

December 12, 2024

The Honorable Michael G. Whitaker  
Administrator  
Federal Aviation Administration  
Washington, DC 20591

The attached letter from the NTSB Chair provides information about the December 12, 2024, report, In-Flight Collision During Air Show Commemorative Air Force Boeing B-17G, N7227C, and Bell P-63F, N6763 *Dallas, Texas November 12, 2022* (NTSB/AIR-24-07). 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-24-31 through A-24-34). We encourage you to submit your response to [ExecutiveSecretariat@nts.gov](mailto: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  
Office of the Managing Director  
National Transportation Safety Board  
490 L'Enfant Plaza SW  
Washington, DC 20594  
Email: [ExecutiveSecretariat@nts.gov](mailto:ExecutiveSecretariat@nts.gov)

# National Transportation Safety Board

Office of the Chair

Washington, DC 20594



December 12, 2024

Mr. Michael G. Whitaker  
Administrator  
Federal Aviation Administration  
800 Independence Avenue, SW  
Washington, DC 20591

Dear Mr. Whitaker:

This letter provides information about the National Transportation Safety Board's (NTSB) December 4, 2024, report *In-Flight Collision During Air Show, Commemorative Air Force Boeing B-17G, N7227C, and Bell P-63F, N6763, AIR-24-07*. 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>.

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

- The air boss's and air show event organizer's lack of an adequate, prebriefed aircraft separation plan for the air show performance.
- The diminished ability of the Boeing B-17G pilot and the Bell P-63F pilot to see and avoid each other's aircraft, and the inherent limitations of the see-and-avoid concept for collision avoidance.
- The lack of Federal Aviation Administration (FAA) guidance for air bosses and air show event organizers on developing plans and performing risk assessments that ensure the separation of aircraft that are not part of an approved maneuvers package.
- The lack of FAA requirements and guidance for recurrent evaluations of air bosses and direct surveillance of their performance.

Accordingly, the NTSB makes the following safety recommendations to the FAA:

- Work with the International Council of Air Shows Inc. (ICAS) and the warbird community to establish standard operating procedures for air show event organizers and air bosses that include: 1) applying

administrative controls to ensure that multiple, dissimilar aircraft not operated as part of an approved maneuvers package remain deconflicted; 2) performing a safety risk assessment for each performance to determine hazards and apply effective mitigations, including consideration for any revenue ride flights conducted during air show operations; and 3) completing a daily debriefing that includes continuous feedback to the Federal Aviation Administration and the ICAS to address any identified deficiencies. (A-24-31)

- Require recurrent air boss evaluations as part of the letter of authorization renewal process. (A-24-32)
- Work with the International Council of Air Shows Inc. and other air show industry stakeholders to develop standardized, unambiguous terms to help ensure that the directives that air bosses provide performers, such as those related to show lines, are clear and brief. (A-24-33)
- Revise Federal Aviation Administration (FAA) Order 8900.1 to provide guidance and a job aid for FAA inspectors who evaluate an air boss's performance and require the FAA inspector-in-charge of an air show to observe an air boss's performance visually and on the air boss radio frequency and provide appropriate feedback during the air show debriefing. (A-24-34)

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 this urgent recommendation. When replying, please refer to the safety recommendation by number (Safety Recommendations A-24-31 through -34). We encourage you to submit your response to [ExecutiveSecretariat@ntsb.gov](mailto:ExecutiveSecretariat@ntsb.gov). If your reply, including attachments, exceeds 20 megabytes, 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.

Sincerely,

[Original Signed]

Jennifer Homendy  
Chair

Attachment

December 12, 2024

Mr. John Cudahy  
President  
International Council of Air Shows Inc.  
205 Van Buren Street, Suite 120  
Herndon, VA 20170

The NTSB is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in the other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable cause of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for any accident or event investigated by the agency. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

The attached letter from the NTSB Chair provides information about the NTSB's December 12, 2024, report, *In-Flight Collision During Air Show Commemorative Air Force Boeing B-17G, N7227C, and Bell P-63F, N6763 Dallas, Texas November 12, 2022* (NTSB/AIR-24-07). 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 refer to additional [guidance on responding to our safety recommendations](#) on our website.

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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](mailto:ExecutiveSecretariat@nts.gov).



