



National Transportation Safety Board

Washington, DC 20594

Safety Recommendation

Date: February 28, 2013

In reply refer to: A-13-01 to -03

The Honorable Michael P. Huerta
Administrator
Federal Aviation Administration
Washington, DC 20591

On January 29, 2013, the NTSB adopted its report concerning the December 7, 2011, accident, in which a Sundance Helicopters, Inc., Eurocopter AS350-B2 helicopter crashed into mountainous terrain near Las Vegas, Nevada.¹ 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>, as report number AAR-13/01.

As a result of this investigation, the NTSB issued three recommendations to the Federal Aviation Administration (FAA):

A-13-01

Establish duty-time regulations for maintenance personnel working under 14 *Code of Federal Regulations* Parts 121, 135, 145, and 91 Subpart K that take into consideration factors such as start time, workload, shift changes, circadian rhythms, adequate rest time, and other factors shown by recent research, scientific evidence, and current industry experience to affect maintenance crew alertness. (Supersedes Safety Recommendation A-97-71 and is classified “Open—Unacceptable Response”)

¹ For more information, see *Loss of Control, Sundance Helicopters Inc., Eurocopter AS-350-B2, N37SH, Near Las Vegas, Nevada, December 7, 2011*, Aircraft Accident Report NTSB/AAR-13/01 (Washington, DC: National Transportation Safety Board, 2013), available online at <http://www.nts.gov>.

A-13-02

Encourage operators and manufacturers to develop and implement best practices for conducting maintenance under 14 *Code of Federal Regulations* Parts 135 and 91 Subpart K, including, but not limited to, the use of work cards for maintenance tasks, especially those involving safety-critical functions, that promote the recording and verification of delineated steps in the task that, if improperly completed, could lead to a loss of control.

A-13-03

Require that personnel performing maintenance or inspections under 14 *Code of Federal Regulations* Parts 121, 135, 145, and 91 Subpart K receive initial and recurrent training on human factors affecting maintenance that includes a review of the causes of human error, including fatigue, its effects on performance, and actions individuals can take to prevent the development of fatigue.

The NTSB also reiterated Safety Recommendation A-04-16 to the FAA:

A-04-16

Require that 14 *Code of Federal Regulations* Part 121 air carriers implement comprehensive human factors programs to reduce the likelihood of human error in aviation maintenance.

The NTSB also superseded and classified Safety Recommendation A-97-71:

A-97-71

Review the issue of personnel fatigue in aviation maintenance; then establish duty time limitations consistent with the current state of scientific knowledge for personnel who perform maintenance on air carrier aircraft.

This safety recommendation is superseded by A-13-01 and is now classified “Closed—Unacceptable Action/Superseded.”

These safety recommendations are derived from the NTSB’s investigation and are consistent with the evidence we found and the analysis we performed. Chairman HERSMAN, Vice Chairman HART, and Members SUMWALT, ROSEKIND, 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.

By: *[Original Signed]*

Chairman