

November 18, 2021

The Honorable Stephen Dickson
Administrator
Federal Aviation Administration

The attached letter from the NTSB Chairman provides information about the NTSB's November 2, 2021, report *Runway Overrun During Landing, Peninsula Aviation Services Inc. d.b.a. PenAir Flight 3296, Saab 2000, N686PA, Unalaska, Alaska, October 17, 2019*, NTSB/AAR-21/05. 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>.

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 of the date of this letter, detailing the actions you have taken or intend to take to implement these recommendations. When replying, please refer to the safety recommendations by number (for example, A-21-46 through -51). We encourage you to submit your response to ExecutiveSecretariat@nts.gov. If your reply exceeds 20 megabytes, including attachments, please e-mail us at the same address for instructions on how to send larger documents. Please do not submit both an electronic copy and a hard copy of the same response.



Executive Secretariat-CRB
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National Transportation Safety Board

Office of the Chair

Washington, DC 20594



November 18, 2021

The Honorable Stephen Dickson
Administrator
Federal Aviation Administration
Washington, DC 20591

Dear Administrator Dickson:

This letter provides information about the National Transportation Safety Board's (NTSB) November 2, 2021, report *Runway Overrun During Landing, Peninsula Aviation Services Inc. d.b.a. PenAir Flight 3296, Saab 2000, N686PA, Unalaska, Alaska, October 17, 2019*, NTSB/AAR-21/05. The details of this investigation and the resulting safety recommendations may be found in the attached report, which can also be accessed at <http://www.nts.gov/>.

As a result of this investigation, we identified the following safety issues:

- Potential for cross-wiring of airplane antiskid brake systems
- Insufficient Federal Aviation Administration (FAA) guidance to identify safety risks for air carriers experiencing significant organizational changes, including bankruptcy, acquisition, and merger
- Lack of FAA consideration of runway safety area dimensions during the process of authorizing an air carrier to operate its aircraft at a specific Title 14 *Code of Federal Regulations* Part 139-certificated airport
- Safety management systems for organizations that design, manufacture, and maintain aircraft.

Accordingly, the NTSB makes the following safety recommendations to the FAA. Additional information regarding these recommendations can be found in the noted sections of the report.

- Identify all currently certificated transport-category airplanes for which system safety assessments for landing gear systems did not consider human error that could lead to cross-wiring of antiskid brake system components, including the wheel speed transducers, and require manufacturers of transport-category airplanes without such assessments to perform the assessments and then

implement mitigations to prevent cross-wiring of antiskid brake system components. (A-21-46) (See section 2.3.4.1.)

- Require the submission and consideration of system safety assessments addressing the landing gear antiskid system for the certification of future transport-category airplane designs. The certification should ensure that the system safety assessments are consistent with the intent of Advisory Circular 25.1309, System Design and Analysis, and that the assessments evaluate and mitigate the potential for human error that can lead to a cross-wiring error. (A-21-47) (See section 2.3.4.1.)
- Require organizations that design, manufacture, and maintain aircraft to establish a safety management system. (A-21-48) (See section 2.3.4.2.)
- Notify principal operations inspectors and frontline managers about the circumstances of this accident and emphasize the importance of existing Federal Aviation Administration guidance for detecting and mitigating the safety risks that can result when certificate holders experience significant organizational change, such as high personnel turnover, a reduction to route structures or flight schedules, bankruptcy, acquisition, and merger. (A-21-49) (See section 2.5.1.)
- Revise Order 8900.1, Flight Standards Information Management System, to include a formalized transition procedure to be used during a changeover of certificate management team personnel responsible for overseeing a certificate holder that is undergoing significant organizational change (for a reason described in volume 6, chapter 2, section 18 of the order) to ensure that incoming personnel are fully aware of potential safety risks. (A-21-50) (See section 2.5.1.)
- Include the runway design code for runways of intended use among the criteria assessed when authorizing a scheduled air carrier to operate its airplanes on a regular basis at an airport certificated under Title 14 *Code of Federal Regulations* Part 139. (A-21-51) (See section 2.5.2.)

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 of the date of this letter, detailing the actions you have taken or intend to take to implement these recommendations. When replying, please refer to the safety recommendations by number (Safety Recommendations A-21-46 through -51). We encourage you to submit your response to ExecutiveSecretariat@ntsb.gov. If your reply, including attachments, exceeds 20 megabytes, 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.

Sincerely,

[Original Signed]

Jennifer Homendy
Chair

November 18, 2021

Mr. Patrick Ky
Executive Director
European Union Aviation Safety Agency

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant accidents in other modes of transportation—railroad, highway, marine, and pipeline. We determine the probable cause of the accidents and issue safety recommendations aimed at preventing future accidents. In addition, we carry out special studies concerning transportation safety and coordinate the resources of the federal government and other organizations to provide assistance to victims and their family members affected by major transportation disasters.

The attached letter from the NTSB Chairman provides information about the NTSB's November 2, 2021, report *Runway Overrun During Landing, Peninsula Aviation Services Inc. d.b.a. PenAir Flight 3296, Saab 2000, N686PA, Unalaska, Alaska, October 17, 2019*, NTSB/AAR-21/05. The details of this accident investigation and the resulting safety recommendation may be found in the attached report, which can also be accessed at <http://www.nts.gov>. For more information about NTSB and our recommendation process, please see the attached one-page summary.

