

The following Safety Recommendations were issued as a result of NTSB Aviation Accident Report “Collision with Terrain Hageland Aviation Services, Inc. dba Ravn Connect Flight 3153 Cessna 208B, N208SD, Togiak, Alaska October 2, 2016.” Report number AAR-18-02. Adopted on April 17, 2018 and published on April 26, 2018.

Safety Recommendation Number	Safety Recommendation Recipient	Safety Recommendation Text
A-18-013	Federal Aviation Administration	Although controlled flight into terrain (CFIT)-avoidance training programs are not required by federal regulation for Title 14 Code of Federal Regulations Part 135 fixed-wing operations, work with Part 135 operators in Alaska to improve any voluntarily implemented training programs aimed at reducing the risk of CFIT accidents involving continuation of flight under visual flight rules (VFR) into instrument meteorological conditions, with special attention paid to the human factors issues identified in recent Alaska accident investigations, including, but not limited to, (1) the challenges of flying in mountainous terrain in Alaska and low-altitude VFR flight in an area subject to rapid changes in weather; and (2) limitations of the Alaska infrastructure, particularly weather observations, communications, and navigation aids.
A-18-014	Federal Aviation Administration	Work with Title 14 Code of Federal Regulations Part 135 certificate holders that operate under visual flight rules in mountainous terrain at altitudes below the required terrain clearance of

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		<p>the aircraft's required terrain awareness and warning system (TAWS) class to (1) ensure that management and pilots are aware of the risks associated with distraction (from continuous nuisance alerts) and complacency (brought about by routine use of the terrain inhibit feature); (2) develop plans for mitigating those risks and minimizing nuisance alerts; and (3) develop procedures that specifically address when pilots should test, inhibit, and uninhibit the TAWS alerts, considering the operator's typical operations and the TAWS manufacturer's guidance.</p>
A-18-015	Federal Aviation Administration	<p>Modify the terrain awareness and warning system requirements in Technical Standard Order C151 such that, once the alerts are manually inhibited, they do not remain inhibited indefinitely if the pilot does not uninhibit them.</p>
A-18-016	Federal Aviation Administration	<p>Install communications equipment throughout Alaska, after determining what would be most effective, to allow increased access to the instrument flight rules system, giving priority to those areas used by Title 14 Code of Federal Regulations Part 135 operators.</p>
A-18-017	Federal Aviation Administration	<p>Ensure that Alaska airports that are served by Title 14 Code of Federal Regulations (CFR) Part 135 operators and</p>

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		have instrument approaches are equipped with weather-reporting capabilities to enable instrument flight rules operations in accordance with 14 CFR 135.225(a).
A-18-018	Medallion Foundation	Expand the criteria for the Medallion stars and shield to include requirements for your members to incorporate Medallion program materials into their Federal Aviation Administration-approved and -accepted training programs and manuals.
A-18-019	Medallion Foundation	Expand the criteria for your safety star to include requirements for a flight data monitoring program.
A-18-020	Hageland Aviation Services, Inc.	Incorporate into your crew resource management training program ground, simulator, and flight training that define second-in-command responsibilities for dual-pilot operations, including, but not limited to, (1) the use of standard operating procedures and execution of pilot flying/pilot monitoring duties as outlined in Advisory Circular 120-71B and (2) aeronautical decision-making and judgment scenarios that are tailored to Hageland’s flight operations and aviation environment, including communications and teamwork with Operations Control Center personnel.

The following Safety Recommendations were reiterated as a result of NTSB Aviation Accident Report “Collision with Terrain Hageland Aviation Services, Inc. dba Ravn Connect Flight 3153 Cessna 208B, N208SD, Togiak, Alaska October 2, 2016.” Report number AAR-18-02. Adopted on April 17, 2018 and published on April 26, 2018.

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A-13-012	Federal Aviation Administration	Require the installation of a crash-resistant flight recorder system on all newly manufactured turbine-powered, nonexperimental, nonrestricted-category aircraft that are not equipped with a flight data recorder and a cockpit voice recorder and are operating under 14 Code of Federal Regulations Parts 91, 121, or 135. The crash-resistant flight recorder system should record cockpit audio and images with a view of the cockpit environment to include as much of the outside view as possible, and parametric data per aircraft and system installation, all as specified in Technical Standard Order C197, “Information Collection and Monitoring Systems.”
A-13-013	Federal Aviation Administration	Require all existing turbine-powered, nonexperimental, nonrestricted-category aircraft that are not equipped with a flight data recorder or cockpit voice recorder and are operating under 14 Code of Federal Regulations Parts 91, 121, or 135 to be retrofitted with a crash-resistant flight recorder system. The crash-resistant flight recorder system should record cockpit audio and images with a view of the

