



U.S. Department
of Transportation

**Federal Aviation
Administration**

Office of the Administrator

800 Independence Ave., S.W.
Washington, D.C. 20591

MAR 28 2011

The Honorable Deborah A.P. Hersman
Chairman, National Transportation
Safety Board
490 L'Enfant Plaza East, SW.
Washington, DC 20594

Dear Chairman Hersman:

This is in response to Safety Recommendations A-10-148 through -158 issued by the Board on December 27, 2010. The Board issued these safety recommendations as a result of an accident that occurred on August 5, 2008, about 1941 Pacific daylight time, when a Sikorsky S-61N helicopter, N612AZ, impacted trees and terrain during the initial climb after takeoff from Helispot 44 (H-44), located at an elevation of about 6,000 feet in mountainous terrain near Weaverville, California. The pilot-in-command, the safety crewmember, and seven firefighters were fatally injured; the copilot and three firefighters were seriously injured. Impact forces and a postcrash fire destroyed the helicopter, which was being operated by the U.S. Forest Service (USFS) as a public flight to transport firefighters from H-44 to another helispot. The USFS had contracted with Carson Helicopters, Inc. (CHI), of Grants Pass, Oregon, for the services of the helicopter, which was registered to CHI and leased to Carson Helicopter Services, Inc., of Grants Pass. Visual meteorological conditions prevailed at the time of the accident, and a company visual flight rules flight plan had been filed.

A-10-148. Require that the hover performance charts published by helicopter manufacturers reflect the true performance of the helicopter in all conditions for which the charts are applicable, including light and variable wind conditions.

FAA Comment. The 14 Code of Federal Regulations Parts 27 and 29 rotorcraft airworthiness standards require rotorcraft to be capable of safe operations in ground effect (IGE) hover and out of ground effect (OGE) hover from zero to at least 17 knots from all azimuths at density altitudes up to the maximum certified for takeoff and landing. Also, the airworthiness standards currently require the rotorcraft flight manual to include hover performance charts representing those conditions in which the rotorcraft can safely hover in winds up to 17 knots from all azimuths.

At the time the Sikorsky Model S-61 helicopter (Model S-61) was certified, the IGE controllability requirements and hover performance chart requirements did not apply. The FAA can only mandate design changes, including changes or additions to performance charts, if we determine that an unsafe condition exists. The Board concluded that the accident was caused by

the pilots flying outside of the approved weight-altitude-temperature hover envelope. The lack of OGE hover charts showing where the Model S-61 could hover at each weight with 17 knot winds from all directions did not contribute to the accident. We lack data to substantiate that an unsafe condition exists and therefore cannot retroactively apply current airworthiness standards for IGE and OGE controllability and hover performance for the Model S-61.

I believe that the Federal Aviation Administration has effectively addressed this safety recommendation, and I consider our actions complete.

A-10-149. Develop and implement a surveillance program specifically for 14 Code of Federal Regulations (CFR) Part 135 operators with aircraft that can operate both as public aircraft and as civil aircraft to maintain continual oversight ensuring compliance with 14 CFR Part 135 requirements.

FAA Comment. On January 24, 2011, the FAA provided the aviation safety inspector workforce with policy clarifications and guidance regarding public aircraft and outlined additional steps to be taken. The FAA currently has a surveillance program for 14 CFR Part 135 operators in place. The surveillance program includes those aircraft which can operate both as public and civil aircraft. The guidance for the surveillance program is provided by FAA Orders 1800.56, National Flight Standards Work Program Guidelines, and 8900.1, Flight Standards Information Management System. We expect these orders and additional guidance to be revised based on the preceding clarifications. The revised policy and guidance will be provided to our workforce, operators, and government entities.

I will keep the Board informed of the FAA's progress on this safety recommendation, and I will provide an update by February 29, 2012.

A-10-150. Take appropriate actions to clarify Federal Aviation Administration (FAA) authority over public aircraft, as well as identify and document where such oversight responsibilities reside in the absence of FAA authority.

FAA Comment. The FAA plans to review and revise current policy as necessary to clarify FAA authority over public aircraft. As a first step towards addressing this issue, the FAA held a public forum on January 20, 2011, to propose initial policy changes related to public aircraft operations.

In the near future, the FAA will publish a notice in the Federal Register to advise the public of proposed public aircraft operational policy changes. Based on the comments received from this notice and the public forum, the FAA will revise policy documents as necessary to clarify FAA authority over public aircraft.

I will keep the Board informed of the FAA's progress on this safety recommendation, and I will provide an update by December 30, 2011.

A-10-151. Require the installation of fuel tanks that meet the requirements of 14 *Code of Federal Regulations* 29.952 on S-61 helicopters that are used for passenger transport.

FAA Comment. The Model S-61 type certification basis was established based on the application date of October 21, 1959 under Civil Air Regulations (CAR), Amendment 7-1 through 7-4. The 14 CFR § 29.952 regulation was introduced at Amendment 29-35, dated November 2, 1994; therefore, this requirement does not apply to the Model S-61. The FAA can only mandate design changes to the Model S-61 fuel tank installation if there is an unsafe condition. We lack adequate safety data to conclude there is an unsafe condition or to retroactively apply later safety standards.

