



# National Transportation Safety Board

Washington, DC 20594

## Safety Recommendation

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**Date:** August 4, 2015

**In reply refer to:** A-15-27 and -28

Mr. Eric Stallmer  
President  
Commercial Spaceflight Federation  
500 New Jersey Ave. NW, Suite 400  
Washington, DC 20001

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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. We are providing the following information to urge the Commercial Spaceflight Federation to take action on the safety recommendations being issued in this letter.

On July 28, 2015, we adopted our report concerning the October 31, 2014, accident in which the SpaceShipTwo reusable suborbital rocket, N339SS, operated by Scaled Composites LLC, broke up into multiple pieces during a rocket-powered test flight and impacted terrain over a 5-mile area near Koehn Dry Lake, California.<sup>1</sup> Additional information about this accident and the resulting recommendations may be found in the report of the investigation, which can be accessed at our website, <http://www.nts.gov>, under report number NTSB/AAR-15/02.

As a result of this investigation, we issued 10 new recommendations, including 8 to the Federal Aviation Administration and the following 2 recommendations to the Commercial Spaceflight Federation:

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<sup>1</sup> National Transportation Safety Board, *In-Flight Breakup During Test Flight, Scaled Composites SpaceShipTwo, N339SS, Near Koehn Dry Lake, California, October 31, 2014*, NTSB/AAR-15/02 (Washington, DC: National Transportation Safety Board, 2015).

A-15-27

Advise commercial space operators to work with local emergency response partners to revise emergency response procedures and planning to ensure that helicopter and other resources are appropriately deployed during flights.

A-15-28

Work with the Federal Aviation Administration to develop and issue human factors guidance for operators to use throughout the design and operation of a crewed vehicle. The guidance should address, but not be limited to, the human factors issues identified during the SpaceShipTwo accident investigation.

Chairman HART, Vice Chairman DINH-ZARR, and Members SUMWALT and WEENER concurred in these recommendations.

The NTSB is vitally interested in these recommendations because they are designed to prevent accidents and save lives. We would appreciate receiving a response from you within 90 days detailing the actions you have taken or intend to take to implement them. When replying, please refer to the safety recommendations by number. We encourage you to submit your response electronically to [correspondence@ntsb.gov](mailto:correspondence@ntsb.gov). If it exceeds 10 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.

[Original Signed]

By: Christopher A. Hart,  
Chairman