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		cockpit environment to include as much of the outside view as possible, and parametric data per aircraft and system installation, all as specified in Technical Standard Order C197, "Information Collection and Monitoring Systems."
A-16-034	Federal Aviation Administration	Require all 14 Code of Federal Regulations Part 135 operators to install flight data recording devices capable of supporting a flight data monitoring program.
A-16-035	Federal Aviation Administration	After the action in Safety Recommendation A-16-34 is completed, require all 14 Code of Federal Regulations Part 135 operators to establish a structured flight data monitoring program that reviews all available data sources to identify deviations from established norms and procedures and other potential safety issues.
A-16-036	Federal Aviation Administration	Require all 14 Code of Federal Regulations Part 135 operators to establish safety management system programs.
A-17-025	Federal Aviation Administration	Encourage industry safety efforts, such as the Commercial Aviation Safety Team and the General Aviation Joint Steering Committee, to identify, develop, and implement incentives for 14 Code of Federal Regulations Part 121, 135, and 91K operators and the general aviation community to freely share

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		pilot weather reports (PIREPs), including braking action or runway condition reports filed as PIREPs, to the National Airspace System to enhance flight safety.
A-17-035	Federal Aviation Administration	Implement ways to provide effective terrain awareness and warning system (TAWS) protections while mitigating nuisance alerts for single-engine airplanes operated under 14 Code of Federal Regulations Part 135 that frequently operate at altitudes below their respective TAWS class design alerting threshold.
A-17-038	Federal Aviation Administration	Expand the application of Federal Aviation Administration Order 8900.1, volume 3, chapter 19, section 6, "Safety Assurance System: Flight Training Curriculum Segments," paragraphs 3-1251(B) and 3-1252, which address controlled flight into terrain-avoidance training programs for 14 Code of Federal Regulations (CFR) Part 135 helicopter operations, to all 14 CFR Part 135 operations.

April 26, 2018

Mr. Daniel Elwell, Acting Administrator
Federal Aviation Administration

Dear Mr. Elwell,

On April 17, 2018, the NTSB adopted its report, *Collision with Terrain, Hageland Aviation Services, Inc., dba Ravn Connect Flight 3153, Cessna 208B, N208SD, Togiak, Alaska, October 2, 2016*, NTSB/AAR-18/02. The details of this accident investigation and the resulting safety recommendations may be found in the attached report, which can also be accessed at <http://www.nts.gov>.

Among the Safety Recommendations, five are issued to Federal Aviation Administration (FAA) and can be found on page 71 of the report; eight are reiterated to the FAA and can be found on pages 72-73 of the report.

The NTSB is vitally interested in these recommendations because they are designed to prevent accidents and save lives. We would appreciate a response within 90 days, detailing the actions you have taken or intend to take to implement these recommendations. When replying, please refer to the safety recommendations by number. We encourage you to submit your response to correspondence@nts.gov. If it exceeds 20 megabytes, including attachments, please e-mail us at the same address for instructions. Please do not submit both an electronic copy and a hard copy of the same response.



CORRESPONDENCE

National Transportation Safety Board

490 L'Enfant Plaza E, S.W.

Washington, D.C. 20594

April 26, 2018

Mr. Gerard Rock, Executive Director
Medallion Foundation

Dear Mr. Rock,

On April 17, 2018, the NTSB adopted its report, *Collision with Terrain, Hageland Aviation Services, Inc., dba Ravn Connect Flight 3153, Cessna 208B, N208SD, Togiak, Alaska, October 2, 2016*, NTSB/AAR-18/02. The details of this accident investigation and the resulting safety recommendations may be found in the attached report, which can also be accessed at <http://www.nts.gov>.

Among the Safety Recommendations, two are issued to the Medallion Foundation and can be found on page 72 of the report.

The NTSB is vitally interested in these recommendations because they are designed to prevent accidents and save lives. We would appreciate a response within 90 days, detailing the actions you have taken or intend to take to implement these recommendations. When replying, please refer to the safety recommendations by number. We encourage you to submit your response to correspondence@nts.gov. If it exceeds 20 megabytes, including attachments, please e-mail us at the same address for instructions. Please do not submit both an electronic copy and a hard copy of the same response



CORRESPONDENCE

National Transportation Safety Board
490 L'Enfant Plaza E, S.W.
Washington, D.C. 20594

April 26, 2018

Mr. David Pflieger, Jr., President

Ravn Air Group

Dear Mr. Pflieger,

On April 17, 2018, the NTSB adopted its report, *Collision with Terrain, Hageland Aviation Services, Inc., dba Ravn Connect Flight 3153, Cessna 208B, N208SD, Togiak, Alaska, October 2, 2016*, NTSB/AAR-18/02. The details of this accident investigation and the resulting safety recommendations may be found in the attached report, which can also be accessed at <http://www.nts.gov>.

Among the Safety Recommendations, one is issued to Hageland Aviation Services, Inc., and can be found on page 72 of the report.

The NTSB is vitally interested in these recommendations because they are designed to prevent accidents and save lives. We would appreciate a response within 90 days, detailing the actions you have taken or intend to take to implement these recommendations. When replying, please refer to the safety recommendations by number. We encourage you to submit your response to correspondence@nts.gov. If it exceeds 20 megabytes, including attachments, please e-mail us at the same address for instructions. Please do not submit both an electronic copy and a hard copy of the same response.



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