I believe that the FAA has effectively addressed this safety recommendation, and I consider our actions complete.

A-10-152. Require that S-61 helicopters that are used for passenger transport be equipped with passenger seats and seat mounting structures that provide substantial improvement over the requirements of Civil Air Regulations 7.260, such as comply with portions of 14 Code of Federal Regulations 29.561 and 29.562.

FAA Comment. The only means to impose this safety recommendation specifically on the Model S-61 is by an airworthiness directive (AD). Under 14 CFR Part 39, an AD can be issued only if an unsafe condition exists in the product and is likely to exist in other products of the same type design. The available safety data does not support an AD or retroactive application of later airworthiness standards.

I believe that the FAA has effectively addressed this safety recommendation, and I consider our actions complete.

A-10-153. Require operators of transport-category helicopters to equip all passenger seats with restraints that have an appropriate release mechanism that can be released with minimal difficulty under emergency conditions.

FAA Comment. The FAA requires that passenger seats in *all* aircraft have restraints with appropriate release mechanisms that can be released with minimal difficulty under emergency conditions. The applicable certification basis regulation for the Model S-61 is CAR 7.355, Seats and Safety Belts. The rotary buckle used in this installation meets the requirements. However, the FAA will investigate the restraint system to determine if a lack of familiarization could be a factor in the quick release of the occupant restraint.

I will keep the Board informed of the FAA's progress on this safety recommendation, and I will provide an update by February 29, 2012.

A-10-154. Require that Advisory Circular 21-34 be used to evaluate all shoulder harness retrofit installations and to determine that the installations reduce the risk of occupant injury.

FAA Comment. An applicant must show compliance with the applicable regulation when requesting a change to the type design of an aircraft. An advisory circular (AC) provides a means of compliance, but is not mandatory like a regulation. However, to ensure the issues you have raised are adequately addressed, we will conduct a review of the passenger restraint system installation.

I will keep the Board informed of the FAA's progress on this safety recommendation, and I will provide an update by February 29, 2012.

A-10-155. Require operators of Sikorsky S-61 helicopters with General Electric model CT58-140 engines to install 10-micron airframe fuel filters.

FAA Comment. The FAA intends to propose an AD within the next six months to require installing a 10-micron airframe fuel filter as specified in Sikorsky Alert Service Bulletin 61B 30-16, dated January 15, 2010. The basis for this action is unrelated to the subject accident because there were no fuel anomalies identified during the accident investigation. Rather, the AD is based on service reports indicating occasional instances of power loss or irregular engine operation, such as slow response to demands for increased power, which can be caused by contamination in the engine fuel control. Service data indicates that some of these events were traced to particles that passed through the original 40-micron airframe fuel filter that would have been captured by a 10-micron airframe fuel filter.

I will keep the Board informed of the FAA's progress on this safety recommendation, and I will provide an update by February 29, 2012.

A-10-156. Require Carson Helicopters, Inc., to put a conspicuous notification on the title page of the Instructions for Continuing Airworthiness that accompany its supplemental type certificate for installing side-mounted seats indicating that the installation does not provide enhanced occupant protection over that provided by the originally installed seats and meets Civil Air Regulations 7.260 standards.

FAA Comment. Instructions for Continued Airworthiness (ICA) provide the documentation necessary to maintain rotorcraft in an airworthy condition. The notification recommended by the Board is not related to maintenance and is therefore not appropriate in the ICA. Furthermore, the recommended notification would be misleading by implying the side-mounted seats failed to meet an expected safety level. The side-mounted seats are required to meet the minimum safety requirements, not exceed them or to enhance the level of safety compared to the original type design.

I believe that the FAA has effectively addressed this safety recommendation, and I consider our actions complete.

A-10-157. Require all applicants for supplemental type certificate (STC) seat installations in any type of aircraft to put a conspicuous notification on the title page of the Instructions for Continuing Airworthiness that accompany the STC indicating whether the installation provides enhanced occupant protection over that provided by the originally installed seats and the certification standard level met by the seating system.


FAA Comment. We are evaluating this safety recommendation to determine how to best address the Board's intent. We will provide an update on this effort by September 30, 2011.

A-10-158. Require supplemental type certificate (STC) applicants to improve the crashworthiness design of the seating system, such as complying with portions of 14 *Code of Federal Regulations* 29.561 and 29.562, when granting STC approval for older transport-category rotorcraft certificated to Civil Air Regulations 7.260 standards.

FAA Comment. This safety recommendation is similar to Safety Recommendation A-10-152, except the requirement to apply 14 CFR § 29.561 and § 29.562 would extend to type design changes for all transport category rotorcraft. The FAA lacks adequate safety data to justify such an extensive, retroactive requirement.

I believe that the FAA has effectively addressed this safety recommendation, and I consider our actions complete.

Sincerely,



J. Randolph Babbitt
Administrator