ 1157 Alaska Daylight Time (ADT)
Airplane: Cessna 208B Grand Caravan, N208SD

B. PARTICIPANTS

Marvin Frantz Operational Factors Division (AS-30) National Transportation Safety Board (NTSB) 490 L'Enfant Plaza East, SW Washington, DC 20594-2000	Katherine Wilson Human Performance Division (AS-60) National Transportation Safety Board 490 L'Enfant Plaza East, SW Washington, DC 20594-2000
------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------

Eric West Air Safety Investigator Office of Accident Investigation and Prevention Federal Aviation Administration (FAA) 800 Independence Ave. SW Washington, DC 20591	Adam Ricciardi Director of Safety Assurance Hageland Aviation Services, Inc 4700 Old International Airport Road Anchorage, Alaska 99502
--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------

C. SUMMARY

On October 2, 2016, about 1157 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., dba² Ravn Connect, Anchorage, Alaska, as a scheduled commuter flight under the provisions of 14 *Code of Federal Regulations* (CFR) Part 135 under 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, Togiak, and company flight following procedures were in effect. Flight 3153 departed Quinhagak Airport (PAQH), Quinhagak, Alaska, at 1133, destined for Togiak Airport (PATG), Togiak, Alaska.

¹ All times are Alaska Daylight Time unless otherwise noted.

² Doing business as.

D. DETAILS OF THE ERRATA

This errata contains grammatical corrections and clarifications. It modifies Attachment 12 to accurately reflect a post-accident understanding between Hageland and the FAA regarding CFIT-A mitigating actions the company would take.

E. FACTUAL INFORMATION

On page 5, insert the word “probable” before the word “accident” in the second to the last line of the third paragraph.

On page 21, change the last sentence of the fifth paragraph to read:

“The FAA-approved, Hageland-specific C-208B cockpit checklist which the company used did not contain any mention of testing the unit.”

On page 21, in the last sentence of the final paragraph, change “date” to “data”.

On page 21, in the final paragraph, insert the following after the first sentence:

“Honeywell used three available Spidertracks data (location and altitude) points and the accident location and altitude to construct the route to be flown in the simulator. Because Spidertracks data was only available at 6-minute intervals, Honeywell created several intermediate data points to define the most probable route of flight taken between the known Spidertracks points.”

On page 27, in the final paragraph, remove the first sentence and replace it with the following:

“Following the accident, Medallion took no action to remove or suspend Hageland’s Medallion Shield.”

On page 31, section 13.0, third line from the bottom, replace the segment “requiring an operative GPS capability on all flights.” with the following:

“elevating the risk level to RA3 (requiring management approval) for any flight with an inoperable GPS.”

In Exhibit 2M, Attachment 12, replace the third page with the following four pages:



January 9, 2017

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

Deke,

I am following up on our meeting of December 29th, 2016 and your letter dated December 20th, 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 17th, 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 31st, 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 31st, 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. 36th 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

Received
1/16/17



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/