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 of the date of this letter, detailing the actions you have taken or intend to take to implement these recommendations. When replying, please refer to the safety recommendation by number (for example, A-21-52 through 54). We encourage you to submit your response to ExecutiveSecretariat@nts.gov. If your reply exceeds 20 megabytes, including attachments, please e-mail us at the same address for instructions on how to send larger documents. Please do not submit both an electronic copy and a hard copy of the same response.

All communications regarding safety recommendations will be stored by the NTSB and viewable by the public. Please do not send privileged or confidential communications in response to this recommendation. Responses marked as confidential or privileged (or similar designations) will be considered nonresponsive. If you have concerns about this protocol, please contact us at ExecutiveSecretariat@nts.gov.



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National Transportation Safety Board

Office of the Chair

Washington, DC 20594



November 18, 2021

Mr. Patrick Ky
Executive Director
European Union Aviation Safety Agency

Dear Mr. Ky:

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant accidents in other modes of transportation—railroad, highway, marine, and pipeline. We determine the probable cause of the accidents and issue safety recommendations aimed at preventing future accidents. In addition, we carry out special studies concerning transportation safety and coordinate the resources of the federal government and other organizations to assist victims and their family members affected by major transportation disasters.

We are providing the following information to urge the European Union Aviation Safety Agency to act on the safety recommendations in this letter because we believe your organization can help reduce the risk of future accidents. For more information about the NTSB and our recommendation process, please see the attached one-page summary.

This letter also includes information about our November 2, 2021, report *Runway Overrun During Landing, Peninsula Aviation Services Inc. d.b.a. PenAir Flight 3296, Saab 2000, N686PA, Unalaska, Alaska, October 17, 2019*, NTSB/AAR-21/05. The details of this investigation and the resulting safety recommendations may be found in the attached report, which can also be accessed at <http://www.nts.gov/>.

As a result of this investigation, we identified the following safety issues:

- Potential for cross-wiring of airplane antiskid brake systems
- Safety management systems for organizations that design, manufacture, and maintain aircraft

Accordingly, the NTSB makes the following safety recommendations to the European Union Aviation Safety Agency. Additional information regarding these recommendations can be found in the noted sections of the report.

- Identify all currently certificated transport-category airplanes for which system safety assessments for landing gear systems did not consider human error that could lead to cross-wiring of antiskid brake system components, including the wheel speed transducers, and require manufacturers of transport-category airplanes without such assessments to perform the assessments and then implement mitigations to prevent cross-wiring of antiskid brake system components. (A-21-52) (See section 2.3.4.1.)
- Require the submission and consideration of system safety assessments addressing the landing gear antiskid system for the certification of future transport-category airplane designs. The certification should ensure that the system safety assessments are consistent with the intent of Acceptable Means of Compliance 25.1309, System Design and Analysis, and that the assessments evaluate and mitigate the potential for human error that can lead to a cross-wiring error. (A-21-53) (See section 2.3.4.1.)
- Require organizations that design, manufacture, and maintain aircraft to establish a safety management system. (A-21-54) (See section 2.3.4.2.)

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 of the date of this letter, detailing the actions you have taken or intend to take to implement these recommendations. When replying, please refer to the safety recommendations by number (Safety Recommendations A-21-52 through -54). We encourage you to submit your response to ExecutiveSecretariat@ntsb.gov. If your reply, including attachments, exceeds 20 megabytes, 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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In the likely event that your company uses autogenerated and/or preformatted confidentiality statements on letterhead or outgoing e-mails, please include a statement in your letter indicating that the information can be publicly released. If you have concerns about this protocol, please contact us at ExecutiveSecretariat@ntsb.gov.

Sincerely,

[Original Signed]

Jennifer Homendy
Chair

November 18, 2021

Mr. Micael Johansson
Chief Executive Officer
The Saab Group

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant accidents in other modes of transportation—railroad, highway, marine, and pipeline. We determine the probable cause of the accidents and issue safety recommendations aimed at preventing future accidents. In addition, we carry out special studies concerning transportation safety and coordinate the resources of the federal government and other organizations to provide assistance to victims and their family members affected by major transportation disasters.

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November 18, 2021

Mr. Micael Johansson
Chief Executive Officer
The Saab Group

Dear Mr. Johansson:

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We are providing the following information to urge Saab to act on the safety recommendation in this letter because we believe your organization can help reduce the risk of future accidents. For more information about the NTSB and our recommendation process, please see the attached one-page summary.

This letter also includes information about our November 2, 2021, report *Runway Overrun During Landing, Peninsula Aviation Services Inc. d.b.a. PenAir Flight 3296, Saab 2000, N686PA, Unalaska, Alaska, October 17, 2019*, NTSB/AAR-21/05. The details of this investigation and the resulting safety recommendations may be found in the attached report, which can also be accessed at <http://www.nts.gov/>.

As a result of this investigation, we identified the following safety issue: the potential for cross wiring of airplane antiskid brake systems. Accordingly, the NTSB makes the following safety recommendation to Saab. Additional information regarding this recommendation can be found in the noted sections of the report.

- Redesign the wheel speed transducer wire harnesses for the Saab 2000 airplane to prevent the harnesses from being installed incorrectly during maintenance and overhaul. (A-21-55) (See section 2.3.4.)

The NTSB is vitally interested in this recommendation because it is designed to prevent accidents and save lives. We would appreciate a response within 90 days of the date of this letter, detailing the actions you have taken or intend to take to implement this recommendation. When replying, please refer to the safety recommendation by number (Safety Recommendation A-21-55). We encourage you to submit your response to ExecutiveSecretariat@ntsb.gov. If your reply, including attachments, exceeds 20 megabytes, 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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