



National Transportation Safety Board

Washington, DC 20594

Safety Recommendation

Date: April 13, 2017

In reply refer to: A-17-8 and -11
A-13-12 and -13
(Reiteration)

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

On March 28, 2017, the National Transportation Safety Board (NTSB) adopted our report concerning the July 3, 2015, accident in which an Airbus Helicopters AS350 B3e helicopter, N390LG, registered to and operated by Air Methods Corporation, lifted off from the Summit Medical Center Heliport, Frisco, Colorado, and then crashed into a parking lot; the impact point was located 360 feet southwest of the ground-based helipad.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>, under report number NTSB/AAR-17/01.

As a result of this investigation, we issued six new recommendations, including two to Airbus Helicopters; one to the Association of Critical Care Transport; one to the Association of Air Medical Services and the Air Medical Operators Association; and the following two recommendations to the Federal Aviation Administration, the latter of which was also issued to the European Aviation Safety Agency:

A-17-8

Require that existing Airbus Helicopters dual-hydraulic AS350-series helicopters be equipped with a visual and an aural alert for the loss of hydraulic boost to the pedal controls, which would result in increased pedal loads.

¹ National Transportation Safety Board, *Loss of Control at Takeoff, Air Methods Corporation, Airbus Helicopters AS350 B3e, N390LG, Frisco, Colorado, July 3, 2015*, NTSB/AAR-17/01 (Washington, DC: NTSB, 2017).

A-17-11

After the actions requested in Safety Recommendation A-17-10 are completed, require operators of Airbus Helicopters dual-hydraulic AS350-series helicopters to incorporate changes to the dual hydraulic system to both ensure pedal control hydraulic assistance and mitigate the possibility of pilot error during any check of the hydraulic system.^[2]

The NTSB also reiterates the following safety recommendations:

A-13-12

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-13-13

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 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.’

Acting Chairman DINH-ZARR and Members HART, SUMWALT, and WEENER concurred in these recommendations.³

² Safety Recommendation A-17-10 asked Airbus Helicopters to do the following: “for existing dual-hydraulic AS350-series helicopters, assess and implement changes to the dual hydraulic system that would both ensure pedal control hydraulic assistance and mitigate the possibility of pilot error during any check of the hydraulic system.”

³ Board Member T. Bella Dinh-Zarr was acting chairman of the NTSB when the accident report was adopted on March 28, 2017. Effective March 30, 2017, Board Member Robert L. Sumwalt, III is acting chairman.

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, as required by 49 *United States Code* section 1135, detailing the actions you have taken or intend to take to implement them. When replying, please refer to the safety recommendations by number and submit your response electronically to correspondence@ntsb.gov.

[Original Signed]

By: Robert L. Sumwalt, III
Acting Chairman



National Transportation Safety Board

Washington, DC 20594

Safety Recommendation

Date: April 13, 2017

In reply refer to: A-17-9 and -10

Mr. Guillaume Faury
Chief Executive Officer
Airbus Helicopters
Aéroport International Marseille Provence
13725 Marignane Cedex, France

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 Airbus Helicopters to take action on the safety recommendation being issued in this letter.

On March 28, 2017, we adopted our report concerning the July 3, 2015, accident in which an Airbus Helicopters AS350 B3e helicopter, N390LG, registered to and operated by Air Methods Corporation, lifted off from the Summit Medical Center Heliport, Frisco, Colorado, and then crashed into a parking lot; the impact point was located 360 feet southwest of the ground-based helipad.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>, under report number NTSB/AAR-17/01.

As a result of this investigation, we issued six new recommendations, including one to the Federal Aviation Administration (FAA), one to the FAA and the European Aviation Safety Agency, one to the Association of Critical Care Transport, one to the Association of Air Medical Services and the Air Medical Operators Association, and the following two recommendations to Airbus Helicopters:

¹ National Transportation Safety Board, *Loss of Control at Takeoff, Air Methods Corporation, Airbus Helicopters AS350 B3e, N390LG, Frisco, Colorado, July 3, 2015*, NTSB/AAR-17/01 (Washington, DC: NTSB, 2017).

A-17-9

For newly manufactured dual-hydraulic AS350-series helicopters, assess and implement changes to the dual hydraulic system that would both ensure pedal control hydraulic assistance and mitigate the possibility of pilot error during any check of the hydraulic system.

A-17-10

For existing dual-hydraulic AS350-series helicopters, assess and implement changes to the dual hydraulic system that would both ensure pedal control hydraulic assistance and mitigate the possibility of pilot error during any check of the hydraulic system.

Acting Chairman DINH-ZARR and Members HART, SUMWALT, and WEENER concurred in this recommendation.²

The NTSB is vitally interested in this recommendation because it is 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 it. When replying, please refer to the safety recommendation by number. We encourage you to submit your response electronically to 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: Robert L. Sumwalt, III
Acting Chairman

² Board Member T. Bella Dinh-Zarr was acting chairman of the NTSB when the accident report was adopted on March 28, 2017. Effective March 30, 2017, Board Member Robert L. Sumwalt, III is acting chairman.



National Transportation Safety Board

Washington, DC 20594

Safety Recommendation

Date: April 13, 2017

In reply refer to: A-17-11

Mr. Patrick Ky
Executive Director
European Aviation Safety Agency
Postfach 10 12 53
D-50452 Cologne, Germany

On March 28, 2017, the National Transportation Safety Board (NTSB) adopted our report concerning the July 3, 2015, accident in which an Airbus Helicopters AS350 B3e helicopter, N390LG, registered to and operated by Air Methods Corporation, lifted off from the Summit Medical Center Heliport, Frisco, Colorado, and then crashed into a parking lot; the impact point was located 360 feet southwest of the ground-based helipad.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>, under report number NTSB/AAR-17/01.

As a result of this investigation, we issued six new recommendations, including two to Airbus Helicopters; one to the Association of Critical Care Transport; one to the Association of Air Medical Services and the Air Medical Operators Association; and two recommendations to the Federal Aviation Administration, one of which is also issued to EASA, as indicated below.

A-17-11

After the actions requested in Safety Recommendation A-17-10 are completed, require operators of Airbus Helicopters dual-hydraulic AS350-series helicopters to incorporate changes to the dual hydraulic system to both ensure pedal control hydraulic assistance and mitigate the possibility of pilot error during any check of the hydraulic system.^[2]

¹ National Transportation Safety Board, *Loss of Control at Takeoff, Air Methods Corporation, Airbus Helicopters AS350 B3e, N390LG, Frisco, Colorado, July 3, 2015*, NTSB/AAR-17/01 (Washington, DC: NTSB, 2017).

² Safety Recommendation A-17-10 asked Airbus Helicopters to do the following: “for existing dual-hydraulic AS350-series helicopters, assess and implement changes to the dual hydraulic system that would both ensure pedal control hydraulic assistance and mitigate the possibility of pilot error during any check of the hydraulic system.”

Acting Chairman DINH-ZARR and Members HART, SUMWALT, and WEENER concurred in this recommendation.³

The NTSB is vitally interested in this recommendation because it is 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 it. When replying, please refer to the safety recommendation by number. We encourage you to submit your response electronically to 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: Robert L. Sumwalt, III
Acting Chairman

³ Board Member T. Bella Dinh-Zarr was acting chairman of the NTSB when the accident report was adopted on March 28, 2017. Effective March 30, 2017, Board Member Robert L. Sumwalt, III is acting chairman.