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# National Transportation Safety Board

Office of the Chair

Washington, DC 20594

December 12, 2024



Mr. John Cudahy  
President  
International Council of Air Shows Inc.  
205 Van Buren Street, Suite 120  
Herndon, VA 20170

Dear Mr. Cudahy:

The NTSB is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in the other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

We are providing the following information to urge the International Council of Air Shows Inc. (ICAS) 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 1-page summary.

This letter provides information about the National Transportation Safety Board's (NTSB) December 4, 2024, report *In-Flight Collision During Air Show, Commemorative Air Force Boeing B-17G, N7227C, and Bell P-63F, N6763*, AIR-24-07. 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>.

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

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- The diminished ability of the Boeing B-17G pilot and the Bell P-63F pilot to see and avoid each other's aircraft, and the inherent limitations of the see-and-avoid concept for collision avoidance.

- The lack of Federal Aviation Administration (FAA) guidance for air bosses and air show event organizers on developing plans and performing risk assessments that ensure the separation of aircraft that are not part of an approved maneuvers package.
- The lack of FAA requirements and guidance for recurrent evaluations of air bosses and direct surveillance of their performance.

Accordingly, the NTSB makes the following safety recommendations to the ICAS:

- In collaboration with the Federal Aviation Administration and other air show industry stakeholders, develop standardized, unambiguous terms to help ensure that the directives that air bosses provide performers, such as those related to show lines, are clear and brief. (A-24-35)
- In collaboration with the Federal Aviation Administration (FAA) and the warbird community, establish standard operating procedures for air show event organizers and air bosses that include: 1) applying administrative controls to ensure that multiple, dissimilar aircraft not operated as part of an approved maneuvers package remain deconflicted; 2) performing a safety risk assessment for each performance to determine hazards and apply effective mitigations, including consideration for any revenue ride flights conducted during air show operations; and 3) completing a daily debriefing that includes continuous feedback to the FAA and the International Council of Air Shows to address any identified deficiencies. (A-24-36)

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 this urgent recommendation. When replying, please refer to the safety recommendation by number (Safety Recommendations A-24-35 and -36). We encourage you to submit your response to [ExecutiveSecretariat@ntsb.gov](mailto:ExecutiveSecretariat@ntsb.gov). If your reply, including attachments, exceeds 20 megabytes, 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.

Sincerely,

[Original Signed]

Jennifer Homendy  
Chair

Attachment

December 12, 2024

Mr. David Oliver  
Acting Chief Executive Officer  
Commemorative Air Force  
5661 Mariner Drive  
Dallas, TX 75376

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# National Transportation Safety Board

Office of the Chair

Washington, DC 20594



December 12, 2024

Mr. David Oliver  
Acting Chief Executive Officer  
Commemorative Air Force  
5661 Mariner Drive  
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Dear Mr. Oliver:

The NTSB is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in the other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

We are providing the following information to urge the Commemorative Air Force (CAF) 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 1-page summary.

This letter provides information about the National Transportation Safety Board's (NTSB) December 4, 2024, report *In-Flight Collision During Air Show, Commemorative Air Force Boeing B-17G, N7227C, and Bell P-63F, N6763, AIR-24-07*. 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>.

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- The lack of Federal Aviation Administration (FAA) guidance for air bosses and air show event organizers on developing plans and performing risk assessments that ensure the separation of aircraft that are not part of an approved maneuvers package.
- The lack of FAA requirements and guidance for recurrent evaluations of air bosses and direct surveillance of their performance.

Accordingly, the NTSB makes the following safety recommendation to the CAF:

- Using the guidance provided in Advisory Circular 120-92D, "Safety Management Systems for Aviation Service Providers," establish a safety risk assessment process for identifying and mitigating risks, tracking safety hazards, and routinely assessing trend data to include policies and procedures that specifically address the unique aspects of air show operations, such as considerations for serving as event organizer; participating in air boss directed performances involving multiple, dissimilar aircraft; and ensuring the safety of revenue passenger rides. (A-24-37)

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-24-37). We encourage you to submit your response to [ExecutiveSecretariat@ntsb.gov](mailto:ExecutiveSecretariat@ntsb.gov). If your reply, including attachments, exceeds 20 megabytes, 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.

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